EXHIBIT 1-A

CDM

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MAR 21 2003

19 March 2003

Ms. Henrietta Stern
Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, CA 93943

Subject: Monterey Peninsula Water Supply EIR – Final Technical Memorandum Phase 1

Dear Henrietta:

Camp Dresser & McKee Inc. (CDM) is pleased to submit the final Phase 1 Technical Memorandum for the Monterey Peninsula Water Supply Project EIR. The report provides a project-level engineering analysis of a desalination project at Sand City and Seaside groundwater basin aquifer storage and recovery (ASR), as well as several program-level alternatives.

Sand City Desalination Project

The report includes a hydrogeologic assessment of well sites and well technologies for seawater collection and brine disposal. We believe that horizontal directionally-drilled (HDD) wells are a promising technology that could have advantages over other technologies, such as radial wells. HDD wells could be extended offshore to minimize on-shore impacts. Also, they can be located in the beach areas of Sand City and along the bluffs of former Fort Ord. Radial wells, in contrast, would need to be installed in beach areas of Sand City, where space constraints limit the maximum size of the project to 6,000 acre-feet/year or less. The report identifies project facilities that would be required for a project with up to 10 MGD (11,000 af/year) of production capacity. The largest size project evaluated has a capital cost ranging from $176 to $216 million, with an associated unit cost of water of $2,300 to $2,500/acre-foot.

However, our Phase 1 engineering assessment is based on limited data and there are many technical questions regarding use of the HDD well technology, including application to the seawater environment, construction methods, costs, and yields. We recommend field investigations early in Phase 2 to address these issues for HDD wells.

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Additionally, we believe that there are significant institutional issues associated with this project, regardless of the technology used for seawater collection and disposal, and that permitting will be complex and challenging. The Phase 1 report identifies key agencies with regulatory authority for the project. The Phase 1 investigation did not include a fatal-flaw screening with respect to permitting, and we would recommend that this be done early in Phase 2, to identify potential fatal flaws for a project using either HDD wells or radial wells.

ASR Project

The report includes an assessment of facilities required for a small ASR project that could be readily integrated with Cal-Am facilities, and larger projects that would require extensive improvements to the Cal-Am system. Our analysis indicates that a small ASR project would be practicable, but that the larger project would be very costly, and would have significant implementation issues. A project with three ASR wells has an estimated capital cost of $21 million for a project that would yield up to 700 acre-feet/year. The associated unit cost for this project is $2800/acre-foot.

Program-Level Alternatives

The report includes an analysis of recycled water, offstream storage and stormwater re-use. The report includes recycled water and stormwater re-use at yields ranging from 300 to 400 acre-feet/year.

We look forward to continuing to work with you during Phase 2 of the EIR.

Very truly yours,

Polly Boissevain

Camp Dresser & McKee Inc.

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Senior Project Manager

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Executive Summary

E.1 Introduction and Background

Camp Dresser & McKee Inc. (CDM) is providing engineering support to Jones & Stokes for preparation of an environmental impact report (EIR) for Monterey Peninsula Water Management District's (MPWMD's) Monterey Peninsula Water Supply Project. CDM's evaluation includes five water supply components, two that will be evaluated in the EIR at a project-level, and three that will be evaluated at a programmatic-level:

Aquifer storage and recovery (ASR) in the Seaside Basin (Project-Level). Use of existing and new wells along the Carmel River to divert excess winter flow from Carmel River for subsequent aquifer storage and recovery (ASR) in the Seaside groundwater basin.

Included in this Section:

Local Desalination Plant at Sand City (Project-Level). Treatment of seawater to potable water standards, using beach wells for water collection and brine disposal. Sites being evaluated are within the MPWMD District boundary, in and around Sand City.

Wastewater Reclamation (Program-Level). Wastewater reclamation through expansion of existing and planned projects by Monterey Regional Water Pollution Control Agency and Marina Coast Water District (MRWPCA/MCWD), and Carmel Area Wastewater District/Pebble Beach Community Services District (CAWD/PBCSD) wastewater reclamation projects.

Off-stream storage (Program-Level). Diversion of Carmel River water to off-stream storage, either as a stand-alone project (for Carmel Valley only) or in conjunction with the ASR Project (Carmel Valley or Fort Ord).

