



ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

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May 20, 2011

John Nall
Principal Environmental Specialist
Department of Planning and Building
County Government Center, Room 300
San Luis Obispo, CA 93408

SUBJECT: *Proposal to Prepare an Environmental Impact Report for the Oster (Las Pilitas) Conditional Use Permit and Reclamation Plan (SWCA No. 21119)*

Dear Mr. Nall:

SWCA Environmental Consultants (SWCA) is pleased to submit this proposal to prepare an Environmental Impact Report (EIR) for the Oster (Las Pilitas Quarry) Conditional Use Permit Project (project). Our project specialists have years of experience with the resources and land use issues requiring evaluation in this EIR, including recent projects of a similar nature.

We recognize how critical it is to have a project team that excels technically and will be dedicated to the project for its duration. Keith Miller, EIR Project Manager, has repeatedly proven himself as a responsive, thorough and resourceful project manager while managing EIRs for the County of San Luis Obispo, including mining and other EIRs that have been sensitive and/or controversial. He is now managing the Pankey EIR, and will be ready when this project starts to devote his skills to assure the products meet the County's high quality standards and are on time. I will be the Project Director, to provide quality control for all work products and be available as a resource to discuss strategies throughout the project.

Our project team also includes Robert Carr (aesthetic resources), Geosyntec (water and geology), MRS (air quality, greenhouse gases, and noise), and Rick Engineering (transportation and circulation), four well respected individuals/firms who will support the preparation of a high quality document.

The attached scope of work outlines SWCA's proposal to provide all of the EIR and related services outlined in the County's RFP, in addition to Optional Tasks that the County may elect to have implemented. Thank you for providing us the opportunity to resubmit this proposal. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Henry". The signature is stylized and includes a long horizontal stroke extending to the right.

Bill Henry, AICP
Project Director/Office Director



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Proposal to Prepare an
Environmental Impact Report

**OSTER (LAS PILITAS QUARRY)
CONDITIONAL USE PERMIT/
RECLAMATION PLAN
DRC2009-00025, ED09-258**

Prepared for:

**COUNTY OF SAN LUIS OBISPO
Department of Planning and Building
976 Osos Street, Room 300
San Luis Obispo, CA 93408-2040**

Prepared by:

**SWCA ENVIRONMENTAL CONSULTANTS
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401**

MAY 20, 2011

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May 20, 2011

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SECTION 1. INTRODUCTION

SWCA Environmental Consultants (SWCA) is pleased to submit a proposal for the preparation of an Environmental Impact Report (EIR) evaluating the proposed Oster (Las Pilitas Quarry) Conditional Use Permit / Reclamation Plan (project). The proposed project is located at 6660 Calf Canyon Way, on the north side of Highway 58, approximately 0.25 mile west of the Parkhill Road intersection, east of the community of Santa Margarita, in San Luis Obispo County, California. The site is located in the Las Pilitas Planning Area, within the Rural Lands land use category and the Energy Extractive 1 Combining Designation Overlay; the southernmost portion of the site is within the Flood Hazard Combining Designation Overlay.

Our proposed scope of work is designed to identify and address potential environmental impacts of the proposed project actions in accordance with California Environmental Quality Act (CEQA) Guidelines and as outlined in the County of San Luis Obispo (County) Department of Planning and Building's Request for Proposals (RFP), dated April 29, 2011.

The following proposal has been prepared by the combined efforts of SWCA (Prime Consultant) and the following sub-consultants:

- Robert Carr – Aesthetics;
- Marine Research Specialists (MRS) – Air Quality, Greenhouse Gas (GHG) Emissions, Noise;
- Geosyntec – Geology and Soils, Water Resources;
- Hatch Mott MacDonald – Transportation/Circulation

SWCA has worked with these sub-consultants in the past and has found that they provide a legally defensible documentation that meets the required scope of work on time and within budget.

A. PROPOSAL ORGANIZATION

SWCA's proposal has been divided into seven sections, which provide a comprehensive discussion of our approach to this EIR.

Section 1 – Introduction: This section provides a brief discussion of the organization of the proposal, a description of the proposed project, and an introduction to SWCA and the project team.

Section 2 – Personnel and Experience: This section outlines the project team's (including SWCA and selected sub-consultants) related mining and EIR experience throughout Central California, and the team's experience in managing projects with similar complexity, magnitude, and principal issue areas. In addition, this section includes a brief discussion on project team coordination, client coordination, and references for recent related projects in the county.

Section 3 – Scope of Work: This section identifies our proposed scope of work, based on review of the project site and project information provided by the County, review of technical reports, and conversations with County staff. Additionally, this section outlines the tasks and methodology proposed to address each environmental section and CEQA requirement; optional tasks are also included, where applicable.





Section 4 – Schedule of Completion: This section identifies the deliverables and outlines the timeframes associated with the project including the Project Description, EIR Outline, Administrative Draft and Draft EIRs, Administrative Final and Final EIRs, and Findings.

Section 5 – Cost Estimate: This section provides cost estimates for each task identified in the scope of work. The costing is based on the development of the CEQA document and is organized by major tasks to be accomplished and the team member responsible for each task. Public hearings attendance, staff meeting attendance, EIR reproduction costs, and optional tasks are also included.

Section 6 – Objectivity: This section provides a statement of SWCA’s guarantee that this EIR will be an independent, objective, and unbiased work product. The project team members have been selected because of their ability to prepare and submit a neutral and unbiased environmental document.

Section 7 – Proposal Terms and Conditions: This section includes an acknowledgement of contract provisions as well as a statement of offer and signatures. In addition, this section includes a discussion of SWCA’s compliance with County insurance requirements.

B. PROPOSED ACTION AND PROJECT UNDERSTANDING

PROPOSED ACTION AND USE OF EIR

The proposed project is a request by Las Pilitas Resources LLC (applicant) for a Conditional Use Permit (CUP) and Reclamation Plan to allow for an aggregate quarry and an asphalt and concrete recycling facility. The proposed project would result in the disturbance of approximately 60 acres on two parcels totaling approximately 203 acres in size; Assessor’s Parcel Number (APN) 070-141-070 is 66.5 acres and APN 070-141-071 is 137.3 acres. The mining operations and eventual reclamation of the site would occur within a 30-year timeframe. The maximum annual extraction would be 500,000 tons. The Reclamation Plan includes restoring the areas of disturbance so that ranching and grazing could resume when mining activities cease.

Approval of the CUP and Reclamation Plan would be a discretionary action, subject to CEQA. The County, as the CEQA lead agency, has determined that the proposed project may have a significant effect on the environment and that an EIR is required. The EIR would also be used by responsible (permitting) agencies, such as the California Department of Fish and Game (CDFG), to satisfy CEQA requirements as they relate to their permit processes.

PROJECT LOCATION

The project site is located east of the Salinas River Bridge and approximately 0.25 mile west of the Parkhill Road intersection, at 6660 Calf Canyon Way (Highway 58). The proposed project is within the Rural Lands land use category in the Las Pilitas Planning Area and the Energy Extractive 1 Combining Designation Overlay, with the southernmost portion of the site in the Flood Hazard Combining Designation Overlay.

