EXHIBIT 1-A

Martin B. Feeney Consulting Hydrogeologist

P.G. 4634 C.E.G. 1454 C.Hg 145

January 9, 2009

Monterey Peninsula Water Management District P.O. Box 85, Monterey, CA 93942-0085

Attention:

Andy Bell, PE; Joe Oliver, PG, CHg

Subject:

MPWMD 95-10 DESALINATION PROJECT - Proposal for Hydrogeologic Services

- Feedwater System Feasibility

Dear Mr. Bell and Oliver:

Following up on your request, I am pleased to present this proposal for professional services associated with assessing the hydrogeologic feasibility of a desalination feedwater system extracting water from the shallow dunes sands on Fort Ord Dunes State Park. Outlined in this proposal is a scope of work, schedule, and fee for the work described. In performing this work, I will lead a project team consisting of Pueblo Water Resources, Inc. (PWR) and Denise Duffy and Associates (DDA). These firms have specific experience in Fort Ord area having assisted me with the Watermaster Sentinel Well Project and Sand City Desalination Project. PWR and DDA will be assisting me with hydrogeologic fieldwork and environmental permitting, respectively.

BACKGROUND

The intent of the hydrogeologic work is to further investigate the feasibility of developing saline groundwater from the shallow dune sand aquifer system in the coastal portion of Fort Ord, more specifically, the area that has recently become Fort Ord Dunes State Park (Park). The saline groundwater would be used as feedwater for a proposed desalination facility. The proposed size of the facility would likely be determined by the amount of feedwater that could be developed.

The idea of utilizing the shallow dune sand aquifer for a source of feedwater is not without precedent. Beginning in the early 1990's the District investigated the feasibility of collector wells at locations both north and south of Fort Ord (Marina and Sand City). These investigations established the feasibility of the shallow aquifer to provide desalination feedwater. Perhaps most importantly, both of these investigations identified a low-permeability layer at the base of the dune sands that isolated the underlying aquifers. These materials have been documented at an elevation of approximately 40 to 50 feet below sea level. This is generally accepted as the approximate top of the underlying aquifer systems in the areas investigated in these earlier studies.

The Phase 1 work performed for the District in 2008 by Camp Dresser & McKee and ICF/Jones & Stokes outlined several differing approaches to developing feedwater from the shallow Dune Sands. The approaches included networks of conventional and/or collector wells at several locations in the Park. As part of the concept development work associated with Phase 1, the conceptual plans were discussed with representatives of both the Monterey County Water Resources Agency (MCWRA) and the Seaside Groundwater Basin Watermaster (Watermaster). Both of these entities expressed conditional approval of the proposal providing the extraction of feedwater (saline groundwater from the ocean) from the proposed areas did not adversely affect the underlying groundwater resources in their respective jurisdictions. Additionally, the project team met with representatives of the Park to understand the land use limitations associated with the siting of the proposed feedwater system infrastructure, assuming it was feasible.

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APPROACH

From the Phase 1 work emerge several fundamental questions that need to be answered to establish the feasibility of the feedwater system. These questions can be prioritized in order of significance to the feasibility of the project and are presented in this order below. If the first question cannot be answered favorably, the subsequent questions would not need to be explored and resolved. Likewise if the answer to the second question is such that the project is infeasible, the third question is rendered academic. The questions, listed in order of importance, are presented below:

- 1. The operation of a feedwater collection system that produces groundwater from the shallow dune sand aquifer will, by intent and design, induce seawater intrusion into the shallow aquifer system. It has been postulated that the shallow aquifer system in the proposed area is underlain by low permeability materials that would provide hydraulic separation between the shallow aquifer system and the underlying aquifer systems of either the Salinas Valley Basin or Seaside Basin. This low permeability layer would protect the underlying aquifers from infiltration of seawater from the shallow aquifer system. Both the MCWRA and Watermaster have indicated that demonstrating the presence and extent of this low permeability layer is fundamental to the project's feasibility and permitability.
- 2. In estimating individual well yields the Phase 1 project utilized hydraulic performance data derived from local studies performed much closer to the ocean than the locations proposed in Phase 1. The proximity to the ocean likely resulted in better well performance than will be possible at greater distances from the ocean. If the performance of the wells is reduced, the proposed number of wells will increase and, accordingly, the footprint of the feedwater system infrastructure will be larger than originally proposed. This increase in the number of wells and footprint may impact the ability to site the required facilities in areas acceptable to State Parks. Alternatively, the project yield could be reduced to fit the available areas.
- 3. If adequate hydrogeologic separation can be demonstrated and the individual well yields are high enough that siting sufficient well capacity is doable within the available areas within the Park, the project will need to demonstrate that the source of supply is ultimately seawater rather than a limited perched water supply. MCWRA has suggested that their acceptance of the project may require demonstration of the production of seawater.

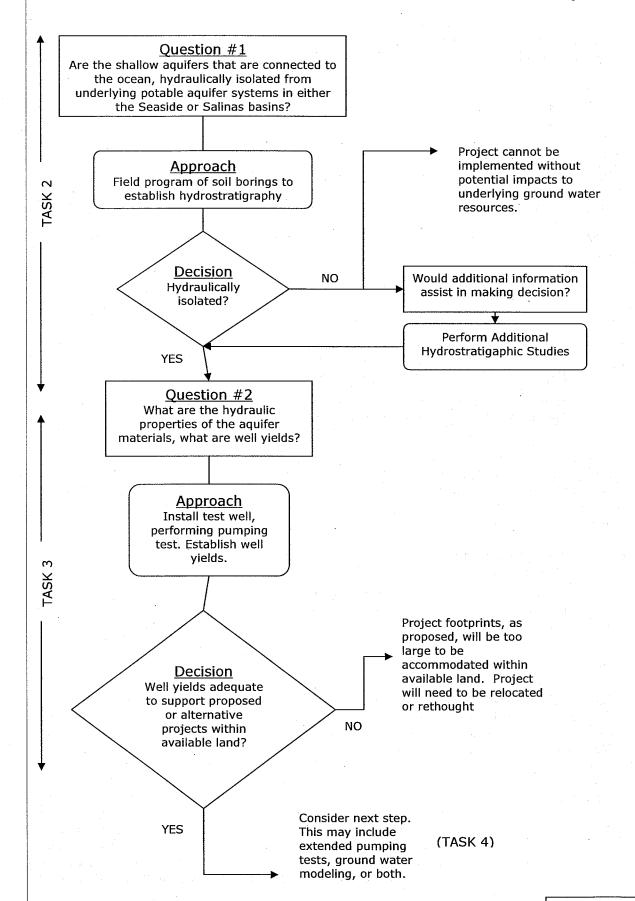
SCOPE OF WORK

The hydrogeologic scope of work needs to address these fundamental questions regarding the feasibility and permitability of the feedwater supply. A scope of work has been developed to address the questions presented above. Task 2 is focused on Question 1, whereas Task 3 and Task 4 are focused on Question 2 and 3, respectively. A formal scope of work is not presented for Task 4 as it is considered premature, given the current understanding of the hydrogeology. After completion of Task 2 and 3, it will be possible to better focus and scope the efforts of Task 4. The overall approach is shown in Figure 1.

Task 1 – Project Management/Meetings – This task will include project management including monthly invoices and progress reports. This task includes informal meetings with staff (3), progress presentations (1) to the Board, and presentations of final reports to the Board (2).

Task 2 - Establish Shallow Hydrostratigraphy of the Project Area.

 $\underline{Task\ 2.1 - Data\ Review}$ — The Phase 1 work included only a cursory review of the existing hydrogeologic data available in the study area. Task 2.1 will include a more detailed review of



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available lithologic data to allow focusing field program on those areas where additional data will be useful. Available data to be reviewed include the lithologic data from the following wells:

- CDM #1 (Range 8) and #2 (MCWD Pump Station)
- Seaside Basin Watermaster Sentinel Wells
- The more southerly wells at Fort Ord Sites 2 and 12

A map of these wells will be prepared and data from these wells will be utilized to construct a cross section along the coast. The map and cross-section will guide site selection of soil borings for Task 2.2.

<u>Task 2.2 – Develop Hydrostratigraphic Field Program – The purpose of this task is to develop a field program that can establish the existence of the postulated low-permeability layer at the base of the dune sands. The program will be developed iteratively with permitting to minimize the field programs impacts and to increase the ease of its permitting. The tentatively proposed scope is as follows:</u>

- Drill 8 10 (two weeks field work) boreholes utilizing the hollow stem auger (HSA) method to elevation of approximately -50 feet (msl). The HSA method has been selected because it does not utilize drilling fluids and therefore minimizes impacts and facilitates permitting.
- Proposed boreholes will be drilled along established paved roads or in existing dirt roads to limit impacts to habitat. Locations to be determined through negotiation with California Department of Parks and Recreation (CDPR).
- After reaching final depth, augers will be removed and the borehole backfilled with cuttings or low permeability materials, as appropriate. Sites will be restored.

Task 2.3 – Permitting for the Hydrostratigraphic Field Program

Due to the very limited scope of work proposed by the above-described field program and the lack of significant environmental impacts, the project is expected to be considered Categorically Exempt from CEQA. Based upon consultation with CDPR and MPWMD staff, the project may qualify for one or more of the following exemptions:

- Class 4: Minor Alterations to Land (CEQA Guidelines section 15304). This class consists of minor public or private alterations in the condition of land, water and/or vegetation.
- Class 6: Information Collection (CEQA Guidelines section 15306). This class consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to environmental resources. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

Land Ownership/Right of Entry. CDPR possesses land use control over the project site. Because the field program would require a right-of-entry permit from CDPR, they may act as lead agency under CEQA and would process the required exemption. Alternatively, MPWMD may act as lead agency, if acceptable to CDPR. DD&A proposes to prepare a project information and environmental checklist document to support the Notice of Exemption to be filed by the CEQA lead agency.