Stormwater Re-use (Program-Level). Several concepts were evaluated to identify potential options for inclusion in the EIR. Information is presented on individual collection systems (cisterns).

ASR, local desalination and wastewater reclamation projects draw upon projects identified in the Plan B Project Report (RMC, 2002), prepared for the California Public Utilities Commission. Off-stream storage and stormwater re-use components have been included at the request of the MPWMD.

E.2 Supplemental Supply Requirements

Based on direction from the MPWMD Board, the Water Supply EIR will evaluate alternative water supply projects for three production targets. These targets, along with their basis, are as follows:

Step 1: 15,285 acre-feet/year. The current Cal-Am production limit, based on SWRCB Order 95-10 production limits for the Carmel River and MPWMD production limits for the Seaside basin.

Step 2: 17,641 acre-feet/year. The Cal-Am production limit, prior to SWRCB Order 95-10, based on historical uses within the Cal-Am system.

Step 3: 18,941 acre-feet/year. Includes historical Cal-Am production limit and an additional allocation for the future development of lots of record.

Production targets represent dry-year targets when water demands are higher due to lower amounts of rainfall.

Table E.1 summarizes the average annual water supply required for the three production steps.

Table E.1
Water Supply EIR – Target Production Levels and Water Supply Needs

Production Target	*Carmel River Legal Supply*	*Seaside Basin Supply*[1]	*Additional Supply Required*
Annual Supplies and Needs (acre-feet/year)			
Step 1 – 15,285	3,376	3,500	8,409
Step 2 – 17,641	3,376	3,500	10,675
Step 3 – 18,941	3,376	3,500	12,065
Average Supply (million gallons/day)			
Step 1 – 13.6	3.0	3.1	7.5
Step 2 – 15.7	3.0	3.1	9.5
Step 3 – 16.9	3.0	3.1	10.8

(1) Current Cal-Am production limit from Seaside basin is 4,000 acre-feet/year. 3,500 acre-feet/year was used as a basis for planning, as a conservative estimate of sustainable production from the aquifer.

Drought Management and Conservation

The District's basis for facility planning incorporates mandatory drought rationing, with 20 percent cutbacks, 2 percent of the time. At the request of the Board, the EIR may also evaluate the impacts of a much more frequent rationing threshold of 20 percent cutbacks, 15 percent of the time.

District staff has performed preliminary Carmel Valley Simulation Model (CVSIM) evaluations with revised drought-management goals. These evaluations indicate that some dry years occur when adequate water supply is still available and conservation cutbacks would yet not be imposed. Therefore, the use of this more frequent rationing threshold would not affect the size of new facilities required. However, more frequent cutbacks would potentially lower operating costs associated with various water supply alternatives. These costs would need to be weighed with the economic impacts on the community of higher rationing targets.

E.3 Project-Level Alternatives Analysis

Initially, Seaside Basin Aquifer Storage and Recovery (ASR) and local desalination were to be evaluated in the EIR at a project-level. CDM performed preliminary engineering evaluations, developed conceptual layouts, prepared detailed alignment evaluations and developed planning level costs for these alternatives.

Seaside Basin Aquifer Storage and Recovery Project

This project involves diverting excess flow from the Carmel River, treating it to current drinking water standards, and conveying it through existing and new pipelines to dual use injection/extraction wells located in the Seaside groundwater basin. Water would subsequently be extracted, chlorinated and delivered to customers during summer months when Carmel River flows are low or non-existent.

CDM evaluated two project sizes:

- <u>Small ASR project (700 acre-foot/year yield).</u> This size project would be integrated with existing Cal-Am facilities, and require only a new 300-HP pump station, and 15,000 feet of new 20-inch diameter pipeline to three new ASR wells. This project has an estimated capital cost of $21 million. The unit cost of water for this project is $2,800/acre-foot.

- <u>Large ASR project (3,200 acre-foot/year yield).</u> This size project is the largest project that could be implemented. Although this project would maximize the use of existing Cal-Am wells and treatment facilities, it would also require many new facilities, including up to five diversion wells in the Carmel Valley, a new 13 MGD water treatment plant, a new 36-inch diameter pipeline between Carmel Valley and the Seaside basin, and new pump stations, pressure reducing stations and distribution storage reservoirs to convey water to and from the wellfield.