PROJECT BACKGROUND

Based on our review of the project plans and technical reports submitted by the applicant, the proposed project has been in development over the last three years. The applicant has prepared numerous technical studies and a set of development plans which detail a phased approach to mining.

The County issued a Notice of Preparation (NOP) for the project on July 1, 2010. Review of the responses to the NOP indicates that the Department of Conservation and other agencies have concerns with regard to the adequacy of some of the information provided by the applicant and requested additional information.

The Department of Conservation requested that the reclamation plan be supplemented and/or revised to address items regarding: mining operation and closure, geotechnical requirements and slope stability, backfilling, hydrology and water quality (specifically basin storage capacities), and resoiling and revegetation after mine closure. The California Department of Forestry and Fire Protection (CAL FIRE) and Department of Resources, Recycling and Recovery also responded to the NOP, and provided information with regard to applicable compliance standards with state codes.

The project has also been of considerable interest to the public. A public EIR scoping meeting was held in the community of Santa Margarita on July 8, 2010. The public has taken an active role in the progress of the environmental review process. Our review of the response letters from the scoping meeting indicates that the public is particularly concerned with truck traffic related issues (e.g., safety, dust, noise), as well as surface and groundwater pollution and the environmental effects of blasting at the quarry.

PROJECT APPROACH/MANAGEMENT

Development of our proposed scope of work is based on our experience with:

1. Surface mine projects in San Luis Obispo County and other jurisdictions;
2. The County's Surface Mining and Reclamation Act (SMARA) program;
3. Complex projects involving intensive and multiple resource agency involvement; and
4. Managing projects with a high level of public controversy in San Luis Obispo County.

Our approach recognizes the considerable efforts that have already gone into the preparation of technical reports and development of the project description. Additional technical studies to be prepared by SWCA or our sub-consultants are limited to those identified as necessary in the Initial Study, in agency responses to the NOP, or by discussions with County staff during development of this proposal. Our understanding of the project issues and proposed approach to address these issues is summarized in Table 1, Project Issues and Approach Summary.

The Oster (Las Pilitas Quarry) CUP/Reclamation Plan EIR will be relatively complex, highly technical in nature, and will receive a high level of public scrutiny. SWCA has found that projects of this type benefit when the management team includes both a Project Manager who is familiar with the project type and issues, and a Project Director who takes an active role in the development of the EIR. This approach allows for more timely resolution of issues that arise during preparation of the EIR and improves the overall quality of the document. We have proposed that scenario for this EIR.

QUALITY ASSURANCE / QUALITY CONTROL

Environmental documents are intended to be read by the general public, yet over time they have become increasingly complicated and technical. They are typically written by teams of resource specialists who are experts in their fields but who often write detailed technical jargon and encyclopedic narratives that are neither easy to understand nor appropriate to the CEQA disclosure process. SWCA's planned approach to preparing a defensible and readable EIR consists of:





- The use of skilled resource specialists who are experts in assessing Central Coast resources;
- A focused CEQA writing team experienced in taking the technical input from resource specialists and turning it into concise sections;
- A technical editing and Quality Assurance/Quality Control (QA/QC) team that directs the writing throughout the process to ensure that the EIR is clear, concise, and expressed in one voice; and
- A thorough technical review of all resources sections in the EIR to ensure that the quality of the work effort meets the requirements of CEQA covers the tasks specified in this proposal, the environmental analysis for each environmental topic is of superior quality, and that the environmental analysis is based on the correct and complete project description.

Table 1. Project Issues and Approach Summary

Initial Study Issue Area	To Be Further Evaluated in EIR?	Approach	Comments
Aesthetics	Yes	Prepare photo-simulations showing existing conditions, proposed project for various mining phases, and post reclamation, as applicable.	Initial Study identifies visual resources and visual character as potentially significant and requests mitigation measures including stockpile height limitations.
Agricultural Resources	Yes	Consultation with County Department of Agriculture. Prepare Agricultural Resources section focused on the project site and potential impacts to surrounding agricultural uses.	Impacts include temporary losses of productive land and conflicts between agricultural and non-agricultural land uses.
Air Quality	Yes	Calculate emissions per San Luis Obispo County Air Pollution Control District (SLOAPCD) guidelines and use of the California Emissions Estimator Model (CalEEMod) program. Include an examination of health risks associated with diesel particulate emissions using the AERMOD modeling program.	Emissions will result from truck trips and processing operations, including concrete and asphalt recycling.
Biological Resources	Yes	Peer review Sensitive Species and Habitat Survey report; update California Natural Diversity Database (CNDDDB) search; perform reconnaissance "ground truthing" site survey; include an analysis of the reclamation efforts.	Spring botanical surveys or special status species protocol surveys not included. <i>Optional task:</i> formal wetland delineation/preliminary jurisdictional determination.
Cultural Resources	No	County determined that cultural resources were insignificant based on Phase 1 cultural resources study conducted by Thor Conway.	Off-site improvements, if necessary, have not been surveyed for cultural resources.
Geology and Soils	Yes	Peer review applicant-prepared Engineering Geology Report.	Slope stability and erosion are significant issues to be considered in the EIR.
Greenhouse Gas Emissions	Yes	Include analysis of GHG emissions and project's contribution to cumulative effects of global climate change.	GHG emissions would result from truck trips and use of heavy machinery for excavation and processing.
Hazards / Hazardous Materials	Yes	Blasting Study and other hazards information provided by applicant, reviewed in the context of federal, state, and local regulations concerning hazards, such as fire and worker safety.	Focus of blasting review is on compliance with existing regulations governing use of explosives.
Land Use	No	Policy consistencies resulting in environmental impacts will be addressed in individual issue areas and the Environmental Setting section, as applicable.	Initial Study indicates that the project is generally consistent with land use plans and policies.
Noise and Vibration	Yes	Peer review applicant-prepared Noise Study and Blasting Study. Augment blasting study to consider off-site impacts, including vibration, as applicable.	Noise and vibration would potentially result from truck traffic ,operations, and blasting. Blasting could result in severe vibration as well.
Population / Housing	Yes	CEQA Guidelines Appendix F regarding energy usage will be addressed and included in an appendix to the EIR.	This analysis will rely on information obtained in the Air Quality, GHG, and Transportation sections.
Public Services /Utilities	No	Road use along haul routes discussed in Transportation/Circulation section. Police and Fire discussion included with Hazards discussion.	Issues to be discussed in other applicable sections.
Recreation	Yes	Potential impacts to Salinas River Trail (and compatibility) will be evaluated.	Preparation of section will require coordination with County Parks.
Transportation / Circulation	Yes	Peer review existing applicant-prepared reports; focus on safety and alternate haul routes; consider idling truck issues; consider queuing locations.	Initial Study indicates that no "fair share" fee mechanism is currently in place in the project area.
Wastewater	No	Initial Study indicates that proposed on-site wastewater system is feasible.	Effluent and other wastewater would be considered in the Water section, as applicable.
Water	Yes	Peer review existing applicant-prepared water data. Project water demand based on various project components; Recommended, but optional: perform long-term pump tests.	Groundwater supply and demand, and surface and groundwater contamination, are significant issues and linked to other resource issues.

