Aspen Environmental Group

Recent Accomplishments and Ongoing Projects

Spring 2003 Issue No. 9

New Division, New People

Aspen is pleased to announce the opening of a new division, **Aspen Consulting Engineers**, which combines Aspen's proven environmental capabilities with a strong water resources group. The division provides combined engineering and environmental capabilities to undertake multi-disciplinary planning studies, feasibility studies, and alternatives analysis for flood control, watershed management and water resources projects, including:

Flood drainage assessment	Flood control planning
Stream flow & floodplain modeling	Scour Analysis
Watershed simulation	Peak flow determination
Hydrologic routing	FEMA map revisions
Watershed sediment modeling	Floodplain mapping

Ms. Jerry Collins, Vice President of Operations, leads our new division. She is a native of Arizona, raised in Willcox, a small southeastern town, and is a graduate of the University of Arizona. She has many valuable experiences

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Transmission Lines

Aspen has become the premier consulting firm in California for environmental issues associated with electric power transmission. For instance, Aspen has been under contract steadily over the past ten years to the California Public Utilities Commission (CPUC) and some of our new projects in this area include:

- A Draft EIR for PG&E's proposed Jefferson-Martin 230 kV Transmission Project. This project will provide additional electric service and reliability to San Francisco and northern San Mateo County by connecting the Martin substation with a new source of electric service. The San Francisco Peninsula is served entirely by transmission corridors along the Highway 101/Bayshore corridor, and diversity of supply is important in this seismically active area. The project includes a 15-mile overhead segment and a 12-mile underground segment. Aspen is considering a wide range of alternatives, including evaluation of generation, renewable energy, and other transmission line route alternatives.
- An Initial Study for the San Diego Gas & Electric Company's Miguel-Mission 230 kV #2 Project. The proposed new and relocated transmission facilities would be installed in the existing SDG&E right-of-way between the Miguel and Mission substations, which are occupied by 69 kV, 138 kV, and 230 kV transmission circuits. The existing right-of-way passes through the cities of San Diego and Santee, Marine Corps Air Station Miramar, and areas in the eastern portion of San Diego county.
- Ongoing or imminent mitigation monitoring on three PG&E transmission line and power line projects: the Northeast San Jose Transmission Reinforcement, Tri-Valley Capacity Increase, and Atlantic-Del Mar projects.

Murphy Promoted - Moves to Sacramento

Phinney to Focus on Specialized Reports

Tom Murphy, who has been with Aspen since 1993, was recently promoted to Vice President, Sacramento Operations, and will relocate this month. As one of our first employees, Tom worked his way up the ranks at Aspen, beginning as an Air Quality Specialist. He is an expert in both air quality and noise issue areas and has worked on many of Aspen's critical proposals and awarded projects. He grew from managing small projects to becoming Deputy Program Manager for Aspen's largest contract for the California Energy Commission. He played a crucial role in the recent proposal that led to Aspen's selection to negotiate a second contract. His move will increase Aspen's efficiency in Energy Commission contract management and bring him closer to the CPUC, another key client with whom we hope Tom will have a close working relationship.

Dr. Suzanne Phinney is shifting her responsibilities to allow her to focus more time on research and writing specialized reports for Aspen, such as the Environmental Performance Review of California Electric Generation Facilities, and the Alternative Electric Generation Technologies Report. She will remain in the Sacramento area.

Aspen Ranked No. 1 in a Bid to Assist the California Energy Commission

Aspen was selected to negotiate the costs associated with a multi-million dollar contract with the Energy Commission to provide engineering and environmental assistance to support the Facility Planning and Licensing Program. We expect negotiations will be finalized and Aspen will be awarded the contract by early June. Should this happen, we will not only continue to support the Energy Commission with siting issues, but will also support this key client in electricity planning, transmission system engineering, natural gas planning, siting trends and policy planning.

Energy Generation

Aspen has been providing environmental and engineering services to the Energy Commission since May 2000. Our Team assisted in the licensing of 45 power plants under a total of 625 Work Authorizations. Our assignments included environmental and engineering evaluations of new power plants, as well as supporting the Energy Commission with alternative cooling technologies, alternative energy generation technologies, transmission modeling, inventory of hydroelectric generation throughout the State, inventory of engineering and environmental data at all 24 coastal power plants, and development of a security plan and training manual for power plants.

Underground Electric Transmission Lines

Tri-Valley Project: Conduit and tie-ins to vaults

Aspen has expanded our expertise in analysis and mitigation monitoring of linear projects with our recent work on underground electric transmission lines.

PG&E's Northeast San Jose Transmission Reinforcement Project is almost complete and includes nearly 3 miles of underground double-circuit 230 kV line. This was installed at the eastern edge of the San Francisco Bay, where underground technology eliminated visual impacts and the potential for bird collision - important issues adjacent to the Don Edwards San Francisco Bay National Wildlife Refuge. Aspen prepared the EIR and our monitors have been working on this project since Spring 2002, and the 230 kV line (along with the new 230 kV Los Esteros Substation) will be energized in June 2003.