  Three potential pipeline alignments were identified to convey water between the Carmel Valley and the Seaside basin. A brief summary of each is provided below:

  - <u>Segunda Alignment.</u> This alignment would parallel Cal-Am's existing Segunda Pipeline. Use of this alignment would face significant implementation issues. New Carmel Valley wells and new pipelines are mostly located in private roads, requiring a number of easements or acquisitions. Additionally, much of the alignment would be located in a corridor that is constrained due to the presence of the existing Segunda Pipeline, and utilities associated with adjacent subdivision developments. Canada Segunda is also a private road, and in many areas the existing Cal-Am easement does not correspond with the road alignment. The alignment crosses two active earthquake faults in the vicinity of the existing Cal-Am tank, as well as adjoining a historical landslide area along Canada Segunda.

- Hatton Canyon Alignment. This alignment would locate new wells and a water treatment plant (WTP) on the Odello-East property, and requires a new pipeline through Carmel Valley Village and the undeveloped Hatton Canyon, and then along public roads to the ASR wellfield. This alignment requires fewer easements and acquisitions, but is significantly longer and more costly than the Segunda Alignment. There are also feasibility issues associated with placement of wells along the Odello-East property, due to potential MTBE contaminant sources in Carmel Valley Village.

- Roach Canyon Alignment. This alignment would run up Roach Canyon to Jack's Peak county park. The alignment would follow mostly fire roads. Preliminary screening for geologic hazards revealed that this alignment has significant landslide hazards, with approximately 1.2 miles of the route through landslide areas. CDM is assessing the feasibility of this alignment, and planning-level costs have not yet been developed.

The estimated capital cost for the large ASR project is $165 million dollars for the Segunda alignment and $199 million dollars for the Hatton Canyon alignment. The estimated unit cost of water is $4,600/acre-foot for Segunda and $5,500/acre-foot for Hatton Canyon. These unit costs are significantly higher than the small ASR project because of the number of new facilities required. Therefore, large ASR may be included in the EIR only as a program element. Small ASR may be included as either a project-level or program-level elements.

Sand City Desalination Project

This project involves the treatment of seawater to potable drinking water standards for conveyance and distribution to Cal-Am customers. Required facilities for desalination include:

- Collector wells located in coastal sands along Monterey Bay;
- A conveyance pipeline and pump station to convey seawater from the beach collector wells to the treatment plant;
- A desalination treatment plant;
- A treated water storage tank, pump station and pipeline to deliver treated water to the Cal-Am system;
- A pump station and pipeline to convey brine water from the treatment plant to injection wells along the Monterey Bay coastline; and,
- Beach wells for injection of treatment plant brine water.

Previous investigations have considered use of radial (Ranney) wells for seawater collection and brine disposal. Radial wells would need to be installed in beach areas, and projects using this technology would be limited to an annual yield of about 6,000 acre-feet/year, due to siting constraints along Sand City beaches. A closed landfill and presence of coastal bluffs limit the areas in which wells could be located.

With recent advances in technology, other types of wells could be used for seawater collection and brine disposal. One such technology is directionally-drilled wells. In this case, the well is drilled at a relatively shallow angle, and then extended horizontally to a desired location hundreds of feet from the entry point. Use of directionally-drilled wells has two distinct advantages:

- Wells could be extended to the submarine environment off-shore to minimize impacts to the coastal groundwater basin[1];
- Wells could be located behind coastal bluffs, extending areas where wells could be placed.

With the use of directional-drilled wells or a combination of radial and directionally-drilled wells, projects with yields of up to 11,000 acre-feet/year would be possible. However, extensive testing and analysis of results would be required to demonstrate this technology. Some of this testing and analysis would be needed early in Phase 2 to demonstrate project feasibility. Also, a desalination project using wells for seawater collection or disposal is expected to have significant implementation issues, since virtually all locations identified for locating wells either are currently or are designated to be incorporated into regional or State parklands. Additionally, such a project would require permits and approvals from a number of different agencies and municipalities, including the Coastal Commission, the National Oceanic and Atmospheric Administration, the California Department of State Parks, the California State Lands Commission, the Monterey Peninsula Regional Park District, the City of Sand City, and others.