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SECTION 2. PERSONNEL AND EXPERIENCE

Keith Miller, Senior Planner, will be the Project Manager for this EIR and will serve as the County’s primary contact. Mr. Miller is highly experienced with CEQA and the National Environmental Policy Act (NEPA) and has been involved in the environmental review process and SMARA permit process for more than 10 years. Mr. Miller’s combined CEQA/SMARA experience has been gained from working both as the previous SMARA Program Manager for the County and as an EIR Project Manager with SWCA. During his work as SMARA Program Manager, Mr. Miller was responsible for permit processing and the environmental review for surface mines. He is currently managing the Pankey CUP EIR, another surface mine project in San Luis Obispo County.

Through those experiences and during the annual inspection process, Mr. Miller worked closely with resource agencies that have permit authority over surface mines. He gained valuable experience working with community groups to address their concerns with the proposed mining projects. He was also responsible for giving information on SMARA rules and regulations, in-stream mining, and the County permit and environmental review process as it relates to surface mines, the Planning Commission, and the Board of Supervisors.

SWCA’s planning and technical staff and sub-consultants proposed for this project are also experienced with CEQA and have specialized expertise with the various environmental topics that will be analyzed in the EIR. This combination of project management, planning, and technical staff will ensure key environmental issues are adequately addressed in the EIR to produce a document that is legally defensible, easily understood by a non-technical audience, and meets County requirements. Included below are qualifications of primary staff that will work on the EIR. SWCA’s project management team will ensure that quality products are produced on time and within budget.

Bill Henry, SWCA’s San Luis Obispo Office Director, will be the Project Director for this EIR and will work closely with Keith Miller and the County’s EIR management staff. This collaborative approach is referenced above in the “Project Approach/Management” section and represents a successful strategy that SWCA is currently implementing on two controversial EIRs being prepared for the County of San Luis Obispo (i.e., the Pankey CUP and Reclamation EIR and the Cold Canyon Landfill Expansion EIR). Mr. Henry has been involved in the preparation and management of EIRs with the County of San Luis Obispo for nearly 20 years, with his first being the San Luis Bay Estates, Phases 4-6 EIR in the mid-1990s. In addition, Mr. Henry currently serves as an extension of County staff assisting in the management of various on-going projects including the Guadalupe Oil Field Remediation Supplemental EIR and the Chevron Tank Farm Development and Remediation EIR. This experience in particular provides Mr. Henry with critical insight in terms of what is required to meet the needs of County staff and what is required to keep a project on track and continually moving forward.





Table 1. EIR Project Team

Team Member	Role	Discipline
SWCA ENVIRONMENTAL CONSULTANTS		
Bill Henry, AICP	Project Director / QA/QC	CEQA/NEPA
Keith Miller	Senior Planner	CEQA/NEPA/SMARA
Emily Creel, JD	Environmental Planner	CEQA/NEPA, Environmental Law
Travis Belt	Associate Biologist	Biology
Kevin Doyle	GIS/CAD Specialist	GIS/CAD
Jaimie Jones	Technical Editor	CEQA/NEPA
ROBERT CARR, AESTHETICS SPECIALIST		
Robert Carr, ASLA	Aesthetics Analyst	Landscape Architecture, Photo Simulations
MARINE RESEARCH SPECIALISTS		
Greg Chittick	Noise, Air Quality, GHG	Senior Scientist
GEOSYNTEC		
Gordon Thrupp, CHG	Associate Hydrogeologist	Hydrogeology, Aquifer Testing, Groundwater Modeling
Jeff Zukin, CEG	Senior Engineering Geologist	Engineering Geology Hydrogeology
Brandon Steets, PE	Senior Engineer	Stormwater Modeling, Watershed Modeling
Lisa Austin, PE	Senior Water Resources Engineer	Stormwater Management
RICK ENGINEERING		
Larry Hail, CE, TE, PTOE	Traffic Analyst	Traffic Engineering

A. PROJECT TEAM

PROJECT MANAGEMENT STAFF

Project Manager

Keith Miller, M.C.R.P., Senior Planner

Mr. Miller will assist with SMARA-related issues and prepare the Project Description and Geology and Soils sections of the EIR. Mr. Miller has 10 years of experience in land use and environmental planning, with an emphasis in implementing CEQA, the National Environmental Policy Act (NEPA), and SMARA. Mr. Miller has experience working in both the public and private sectors, managing a wide range of projects from General Plan Update EIRs, to discretionary land use and coastal development permits. He has managed the preparation of environmental documents including EIRs and Mitigated Negative Declarations and environmental constraints analyses. As a local contact for surface mine activity within San Luis Obispo County, Mr. Miller frequently interacts with the various resource agencies involved with surface mining, and has built effective relationships with representatives from those agencies and with the mine operators. Mr. Miller has also been responsible for processing numerous surface mining Conditional Use Permits and Reclamation Plans.

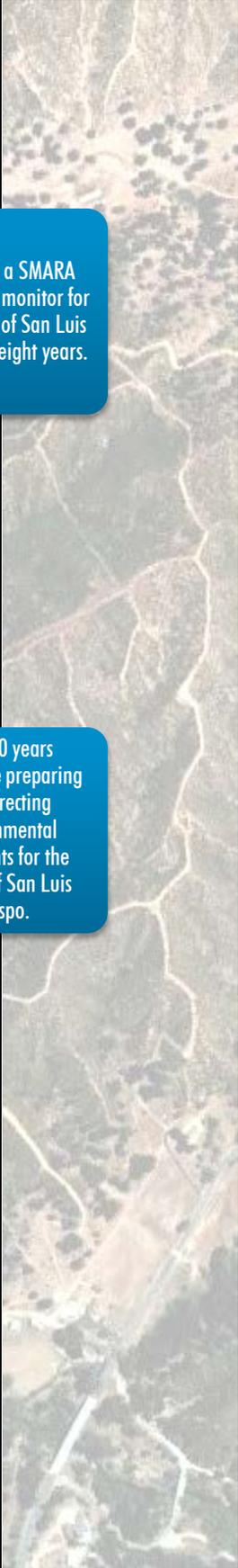
Served as a SMARA compliance monitor for the County of San Luis Obispo for eight years.