California Coastal Act Compliance. Fort Ord Dunes State Park is within the coastal zone. "Developments" may be subject to the Coastal Development Permit process through the California Coastal Commission who retained jurisdiction for issuance of Coastal Development Permits for the Fort Ord Dunes State Park. The hydrostratigraphic field program does not propose any impacts to coastal resources nor any permanent changes to land use. Therefore, the field program may not be deemed a "development" pursuant to Section 30106 of the Coastal Act. If CDPR and MPWMD staff deems the

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action a "development" or otherwise requests consultation and/or permits from the Coastal Commission, the field program is anticipated to be easily permittable with a de Minimus Waiver consistent with Section 30624.7. This de minimus waiver process was used by the Feeney/DD&A team to comply with the California Coastal Act for recently installed Seaside Watermaster Sentinel monitoring wells. An optional budget is provided for DD&A to prepare the appropriate application for, and to consult with, the Coastal Commission staff.

U.S. Army Restrictions. Previous Army activities within the park boundaries involved infantry training and the use of ammunition. According to the FODSP General Plan, decades of use as a firing range resulted in elevated levels of heavy metals in soil throughout the park and spent ammunition. Remediation activities began in 1997, and lead contamination and spent ammunition cleanup work has been completed. DD&A and/or MPWMD will consult with the U.S. Army, to ensure that the Hydrostratigraphic field Program would not result in lateral spreading of contaminants to groundwater aquifers and would have negligible risks due to lead (or other heavy metal) exposure to construction workers or the general public

According to the Record of Decisions (EPA Superfund Record of Decision; EPA ID CA7210020676, dated 4/6/05), there remains some chance of discovery of materials, specifically, Military Munitions (MM), associated with the former firing range during construction activities. The US Army has determined that the risk is low enough to allow public use, and the Environmental Protection Agency, Department of Toxic Substances Control, and the Regional Water Quality Control Board concur with this determination. In addition, the proposed well drilling project will be restricted to existing roads where the risk of encountering possible ammunition or contaminated soil is unlikely. However, due to the potential for discovering MM during construction, the project should require that all construction workers receive an Army MM safety briefing from the Base Reuse and Closure Fort Ord office prior to starting construction and, as needed thereafter. In the event MM is suspected or discovered, the contractors will: 1) immediately suspend actions which may affect the item; 2) not touch or disturb the item; 3) clearly mark the location; and 4) contact the local law enforcement agency (Presidio of Monterey Police) immediately for further investigation. In addition, the U.S. Army has place restrictions upon some ground-disturbing activities in certain areas of the former Fort Ord, including some portions of the Fort Ord Dunes State Park.

This scope of work assumes that the project would comply with those restrictions pursuant to requirements set forth in the property transfer documents between the U.S. Army and the U.S. Department of Interior, National Park Service (which was carried forward when the property transferred from National Parks to CDPR).

No other federal, state or local land use agencies would be required to grant permits. This hydrostratigraphic field program (i.e., geotechnical borings) does not propose wells; therefore, well permits would not be required according to Monterey County Environmental Health regulations, County Code Section 15.08.

This scope of work assumes the following:

- No federally-owned land would be impacted by the field program;
- CDPR and MPWMD staff finds that the activity meets the Class 4 and/or Class 6 Categorical Exemption from CEQA;
- Construction disturbance of less than one acre; precluding CRWQCB Stormwater Permit;
- The field program would <u>avoid</u> any and all land determined by California State Parks staff to possess any sensitive species or habitat, including but not limited to: sand gilia (Gilia tenuiflora ssp. arenaria), Monterey spine-flower (Chorizanthe pungens var. pungens),

coast wallflower (Erysimum ammophilum), Monterey ceanothus (Ceanothus cuneatus var. rigidus) sandmat manzanita (Arctostaphylos pumila), Smith's blue butterfly (Euphilotes enoptes smithi), black legless lizard (Anniella pulchra nigra), and western snowy plover (Charadrius alexandrinus nivosus);

- MPWMD would be responsible for paying any application fees;
- This scope of work does not include implementation of mitigation measures or conditions
 of permit/project approval, mitigation monitoring, reporting, and/or presence of qualified
 personnel during construction. A new proposal/scope of work and budget can be provided
 for these services, if desired by the project team.

<u>Task 2.4 – Perform Hydrostratigraphic Field Program</u> After permitting field program, field investigation will be initiated. It is anticipated that the program outlined above can be performed in a two period. Each borehole will be lithologically logged by a geologist and drive samples taken below the water table. Bulk samples will be collected for grain-size and permeability testing. Laboratory testing will allow comparison of hydraulic qualities from location to location and allow projection of the aquifer test data from a single site to other sites. After reaching final depth, each borehole will be geophysically logged with a natural gamma tool to assist in the distinguishing of coarse and fine grained materials. Geophysical logs will be performed with portable field equipment to expedite field work and, if possible, water quality samples will be collected with a bailer from within the augers. Water quality samples will be tested in the field for electroconductivity.

<u>Task 2.5 – Reporting</u> After completion of the field work, a technical memorandum (TM) summarizing the findings will be prepared. This memorandum will document the hydrogeologic conditions of the Dune Sands and any low permeable units separating the Dune Sands from the underlying Paso Robles Formation and/or the 180-Foot Aquifer. The TM will be supported by lithologic and geophysical logs and cross-sections. Recommendations will be presented to advance or terminate further hydrogeologic studies at each site

Criteria for terminating/moving ahead, or additional study

The data from the field program will allow likely support one of the following conclusions:

- 1. There is an areally extensive, low-permeability stratum underlying the saturated dune sands.
- 2. Low-permeability strata are observed at the same relative elevation in some borings but not in others suggesting that this strata is areally discontinuous.
- 3. Although there are low permeability strata encountered in many of the soil borings, these strata occur at differing elevations, suggesting that they are lenticular and do not extend for great distances.

If the data support the first conclusion, the project planning should move ahead with Task 3. If the data support the second conclusion, additional investigation work might be merited to define an area with extensive separation. If the third conclusion is supported by the data, it will be difficult to permit the project as the potential for impacts to the underlying groundwater systems cannot be eliminated.

Task 3 – Establish Aquifer Properties/Individual Well Yields. After demonstrating adequate hydraulic separation from underlying groundwater, the individual yield of a well needs to be established so the number of wells required can be determined. Project planning, costing or footprint cannot be determined unless the individual well yield is known.

<u>Task 3.1 – Develop Test Well Program</u> The yield of an individual well producing from the Dune Sands will be established by installation of a test well and performance of a pumping test. Aquifer parameters will be developed through installation of three monitoring wells to collect water level response data during pumping test. In accordance with CDPR's expressed wishes, test well and monitoring wells will be designed for eventual removal to facilitate permitting. Additionally, discharge water from the test well will be directed to the ocean at established points of discharge. At this writing it is assumed that the test well program would be performed at the so-called Bunker site identified by CDM.

Task 3.2 Permitting for Test Well Program

Upon determination that the test well program will be implemented, DD&A and other members of the project team (as necessary) will informally consult with the identified land use and environmental regulatory agency representatives. To include with permit applications, Pueblo Water Resources and Martin Feeney, in coordination with District staff will develop a detailed field investigation plan that specifies the following:

- all temporary and permanent physical changes to the project site(s),
- · construction equipment to be used, methodology, schedule,
- · pre-construction training and monitoring activities,
- monitoring activities and best management practices to be used during construction,
- · data collection protocols,
- · operational monitoring activities and frequency,
- field quality assurance and quality control,
- · health and safety protocols, and
- activities necessary to comply with existing restrictions and regulations to protect sensitive plant and wildlife resources.

Using the above project information and with input by District staff, DD&A will assist the team in preparing permit applications in signature-ready format. Upon MPWMD signature, DD&A will be available to assist District staff to coordinate with the agencies to determine if applications are complete, provide additional information, review project measures to avoid or minimize impacts, and identify additional permit conditions recommended for permit approval. If necessary, DD&A will continue to coordinate with the regulatory agencies on behalf of MPWMD in order to expedite issuance of permits. MPWMD would be responsible for agreeing to and finalizing these permit conditions (i.e., if necessary, negotiating the final wording based on engineering design and construction needs) and executing (signing) the permits. The following approvals and/or permits would be anticipated to be required and DD&A's services are outlined below in more detail:

State Parks Authorization

DD&A is available to prepare and submit project description and other application materials for permission to install the test and monitoring wells. The application would need to include assessment of potential impacts for their review prior to granting the permit. The key issues will likely be construction impacts on:

• Biological resources, including habitat for special-status wildlife species (Smith's blue butterfly, snowy plover, and black legless lizard) and presence of special-status plant species (Monterey spineflower, wallflower, and sand gilia). This scope of work includes botanical surveys of up to

two 1 acre sites for the purpose of identifying appropriate areas for project components and construction activities which would avoid resources

- Coastal zone analysis/consistencies (aesthetics, impacts on visitor serving uses and coastal access)
- Other construction and test well operational impacts (air quality, noise, water quality, etc.)

California Coastal Act Coastal Development Permit (California Coastal Commission)

The project is anticipated to require a Coastal Development Permit from the California Coastal Commission. The project is anticipated to be considered "de minimus" and thereby receive a waiver from the Coastal Commission staff. DD&A is prepared to work with the project team to prepare the permit packages for the Coastal Development Permit and to provide coordination with Coastal Commission staff as needed to secure the relevant permits if a "De Minimus Waiver" is deemed to be appropriate. See further discussion under Task 2.3, above.

Monterey County Well Drilling Permits

In addition to the above permits, well construction permits will be required from Monterey County Environmental Health Department. These permits are essentially ministerial and require 2 to 3 weeks to be issued. These permits can only be issued to the drilling contractor. DD&A will not be responsible for assisting with application for or receipt of these permits.

Regional Water Quality Control Board (RWQCB)

DD&A is prepared to work with the project team to prepare the permit package for the general waiver from the Central Coast Regional Water Quality Control Board (RWQCB) for discharge of produced water back to existing drainage channels terminating at the beach. It is assumed that the waiver request would include the production and testing water from only one test well site, even though testing may be pursued at other sites based on the results of the initial work. Production water from development of the monitoring wells may also be included in the waiver request, if necessary.