Total capital costs for a desalination project using seawater collection and brine disposal wells are estimated to range from $87 to $109 million dollars for a project with an annual yield of 4,900 acre-feet/year and from $176 to $216 million for a project with an annual yield of 11,000 acre-feet/year. The unit cost of water for this project ranges from $2,200/acre-foot to $2,800/acre-foot. Energy costs are a significant component of the unit cost, accounting for about 40% of the unit cost, at a cost of $0.12/kwh for energy.

E.4 Program-Level Alternatives Analysis

Off-stream storage, reclaimed wastewater and stormwater re-use were included in the evaluation as program-level alternatives. CDM's evaluation included preliminary

1 Brine disposal is proposed for the brackish water Aromas Sands formation which is not used for water supply. However, the formation overlies and is hydraulically connected to the Paso Robles and Santa Margarita formations, which are used for water supply.

engineering to identify project sizes, yields, and required facilities, as well as concept-level (non-site-specific) cost estimating to estimate project costs.

Generally, these projects would have smaller annual yields than project-level alternatives. A brief summary of these projects is presented below:

- Off-stream storage. Program-level project descriptions were developed for two projects – a conjunctive use project using groundwater storage in the Tularcitos alluvial aquifer and an off-stream storage reservoir on Chupines Creek. Annual project yields would range from 400 acre-feet/year for Tularcitos Creek aquifer to 1,000 acre-feet/year for the Chupines Creek Reservoir. Capital costs for the Tularcitos Creek project are estimated to range from $40 to $60 million, with a unit cost of $8,000/acre-foot to $11,000/acre-foot. Capital costs for the Chupines Creek project are estimated at $150 million, with a unit cost of water of $12,000/acre-foot.

- Reclaimed wastewater. Two potential reclaimed wastewater projects were identified – these include:

  - The Regional Urban Recycled Water Program. This project is being pursued jointly by Marina Coast Water District (MCWD) and the Monterey Regional Water Pollution Control Agency, and could provide about 250 acre-feet/year to customers currently receiving potable water from Cal-Am. This project is also one of several water supply options being considered by MCWD as part of its Regional Urban Water Augmentation Project, to identify up to 2,400 acre-foot/year of new supply for the City of Marina, Fort Ord and Cal-Am customers.

  - Extension of existing Carmel Area Wastewater District/Pebble Beach Community Services District project to Pacific Grove. This project would potentially provide about 100 acre-feet/year to customers currently receiving potable water from Cal-Am. Project implementation is dependent on implementation of planned system improvements to reduce the salt loading of the existing irrigation supply, and is one of several projects that could be implemented. Most other identified projects would offset potable water use within the Cal-Am system.

  Current capital and unit costs are not available for these projects.

- Stormwater Re-use. Program-level project descriptions were developed for a customer cistern program. This program would involve installation of commercially available cisterns at individual sites to collect stormwater from roofs and other impermeable surfaces. Commercially-available cisterns are available in 75-gallon sizes and could be linked for a total storage capacity of 150 gallons per site. With a 25% to 50% participation rate, anticipated yields are 50 to 100 acre-feet/year. Implementation of a program is estimated to cost between $5 to $7 million for a 25% participation rate and between $10 to $14 million for a 50% participation rate. Cisterns have a very high unit cost, estimated to range from $85,000 to $115,000/acre-foot. A cistern program could potentially be eligible for grant funding through Proposition 13, though funding through this program is a competitive process.

E.5 Formulation of Alternatives

CDM prepared a preliminary formulation of alternatives, based on the water supply requirements identified in Table E.2. At the request of the State Water Resources Control Board (SWRCB), MPWMD is currently preparing a water availability analysis, based on the June 2002 flow schedule developed by National Marine Fisheries Service. This analysis is not expected to change the size of facilities needed to meet the production targets, but it could reduce the need to operate the facilities in certain water years or periods within a water year if additional water above the currently recognized 3,376 acre-feet/year Cal-Am water right is deemed to be available for diversion in the Carmel Valley.

To formulate alternatives, CDM selected two groups of alternatives that would maximize each of the project-level water supply components. Table E.2 summarizes the preliminary formulation of alternatives.