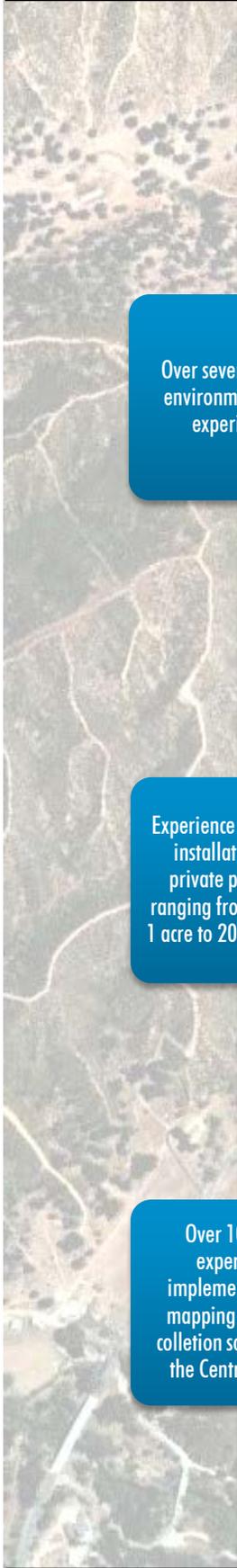
Project Director

Bill Henry, M.C.R.P., AICP, Project Director / Office Director

Mr. Henry will provide QA/QC during document preparation. He has been preparing environmental documents in California and the County since 1988. As Office Director, Mr. Henry retains a diverse workload by working directly on the preparation and management of a wide array of environmental documents and projects in addition to performing management responsibilities that include client liaison, agency liaison, preparation of project budgets, administration and review of contracts, staff and project planning, and quality control for projects under his direction. Mr. Henry's experience throughout San Luis Obispo County and the Central Coast region includes preparation, coordination, and processing of a wide variety of environmental documents, monitoring plans, revegetation plans, technical reports, resource agency permits, and resource protection and conservation studies. SWCA realizes the importance of QA/QC. Mr. Henry will carefully review the draft documents for accuracy before they are submitted to the County.

Over 20 years experience preparing and directing environmental documents for the County of San Luis Obispo.





TECHNICAL STAFF

In addition to the staff members and sub-consultants listed below, Mr. Miller will assist in the preparation and review of sections of the EIR. If needed, as a means of expediting the project schedule, technical staff from other SWCA offices can be drawn upon at the County’s discretion.

Planning

Emily Creel, J.D., Environmental Planner

Over seven years of environmental law experience.

Ms. Creel will prepare the Executive Summary, Introduction, Environmental Setting, Agricultural Resources, Recreation, Issues with Insignificant Impacts, and Growth Inducing Impacts sections of the EIR, as well as keep the team informed of recent environmental legal changes and updates. Ms. Creel obtained her JD in 2005 and has been practicing environmental, property, municipal, and land use law in San Luis Obispo County for over three years. She has a specialized background in environmental and property law, and has over seven years of environmental law experience. Ms. Creel is well versed in

state and federal environmental laws and regulations, legal research resources and interpretations, the formulation of case law precedence, the administrative process, and local county and municipal codes and Coastal Commission regulations. Three years of legal practice have given Ms. Creel the ability to handle complex environmental and legal issues.

Biological Resources

Travis Belt, B.S., Associate Biologist

Experience on military installations and private properties ranging from less than 1 acre to 200,000 acres.

Mr. Belt will prepare the Biological Resources section of the EIR. Mr. Belt has over seven years of consulting and natural resources management experience. His professional abilities include botanical resources inventory and monitoring, federal and state wetland regulations, Endangered Species Act compliance, impact mitigation, land rehabilitation and maintenance, and watershed management. He has proven experience managing a variety of biological projects, and regularly prepares EIR biology sections. Mr. Belt has performed natural resources management activities on military installations and private

properties ranging from less than an acre to 200,000 acres in size.

DOCUMENT SUPPORT STAFF

GIS / Data Management

Kevin Doyle, B.S., GIS/CAD Specialist

Over 10 years experience implementing GIS mapping and data collection solutions on the Central Coast.

Mr. Doyle will provide GIS management and prepare the graphics for the project. Over the past ten years, Mr. Doyle has worked on numerous environmental projects on the central coast, often working with consultants and regulatory agencies in order to help conduct complicated environmental impact analyses. Mr. Doyle has been using ESRI products since ArcINFO version 7.2, and is currently using ArcGIS 9.3 for SWCA project needs. Mr. Doyle is very adept at understanding project needs and designing unique GPS data collection routines. This experience provides for a seamless work flow from the field to the office, and into map production. He also makes it a mission to keep moving forward in the constantly evolving IT profession to ensure that all projects are utilizing cutting edge technology.

He also makes it a mission to keep moving forward in the constantly evolving IT profession to ensure that all projects are utilizing cutting edge technology.

Technical Editing and Document Compilation

Jaimie Jones, Technical Editor

Ms. Jones will assist with preparation of the Mitigation Monitoring Program for the EIR and will conduct the technical review as well as document compilation. Ms. Jones has over six years of professional experience in environmental planning with an emphasis on environmental document coordination and preparation. She has been involved in the facilitation of public scoping meetings and assisting with the preparation of environmental documents. As Technical Editor for the San Luis Obispo office, Ms. Jones has overseen document quality control, consistency, and compilation of more than 100 environmental reports, including EIRs, Mitigated Negative Declarations, and a variety of natural and cultural resource studies.

Experienced technical editor for multiple award winning environmental documents.

SUB-CONSULTANTS

SWCA has chosen the sub-consultants for this project team based on previous project experience and the quality of deliverables they prepare.

Aesthetics

Robert Carr, B.S.L.A., ASLA, Landscape Architect

Mr. Carr will prepare the Aesthetics section of the EIR. He is a licensed Landscape Architect (No. 3473) specializing in visual impact analysis. He has over 22 years of professional landscape architectural experience, both as a private consultant and in the public sector. Mr. Carr has extensive experience in preparing aesthetic studies for controversial projects involving high quality visual resources and sensitive viewer groups on the Central Coast and throughout the state. His work has included analysis of planned developments, large-scale controversial commercial projects, residential subdivisions, multi-story apartment buildings, golf course development, wineries, state-wide fiber-optic cable installation projects, wireless communication towers, mines and quarries, landfills, wastewater treatment plants, and public parks,. Mr. Carr's work includes evaluation of several aggregate and sand and gravel mines, including a comprehensive visual analysis of the Hildreth Aggregate Mine in Madera County that was highly visible from State Highway 41 in a scenic area. As a visual resource specialist, his responsibilities have included comprehensive visual impact studies for public works projects throughout the state, including highway corridor impact studies for Santa Barbara/Montecito, Monterey/Carmel, Santa Cruz, Mariposa, and other communities, and the historic arch bridges of the Big Sur Coast. Mr. Carr has considerable expertise with several visual analysis methods, including those developed by the Bureau of Land Management, the U.S. Forest Service, the Federal Highway Administration (FHWA), and methods preferred by the various cities and counties of the central coast, the State Coastal Commission, and also regional hybridized approaches.

Over 22 years of professional landscape architecture experience, as a private consultant and in the public sector.

Air Quality, Noise, and Greenhouse Gas Emissions

Marine Research Specialists

Greg Chittick, M.S., Senior Scientist

Over 20 years of experience specializing in air quality and noise analysis.