Assumptions for Test Well Program Permitting

The permitting for the test well and monitoring well installation and operation assumes the following; if one or more of these conditions do not apply, an amendment to this scope of work and budget would be necessary:

- There would be no requirement for CEQA compliance beyond a Categorical Exemption for the test well and monitoring wells installation and operational activities;
- Construction on CDPR-owned property only eliminating the requirement for National Environmental Policy Act (NEPA) compliance due to federal ownership;¹
- Similar to as described above under Task 3.2, the Test Well Program would comply with U.S. Army Military Munitions restrictions on soil disturbing activities;
- Construction disturbance of less than one acre; precluding CRWQCB Stormwater Permit;
- No special status plant or wildlife species will be directly impacted by the project. The sites are anticipated to be selected to avoid impacts to sensitive species and their habitat; ²

¹ The Fort Ord Dunes State Parks was transferred from the U.S. Army to the U.S. Dept. of Interior (National Parks Service) in 2006 and subsequently from National Parks to CDPR in 2007. More importantly, CDPR has indicated that they have the operational authority to allow uses such as test wells and monitoring wells.

² If construction activities are deemed to potentially disturb sensitive habitat and the project is not redesigned to avoid the species and habitat, a California Endangered Species Act Section 2081 Take Permit and/or a Federal Endangered Species Act Take permit may be necessary. If they are found to be necessary, existing HMPs and/or Biological Opinions may be relied upon to

- All official correspondence between the MPWMD and the RWQCB during the NPDES waiver application process would be developed and forwarded by MPWMD;
- If the waiver development process results in the need for a Stormwater Pollution Prevention Plan, the plan will be developed by the well construction contractor;
- DD&A staff will attend up to three (3) meetings and/or field visits during each task (2.3 and 3.2) with the project team and/or agencies (can include MPWMD Board meetings without a presentation by DD&A);
- No attendance by DD&A at meetings with the RWQCB in San Luis Obispo or at the California Coastal Commission meetings or hearings;
- Any application fees would be paid directly by MPWMD; the cost of the application fees is not included in this proposal;
- This scope of work does not include implementation of mitigation measures or conditions of permit/project approval, mitigation monitoring, reporting, and/or presence of qualified personnel during construction. A new proposal/scope of work and budget can be provided for these services, if desired by the project team.

<u>Task 3.3 – Perform Test Well Program –</u> After receiving permission from CDPR, the test well program will be initiated. Test and monitoring wells will be permitted through Monterey County and drilled by a drilling contractor with a C-57 license. The test well will be 6-inches in diameter and installed to a depth fully penetrating the Dune Sand aquifer (assumed to be < 150 feet). The well will be installed utilizing the direct rotary method utilizing biodegradable drilling fluid. Casing will be Schedule 40 PVC with wire-wrapped PVC screen. Both the test well and the associated monitoring wells will be sampled, lithologically and geophysically logged at the time of installation. After installation, the well will be developed by air-lifting and then by pumping and surging with the test pump. Purge water will be contained on site in a Baker Tank and discharged through the stormwater outfall or transported off site for disposal. Drilling soil waste will be contained on site for later land disposal.

Concurrent with the installation of the test well, three monitoring wells will be installed to monitor aquifer response during the pumping test. Each monitoring well will be drilled to equivalent depth and be screened identically to the test well. The three monitoring wells will be arranged such that two of them are on a line perpendicular to the ocean on either side of the test well. The other well will be located at 90 degrees to the north or south of the test well. Each monitoring well will be approximately 50 feet from the test well. Monitoring wells will be installed by either the direct rotary or HSA method, whichever is consider more efficient. Monitoring wells will be developed by air-lifting and swabbing.

Consistent with the goal of removing the test well and monitoring wells after completion of the investigation, the wells will be gravel packed in the perforated interval but not provided with and annular seals. This will allow for easy removal of the casing and site restoration.

After completion of the test well and the monitoring wells, a test pump will be installed into the test well and a 72-hour constant rate pumping test will be performed. During the test, the monitoring and the test well will be equipped with water level data loggers to collect drawdown and recovery data. Power for the test pump will be provided by a trailer-mounted, diesel-powered generator. Water from the test will be routed through a totalizing meter and then through closed pipe to the point of discharge.

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During testing, water quality parameter of EC will be measured at regular intervals. Upon completion of the testing a final water quality sample will be collected for laboratory analysis. Laboratory analysis will include general mineral constituents as well as constituents of particular concern for membrane treatment.

<u>Task 3.4 – Revisit Site Footprint and Compatibility with State Parks –</u> After completion of the pumping test, the yield of a single well and an estimate of the yield of other types of intake facilities will be available. Additionally, the required spacing of these facilities will also be estimated. Utilizing these values, estimates of the footprint of various size projects, as supplied by differing types of intake structures, will be developed. These footprints will be compared to available land and compatibility of proposed uses.

Criteria for quitting/moving ahead, or additional study Recommendation => continue or quit

<u>Task 3.5 – Remove Test/Monitoring Wells –</u> CDPR has indicated that a requirement of the project is that existing test well and monitoring wells be demolished and removed should the project not proceed to subsequent phases. After completion of field activities (whether after Task 3 or Task 4), the monitoring and test well will be removed and the sites restored to original condition. This task provides contractor oversight in performing this task. The components of these tasks would be:

- Engage Well Drilling Contractor with C-57 license
- Obtain well destruction permits from Monterey County
- Demolish and remove test and monitor well casings.
- Perform site restoration, as required by CDPR.

Task 4 – Expanded Hydrogeologic Studies – The purpose of this task would be to increase understanding of the source of the feedwater extracted from proposed extraction facilities. This work would be focused on establishing the percentage of water that is derived from the ocean verses the amount that is derived from inland sources. This task will likely include an extended pumping test or groundwater modeling, likely both. As mentioned above, development of detailed scope for this task is premature at this time. This task may need to include the construction of a deeper monitoring well into the underlying aquifer to assess gradients and hydraulic separation.

BUDGET

The estimated budget for the program is shown on **Table 1** (attached). The table summarizes estimated labor hours and total dollars by activity for three tasks. Task 2 includes budgeting for soil borings installation and permitting, Task 3 includes budgeting for test well operations at the Bunker site. Task 4 work is not budgeted at this time. Table 1 includes time for the consultant team and outside services. The fee schedules for the various members of the consultant team are attached.

SCHEDULE

The estimated schedule for the project is 12 months. The overall schedule is driven by the estimated time for permitting activities. We have assumed that permitting for the Task 2 would take three months, and that Task 3 permitting would require an additional three months. The permitting of Task 3 may require additional time.

After permitting Task 2, field operations and reporting are anticipated to take six weeks. After permitting Task 3 field operations are anticipated to two months. Reporting would take an additional month.

PROJECT PERSONNEL

A team of consultants will perform the work described. I will serve as project manager and project geologist. I will be assisted by contract personnel from Pueblo Water Resources Associates, Inc (PWR). PWR is geologic/hydrogeologic consulting firm formed by several of my former employees. Their talents and qualifications are well known to District staff and I am completely comfortable with their abilities.

The permitting work will be performed by Denise Duffy and Associate, Inc. (DDA). DDA is a Monterey-based planning and permitting firm. They have done extensive work on permitting and CEQA on the former Fort Ord. They long standing personal relationships with the personnel of the various agencies involved in the permitting process. Their specific qualifications for the project are attached.

QUALIFICATIONS

I am a Professional Geologist and Certified Hydrogeologist in California with more than 27 years experience in groundwater consulting. I am a founding Principal of Staal, Gardner and Dunne, Inc. (later became Fugro West, Inc.) and managed these firm's Monterey County offices for 9 years. I later was a member of the firm, Balance Hydrologics, Inc. I have been an independent consultant since 1998. My experience in groundwater supply issues includes well siting and design, preparation of project specifications and contractor supervision, well maintenance and repair, water treatment, groundwater modeling (both flow and solute-transport), perennial yield analysis, water quality assessments, and regulatory compliance.

I have approximately 24 years of experience in Monterey County ground water resource issues. My local experience in groundwater resources is extensive and dates back to 1983 with the base-wide Fort Ord hydrogeologic investigation performed for the Army Corps of Engineers. Since that time, I have performed a number of studies in the Seaside Groundwater Basin and the Salinas Valley Basin for both public and private clients. I also have extensive experience in smaller groundwater basins including Pajaro, Laguna Seca, El Toro, Arroyo Seco, San Martin/Morgan Hill and San Ardo areas. In addition, I also have significant experience in the Carmel River Aquifer System, completing studies of the bedrock geometry of the alluvial aquifer and a development of a groundwater flow model of the Carmel Valley Alluvial Aquifer System for the District.

Most recently, I redesigned the coastal monitoring well network on Fort Ord for the Watermaster and successfully supervised the installation of these wells (Sentinel Well Project). I also chaired and coordinated the review of the Seaside Basin groundwater model for the Watermaster. I also am currently serving as the hydrogeologist on the National Water Resources Institute (NWRI) panel reviewing the Monterey Regional Water Pollution Control Agency's Groundwater Replenishment Project in the Seaside Basin.

My desalination experience is also extensive. I've worked throughout the Caribbean on feedwater issues for numerous small desalination facilities. Locally, I designed both the feedwater and brine disposal system for the Marina Coast Water District desalination facility. I performed the early feasibility studies for the District in both Marina and Sand City. I have served as technical reviewer for the both the District's 2002 and 2007 desalination studies, as well as California American's Coastal Water Project. I am also the primary hydrogeologist for the City of Sand City's soon to be operational desalination project.

CONTRACTING/INSURANCE

It is assumed that the District will utilize their standard contract for professional services. Please provide a copy as soon as possible for review by my insurance carrier. Alternatively, I would be happy to provide a copy of my standard agreement. Please let me know your preference. I maintain general, automobile, and insurance coverage with limits of \$1,000,000. I maintain professional errors and omissions insurance at \$2,000,000.

