



Aspen

Environmental Group

Recent Accomplishments and Ongoing Projects

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HABITAT RESTORATION

Aspen continues to conduct numerous challenging projects in the area of habitat restoration and has developed a high level of expertise in this important area of natural resources protection, integrating the skills of our biologists, hydrologists and water resource specialists, and planning and permitting professionals. Aspen has prepared plans for several significant habitat restoration projects in California and Arizona this year, including Agua Fria near Phoenix, El Vado Wash in Tucson, Old San Jose Creek in Goleta, and Sulphur Creek and Wood Canyon restoration projects in Orange County. Aspen also completed the baseline conditions investigations for the Matilija Dam Ecosystem Restoration Project, including completion of vegetation mapping for the Ventura River and Matilija Creek. Aspen's capabilities in habitat restoration planning and watershed management planning have expanded, most significantly with the hiring of Dr. Spencer MacNeil, a specialist in riparian restoration and the functional assessment of wetlands (see Aspen Biographies, p. 3). Coming to Aspen from the U.S. Army Corps of Engineers (Corps), Dr. MacNeil is an expert in the Hydrogeomorphic (HGM) Approach. [Click here to cont. p. 2](#)

POWER GENERATION FACILITIES & ALTERNATE ENERGY TECHNOLOGY

During the last two and a half years, Aspen has assisted the **California Energy Commission** in dealing with the State's pressing energy issues. During this time our team participated in environmental and engineering issues associated with 41 power plants and were given approximately 600 work authorizations (assignments). Our assignments included environmental and engineering evaluations, as well as studies of alternative cooling technologies, alternative energy generation technologies, and environmental performance of the generating industry through recent decades.

Among Aspen's recent assignments for the CEC is developing a sophisticated modeling system to predict cooling tower and combustion stack visible vapor plume frequencies and dimensions. This will provide more consistently reliable plume frequencies and plume dimensions to be used in visual simulations and impact assessments. Aspen will also conduct extensive testing of the model, as well as train CEC staff on proper application of the new modeling software for various power plant case scenarios. [click here to cont. p. 3](#)

TRANSMISSION LINES

Aspen has become California's premier consulting firm for analysis of electric power transmission projects. Starting with the 165-mile Alturas Transmission Line EIR/S in 1994-1996, Aspen has prepared a significant number of EIRs for transmission lines under the jurisdiction of the **California Public Utilities Commission**: the Northeast San Jose Transmission Reinforcement Project EIR (NESJ) (published February 2001), the Tri-Valley Capacity Increase Project EIR (published April 2001), and the Los Banos-Gates ("Path 15") 500 kV Transmission Project (published October 2001). In addition, Aspen has prepared several Mitigated Negative Declarations for power line and substation proposals in both **PG&E** and **Southern California Edison** territories. Aspen was recently selected to prepare the EIR for the Jefferson-Martin 230 kV Transmission Line Project in San Mateo County. For the California Energy Commission, our team has conducted numerous studies on transmission lines associated with construction of new power plants.

Aspen's recent transmission work has required staff to keep abreast of technologies and feasibility considerations for installing underground transmission lines. Aspen evaluated such segments in the NESJ, Tri-Valley, and Atlantic-Del Mar projects, all employing solid dielectric cable. [click here to cont. p. 4](#)

PIPELINES

Aspen has successfully completed environmental documentation and mitigation monitoring for numerous petroleum products, natural gas, and water supply pipelines in California and other western states. Many of these projects were highly controversial. All of our documents were approved and/or certified and several successfully withstood legal challenges. Recently, the **California State Lands Commission** selected Aspen to prepare an EIR for a 20-inch petroleum products pipeline proposed to be constructed from Concord to West Sacramento. The 70-mile route, proposed by **Kinder Morgan Energy Partners**, would cross the Carquinez Strait, the Cordelia Slough, and about 50 other waterways in Contra Costa, Solano, and Yolo Counties. Major issues include pipeline safety and potential impacts to biological resources (marine and aquatic resources, wetlands, commercial fisheries, and sensitive species). Land uses adjacent to the route include industrial lands, open space, residential areas (in Fairfield and Suisun City), and large areas of agricultural land. Aspen was also selected by the **Santa Clara Valley Water District** to prepare an Initial Study/Mitigated Negative Declaration for a proposed project to enhance the District's reclaimed water supply.

ASPEN TEAM WIN AWARDS FROM CEC

On November 6, 2002, ten Aspen staffers and 14 additional team members who worked on the California Energy Commission Program to Review Applications for Certification will receive **Outstanding Achievements Awards** at a luncheon in Sacramento. Each will receive a framed certificate and letter of appreciation signed by CEC Executive Director Steve Larson, Siting Division Deputy Director Terry O'Brien, and Program Manager Dave Maul. Aspen recipients are: Dr. Hamid Rastegar, Thomas Murphy, Susan Lee, William Walters, Negar Vahidi, Christian Huntley, Christopher Meyer, James Brewster Birdsall, Joseph Crea, and Elise Camacho.