Table E.2
Preliminary Water Supply Alternatives

Production Target/ Water Supply Alternative	Water Supply Component					
	Desalination at Sand City	Seaside Basin ASR	Reclaimed Wastewater	Off-stream Storage	Stormwater Re-use	Totals
Alternative 1 – Sand City Desalination with Small ASR and Program Elements (acre-feet/year)						
Step 1 – 8,400 af/yr	7,400	700	250	--- (1)	50	8,400
Step 2 - 10,700 af/yr	9,700	700	250	--- (1)	50	10,700
Step 3 – 12,100 af/yr	11,000	700	350	--- (1)	50	12,100
Equivalent Average Daily Use (million gallons/day)						
Step 1 - 7.5 MGD	6.6	0.6	0.2	----	0.1	7.5
Step 2 – 9.6 MGD	8.7	0.6	0.2	----	0.1	9.6
Step 3 – 10.8 MGD	9.8	0.6	0.3	----	0.1	10.8
Alternative 2 – Large ASR with Sand City Desalination and Program Elements (acre-feet/year)						
Step 1 – 8,400 af/yr	4,900	3,200	250	--- (1)	50	8,400
Step 2 – 10,700 af/yr	7,200	3,200	250	--- (1)	50	10,700
Step 3 – 12,100 af/yr	8,500	3,200	350	--- (1)	50	12,100
Equivalent Average Daily Use (million gallons/day)						
Step 1 – 7.5 MGD	4.3	2.9	0.2	----	0.1	7.5
Step 2 – 9.6 MGD	6.4	2.9	0.2	----	0.1	9.6
Step 3 – 10.8 MGD	7.6	2.9	0.3	----	0.1	10.8

(1) Off-stream storage could be included with yields of up to 1,000 af/yr that would reduce desalination component. However, this would result in more expensive project.

Alternative 1 – Desalination, Small ASR, and Program Elements

Alternative 1 features a local Sand City desalination project ranging in size from 7,400 af/year to 11,000 acre-feet/year, a small ASR project (700 af/yr), reclaimed wastewater projects and stormwater re-use. Table E.3 and Figure E.1 summarize the facilities associated with this alternative.[2] The top part of Table 5.2.1 summarizes key project facilities and sizes for the three production steps. The middle part of the table summarizes project yields, and the bottom part of the table summarizes capital and operating costs.

Table E.3
Summary of Facilities, Yields and Costs for Alternative 1 Desalination (7,400 to 11,000 af/yr), Small ASR (700 af/yr) and Program Elements (300 to 400 af/yr)

Project	***Production Target (af/yr)***		
	Step 1	***Step 2***	***Step 3***
Desalination Project - Key Facilities			
Number of Seawater Collection Wells	6-10	7-12	9-15
Number of Brine Disposal Wells	6-10	7-12	9-15
Desalination Plant (MGD)	7	9	10
New Pipelines - Seawater Collection and Brine Disposal			
New Pipelines - WTP to Treated Water System			
ASR Project - Key Facilities			
Number of New ASR Wells	2	2	2
New 300 HP Booster Pump Station			
New Pipelines - Pump Station to Wellfield			
Wastewater Reclamation			
Regional Urban Water Recycling Program	Yes	Yes	Yes
CAWD/PBCSD Extension	No	No	Yes
Stormwater Re-use (Cisterns)			
Percent Customer Participation	25%	25%	25%
Project Annual Yields (af/yr)	**Step 1**	**Step 2**	**Step 3**
Desalination Project	7,400	9,700	11,000
ASR Project	700	700	700
Program Elements	300	300	400
Total Project Yield	**8,400**	**10,700**	**12,100**
Project Costs (Project-Level Alternatives)	**Step 1**	**Step 2**	**Step 3**
Capital Costs (Million $)			
Desalination Project	134-161	159-194	176-216
ASR Project	21	21	21
Total Capital Costs	**155-182**	**180-215**	**197-237**
Project Annual Costs (Million $)			
Desalination Project – Annualized capital cost	10.8-13.0	12.8-15.6	14.2-17.4
Desalination Project – O&M cost	7.6	9.8	10.6
ASR Project – Annualized capital cost	1.7	1.7	1.7
ASR Project – O&M cost	0.3	0.3	0.3
Total Annual Costs	**20.4-22.6**	**24.6-27.4**	**26.8-30.0**
Project Unit Costs ($/acre-foot)			
Desalination Project	2500-2800	2300-2600	2300-2500
ASR Project	2800	2800	2800
Blended	2500-2800	2400-2600	2300-2600

Cost basis: Engineering News Record Construction Cost Index = 7,655 (San Francisco, Dec 2002)

2 Figure E.1 shows the configuration for a desalination project with individual well production rates based on 5 gpm/foot of screened length for wells. Estimated production rates range from 3 gpm/foot to 5 gpm/foot. The lower production rate would require a different project configuration with more wells. Table E.3 provides a range of costs for the estimated production rates.