I appreciate the opportunity to be involved with this project. Please call if you have any questions.

Sincerely,

Attachment: Fee Schedules

TABLE 1

Monterey Peninsula Water Management District

95-10 Desalination Project - Hydrogeologic Investigation

BUDGET

\$291,800 -

	Professional Servi	ce			Prin. Hydrogeologist	iin. Engineer	Prin Field Rate	roject	SIS	Vord Proc.	Jata Entry	Graphics
TASK DESC	RIPTION		HOURS	FEE	\$150	\$150	\$135	\$135	\$140	<u>≨</u> \$60	\$50	\$90
Task 1 F	Project Management/Meetings		EO	0 200	40			40				
Task 2.1			58 48	8,280 6,240	40 8			16 32		2		
	Develop Hydrostratigraphic Field F	rogram	40	5,160	16			16		4		- 8 - 4
	Permit Hydrostratigraphic Field Pr		36	4,800	16		··	16		4		
	Perform Hydrogeologic Field Prog		140	19,200	20			120			* **********	
Task 2.5 F			64	8,400	16			40		4		4
Tack 3.1 F	Develop Test Well Program		40	5,700	20			20				
	Permit Test Well Program		48	6,840	24			24			<u>-</u>	
	Perfom Test Well Program	1	76	10,500	16			60				
	Revisit Footprint and Compatibility	with State Parks	24	3,480	16			8				
Task 3.5 F			68	8,880	24			32		4		8
		TOTAL (LABOR)	642	87,480	216			384		18		24
	Other Direct Charg	es (ODC)	Dotof									
Task 2.3 [Denise Duffy		Rate\$	Fee 9,930								
	Orilling Contractor			40,250								
	Seophysical Equipment Rental			3,450			,					
	aboratory Services (geotech)	10		3,000	-							
Task 2.4												
	Denise Duffy			38,080			***************************************					
Task 3.4 [Drilling Contractor (drilling, constru	ction, development, clea	anup)	71,000								
~-~	Senerator, Pump, Piping			10,000								
	Well Destructions			20,000								
	.aboratory Services (wq) Monitoring Equipment	3	150	450 2,000								
				_,,								
Task 2 Task 3	Per diem Per diem	30 14	140 140	4,200 1,960			-					
		SUBTOTAL (ODC)	1,10	204,320								
	•			,,								
		Task 1-2		112,910								
		Task 3 TOTAL COST		178,890 \$291,800								

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DENISE DUFFY AND ASSOCIATES PROPOSAL





Monterey Peninsula Water Management District 95-10 Hydrogeologic Studies Project Denise Duffy & Associates' Proposal for Environmental Review and Permitting Assistance January 9, 2009

This constitutes DD&A's scope and budget estimate for conducting California Environmental Quality Act (CEQA) processing and providing permitting assistance for the Monterey Peninsula Water Management District 95-10 Hydrogeologic Studies Project. The project involves two phases that would require permitting and, potentially environmental processing: 1) A hydrostratigraphic field program involving primarily soil borings using a hollow stem auger, and 2) a test well program including monitoring wells that will be conducted to identify whether the wells could produce adequate quantities of water. The DD&A scope of work for these two phases are defined in Tasks 2.3 and 3.2, corresponding to the two phases of the work.

The first phase would involve conducting geotechnical soil borings within the Fort Ord Dunes State Park area of the Ord Community (former Fort Ord). This scope of work assumes the following activities would be conducted:

- The contractor would drill 8-10 (two weeks field work) boreholes utilizing the hollow stem auger (HSA) method to elevation of approximately -50 feet (msl). The HSA method has been selected because it does not utilize drilling fluids and therefore minimizes impacts and facilitates permitting.
- Proposed boreholes will be drilled along established paved roads of in existing dirt roads to limit impacts to habitat. Locations to be determined through negotiation with California Department of Parks and Recreation (CDPR).
- After reaching final depth, augers will be removed and the borehole backfilled with cuttings or low permeability materials, as appropriate. Site will be restored.

Total land disturbance would be less than one acre, thereby avoiding the requirement for a California Regional Water Quality Control Board (RWQCB) Construction Storm Water Permit. The sites will be selected to avoid biological resources (including special status species and their habitat) to the extent possible.

The second phase of work would involve the establishment of the yield of an individual well producing from the Dune Sands installation of a test well and performance of a pumping test. Aquifer parameters will be developed through installation three monitoring wells to collect water level response data during pumping test. In accordance with CDPR wishes, test well and monitoring wells will be designed for eventual removal to facilitate permitting. Additionally, discharge water from the test well will be directed to the ocean at established points of discharge. At this writing it is assumed that the test well program would be performed at the so-called Bunker site identified by CDM.

SCOPE OF WORK

Task 2.3 - Permitting for the Hydrostratigraphic Field Program

Due to the very limited scope of work proposed by the above-described field program and the lack of significant environmental impacts, the project is expected to be considered Categorically Exempt from CEQA. Based upon consultation with CDPR and MPWMD staff, the project may qualify for one or more of the following exemptions:

- Class 4: Minor Alterations to Land (CEQA Guidelines section 15304). This class
 consists of minor public or private alterations in the condition of land, water and/or
 vegetation.
- Class 6: Information Collection (CEQA Guidelines section 15306). This class consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to environmental resources. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

Land Ownership/Right of Entry. CDPR possesses land use control over the project site. Because the field program would require a right-of-entry permit from CDPR, they may act as lead agency under CEQA and would process the required exemption. Alternatively, MPWMD may act as lead agency, if acceptable to CDPR. DD&A proposes to prepare a project information and environmental checklist document to support the Notice of Exemption to be filed by the CEQA lead agency.

California Coastal Act Compliance. Fort Ord Dunes State Park is within the coastal zone. "Developments" may be subject to the Coastal Development Permit process through the California Coastal Commission who retained jurisdiction for issuance of Coastal Development Permits for the Fort Ord Dunes State Park. The hydrostratigraphic field program does not propose any impacts to coastal resources nor any permanent changes to land use. Therefore, the field program may not be deemed a "development" pursuant to Section 30106 of the Coastal Act. If CDPR and MPWMD staff deems the action a "development" or otherwise requests consultation and/or permits from the Coastal Commission, the field program is anticipated to be easily permittable with a de Minimus Waiver consistent with Section 30624.7. This de minimus waiver process was used by the Feeney/DD&A team to comply with the California Coastal Act for recently installed Seaside Watermaster Sentinel monitoring wells. An optional budget is provided for DD&A to prepare the appropriate application for, and to consult with, the Coastal Commission staff.

U.S. Army Restrictions. Previous Army activities within the park boundaries involved infantry training and the use of ammunition. According to the FODSP General Plan, decades of use as a firing range resulted in elevated levels of heavy metals in soil throughout the park and spent ammunition. Remediation activities began in 1997, and lead contamination and spent ammunition cleanup work has been completed. DD&A and/or MPWMD will consult with the U.S. Army, to ensure that the Hydrostratigraphic field Program would not result in

lateral spreading of contaminants to groundwater aquifers and would have negligible risks due to lead (or other heavy metal) exposure to construction workers or the general public

According to the Record of Decisions (EPA Superfund Record of Decision; EPA ID CA7210020676, dated 4/6/05), there remains some chance of discovery of materials, specifically, Military Munitions (MM), associated with the former firing range during construction activities. The US Army has determined that the risk is low enough to allow public use, and the Environmental Protection Agency, Department of Toxic Substances Control, and the Regional Water Quality Control Board concur with this determination. In addition, the proposed well drilling project will be restricted to existing roads where the risk of encountering possible ammunition or contaminated soil is unlikely. However, due to the potential for discovering MM during construction, the project should require that all construction workers receive an Army MM safety briefing from the Base Reuse and Closure Fort Ord office prior to starting construction and, as needed thereafter. In the event MM is suspected or discovered, the contractors will: 1) immediately suspend actions which may affect the item; 2) not touch or disturb the item; 3) clearly mark the location; and 4) contact the local law enforcement agency (Presidio of Monterey Police) immediately for further investigation. In addition, the U.S. Army has place restrictions upon some ground-disturbing activities in certain areas of the former Fort Ord, including some portions of the Fort Ord Dunes State Park.

This scope of work assumes that the project would comply with those restrictions pursuant to requirements set forth in the property transfer documents between the U.S. Army and the U.S. Department of Interior, National Park Service (which was carried forward when the property transferred from National Parks to CDPR).

No other federal, state or local land use agencies would be required to grant permits. This hydrostratigraphic field program (i.e., geotechnical borings) does not propose wells; therefore, well permits would not be required according to Monterey County Environmental Health regulations, County Code Section 15.08.

This scope of work assumes the following:

- No federally-owned land would be impacted by the field program;
- CDPR and MPWMD staff finds that the activity meets the Class 4 and/or Class 6 Categorical Exemption from CEQA;
- Construction disturbance of less than one acre; precluding CRWQCB Stormwater Permit;
- The field program would <u>avoid</u> any and all land determined by California State Parks staff to possess any sensitive species or habitat, including but not limited to: sand gilia (Gilia tenuiflora ssp. arenaria), Monterey spine-flower (Chorizanthe pungens var. pungens), coast wallflower (Erysimum ammophilum), Monterey ceanothus (Ceanothus cuneatus var. rigidus) sandmat manzanita (Arctostaphylos pumila), Smith's blue butterfly (Euphilotes enoptes smithi), black legless lizard (Anniella pulchra nigra), and western snowy plover (Charadrius alexandrinus nivosus);
- MPWMD would be responsible for paying any application fees;

• This scope of work does not include implementation of mitigation measures or conditions of permit/project approval, mitigation monitoring, reporting, and/or presence of qualified personnel during construction. A new proposal/scope of work and budget can be provided for these services, if desired by the project team.