Also nearly complete is Phase 1 of PG&E's Tri-Valley Capacity Increase Project, in Pleasanton and Livermore. This all-underground segment included several major bores (below Highway 84 to avoid traffic impacts and beneath Arroyo del Valle to avoid riparian habitat). This segment serves PG&E's existing Vineyard Substation, and the new line segment will also be energized by summer 2003.

The current technology for underground transmission is the use of solid dielectric cables, installed within PVC pipes that serve as conduit for the cables and are encased in concrete to protect and insulate the cables. About every 1,000 feet, an underground splice vault is constructed within the right-of-way. These eight-foot by twelve-foot vaults are concrete and have manhole access; this is where segments of cable are spliced together. When the vaults, PVC conduit, and concrete insulation are installed, the cable is pulled through the conduit from one vault to the next, and cable segments are spliced together.

Where an overhead transmission line segment connects with an underground segment, a transition station or transition structure is constructed. Whereas the cost of traditional tower-mounted high-voltage transmission lines can be in the range of $1 to 2 million per mile, the cost of underground lines can range from $5 to $10 million per mile. In addition to the significant cost difference, construction impacts and the potential for higher electric and magnetic fields can be concerns in using underground lines.

Fiber Optics

Another linear infrastructure area for which Aspen has become a leader is fiber optics projects. Under contract to CPUC, Aspen is conducting the CEQA compliance review of statewide fiber optic project applications filed with CPUC, including the preparation of Initial Studies and subsequent Mitigated Negative Declarations (MND) or EIRs. Subsequent to CPUC approval, Aspen will monitor fiber construction efforts in accordance with approval requirements.

In addition to recently completing environmental review and monitoring of the 2,500-mile fiber optic project, Aspen is currently monitoring the construction of Looking Glass Networks' service connections in the San Francisco Bay Area to create a Metropolitan Area Network. Aspen is also monitoring the construction of a five-mile expansion of the Williams Communications' network north of Sacramento in accordance with the IS/MND prepared by Aspen and certified by CPUC. Finally, Aspen is also monitoring the construction of service connections for the Metromedia Fiber Optic Cable Network in the San Francisco Bay Area.

Water Resources & Habitat Restoration

Headcut at Piru Creek

Aspen was recently awarded an indefinite quantity Environmental and Technical Support Services contract with the California Department of Water Resources, Southern Region. Delivery orders recently awarded on this contract include:

- The Tehachapi Afterbay Enlargement Project will provide additional regulatory storage for the Valley String Pumping Plants. Aspen is conducting biological surveys, agency consultation, and CEQA documentation.
- The Piru Creek Repairs and Pyramid Dam Bridge Repairs rehabilitation projects will protect access roads required for inspection and maintenance of facilities. Aspen is conducting biological surveys, permitting, and CEQA documentation.

On behalf of the Corps, Aspen is preparing riparian restoration project reports on Wood Canyon in the Aliso Creek Watershed (Orange County) and the Agua Fria River and El Vado Wash (Arizona). The Wood Canyon Project involves restoration of a stream being degraded by artificially elevated flows from local development. Low-flows from a Wood Canyon tributary will be diverted into the now-unused historic tributary channel. The riparian system will benefit from 1) restoring habitat to the historic low flow channel and 2) reducing nuisance flows beginning to destabilize the Wood Canyon main channel through bed degradation.

The Agua Fria riparian restoration would restore native habitat within a soil-cement-lined flood control channel in western Maricopa County. The El Vado Wash project would restore native vegetation to an unlined urban flood control channel in southern Tucson.

New Division, New People, cont.

in building the capacity of firms in this industry. Her late husband, a civil engineer, owned a large engineering firm in Tucson. Due to his illness, Ms. Collins postponed graduate studies to spend more time with him and learn his business. Following his untimely death, Ms. Collins remained at his firm, having learned a great deal about how to manage an engineering business. After it was sold, she formed a partnership with one of her former employees. Over 18 years, they built Collins/Piña Consulting to over 100 people before they sold it to a large national firm. She remained there as Office Manager of the Phoenix office and Deputy Director overseeing their three Arizona offices. Her focus is on business management, marketing, and administrative activities.

Driving Force Behind Aspen Consulting Engineers

Mr. Pedro Calza, P.E., spent his early years in Mexico but graduated from high school in Nogales, Arizona. He then joined the Navy and served in Vietnam. After his service, he took advantage of the GI bill and attended the University of Arizona, where he obtained a Civil Engineer degree with an emphasis on water resources.

Mr. Calza has managed numerous studies on hydrology, hydraulics, erosion and sedimentation, urban drainage and flood control, floodplain management, and other water resources. Before joining Aspen, he was the regional Director of Water Resources for Tetra Tech, Inc. in Arizona and worked for the Flood Control District of Maricopa County. At the District he managed floodplain delineation studies totaling 540 miles and initiated the first County floodplain delineation program, which is the largest in the country.