Mr. Chittick is a senior scientist with MRS, with over 20 years of experience specializing in air quality analysis, noise analysis, safety, risk, aesthetics, and GIS systems. At MRS, he has been involved in preparing air quality and noise studies and environmental impact assessments, environmental technology studies, computer mapping analysis, modeling accidental releases of hazardous materials and conducting risk analysis studies for small and large facilities. Mr. Chittick worked previously at Lawrence Berkeley Laboratory and for Arco at oil and gas facilities along the California Coast. Mr. Chittick also worked for over 10 years in Boston, MA, on risk and EIR analysis. Mr. Chittick is a member of the American Society of Mechanical Engineers, Southern California Association of Risk Analysis, the Chlorine Institute and a member of the International Institute of Ammonia Refrigeration.

Geology and Soils, Water

Geosyntec

Gordon Thrupp, Ph.D., CHG, Associate Hydrogeologist

Over 25 years of experience scientifically evaluating geological, geophysical, and hydrogeological problems.

Mr. Thrupp will serve as the lead technical investigator and manage the Geosyntec personnel for this project. He will also be the principal contact with SWCA, the County, and other stakeholders. He has over 25 years of experience scientifically evaluating geological, geophysical, and hydrogeological problems, and 20 years experience conducting quantitative hydrogeologic evaluations and developing groundwater models. He has conducted numerous aquifer testing programs and water resource assessments. He also has developed and reviewed numerous groundwater flow models, at both regional and local scales for use as tools for assessing engineering alternatives and for water supply feasibility studies. Mr. Thrupp is known for his practical approaches to problems and cost-effective solutions. He worked on a water resource assessment of the Soquel Creek Basin and completed a Groundwater Resource Capacity Evaluation of the Nipomo Mesa area for the County Department of Planning and Building and Department of Public Works. He is experienced in making public presentations to groups of water resource stakeholders.

Jeff Zukin, CEG, Senior Engineer

Served as a SMARA compliance monitor for the County of San Luis Obispo for eight years.

Mr. Zukin has over 20 years of experience in managing and performing groundwater resource and environmental investigations around the United States. Mr. Zukin has managed groundwater resource studies that have involved both regional exploration as well as site-specific development projects. His groundwater resource experience includes evaluation of groundwater basins and bedrock aquifers, aquifer testing, well field design, long-term groundwater yield analyses, and watershed protection management. Mr. Zukin's environmental hydrogeology work has included the assessment of potential impacts of contaminants on drinking water aquifers and the characterization of numerous types of facilities including manufactured gas plant sites, landfills, Leaking Underground Fuel Tank (LUFT) sites, oil fields, railroads, tank farms, oil refineries, and industrial contaminated chlorinated solvent sites. He has also completed numerous

hydrogeologic and geologic environmental impact analyses as well as engineering geology projects.

Brandon Steets, PE, Senior Engineer

Mr. Steets will conduct review and analysis of erosion potential, runoff mitigation measures, and stormwater pollution prevention plans (SWPPP) for the proposed quarry project. He is experienced in conducting and managing large water quality modeling and monitoring projects to support National Pollutant Discharge Elimination System (NPDES) permitting, Total Maximum Daily Load (TMDL) implementation, stormwater quality management/planning, and Best Management Practice (BMP) design. His experience includes watershed, receiving water, and stormwater quality modeling; water quality monitoring plan development, implementation, data analysis, and reporting; and stormwater BMP selection and design. Mr. Steets’ experience working on County projects and his familiarity with the County’s sediment transport model will be an added benefit to the project.

Experienced in conducting and managing large water quality modeling and monitoring projects.

Lisa Austin, PE, Senior Water Resources Engineer

Ms. Austin will provide technical review of the Water section of the EIR. She has 20 years of experience in water quality and stormwater management. Ms. Austin has prepared many CEQA water quality and hydromodification management plans and technical reports for major new development and redevelopment projects in California. These reports identify regulatory issues, pollutants of concern and significance thresholds; identify selected treatment control and hydromodification control BMPs; model stormwater runoff volumes, flow rates, and water quality; develop and evaluate the effectiveness of water resource management plans; and assess the significance of potential water quality and hydromodification impacts. Ms. Austin serves as a Director on the California Stormwater Quality Association (CASQA) Board of Directors.

Serves as a Director on the California Stormwater Quality Association Board of Directors.

Transportation/Circulation

Rick Engineering

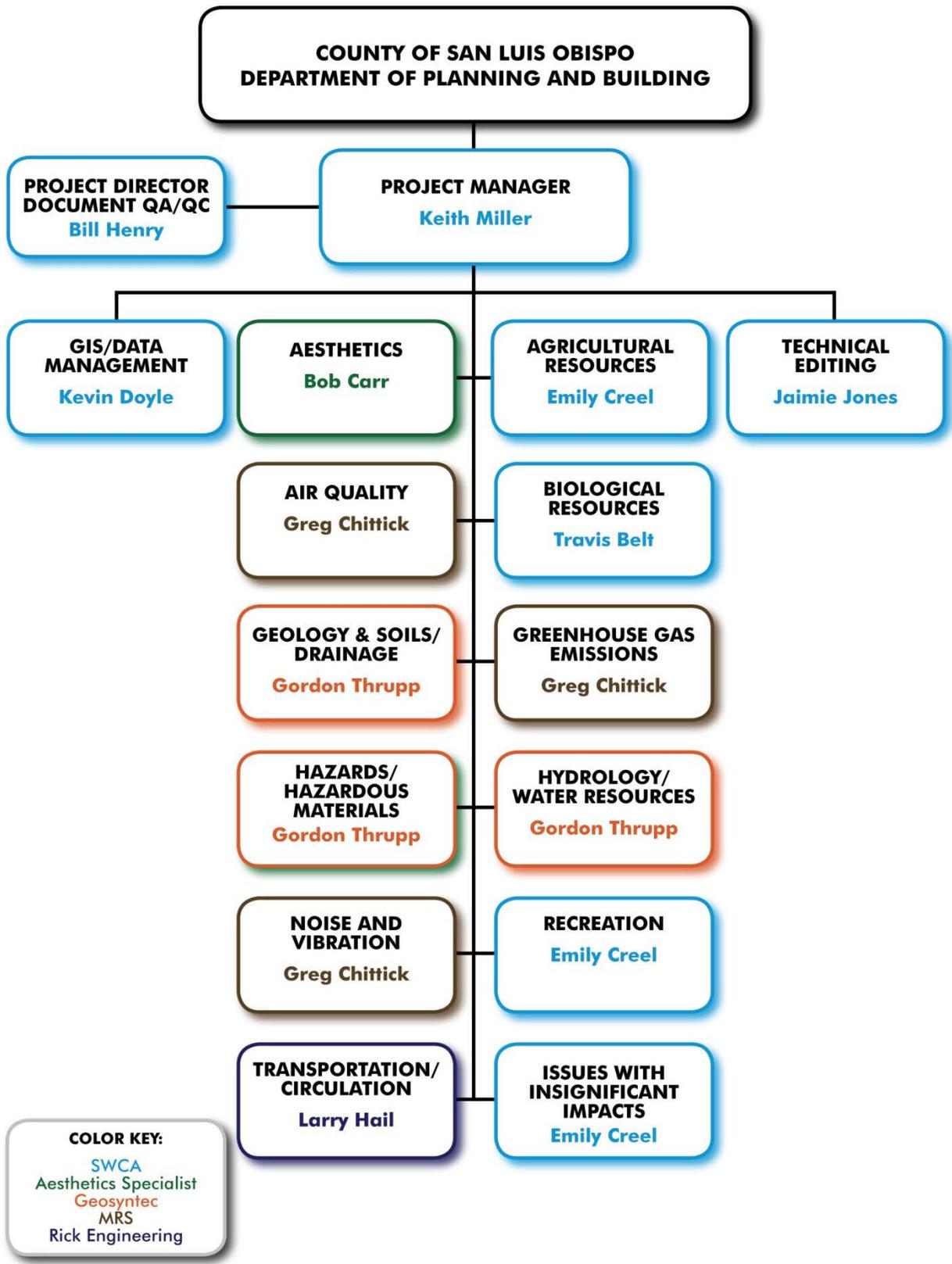
Larry Hail, CE, TE, PTOE, Principal Traffic Engineer