Task 3.2 Permitting for Test Well Program

Upon determination that the test well program will be implemented, DD&A will informally consult with the identified land use and environmental regulatory agency representatives. To include with permit applications, Pueblo Water Resources and Martin Feeney will develop a detailed field investigation plan that specifies the following:

- all temporary and permanent physical changes to the project site(s),
- construction equipment to be used, methodology, schedule,
- pre-construction training and monitoring activities,
- monitoring activities and best management practices to be used during construction,
- data collection protocols,
- operational monitoring activities and frequency,
- field quality assurance and quality control,
- health and safety protocols, and
- activities necessary to comply with existing restrictions and regulations to protect sensitive plant and wildlife resources.

Using the above project information, DD&A will assist the team in preparing permit applications in signature-ready format. Upon MPWMD signature, DD&A will be available to coordinate with the agencies to determine if applications are complete, provide additional information, review project measures to avoid or minimize impacts, and identify additional permit conditions recommended for permit approval. If necessary, DD&A will continue to coordinate with the regulatory agencies on behalf of MPWMD in order to expedite issuance of permits. MPWMD will be responsible for agreeing to and finalizing these permit conditions (i.e., if necessary, negotiating the final wording based on engineering design and construction needs) and executing (signing) the permits. The following approvals and/or permits would be anticipated to be required and DD&A's services are outlined below in more detail:

State Parks Authorization

DD&A is available to prepare and submit project description and other application materials for permission to install the test and monitoring wells. The application would need to include assessment of potential impacts for their review prior to granting the permit. The key issues will likely be construction impacts on:

• Biological resources, including habitat for special-status wildlife species (Smith's blue butterfly, snowy plover, and black legless lizard) and presence of special-status plant species (Monterey spineflower, wallflower, and sand gilia). This scope of work includes botanical surveys of up to two 1-acre sites for the purpose of identifying

appropriate areas for project components and construction activities which would avoid resources

- Coastal zone analysis/consistencies (aesthetics, impacts on visitor serving uses and coastal access)
- Water quality and hydrology
- Other construction and test well operational impacts (air quality, noise, water quality, etc.)

California Coastal Act Coastal Development Permit (California Coastal Commission)

The project is anticipated to require a Coastal Development Permit from the California Coastal Commission. The project may be considered "de minimus" and thereby receive a waiver from the Coastal Commission staff. DD&A is prepared to work with the project team to prepare the permit packages for the Coastal Development Permit and to provide coordination with Coastal Commission staff as needed to secure the relevant permits if a "De Minimus Waiver" is deemed to be appropriate. See further discussion under Task 2.3, above.

Monterey County Well Drilling Permits

In addition to the above permits, well construction permits will be required from Monterey County Environmental Health Department. These permits are essentially ministerial and require 2 to 3 weeks to be issued. These permits can only be issued to the drilling contractor. DD&A will not be responsible for assisting with application for or receipt of these permits.

Regional Water Quality Control Board (RWQCB)

DD&A is prepared to work with the project team to prepare the permit package for the general waiver from the Central Coast Regional Water Quality Control Board (RWQCB) for discharge of produced water back to existing drainage channels terminating at the beach. It is assumed that the waiver request would include the production and testing water from only one test well site, even though testing may be pursued at other sites based on the results of the initial work. Production water from development of the monitoring wells may also be included in the waiver request, if necessary.

Assumptions for Test Well Program Permitting

The permitting for the test well and monitoring well installation and operation assumes the following; if one or more of these conditions do not apply, an amendment to this scope of work and budget would be necessary:

- There would be no requirement for CEQA compliance beyond a Categorical Exemption for the test well and monitoring wells installation and operational activities;
- Construction on CDPR-owned property only eliminating the requirement for National Environmental Policy Act (NEPA) compliance due to federal ownership;¹
- Similar to as described above under Task 3.2, the Test Well Program would comply with U.S. Army Military Munitions restrictions on soil disturbing activities;

The Fort Ord Dunes State Parks was transferred from the U.S. Army to the U.S. Dept. of Interior (National Parks Service) in 2006 and subsequently from National Parks to CDPR in 2007. More importantly, CDPR has indicated that they have the operational authority to allow uses such as test wells and monitoring wells.

- Construction disturbance of less than one acre; precluding CRWQCB Stormwater Permit;
- No special status plant or wildlife species will be directly impacted by the project. The sites are anticipated to be selected to avoid impacts to sensitive species and their habitat; ²
- All official correspondence between the MPWMD and the RWQCB during the NPDES waiver application process would be developed and forwarded by MPWMD;
- If the waiver development process results in the need for a Stormwater Pollution Prevention Plan, the plan will be developed by the well construction contractor;
- DD&A staff will attend up to three (3) meetings and/or field visits during each task (2.3 and 3.2) with the project team and/or agencies (can include MPWMD Board meetings without a presentation by DD&A);
- No attendance by DD&A at meetings with the RWQCB in San Luis Obispo or at the California Coastal Commission meetings or hearings;
- Any application fees would be paid directly by MPWMD; the cost of the application fees is not included in this proposal;
- This scope of work does not include implementation of mitigation measures or conditions of permit/project approval, mitigation monitoring, reporting, and/or presence of qualified personnel during construction. A new proposal/scope of work and budget can be provided for these services, if desired by the project team.

BUDGET

The estimated costs to complete the above-described scope of work tasks are shown in the attached budget. Due to the unknown level of effort needed to provide the services outlined, this scope of work will be billed in accordance with the time and materials actually expended and the budget for this task is estimated as a not-to-exceed of \$48,183. In addition to the time required to compile application materials (including one round of revisions) and conduct telephone and e-mail correspondence, we anticipate that at least one coordination meetings with each of the responsible permitting agencies will be necessary. This task may require an amendment if the level of effort exceeds that shown in the budget. If the actual work effort cost reaches 90% of this estimate, DD&A will alert the client and request an amendment.

DD&A QUALIFICATIONS

Attached are DD&A's qualifications for this project and resumes for the key individuals that will be assigned to complete the scope of work (Denise Duffy and Alison Imamura).

² If construction activities are deemed to potentially disturb sensitive habitat and the project is not redesigned to avoid the species and habitat, a California Endangered Species Act Section 2081 Take Permit and/or a Federal Endangered Species Act Take permit may be necessary. If they are found to be necessary, existing HMPs and/or Biological Opinions may be relied upon to mitigate impacts, and DD&A is available to assist with additional biological surveys, reports and permit applications and processing for an additional fee.

Ď	Denise Duffy & Associates Labor - MPWMD 95-10 Hydrogeologic Studies at Fort Ord Dunes State Park - Project Permitting	Hydrogeol	logic Stud	ies at For	t Ord Du	nes State	Park - Pro	ject P	ermit	ing
LYSKS#	Task Description	lsqiənin¶	Project Manager	Senior Biologist	Planner/Scientist/CIS	Clerical	PENSES (Communication, cument preparation, eage)	b-Task Total		sk Total (not including tional task 2.3.5)
	Rate	\$ 205.00	\$ 125.00	\$ 105.00	\$ 77.50	\$ 60.00	юр	nS		
2.3	Permitting for Geotechnical Borings									\$ 8,635
2.3.1	Project Initiation, Management and Meetings	9	12	2		2	75	69	2,925	
2.3.2	Early Consultation CDPR/MPW/MD/CCC/Army	2	10	4	9			\$ 2,	2,545	to the state of the same to the state of the
2.3.3	Prepare Draft Application Materials for CDPR	2	16	9	12	8	150	S	3,970	
2.3.4	Respond to Comments / Final Application Materials	2	9	2	8	4	100	se.	2,120	
2.3.5	OPTIONAL Coastal Permit -Waiver Process	4	20	8	18	8	400	s	435	
3.2	Permitting for Test/Monitoring Wells									\$ 33,113
3.2.1	Test Well Project Description, Management & Meetings	9	12	4	2	9	50	89	3,319	
3.2.2	Early Consultation CDPR/MPWMD/CCC/RWQCB	4	10	8	4		Total Care Company of the Control of	\$ 2,	2,388	ade mentiographic facility of the country by designation and distributions.
3.2.3	Site Surveys - Biology			4	8		30	se.	682	
3.2.4	Prepare Draft Application Materials for CDPR	4	16	9	8	4	100	6 /3	3,812	
3.2.5	Respond to Comments / Final CDPR Application	2	2		4	2	50	€ 9	1,140	***************************************
3.2.6	Prepare Draft Application Materials for CCC	4	24	4	18	8	200	S	6,227	
3.2.7	Respond to Comments / Final CCC Application	2	9		4	2	200	s,	1,814	
3.2.8	Prepare Draft Application Materials for RWQCB	4	30	8	16	9		⇔	6,570	
3.2.9	Respond to Comments / Final RWQCB Application	2	8	2	2	2	200	S	1,901	
3.2.10	Project Strategy/Description Assistance	8	24	Manage, Sagarif.	8	•		\$ 5,	5,260	
Total DD6	Total DDA hours by person	48	9/I	20	100	44				418
Total DDA	Total DDA cost by person	\$ 9,840	\$ 22,000	\$ 5,250	\$ 7,750	\$ 2,640	\$ 1,855			\$ 41,748

TOTAL NOT-TO-EXCEED COST ESTIMATE (no optional task 2.3.4) \$ 41,748

TOTAL NOT-TO-EXCEED COST ESTIMATE (including optional task) \$ 48,183

For this reason, DD&A reserves the right to notify the client when time and expenses have reached 90% of this not-to-exceed amount and request agency staff changes and timeframes for project review and approval, the level of effort required for DD&A may be more than the estimate provided. Assumptions for the estimate of hours of effort: The assumptions and exclusions in the DD&A scope of work (dated Jan. 4, 2009), this is a reasonable estimate of level of effort based on past experience of DD&A staff. Due to the variables involved in the permitting process, such as additional budget, if necessary, to assist the client with permit acquisition. Up to three meetings with MPWMD, CDPR, and project team are included in each task. No hearing attendance or Board meeting presentations are included.