Aspen also welcomes the newest staff members working at Aspen Consulting Engineers, **David Jensen, P.E.**, and **Jeff Shelton, EIT**. Mr. Jensen is a water resources engineer who specializes in hydraulics, hydrology, groundwater, construction management, and materials testing. Mr. Shelton holds a Civil Engineering degree and his training is in the environment and water resources.

Aspen welcomes back **Craig Hattori**, who returns to our Agoura Hills office after several years as a CAD/Graphics manager to manage CAD and GIS capabilities. He also provides support for information technology management and with graphic design. As part of our ongoing growth, Aspen is also pleased to announce two new staff members in Agoura Hills. **Kathleen Robertson** has joined us as an environmental planner and **Tatiana Winter** has joined us as an environmental planning intern. Both will be assisting staff with a variety of projects.

Habitat Restoration: Sulphur Creek

Over the past two years, we have built a team with all the key skills and experience to provide excellent habitat and riparian restoration services. Section 206 of the Water Resources Development Act of 1996 allows the U.S. Army Corps of Engineers (Corps) to use Federal funds, with local sponsor participation, in riparian restoration projects. Aspen is currently working on one such project for the Corps. We prepared a Detailed Project Report and environmental evaluation for the aquatic restoration of a 2,000-foot segment of Sulphur Creek in the City of Laguna Niguel, in Orange County, California.

Sulphur Creek Site Location

Riparian ecosystems are declining throughout the southwestern United States, and many have disappeared completely. Due to the scarcity of this natural resource, wetland and riparian habitats are particularly valuable, play-

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Schools and Educational Facilities

Aspen Won LAUSD Program EIR

Aspen is pleased to announce we were selected to prepare the Program EIR for Phases II, III, and IV of the Los Angeles Unified School District's (LAUSD's) new school construction program intended to meet projected seat needs through the year 2020. These Phases represent the largest school facilities improvement project in the country, and are intended to create approximately 200,000 new seats by the year 2020 for schools within the LAUSD boundary. The LAUSD is the nation's second largest school district and includes the City of Los Angeles and 27 contiguous jurisdictions.

Aspen also continues its work via its on-call Environmental Services Contract assisting the LAUSD with one of the largest public works projects in the country - the planning and construction of more than 100 new schools and the expansion of dozens of existing schools to meet present overcrowded conditions (Phase I). Aspen prepares CEQA documentation such as EIRs and IS/MNDs for Primary Centers, Middle Schools, and High Schools throughout the eight planning areas of the LAUSD, which has a total student enrollment of over 800,000. The focus of many of the documents is assessment of impacts associated with air quality emissions, on-site hazards and hazardous materials, project-generated noise, land use and planning, and traffic and transportation. Major issues of concern usually include traffic and noise generated by school activities affecting the surrounding street system and neighborhood. Aspen meets this challenge by coordinating with the Los Angeles Department of Transportation to minimize project traffic impacts through mitigation options including mitigation fees.

Pipelines

Aspen is building on our significant expertise in pipeline projects by continuing to work on environmental documentation and mitigation monitoring for a number of petroleum products, natural gas, and water supply pipelines. We submitted an administrative Draft EIR for the proposed 70-mile, 20-inch Kinder Morgan Energy Partners petroleum products pipeline to the California State Lands Commission. As part of our On-Call Contract with the California Department of Water Resources (DWR), Aspen will conduct biological surveys and CEQA documentation for the Santa Ana Valley Pipeline Repairs project, which is part of the California Aqueduct/State Water Project. The DWR plans to repair approximately 12 pipe sections. The 12-foot diameter pipeline extends from the Devil Canyon Power Plant in San Bernardino County to the Lake Perris reservoir inlet in Riverside County - a distance of approximately 27 miles. Under contract to CPUC, Aspen has also recently completed the mitigation monitoring of construction of PG&E's Line 401 Capacity Loop Project. This approximately 14-mile long, 42-inch natural gas pipeline was constructed as two separate segments in Shasta and Modoc Counties.

Habitat Restoration, cont.

ing a critical role in the life cycles of numerous plant and animal species. As in many other riparian ecosystems, Sulphur Creek has been modified over the years by development and the invasion of exotic vegetation. We proposed restoration that would re-establish some of the historic habitat values by removing and replacing some water control features with environmentally friendly floodplain enhancements and native riparian vegetation. These floodplain enhancements will improve water storage and nutrient cycling to support native plant growth. Aspen used the Corps' Hydrogeomorphic (HGM) Approach for wetland functional assessment to evaluate riparian functional output and compare project alternatives. This approach measures field indicators pertaining to the biotic and abiotic condition of waters and wetlands. These indicators are used to estimate the capacity of the system to perform a suite of hydrologic, biogeochemical, and biologic functions relative to a range of conditions observed for similar aquatic resources in a specific region. The HGM output data were incrementally analyzed with construction cost data to identify a Recommended Plan.

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