Mr. Hail will conduct a peer review of the traffic study, and will prepare the EIR Transportation/Circulation section. Mr. Hail is a principal traffic engineer, and has completed hundreds of projects over the past 24 years. Transportation planning studies prepared by Mr. Hail have included the evaluation of project specific impacts, analysis of alternatives, identification of required mitigation measures, and summaries of recommendations. He has completed numerous projects throughout San Luis Obispo County, including the preparation of transportation planning studies for Cold Canyon Landfill Expansion CUP EIR, AT&T Fiber Optic Line Project – San Luis Obispo to Los Angeles Supplemental EIR, Nipomo Community Park Master Plan EIR, and Pankey CUP and Reclamation Plan EIR.

Twenty-four years of experience as a traffic engineer, including projects throughout San Luis Obispo County.



Figure 1. Project Team Organization



B. SWCA PROJECT RELATED EXPERIENCE

SWCA has been performing environmental work in San Luis Obispo County since 1984 (formerly as Morro Group, Inc). Several examples of recent mining EIRs and other related environmental documents prepared by SWCA are discussed in detail below. Our Statement of Qualifications information is available upon request. These projects highlight our experience and familiarity with environmental documents and regional issues throughout the County and region.

PANKEY CONDITIONAL USE PERMIT AND RECLAMATION PLAN EIR



SWCA is retained by the County of San Luis Obispo Department of Planning and Building to prepare an EIR for the proposed Pankey CUP and Reclamation Plan. The project is located within and adjacent to the Salinas River, north of the community of San Miguel. The applicant is proposing to mine up to 105,500 cubic yards of sand and gravel per year from the river and creek systems through

implementation of an Area-Wide Adaptive Management Plan (AAMP). The AAMP is specific to the project and would establish mining procedures and protocols with the objective of allowing: 1) the applicant and resource agencies a level of certainty in regard to the location and amount of material which could be removed annually, and 2) a method to monitor the potential effects of the aggregate removal on surrounding natural resources, infrastructure, and the local and regional geomorphology. Issues considered in the EIR include Aesthetics, Air Quality/GHG Emissions, Biological Resources, Drainage, Geology and Soils, Traffic and Safety, and Cumulative impacts. The Draft EIR is scheduled for circulation in October 2011.

SOLARI SAND AND GRAVEL PROJECT EIR

SWCA is retained by the County of Kern to prepare an EIR for the proposed Solari Sand and Gravel project. The proposed project would encompass approximately 703 acres of land owned by Granite Construction. Approximately 425 acres would be mined, and ancillary project components would require additional ground disturbance of approximately 118 acres. Project operations will include sand and gravel extraction, periodic asphalt and concrete recycling operations, an asphalt concrete production plant, and a Portland cement concrete production plant. SWCA is responsible for peer-reviewing technical studies prepared by the applicant and for the preparation of additional studies and the EIR. Issues considered in the EIR include Air Quality/GHG Emissions, Biological Resources, Cultural Resources, Geology and Soils, Traffic and Safety, and Cumulative impacts.



CLIENT:

County of San Luis Obispo
Department of Planning and Building

CONTACT:

Murry Wilson
(805) 788-2352

CLIENT:

County of Kern
Planning and Community Development Department

CONTACT:

Paul Johnson
(661) 862-5022

HILDRETH CREEK QUARRY CONDITIONAL USE PERMIT APPLICATION PACKAGE

CLIENT:

Granite Construction Inc.

CONTACT:

Nate Rutterbush
(formerly with Granite)
(559) 318-6301



SWCA was retained by Granite Construction Company to prepare an application package for their proposed deep pit mine on 323 acres near Hildreth Creek in Madera County, California. In addition to the CUP application for aggregate mining and processing, the package included applications for lot line adjustments and parcel maps among three properties, for rezone of the project parcels, cancellation of Williamson Act contracts on those parcels, and a surface mining Reclamation Plan. To support the anticipated EIR for the project,

Granite tasked SWCA with providing extensive environmental background information as part of the application. SWCA staff prepared this information in the form of an expanded initial study covering all environmental topics in Appendix G, an alternatives analysis and comprehensive review of applicable plans and policies, emphasizing the environmental setting, existing conditions for each resource of concern, and an initial assessment of environmental impacts. Supporting technical reports were prepared by SWCA for visual resources, air quality analysis, blasting study, and climate change (GHG), cultural resources, noise, and traffic analysis. SWCA biologists prepared the Reclamation Plan in accordance with SMARA and Madera County regulations. With work initiated in July 2009, applications were presented to the County in November 2009. The County accepted the application package and Expanded Initial Study, and used this information to develop the RFP for the EIR on the project. Mr. Carr and Hatch Mott MacDonald were on SWCA’s team for this project and prepared expanded studies in their respective disciplines for submittal to Madera County. (Note: SWCA’s contract with Granite on this project was terminated upon project completion in early 2010.)

ROCKY CANYON QUARRY EIRS

Program EIR

SWCA was retained by the County in 1994 to prepare a Program EIR for the expansion of the existing Rocky Canyon Quarry owned by Wilco-Hermrick, Inc. and located adjacent to the city of Atascadero. The applicant proposed expansion of operations to ultimate completion in 85 years. The EIR focused on biological impacts, mine reclamation, and area revegetation. As part of the Program EIR, test plots were evaluated to determine the most appropriate methods of revegetation. Other issues included truck traffic on Atascadero roads, drainage, erosion and sedimentation issues, geologic hazards, air quality impacts, pollution of ground water resources, visual impacts, noise impacts, cumulative impacts resulting from increased operations of other local quarries, and growth inducing impacts. This project faced considerable public controversy, particularly with regard to traffic impacts.