FIRM QUALIFICATIONS

Denise Duffy & Associates Company Profile

Denise Duffy & Associates, Inc. (DD&A) offers professional environmental consulting products and services to local, regional, state, and federal agencies, public institutions, private land owners, corporations, and developers. DD&A has demonstrated project experience in the preparation of environmental documents for a variety of infrastructure water supply projects and planning efforts. including sewer/water/drainage lines, bridges, and roadways. As a land use planning and environmental consulting firm, DD&A provides high quality environmental impact and constraints assessments, management of development proposals and projects, natural resource analysis, management and permitting, site planning, governmental studies, and contract planning. DD&A has extensive experience in developing the most sustainable and implementable mitigation and recommendations to enhance the environment, policy consensus, and provides community outreach and facilitation for complex and controversial projects.

DD&A has a well-respected reputation in the thorough and ethical preparation of environmental documentation in compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). From small focused environmental assessments to multidisciplinary, inter-jurisdictional reports on large-scale development projects, **DD&A** has a proven track record for meeting our clients' needs and successfully coordinating and completing the requirements for state and federal environmental review.



The Natural Resources Division of **DD&A** performs biological impact assessments; stream, wetland, lake/reservoir and estuary management; biological reports; wetland delineations and assessments; site assessments (environmental constraints/opportunities analysis); watershed science and planning; restoration planning, design, and implementation; mitigation monitoring and reporting programs; environmental permitting and approvals; and special-status species consultation and management.

DD&A tailors each project team to ensure the most qualified professionals are available to assist the client. DD&A assembles the best land use planners, biologists and wildlife specialists, civil engineers, transportation, air quality, acoustical, cultural resource, geotechnical, hydrogeologic, and other technical specialists to meet each project's objectives. Project team interaction and individual expertise ensures efficient project management with a high standard of performance and quality.

Denise Duffy & Associates' Specific Qualifications for the Monterey Peninsula Water Management District: Hydrogeologic Studies for the Order 95-10 Project

DD&A has the practical experience and technical knowledge to address the environmental issues associated with the proposed project. The team represents decades of specialized experience in land development and community planning projects in addition to having the in-house and technical consulting expertise to address community concerns. Our reputation underscores our ability to meet the project needs: we have handled dozens of controversial projects for jurisdictions and have successfully satisfied CEQA/NEPA and related permitting requirements for these projects.

DD&A is qualified in all phases of project development, particularly the preparation of environmental documentation in compliance with federal, state, and local requirements. DD&A is headquartered in Monterey, California and has regional offices in San Jose, California, and in Reno, Nevada. DD&A consistently oversees the preparation of Environmental Assessments, Environmental Impact Reports, Environmental Impact Statements, and other various CEQA and NEPA environmental documents and technical reports. DD&A employs recognized experts in the preparation of environmental documentation in compliance with NEPA and CEQA. DD&A also has full service technical capabilities for graphics (including GIS, Adobe, and a variety of publishing software), California Natural Diversity Database subscription, and all necessary field and office equipment for the completion of this proposed work effort.

Denise Duffy & Associates, Inc. (DD&A) has been in business twenty-five years as a land use planning and environmental consulting firm providing services in CEQA and NEPA compliance, regulatory permitting, management of infrastructure projects, natural resource planning, environmental impact assessments, water supply and distribution planning, watershed and hydrologic analyses, and contract planning services.

DD&A is experienced in water supply, wastewater and stormwater projects including analysis of major facilities such as wells, tanks and distribution lines, instream dams and reservoirs, stormwater facilities, recycled water, water planning, and desalination projects. The following short list environmental analysis and processing projects demonstrates our specific experience. Additional relevant projects are provided in the next section.

- Regional Water Augmentation Project Alternatives Feasibility Report (Regional Desalination Plant and Urban Water Recycled Project) and EIR for MCWD in consultation with FORA
- MCWD Bayer Tank CEQA Documentation, Permit Coordination, and Construction Monitoring

- MCWD Desalination Project EIR
- MCWD Recycled Water Pipeline Project EIR Addenda and EA,
- MCWD UCMBEST Water Pipeline Project EA/IS Negative Declaration and FONSI,
- Carmel Area Wastewater District (CAWD) and Pebble Beach Community Services District Wastewater Reclamation Project,
- CAWD IS/MND on the Micro-Filtration/Reverse Osmosis Advanced Tertiary Treatment Project,
- San Clemente Dam Three-Phase Engineering Feasibility, Alternatives Analysis, Preliminary Environmental Assessment, CEQA/NEPA Environmental Processing and Engineering Design, and
- CEQA Compliance for the CSUMB Storm Water Master Plan

DD&A has the complete technical capabilities for project evaluation and proven track record for completion of major environmental analyses on complex infrastructure projects. DD&A's in-house capabilities include a full staff of planners and environmental consultants, permit acquisition, and entitlement experts as well as personnel very familiar with the District regulations and procedures for environmental documentation on similar projects. Denise Duffy and the senior management team are proven experts in CEQA/NEPA preparation and all DD&A staff has direct and extensive knowledge of all applicable local, state, and federal environmental laws, standards, and practices affecting this project. DD&A has a long-standing reputation for thorough and excellent environmental documentation preparation on complex water supply and wastewater projects.

DD&A is very familiar with the individuals, agencies, businesses, and environmental organizations that would be most affected by or most interested in this project. DD&A brings a wealth of professional contacts with the agencies, key players, and decision-makers on every level of this project, including specific experience with CEQA and NEPA documentation for the local agencies and jurisdictions.

Representative Projects

The following are representative projects demonstrating DD&A's commitment to environmentally responsible and sustainable projects through our precise, thorough and ethical application of local, state, and federal environmental and planning laws and policies.

CSUMB Master Plan Environmental Review. DD&A prepared environmental documents for the 2007 Master Plan for the California Statue University Monterey Bay. This plan addressed the continuation of the conversion of a former military base to a public educational institution. The project required closely coordinated efforts between members of the project team,



including the project management staff and master planning consultants. DD&A prepared the EIR with program-level and project-level components to streamline the CEQA process addressing various physical environmental impacts associated with full buildout of the campus. The project objectives included creating a development that incorporates site design, residential architecture, and construction consistent with the best practices in Green Development, including the reduced consumption of resources (water, energy, and materials); increased mobility options and reduced dependence on automobile travel; economic diversity and accessibility of residents through a diversity of products; regionally appropriate architectural design drawn from historic precedents and materials; progressive decentralized storm water solutions that reduce impact, increase infiltration, and eliminate off-site discharge in all but extreme storm events; reduced potable water consumption for interior residential uses and exterior landscape applications; and the incorporation of new "green" materials and techniques through research, analysis, and monitoring linked to University curriculum.

Seaside Sentinel Wells Environmental Review and Permitting. Working closely with the hydrogeologist, DD&A prepared applications and coordinated with the client, land owner, the California Coastal Commission, and the U.S. Army to entitle the installation and use of the Sentinel Monitoring Wells for the Seaside Basin Watermaster. The purpose of the wells is to monitor the Seaside Groundwater Basin for seawater intrusion. Based on DD&A's development, monitoring, and enforcement of thorough environmental avoidance measures and construction best management practices, the project qualified for a Categorical Exemption from CEQA and was permitted via a "de minimus" waiver from the California Coastal Commission.



Pescadero Canyon Restoration: Riparian Habitat Restoration Planning, Condition Compliance Management, Mitigation Monitoring, and Initial Study/Negative Declaration. For the City of Carmel-by-the-Sea, DD&A produced a Mitigation Monitoring and Reporting Plan, conducted site inspections of project construction, supervised the installation of a Creek Stabilization Plan, and consulted on re-vegetation species. DD&A prepared an Initial Study/Negative Declaration for a project involving construction of infrastructure and installation of a Riparian Habitat Restoration and Erosion Control Plan for a canyon, creek mouth and beach impacted by a debris dam breakout

flood. Surface and subsurface flows, seepage, landslides and unstable slopes have complicated the design and construction of this project. The property is located at the mouth of Pescadero Canyon at Carmel River State Beach and adjacent to the Pebble Beach Golf Course. DD&A also acquired the appropriate agency permits and provided coordination between the agencies for this project.

Mission Trails and Rio Road (Flanders Gulch) Flood Damage CEQA Documentation, Permits, Stream Stabilization, and Restoration. Flanders Gulch, which drains the south side of the City of Carmel into the Carmel River, sustained heavy damage in the 1995

and 1998 floods. DD&A was retained by the City of Carmel by the Sea to prepare an Initial Study/Negative Declaration and emergency Categorical Exemption respectively for CEQA clearance for these projects. DD&A also obtained the necessary Corps nationwide permits, RWQCB waivers, CDFG 1601 Agreements, Monterey Peninsula Water Management District river work permit, and administrative Coastal Development Permit. The Rio Road to Carmel River reach work was redesigned and monitored to avoid new fill in the Carmel River at the new outlet structure, provide a natural flood control overflow channel, minimize riparian habitat, steelhead and red legged frog impacts, and restore cleared arroyo willow riparian habitat. The Mission Trails reach was redesigned to provide only two heavy equipment access ramps, use biotechnical grade control and bank stabilization where appropriate, and install grade control structures with California Conservation Corps labor. Homes bordering the creek were urged to make the necessary bank stabilization repairs under these "blanket" permit construction windows. The heavily used recreation trail was restored, dangerous trees removed, and the access ramps degraded and revegetated with native species. Client: City of Carmel-by-the-Sea.