FIBER OPTICS

One of the other linear infrastructure areas in which Aspen has become a leader for environmental assessment and permitting activities is in the installation of fiber optics. Under a current contract to **CPUC**, Aspen conducts the CEQA compliance review of statewide fiber optic project applications filed with CPUC, including the preparation of Initial Studies, subsequent MNDs, or EIRs. Subsequent to CPUC project construction approval, Aspen will monitor the construction efforts in accordance with approval conditions.

Aspen is currently preparing the MND for **Looking Glass Networks'** planned installation of conduit and related facilities to create a Metropolitan Area Network in the San Francisco Bay Area and Los Angeles Basin. Additional tasks include the preparation of a MND for a five-mile expansion of the Williams' network north of Sacramento. Recently completed work includes the **Level 3 Communications Fiber Optic Project**, which covers 2000 miles across the state.

WATER RESOURCES

Aspen was recently selected by **West Basin Municipal Water District** to prepare an EIR/EIS for its planned 20-mgd seawater desalination facility at the El Segundo Generating Station.

Meeting California's growing water needs is an ongoing challenge. The Department of Water Resources projects that by 2020 demand will exceed supply by 2.4 million acre-feet (maf) in normal rainfall years and by 6.2 maf in drought years. It is likely that seawater desalination will undoubtedly be part of California's water future. Improved technology, using microfiltration and reverse osmosis, is making desalination more cost effective.

Rising water prices combined with declining costs to produce desalinated seawater will soon make desalting feasible at a larger scale. In 1990, imported water cost southern Californians \$230 per acre-foot and desalinated seawater cost \$2,000 per acre-foot. In 2002, imported water has

since increased to nearly \$500 per acre-foot and desalting costs have dropped to about \$800 per acre-foot. The difference is expected to shrink in the future.

Substantial energy is needed to produce desalinated seawater; therefore, reducing energy costs helps reduce desalting costs. For this reason, the preferred location for a desalination facility is a coastal power plant site. By locating within the "fence line" of a power plant, the water producer can pay for power without the added cost of transmission fees, resulting in a substantial reduction of about \$100 per acre-foot in production costs.

Seawater desalination uses an almost limitless water source that is independent of water rights and unaffected by variations in precipitation. It can help offset future reduction in deliveries of Colorado River water to southern California and reduce the need to import additional water from northern California. Imported water could then be used as a supply for other growing southwest states and for environmental uses (e.g., replenishing depleted rivers and lakes, restoring riparian habitat).

Aspen is also conducting a study of 25 coastal power plants for the California Energy Commission and conducting hydrology and water resource evaluations at 41 power plant sites. In addition, Aspen was awarded a contract from the Santa Clara Valley Water District and recently won a contract (as subcontractor to MEC) to perform the hydrology and hydraulics portion of the Dominguez Channel Watershed Management Plan.

HABITAT RESTORATION, CONT.

The Corps' Engineer Research and Development Center developed the HGM Approach to satisfy the need for better information on wetland functions within the programmatic requirements of the Clean Water Act Section 404 regulatory program (33 CFR 320-330). This assessment tool is based on three fundamental factors that influence how wetlands function: position in the landscape (geomorphic setting), water source (hydrology), and the flow and fluctuation of water in the wetland (hydrodynamics). The HGM Approach first classifies wetlands based on their differences in functioning; second it defines functions that each wetland class performs; and third it uses reference to establish the range of wetland functioning. Regional assessment models are developed based on the functional profiles that describe the physical, biological, and chemical characteristics of a regional wetland subclass. These models can be used to estimate gains and losses in the capacity of a wetland to perform specific functions compared to wetlands of the same regional subclass. The HGM Approach also offers an objective and reliable tool for designing and evaluating habitat restoration projects and for watershed management planning. Aspen has utilized the HGM Approach to formulate and evaluate restoration alternatives in recent restoration projects such as at Sulphur Creek and Wood Canyon.

ASPEN BIOGRAPHIES

To be able to expertly conduct the increasing number of projects awarded, Aspen is pleased to announce the addition of two new Senior-level employees. **George Hampton**, a NEPA specialist, comes to Aspen after 25 years as the environmental coordinator for NEPA compliance with three U.S. Department of the Interior agencies. **Dr. Spencer MacNeil**, a habitat restoration expert, comes to Aspen after six years with the Regulatory Branch of the Army Corps' Los Angeles District (Ventura office).



Mr. Hampton is a geographer by education and began his career working for NASA's Earth Resource Satellite Program. He next moved to California where he performed the meteorology and geography portion of EISs for the Bureau of Land Management. He performed NEPA work for the Office of Surface Mining, and later also for Minerals Management Service. In two stints, he spent 11 years in New Orleans working on projects in the Gulf of Mexico and had recently returned to California when Aspen recruited him to join our team.

On a personal note, George and his family have rescued three greyhounds (from race tracks). He claims they are large couch potatoes. He enjoys running and golf and is a former (now honorary) member of the Mystic Krewe of Brew--a beer brewing club in New Orleans. He also enjoys cutting gemstones (a skill for which he has had some training and which makes him popular around the holidays).