CLIENT:

County of San Luis Obispo

Department of Public Works

CONTACT:

Eric Wier
(805) 788-2766

Revised Program EIR

SWCA was retained in 1996 to revise the Program EIR based on Wilco-Hermrick, Inc.’s request to add an additional 122 acres to their existing Rocky Canyon Quarry. The Revised Program EIR focused on the potential impacts of the additional acreage and the extension of operations at the same rate of excavation from 85 years to 220 years. The Revised EIR focused on the same issues as the original EIR and found that the revised project resulted in a decrease in significant impacts. This was due to the decrease in angle of slopes which increased the success rate of revegetation and a decrease in visual impacts due to the retention of foreground ridges.

Subsequent EIR



SWCA was also retained in 2000 to prepare a Subsequent EIR and update the Rocky Canyon Quarry Specific Plan based on Union Asphalt, Inc.’s request for an increase of 100,000 cubic yards of aggregate per year for the first five years and possible incremental increases up to 200,000 cubic yards beginning year six. In addition to the yearly increase, Union

Asphalt also proposed an increase in production hours. This increase in aggregate production and production hours would not require any change in the capacity method of operation of the processing plant.

SURFACE MINING AND RECLAMATION ACT SERVICES INSPECTION REPORTS

SWCA was retained by the County Department of Planning and Building, Division of Environmental and Resource Management, to provide SMARA services on behalf of the County. Services include reviewing previous mining operation annual reports, performing annual inspections with mine operators, and documenting the on-site conditions of the approximately 40 surface mine operations throughout San Luis Obispo County. These mines include large open pit mines and in-stream sand and gravel mines. SWCA is responsible for correspondence with the Department of Conservation Office of Mine Reclamation, and other regulatory agencies including the CDFG and the SLOAPCD. Environmental issues considered during site inspections include revegetation and habitat restoration, drainage, grading/slope stability, erosion control, creek setbacks, truck traffic/safety, and dust control. Every active surface mine must have a financial assurance mechanism (bond, cd, etc.) in place to assure that, in the event that the mine operator is unwilling or unable to reclaim their surface mine, there are resources in place for the County to adequately reclaim the mine. SWCA works with the County in reviewing financial assurance cost estimates to determine their adequacy, and in securing the mechanism with the operator.



CLIENT:

County of San Luis Obispo
Division of Environmental and Resource Management

CONTACT:

Ellen Carroll
(805) 781-5027



CLIENT:

County of San Luis Obispo

Division of Environmental and Resource Management

CONTACT:

John Nall
(805) 781-5027

While performing the scope of work, SWCA has noted potential violations of permit conditions and worked with operators and local agencies to rectify issues. SWCA has also assisted in identifying whether or not mine operations have met the requirements of their reclamation plans and can be permanently closed. SWCA’s experience with State and local surface mining rules and regulations, and demonstrated ability to work with a diverse group of stakeholders, including the mine operators, regulatory agencies, and other resource agencies, has helped the County maintain a high level of compliance with SMARA.

COUNTY OF SAN LUIS OBISPO ON-CALL SERVICES CONTRACT



The County Department of Planning and Building, Division of Environmental and Resource Management, has retained SWCA under a succession of planning and environmental open-services agreements since 1990. This contract has been renewed consecutively and is currently ongoing. SWCA was initially contracted by the County to expedite the process of preparation of environmental documents for projects throughout the County. SWCA has prepared over 200 environmental documents under this contract, including

mitigated negative declarations, mitigation monitoring plans, expanded initial studies, EIR recommendations, and NOPs. SWCA has also assisted County staff by providing discretionary permit review, preparing appeal responses and staff reports, and presenting permit requests and environmental documents to the County Board of Supervisors, Planning Commission, and Planning Department Hearing Officer.

Project areas include both un-incorporated urban communities and rural areas within the inland and coastal regions of the county. Project application types include land use permits, subdivisions, variances, general plan amendments, ordinance amendments, and various combinations of the above. SWCA’s experience consists of a diverse range of projects, including: residential subdivisions, mixed use and commercial developments, telecommunications facilities, wineries and tasting rooms, private wind and solar energy projects, industrial developments, mines and quarries, and specific plans.

SMITH RIVER PIT, NESBITT PIT, CRESTON PIT, SPREAFICO PIT PROJECTS

While employed by the County, Mr. Miller was responsible for permit processing and preparation of the environmental determinations for multiple surface mines. Two of these mines, the Smith River and Nesbitt Pits were located in-stream in the Salinas River. The Creston Pit was also located in-stream, in Huerhuero Creek, a major tributary to the Salinas River. Resource issues with these mining operations included biological resources, geomorphology, cultural resources, noise, and truck traffic, similar to the proposed project. These operations required review of technical documents and consultation with resource agencies, community groups, and members of the public. As with the proposed project, a number of the projects included significant controversy, public comment, and contentious public hearings.

C. COORDINATION

PROJECT TEAM COORDINATION

SWCA proposes a chain of command that will entail all SWCA communications running through Keith Miller, EIR Project Manager, to the County’s Project Manager. All issues at the project team level will be synthesized by Mr. Miller and forwarded, verbally or otherwise, to Mr. Nall. As the Project Director, Mr. Henry will work both behind the scenes with Mr. Miller and Mr. Nall and, when needed or requested, will provide front line support at meetings and during any other project related tasks.

Mr. Miller has extensive experience organizing and managing multidisciplinary teams and understands the importance of ensuring team coordination and cooperation throughout the environmental review process. Sub-consultants are chosen based on past performance history. Only those who continually meet deadlines in a timely manner and perform tasks with the highest levels of competency and integrity have been selected to assist in the preparation of the Oster (Las Pilitas Quarry) CUP/Reclamation Plan EIR. SWCA’s professional reputation helps to assure sub-consultant cooperation. Sub-consultants are aware of SWCA’s extensive professional relationship with the County and look to ensure future work with SWCA by performing tasks efficiently and maintaining high quality performance standards.



CLIENT COORDINATION

Through preparation and implementation of the above-referenced CEQA documents for various public agencies, SWCA has gained an understanding of the need to maintain a close working relationship with agency staff and strives to provide consistent and open communication throughout the process of preparing these documents. SWCA understands that agency staff and management have a vested interest in the final product and are required to defend the content and recommendations found in these documents to decision makers and the public. One aspect of SWCA’s philosophy in preparing EIRs involves continually working closely with the County with respect to potentially critical CEQA issues that are identified at any point in the document preparation process. SWCA has chosen Mr. Miller as project manager because of his experience with mining-related projects; knowledge of the proposed project; ability to interface with the project applicant, public and County; and his excellent working relationship with the County.



D. REFERENCES

The following references are specific to SWCA’s experience preparing EIRs. We encourage those reviewing the SWCA proposal to contact those listed for information on SWCA’s capabilities and past record of performance. Additional references are also available on request.