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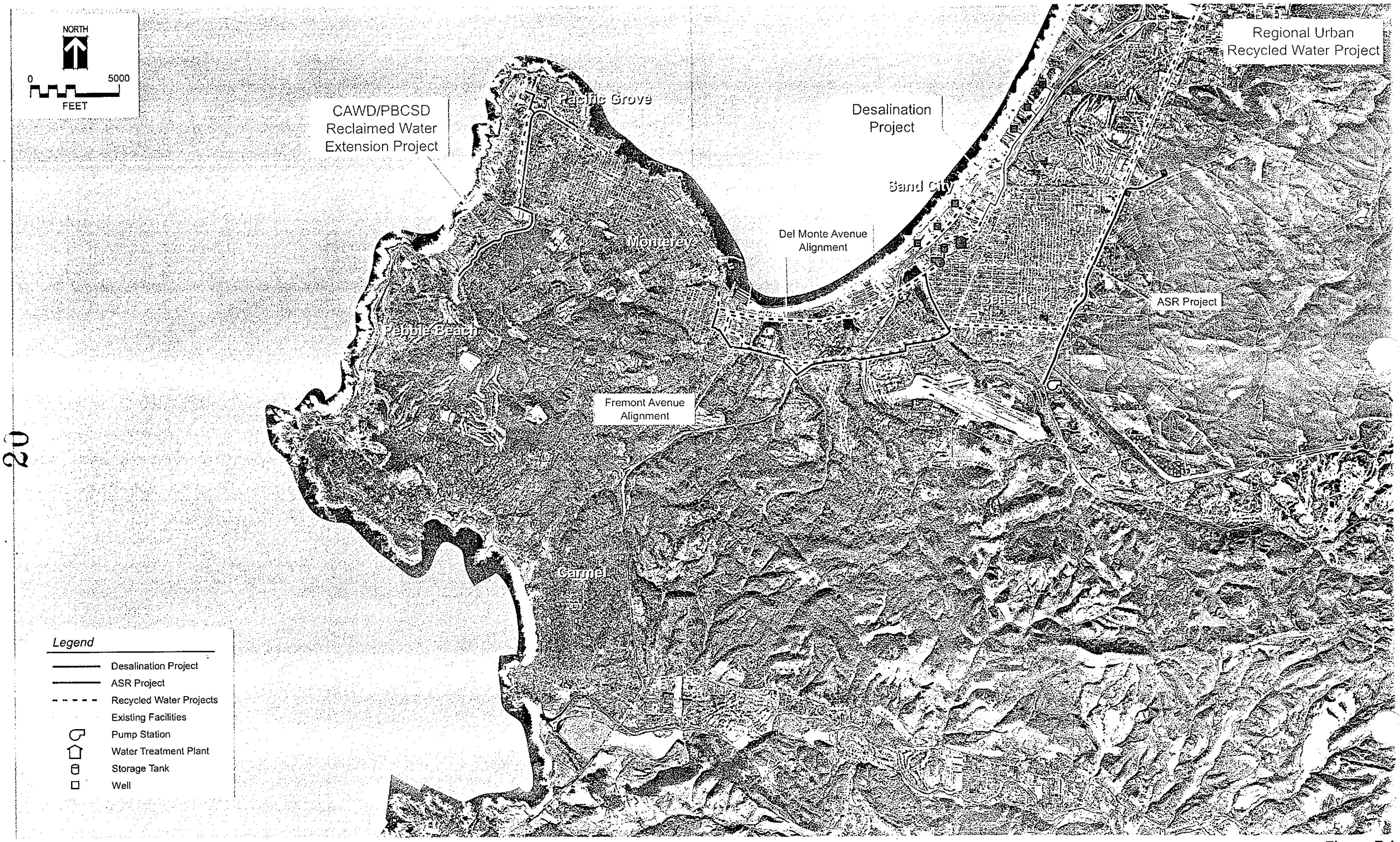