Dr. MacNeil, an expert in the Hydrogeomorphic Approach, grew up a few miles away from Aspen's headquarters, in Westlake Village, and went to High School with one of Aspen's first employees (Negar Vahidi). He later graduated from the same Environmental Science & Engineering doctoral program at UCLA as Aspen's two Principals and our Vice President of Operations in Sacramento, Dr. Suzanne Phinney. As an undergrad, inspired by a microbiology course, he changed his major from pre-Med to microbiology and remained at UCLA through his D.Env. Performing field work in restoring a salt marsh, he grew to have a strong interest in habitat restoration. After graduating, Dr. MacNeil followed one of his mentors to work for the Army Corps where he became a Senior Project Manager.



He is a specialist in the identification and evaluation of habitat restoration alternatives, habitat mitigation and monitoring, and wetland delineation, with extensive experience in Federal and State permitting. While evaluating restoration alternatives on the Wood Canyon project, he became familiar with some Aspen staff members. Aspen recruited him to

join us and enhance our restoration capabilities. He is very excited about the prospects of further developing this growing area of our business.

Dr. MacNeil loves both participating in and being a spectator for a wide range of sports including football, snow skiing, and martial arts. He lived in several different places while growing up, including Germany as a young child. He can still converse in German. He enjoys traveling and spending time with his family.

ENVIRONMENTAL IMPACT ANALYSIS

HIGHLIGHT: CACHE CREEK

Preparation of high quality environmental assessment under CEQA and NEPA continues to be one of our major strengths and core competencies. We recently prepared a Supplemental Environmental Impact Report (SEIR) for the Cache Creek Resources Management Plan (CCRMP) and Cache Creek Improvement Program (CCIP) for Yolo County. The original EIR supported adoption and implementation of the CCRMP and CCIP in 1996 and the issuance of permits by the Army Corps, State Regional Water Quality Control Board, and California Department of Fish and Game (CDFG). In re-applying for these permits, the County wanted to update current conditions in the project area for specific issue areas most likely to experience change since adoption of the CCRMP. The issues evaluated in the current SEIR include:

1. Geology and Soils: erosion, channel stability, and mining;
2. Hydrology & Water Quality: contaminant (e.g. mercury & boron) discharges into surface & ground water, channel capacity, including relevance to potential flood conditions, sediment suspension, & changes in currents & drainage patterns;
3. Groundwater: groundwater recharge;
4. Habitat and Wildlife: effectiveness of habitat restoration efforts, disturbance of wildlife habitat, & exotic invasive plant removal;
5. Land Use: conflicts with applicable environmental plans or policies, increases in other government services, and recreation.

Aspen also prepared a Wetlands Delineation Report for the Corps to support re-issuance of Regional General Permit #58 (a 404 permit). See "Other News Briefs" for newly completed or awarded projects.

POWER GENERATION, CONT.

Aspen also managed cooling and water supply feasibility studies for several proposed power plants in California, including the development of conceptual engineering designs for dry and hybrid cooling systems, estimates of overall plant efficiency and reliability, and impact analysis in all environmental and engineering disciplines. In addition to cooling options, alternative water supplies (primarily reclaimed water) and water supply pipeline routes were evaluated at several plants where use of large quantities of fresh water had the potential to impact water supply. These studies evaluated the potential for alternative cooling or water supply to reduce impacts to water and biological resources.

OTHER NEWS BRIEFS

Schools and Educational Facilities: Aspen has become expert in the assessment of the impacts of educational institutions and facilities. To date, Aspen has completed assessments for over 26 facilities (with a constructed value of over \$500 million) for the Los Angeles Unified School District.

Aspen has several assignments with Ventura County Flood Control District, including Section 404 permitting and assistance with the habitat evaluation for the Matilija Dam Ecosystem Restoration Project and the preparation of the EIR for the Arundo Task Force's arundo management program in the Ventura River watershed.

An Aspen/URS team recently won a \$3 million, 3-yr. Plan Formulation contract with the U.S. Army Corps of Engineers Los Angeles District to provide flood control, habitat restoration, watershed management, and infrastructure planning services in the southwest.

AS WE GO TO PRESS--

1. Aspen's newest office, housing our new Director of Water Resources and Flood Plan Management Group, to be opened in December in Phoenix, Arizona.
2. Aspen was selected out of 11 firms to negotiate a Department of Water Resources Southern California On-Call Contract to provide CEQA/NEPA services to the State Water Project.

TRANSMISSION LINES, CONT.

technology. This technology uses insulated cable, allowing the elimination of the potentially hazardous circulating oil coolants that were used with older underground cables. Based on Aspen's investigation of underground versus overhead transmission, the NESJ project was approved with about 2.8 miles of underground cable and 4.5 miles of overhead 230 kV line. The Tri-Valley project originally proposed 23.4 miles (including 2.7 miles underground), but after Aspen's analysis, the approved project was 14.3 miles long, with 11.8 miles underground. Aspen is currently monitoring construction of the NESJ and Tri-Valley projects, adding underground cable installation to our monitoring expertise.

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