Monterey County Bridges Seismic Retrofits/Replacements: Biological Monitoring, Regulatory Permits, and NEPA/CEQA Documentation. DD&A worked closely with Boyle Engineering on the design, NEPA/CEQA environmental documentation, and permit acquisition for the retrofit of seven bridges and replacement of two bridges over the Salinas River, Arroyo Seco River, San Lorenzo Creek, Lewis Creek and other streams. This effort included Preliminary Environmental Studies, Natural Environment Studies, and management of Cultural Resources Studies and Hazardous Waste Initial Site Assessments. The environmental documentation included Categorical Exclusions/Exemptions, IS/ND and EA/FONSI. In addition, DD&A facilitated coordination with Caltrans and FHWA, conducted ESA consultation, and acquired all of the necessary environmental regulatory permits. DD&A incorporated all of the environmental conditions into the Plans, Specifications and Cost Estimates (PS&Es) and is performing the pre-construction and construction monitoring, which includes wetland and riparian restoration at each site.

Agriculture and Land Based Training Association (ALBA) Triple M Ranch Wetland Restoration Project. DD&A was contracted by the ALBA to prepare a Biological Assessment for use in consultation between USFWS & ACOE, a Wetland Delineation, and regulatory permit applications (Clean Water Act Sections 404 and 401, and Fish and Game Code Section1602) for the Triple M Ranch Wetland Restoration Project, located near Las Lomas, CA in the Elkhorn Slough Watershed. The project goals include improving and maintaining habitat for three state and/or federally listed species (California red-legged frog California tiger salamander, and Santa Cruz long-toed salamander), improving water quality on the site, and restoring diverse native plant communities. DD&A provided innovative environmental solutions to improving water quality, and biological conditions for sensitive, plants, habitats and animals.

Andrew Molera State Park Pedestrian Bridge: Protocol Level Wildlife Studies and Surveys, Regulatory Permitting, and Biological Monitoring. Coordinated the acquisition of the regulatory permits and wildlife studies and surveys necessary for the construction

of a pedestrian bridge over the Big Sur River in Andrew Molera State Park. The permits for this project include a 1601 Stream Bed Alteration Permit, Clean Water Act Section 401/404 permits, and were in accordance with the Local Coastal Plan. NMFS and FWS Endangered Species Act consultation for steelhead, red legged frog and listed riparian bird species was acquired with minimal agency comment on a fast timeframe due to DD&A's knowledge of and commitment to superior mitigation for this project.

Santa Clara Valley Water District Coyote Lakes Wetland Creation Project. DD&A provided early feasibility, CEQA and permitting consultation services including conducting initial study checklist and technical studies scoping services for the creation of a 20-acre wetland project in South San Jose. Key issues included reviewing and recommending geotechnical, hydrology, biological methodologies and protocol for the proposed project. In addition, DD&A provided an overview of CEQA, NEPA and permitting requirements which guided the successful implementation of the wetland project.



Education

Public Policy and Planning Studies, University of California at Berkeley, Continuing Education

Bachelor of Arts, Environmental Studies, University of California at Santa Barbara, 1977

Professional Affiliations

American Planning Association

Association of Environmental Professionals

Denise Duffy

Denise Duffy is founder and president of the company, and has extensive experience in public involvement, environmental analysis, project management, entitlement processing, and interagency coordination. Ms. Duffy is a leader in the field of land use planning and environmental and public policy in the Central Coast area. She brings over 25 years of experience in CEQA and NEPA processing, public involvement, and project management for major infrastructure studies. Denise Duffy has prepared, managed and participated in hundreds of environmental analyses and reports including EIRs, EAs, EISs and MNDs and Initial Studies.

Denise Duffy's experience includes environmental reports and analysis that have been conducted for and/or been accepted by the Bureau of Reclamation (BR) Federal Aviation Administration (FAA), Bureau of Land Management (BLM), Army Corps of Engineers (USACOE), Federal Highway Administration (FHWA), National Marine Fisheries (NMFS/NOAA), U.S. Department of Housing and Urban Development (HUD), U.S. Fish and Wildlife Service (USFWS), as well as various other federal and state review agencies. Her experience qualifies her as project manager, development expert, and land use consultant for major facility and planning projects in California.

Ms. Duffy has ample experience managing and authoring environmental assessment documents for private and public developments and in the management of complex water resource planning processes for large projects. Her recent project experience includes preparing EIRs under CEQA and Environmental Assessments under NEPA for major infrastructure projects for the Marina Coast Water District, the Santa Clara Valley Water District, the Monterey Peninsula Water Management District, the Department of Water Resources, the Fort Ord Reuse Authority, the Carmel Area Wastewater District, the Pebble Beach Community Services District, and other agencies. Past project experience includes preparation of environmental documentation for Department of Water Resources and California-American Water Company. Ms. Duffy has extensive experience in public involvement, including the development of policy consensus in planning projects; she has worked in a variety of positions that require governmental cooperation and citizen involvement.

Project Experience:

Marina Coast Water District Regional Urban Water Augmentation Project: Ms. Duffy served as the overall project manager and oversaw the preparation of the alternatives/engineering analysis and environmental documentation. The DD&A team conducted a thorough and comprehensive alternatives analysis to identify a non-groundwater source of urban water supply (to accommodate future development of the former Fort Ord and portions of the Monterey Peninsula). The alternatives considered included projects that would be technically, environmentally, and financially viable and sustainable. As part of the analysis, DD&A conducted technical advisory committee meetings to gather input from individuals and agencies with particular experience and interest in the project. This project includes development of the Alternative Analysis Report, engineering design and feasibility analysis, and determination of preferred projects.

Marina Coast Water District (MCWD) Desalination Plant EIR: Ms. Duffy served as the overall project manager and oversaw the preparation of the environmental documentation. DD&A prepared the EIR for all phases of a proposed desalination plant to serve customers within the MCWD. Key issues that were analyzed included the hydraulic modeling of brine discharge, potential impacts to near-shore biological resources, growth inducement, and development of a monitoring program to protect marine resources.

Denise Duffy

Principal

Carmel Sanitary District/Pebble Beach Community Services District Wastewater Reclamation Project EIR: Ms. Duffy served as the overall project manager and oversaw the preparation of the environmental documentation. DD&A prepared a comprehensive EIR analyzing the impacts of using reclaimed water on seven Pebble Beach golf courses in the County of Monterey. Because the project involved a net savings of about 850 acre-feet of potable water, issues addressed included regional water supply, water allocation, and water quality. Client: CSD/PBCSD.

San Clemente Reservoir, Monterey County, Phases I, II, and II: Ms. Duffy served as the overall project manager and oversaw the preparation of the environmental documentation. DD&A prepared a multiphase analysis of a major water project on the Carmel River. The analysis included initial management of engineers and planners and a team of environmental experts in order to determine a set of preferred alternatives for further review. The second phase of the project included preliminary design of the preferred alternatives and review of potential environmental impacts and issues for the selected dam repair alternatives. Potential environmental issues reviewed included biotic resources, wetlands, fisheries, archaeology, construction impacts, visual impacts, land use compatibility, and water supply/growth inducement. Project analysis was conducted for the Department of Water Resources, Division of Safety of Dams (DSOD). The third phase of the project included the preparation of an EIR (CEQA) and an EA (NEPA). The project involved a lead role in determining the type and scope of State and federal environmental review, documentation, and permitting considered necessary. DD&A prepared the EIR/EA on the preferred dam repair alternative. Client: California-American Water Company.

Canada Reservoir Preliminary Environmental Assessment and CEQA/NEPA Studies, Monterey County: Ms. Duffy served as the overall project manager and oversaw the preparation of the environmental documentation. DD&A conducted comprehensive environmental studies for the conceptual design of a 28,000 acre-foot reservoir, diversion structure, and treatment plant in the Carmel Valley area of Monterey County. Responsibilities included the management and coordination of studies for river hydraulics, sedimentation, biotics, seismicity, geotechnical/geologic conditions, archaeological resources, land use, and cost estimation. DD&A was also retained as the environmental consultant to evaluate the potential environmental issues of the proposed facilities and alternative sites. The documentation was included in the EIR/EIS prepared for the Water Supply Alternatives by the Monterey Peninsula Water Management District. Client: American Water Works Service Company/ California-American Water Company.



Alison Imamura, AICP

Senior Planner / Engineer / Project Manager

Education

Bachelor of Science, Environmental Engineering, Cal Poly San Luis Obispo, 1995.

Master of Science, Civil and Environmental Engineering, University of California at Berkeley, 1996.

Continuing Education, Land Use/Natural Resources, University of California, Davis, ongoing.

Professional Affiliations

Association of Environmental Professionals (AEP) American Planning Association (APA)

Work Experience

Senior Environmental
Planner/Engineer, DD&A

Environmental Engineer, Radian International

Water Resources Engineer,
California Regional Water
Quality Control Board, Central
Coast

National Science Foundation
Intern, University of Southern
California Center for Laser
Studies

Registrations/Certifications

American Institute of Certified Planners (AICP) Engineer-in-Training (EIT) Alison Imamura, AICP, is a professional planner and environmental engineer with over 12 years of experience managing and preparing major environmental documents for public agencies, in addition to assisting with local, State, and federal permit acquisition, entitlements processing, and environmental monitoring and reporting. Ms. Imamura has a technical background in environmental and civil engineering and provides project management and CEQA/NEPA expertise on a range of projects. She is intimately familiar with local, State, and federal issues, policies, and regulatory regimes regarding water supply. Ms. Imamura brings the following planning, regulatory, scientific, and engineering expertise to DD&A's projects:

- Design, construction, and operation of waste water and water supply systems and other infrastructure projects;
- Air quality engineering, including complex air pollution modeling and environmental health and safety programs;
- Permitting under the Clean Water Act and National Pollutant Discharge Elimination System (NPDES);
- Experience evaluating hazardous material issues and solutions at contaminated sites;
- Specific and general planning principles and practices;
- Infrastructure funding, capital planning, and funding;
- Identification and mitigation measure development forwater quality and wetlands impacts/projects; and
- Management of mitigation monitoring for major land use development and infrastructure projects, including residential, commercial, transportation, water supply, and drainage facilities.