Figure E.1
Water Supply Project Alternative 1
Sand City Desalination Project (7,400 - 11,000 af/yr),
Small ASR Project (700 af/yr) and Program Elements (300 to 400 af/yr)

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The total capital cost for project-level elements ranges from $155 to $182 million for Production Step 1 to $197 to $237 million for Production Step 3. The blended unit cost of water for the project-level elements ranges from $2300/acre-foot to $2800/acre-foot.

Alternative 2 – Large ASR, Desalination and Program Elements

Alternative 2 features a large ASR project (3,200 af/yr), along with a Sand City desalination plant (4,900 to 8,500 af/yr), reclaimed wastewater projects and stormwater re-use. Table E.4 and Figure E.2 summarize the facilities associated with this alternative.[3]

The total capital cost for project-level elements ranges from $252 to $308 million for Production Step 1 to $305 to $368 million for Production Step 3. The lower cost is for an ASR project using Segunda alignment and a desalination project with 4 to 6 collector wells and the higher cost is for an ASR project using Hatton Alignment and a desalination project with 7 to 10 collector and disposal wells. The blended unit cost of water for the project-level elements ranges from $2,900/acre-foot to $3,900/acre-foot.

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3 Figure E.2 shows a configuration for the desalination project with individual well production rates based on 5 gpm/foot of screened length for wells. Estimated production rates range from 3 gpm/foot to 5 gpm/foot. The lower production rate would require a different project configuration with more wells. Table E.4 provides a range in costs for the estimated production rates.

Table E.4
Summary of Facilities, Yields and Costs for Alternative 2
Large ASR (3,200 af/yr), Desalination (4,800 to 8,500 af/yr) and Program Elements (300 to 400 af/yr)

Project	Production Target (af/yr)		
	Step 1	Step 2	Step 3
ASR Project - Key Facilities			
Number of Carmel Valley Diversion Wells	5	5	5
Number of ASR Wells	11	11	11
New WTP (MGD)	13	13	13
New Pipelines - Wellfield to WTP			
New Pipelines - WTP to ASR Wellfield			
Desalination Project - Key Facilities			
Number of Seawater Collection Wells	4-7	5-9	6-10
Number of Brine Disposal Wells	4-7	5-9	6-10
Desalination Plant (MGD)	4	6	7.5
New Pipelines - Seawater Collection and Brine Disposal			
New Pipelines - WTP to Treated Water System			
Wastewater Reclamation			
Regional Urban Water Recycling Program	Yes	Yes	Yes
CAWD/PBCSD Extension	No	No	Yes
Stormwater Re-use (Cisterns)			
Percent Customer Participation	25%	25%	25%
Project Annual Yields (af/yr)	**Step 1**	**Step 2**	**Step 3**
ASR Project	3,200	3,200	3,200
Desalination Project	4,900	7,200	8,500
Program Elements	300	300	400
Total Project Yield	**8,400**	**10,700**	**12,100**
Project Costs (Project-Level Alternatives)	**Step 1**	**Step 2**	**Step 3**
Capital Costs (Million $)			
ASR Project	165-199	165-199	165-199
Desalination Project	87-109	109-138	140-169
Total Capital Costs	**252-308**	**274-337**	**305-368**
Project Annual Costs (Million $)			
ASR Project – Annualized capital costs	13.3-16.1	13.3-16.1	13.3-16.1
ASR Project – Annual O&M costs	1.3-1.7	1.3-1.7	1.3-1.7
Desalination Project – Annualized capital costs	7.0-8.8	8.8-11.1	11.3-13.6
Desalination Project – Annual O&M costs	5.3	7.1	8.2
Total Annual Costs	**26.9-31.9**	**30.5-36.0**	**34.1-39.6**
Project Unit Costs ($/acre-foot)			
ASR Project	4600-5500	4600-5500	4600-5500
Desalination Project	2500-2900	2200-2500	2300-2600
Blended	3300-3900	2900-3500	2900-3400