Ms. Imamura has managed the following key DD&A projects, in addition to her work on dozens of other CEQA, NEPA, long-range planning, entitlements, permitting, and monitoring projects:

Marina Coast Water District (MCWD) Water Augmentation Project and Environmental Impact Report (EIR): Ms. Imamura was the environmental project manager for this water supply planning project, which had the goal of identifying, designing, and evaluating alternatives for augmenting available groundwater supplies for redevelopment projects at the former Fort Ord. The key alternatives included a desalination project in the City of Marina and a regional urban recycled water project. The analysis included collaborative team efforts toward input and involvement from more than a dozen agencies and jurisdictions, organization of technical advisory and agency meetings, and presentation of results at various FORA and MCWD committee and board hearings. The EIR included analyses of terrestrial and marine resource impacts, energy, air quality, noise, cultural resources, hazardous materials, hydrology and water quality, traffic, and, in particular, water supply, growth inducement, cumulative impacts, and land use issues. The EIR was completed and certified in April 2005. In addition, since then, she has managed the project-level CEOA and NEPA processes for the Regional Recycled Water Project that will provide recycled water for irrigation purposes throughout the former Fort Ord and into the Monterey Peninsula.

Carmel Valley Filter Plant Clearwell Project Permitting and Environmental Monitoring: In 1998 and 1999 Ms. Imamura managed this project, which involved site planning, environmental constraints analyses, preliminary environmental review, permitting application preparation and submittal, and monitoring of mitigation

Alison Imamura, AICP

Senior Planner / Engineer / Project Manager

implementation and condition compliance. The project involved the construction of a new 1.5-million-gallon concrete tank and laying of pipeline along an existing access road on Cal-Am property. Critical issues included construction impacts on the local neighborhood, archaeology, and vegetation.

Seaside Highlands (Hayes) Housing Development Project Contract Planning and Mitigation Monitoring. Ms. Imamura served as contract planner for the first private residential redevelopment project at the former Fort Ord. She managed a complicated entitlements process and resolved the challenges of processing the CEQA review and project approvals for this 380-unit subdivision, including open space, community building, parkland, and detention facility/open space. Ms. Imamura brought the City, responsible agencies, and the applicants together through a year-long process of project redesign, environmental review, and conditions of approval negotiations that eventually lead to successful entitlement and ultimately construction of the project. She provided staff reports, noticing, EIR consultant coordination, and public hearing preparation and presentation, but she also served as mediator during intensive negotiations concerning the language and conclusions in the EIR and the project conditions of approval. She developed and implemented a condition compliance and mitigation monitoring database/tracking systems, prepared and reviewed the subdivision and reimbursement agreements, and provided substantial input on the covenants, conditions, and restrictions. She performed site inspections and reporting to ensure proper implementation of conditions of approval, including mitigation measures for erosion and dust control, construction best management practices, landscaping, fencing, architectural variety, and treatment of hazardous materials among others.

Marina Coast Water District Water System Master Plan and Capital Improvement Plan Environmental Strategy. In consultation with MCWD and Carollo Engineers, DD&A prepared an analysis and an efficient, effective, and reliable CEQA strategy for processing the projects within the Marina Coast Water District Water System Master Plan (WSMP) and Capital Improvement Program (CIP). DD&A reviewed and conducted preliminary strategic analysis, in addition to reviewing the overall WSMP/CIP and completing an Initial Study Checklist. DD&A recognized the timeliness of developing an optimal CEQA process for the WSMP projects due to the following factors: 1) possessing conceptual project descriptions and schedules for programmed construction projects within the next several years, 2) funding programs in place, and 3) several large new developments are under construction and/or entering service agreements with MCWD. DD&A worked with the clients to develop criterion to determine the preferred CEQA process for the WSMP and the individual projects within the WSMP and CIP. These included schedule/timeframe, cost effectiveness and economies, assurance for usability, effectiveness and risk of CEQA challenges (i.e., political/environmental controversy), and need for CEQA process (review for exemption).

Gilroy General Plan Update EIR. Ms. Imamura managed preparation of the EIR for the City of Gilroy's controversial General Plan Update. The EIR addressed environmental impacts of the General Plan, changes to the General Plan land use map, and development policies. Key issues included conversion of agricultural land, provision of public services, and infrastructure, population and housing, traffic, air quality, noise, and biological issues.

Carmel Area Wastewater District Salinity Management Program Environmental Review. Ms. Imamura acted as Project Manager for a project that involves upgrading Carmel Area Wastewater District and Pebble Beach Community Services District's Recycled Water Treatment and Distribution systems to an advanced tertiary treatment system. The purpose of the project is to provide reduction in salinity of the product water that is used on golf courses in the Pebble Beach/Del

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Monte Forest area. DD&A was involved in developing not only the preferred method of achieving the salinity reduction (in this case, microfiltration and reverse osmosis), but also in providing key strategic assistance on the environmental impacts, regulatory constraints, and CEQA process for the project, which included an IS/ND.

Marina Coast Water District Well 33 Project Initial Study and Environmental/
Permitting Strategy Coordination. Ms. Imamura acted as project manager for
environmental review and permitting process for a test well and provided scoping
and early environmental review of permanent well in the Salinas Valley groundwater
basin to replace existing system wells that may be threatened by seawater intrusion.
Key issues included controversy over land and water rights, construction impacts
(air, noise, erosion), and water supply.

Santa Cruz Rail Line CEQA/NEPA. Ms. Imamura managed interagency coordination to determine CEQA and NEPA compliance requirements and to resolve contractual issues with the client and subconsultants. The project included preparation of a CEQA Initial Study and a NEPA Categorical Exclusion for the acquisition of the entire length of Union Pacific Railroad in Santa Cruz County.

Pacific Grove Shore Improvement Project IS. Evaluated environmental impacts of improvements proposed by the City of Pacific Grove to reinforce various shoreline facilities, including recreation trails, roads and other infrastructure. This required gathering input from local, State, and federal agencies and working with the City and project engineers to refine mitigation measures to make them feasible and practical. Key issues including California Coastal Act consistency, sand balance, biological resources, aesthetics, recreation, cultural resources, and water quality issues.

Other Project Management Experience:

- Caltrans NEPA Noise Studies, Statewide
- Capitola Road Improvements NEPA/CEQA Technical Studies
- Carmel Beach Bluff Protection IS/ND and Resource Agency Permitting
- Carmel Hill and River Bicycle and Pedestrian Trail NEPA/CEQA
- Carmel Storm Drain and Tree Removal projects IS/ND
- Carmel Valley Road Improvement Projects IS/ND
- City of Seaside Well Replacement Project IS/ND
- Creekbridge Residential Subdivision Prezoning and Annexation EIR
- Creekside Center Mixed Use Project EIR
- Fairview Road Left Turn Channelization Project NEPA Technical Studies
- First Tee Project Contract Planning, IS, EA, and EIR
- Gilroy Presbyterian Church EIR Initiation
- Gilroy Urban Service Area Amendments EIR
- Gilroy Uvas Creek Trail/Park and Las Animas Veterans Park Initial Studies
- Gilroy Miraflores and PSI Residential Development IS/MNDs
- Gilroy Eastside Studies General Plan Amendment Environmental Studies
- Hitchcock House/San Carlos Inn Project EIR
- LaTourette Residential Subdivision, Monterey County EIR
- Panattoni Bridge and Riparian Restoration (Carmel Beach) IS/MND
- Rispin Mansion Hotel and Library EIR
- Sea Urchin/Periwinkle Residential Development EIR
- Seaside Resort Development Entitlements Processing
- SPCA Monterey County Horse Rescue Facility Environmental Assessment and Entitlements and Overall Facility Planning
- Tavernetti/Morisoli Subdivision EIR

FEE SCHEDULES

Martin B. Feeney, PG, CEG CHg Consulting Hydrogeologist

Fee Schedule 2009

Professional Services	
Principal Hydrogeologist	\$150/hour
Principal Hydrogeologist (field)	\$135/hour
Project Hydrogeologist	\$120/hour
Word Processor	\$70/hour
Illustrator/GIS	\$90/hour
Equipment	· · · · · · · · · · · · · · · · · · ·
Data Logger and Transducer	\$125/day
Conductivity Meter	\$75/day
Turbidity Meter	\$75/day
Indirect Charges	
Reproduction	Cost + 15%
Outside Services	Cost + 15%
Laboratory Services	Cost + 15%
Mileage (outside 100 mile radius)	\$0.50/mile



2009 STANDARD FEE SCHEDULE

PROFESSIONAL SERVICES

Principal Professional\$	160/hr
Senior Professional\$	145/hr
Senior Field Professional\$	135/hr
Project Professional \$	130/hr
Staff Professional\$	100/hr
Senior Technician\$	90/hr
Technician\$	80/hr
Drafting\$	70/hr
Word Processing\$	55/hr
OTHER DIRECT CHARGES	
Subcontracted ServicesCost	Plus 15%
Outside ReproductionCost	Plus 15%
Travel, Subsistence, and Expenses	Plus 15%
Vehicle\$	75/day
Automobile Mileage (beyond 50 miles from Pueblo offices)\$0).585/mile



Denise Duffy & Associates, Inc.

PLANNING AND ENVIRONMENTAL CONSULTING

SCHEDULE OF RATES

HOURLY PERSONNEL RATES

Principal	\$205.00
Senior Project Manager	\$135.00
Senior Environmental Specialist	\$125.00
Environmental Biologist	\$118.00
Project Manager	\$108.00
Senior Planner	\$100.00
Assistant Project Manager	\$ 95.00
Associate Planner/Scientist	\$ 88.00
Assistant Planner/Scientist	\$ 78.00
GIS/Computer Specialist	\$ 78.00
Administrative Manager	\$ 70.00
Graphics	\$ 68.00
Field Technician	\$ 60.00
Administrative Assistant	\$ 58.00

The above rates are valid through 12/31/09, and subject to revision thereafter.

Reimbursable Expenses are charged at DD&A cost, plus 15%.

These expenses may include, but are not limited to: Subconsultants, reproduction, courier, postage, long-distance phone, fax and cellular, mileage and field supplies.

Mileage will be charged at the current IRS mileage rate.

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