Cost Basis: Engineering News Record Construction Cost Index = 7,644 (San Francisco, Dec 2002)

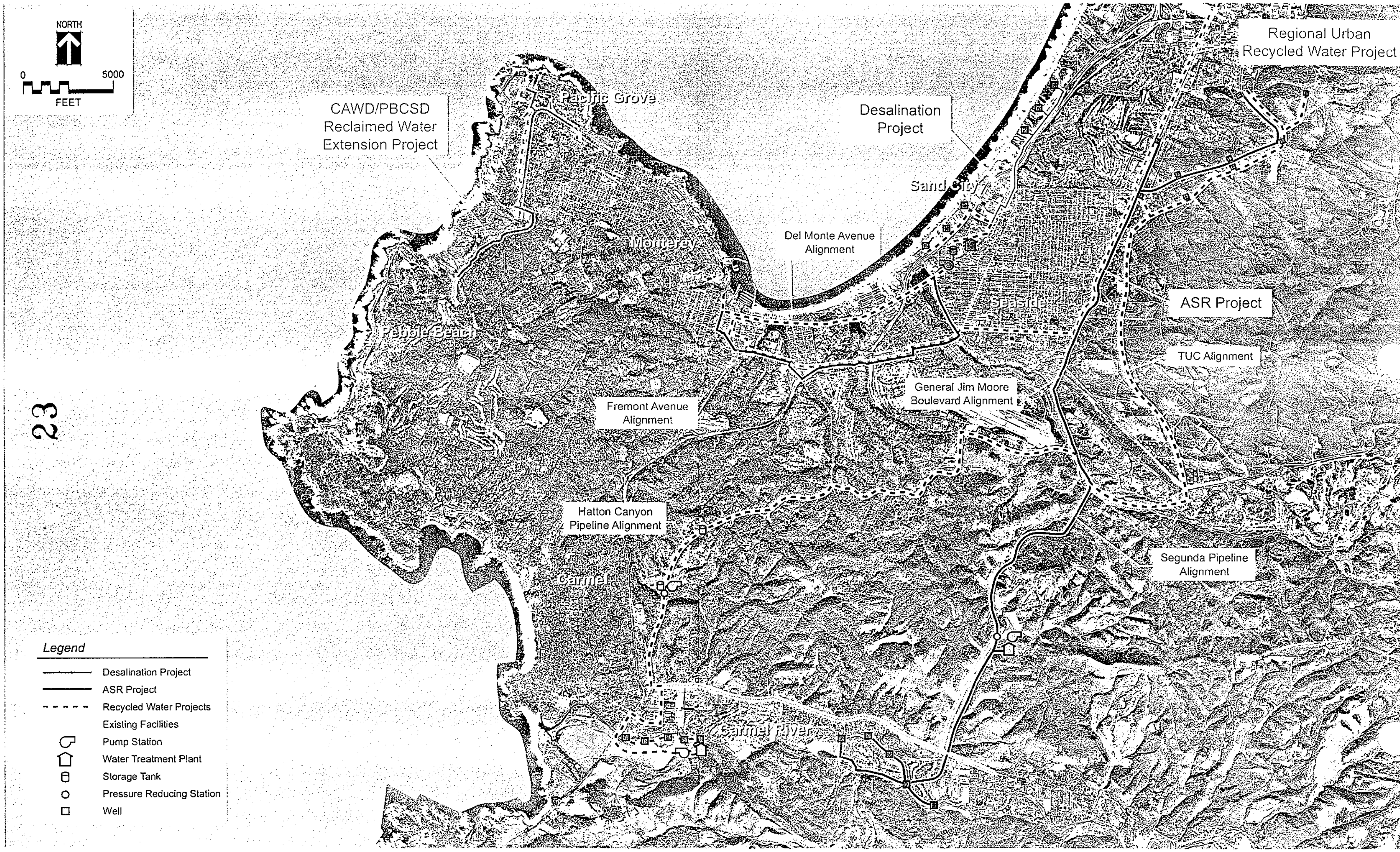

Figure E.2
Water Supply Project Alternative 2
Large ASR Project (3,200 af/yr),
Sand City Desalination Project (4,900 - 8,500 af/yr), and Program Elements (300 to 400 af/yr)

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