Table 2. References

Contact	Project Reference	Contact Information
COUNTY OF SAN LUIS OBISPO DIVISION OF ENVIRONMENTAL & RESOURCE MGMT		
John Nall, Senior Environmental Planner	Cold Canyon Landfill Expansion CUP EIR	(805) 781-5027
CITY OF FORT BRAGG COMMUNITY DEVELOPMENT DEPARTMENT		
Marie Jones, Community Development Director	Fort Bragg Coastal Restoration and Trail Project EIR	(707) 961-1807
COUNTY OF KERN DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT		
Paul Johnson, Supervising Planner	Solari Sand and Gravel EIR	(661) 862-5022
COUNTY OF SAN LUIS OBISPO DEPARTMENT OF PLANNING AND BUILDING		
Steve Mc Masters, Environmental Specialist	AT&T Fiber Optics Cable Project – San Luis Obispo to Los Angeles EIR and Supplemental EIR	(805) 781-5096

SECTION 3. SCOPE OF WORK

A. EIR OVERVIEW

The EIR will meet all requirements set forth in the CEQA Guidelines (California Code of Regulations [CCR] 15000 et. seq.), Title 14. The following are scope of work descriptions of the key components required for the EIR. This scope of work reflects information contained in and attached to the RFP. In addition to this information, SWCA and our sub-consultants have added to the impacts evaluation and scope of work, where appropriate, for each issue area based on our experience with the project, and similar projects and locations. In preparing this scope, SWCA has made every effort to recognize the substantial amount of existing applicant-prepared information, while recognizing that the EIR must be legally defensible.

EXECUTIVE SUMMARY

The Executive Summary of the EIR will include a brief description of the project, an impact and mitigation measure summary table, a summary of each issue area discussed in the environmental impact analysis, a brief description of identified alternatives and the environmentally superior alternative, and the growth inducing impacts of the project. The Executive Summary will be prepared as a stand-alone document for submittal to the State Clearinghouse. The Executive Summary will be prepared by Keith Miller of SWCA and will include the following scope of work:

Itemized Scope of Work

1. Include the Introduction to the EIR and summarize the project description and environmental setting sections of the EIR in the Executive Summary.
2. Summarize the impacts and mitigation measures in tabular format.
3. Synthesize the EIR Alternatives discussion and Growth Inducing Impacts in text format.

INTRODUCTION

The Introduction section of the EIR will discuss the history of the project and relevant background information. Information will be obtained from available documents and communications with the County. This section will provide an overview of the document; identify the lead, responsible, and trustee agencies for the project; and describe the intended uses of the EIR. The Introduction will also include a discussion of the entire EIR review process. This section will be prepared by Emily Creel of SWCA and will include the following scope of work:

Itemized Scope of Work

1. Provide an introduction, brief synopsis of the purpose of the EIR, EIR format, and pertinent description of the intent of CEQA. Describe the intended uses of the EIR.
2. Provide a brief history of the project.
3. Provide a timeline and discussion of the means to comment on the draft EIR and dates for public hearings.
4. Provide a list of responsible and trustee agencies.



PROJECT DESCRIPTION

The Project Description will be based on the information supplied by the applicant and contained in County project files. CEQA requires the project description to describe the “whole of the action,” which in this case includes the quarry excavation phases; processing, stockpiling, and hauling of the material; reclamation plans; and any off-site or secondary improvements. Formulation of the project description will be a result of close interaction and communication with the County Project Manager and the applicant. The Project Description will also include the project objectives to be used in the EIR alternatives analysis. Identification of the project objectives is critical to the development and evaluation of alternatives. The Project Description will be prepared by Keith Miller of SWCA and will include the following scope of work:

Itemized Scope of Work

1. Identify project site location and prepare legal description, including the Assessor’s Parcel Map and regional and vicinity maps.
2. Describe the project, including all intended components. Prior to the project start-up meeting, SWCA will prepare a list of information needed to adequately and thoroughly describe the project and its components. Since the applicant did not submit a formal project description, we will request that the applicant provide, either verbally at a meeting or written, an explanation of many of the project components illustrated on the project plans.
3. Prepare a comprehensive listing and description of the project improvements proposed as part of the project. Improvements will include any proposed preliminary landform alterations, assumptions regarding grading and drainage improvements, various mining phases, reclamation plan, and any other physical site alterations, as well as specific information regarding intended ancillary uses to the development, including any infrastructural improvements or any off-site or queuing or related ancillary improvements associated with the project.
4. Identify project objectives, and a description of project phasing. In addition, the project description will describe recent history of the project site including land use actions and decisions that have enabled the site to be eligible for the proposed action.
5. Compile a comprehensive list (in sequential order) of all County and resource agency permit approvals needed for the project. This list will be developed in consultation with agency staff and will form the basis for the EIR mitigation measure timing component requirements.

ENVIRONMENTAL SETTING

The proposed project site is located in the Rural Lands category, within the Las Pilitas Planning Area. The project area is approximately 60 acres and is adjacent to the Salinas River, and associated floodplain and upland areas. Existing development on the project site is relatively limited, and consists of level to steeply sloping terrain.

The Environmental Setting section will include a description of the physical setting of the project site, the surrounding land uses, and the cumulative development scenario. In addition, this section of the EIR will include a summary of consistency with plans and policies. Based on the Initial Study, the proposed project has the potential to be

inconsistent with a number of policies. SWCA will review applicable plans and policies, after consultation with County staff, and make a preliminary determination of the proposed project's consistency with them. Consistency with policies of the Salinas River Area Plan; Land Use, Conservation, Agriculture and Open Space Elements; and other current County of San Luis Obispo General Plan documents will be discussed in this section. Consistency determinations will be made after impacts and mitigation measures are developed as these are two key components in determining a project's potential consistency. The Environmental Setting section of the EIR will be prepared by Emily Creel of SWCA and will include the following scope of work:

Itemized Scope of Work

1. Describe the physical characteristics of the site and surrounding area (e.g., geology, biology, land characteristics, etc.). Photographs of the surrounding land uses and properties will be included, as applicable.
2. Include descriptions of the current land use and zoning designations and overlays for the project site, and provide a detailed description of the present use of the site and surrounding properties.
3. Consult with the County Project Manager to verify the appropriate list of local and regional plans, Development Standards, ordinance requirements, and management plans for the project. Consult with other agencies such as Office of Mineral Resources, U.S. Fish and Wildlife Service (USFWS), CDFG, Regional Water Quality Control Board (RWQCB), and SLOAPCD to determine the project's consistency with federal, state, and local regulations governing land use.
4. Prepare a table of applicable land use policies and identify project consistency based on information in the applicable issue area sections.
5. Identify the cumulative development scenario based on discussion and coordination with County staff. Information regarding land use changes and development in the area will be obtained from agency staff, including projects under consideration, recently approved projects, proposed and approved land use and zoning amendments, associated environmental documents, and mapping. Particular attention will be paid to existing and pending in-stream surface mines in the upper Salinas River watershed.
6. Prepare a map showing the cumulative study area and the location of the project included in the cumulative development scenario. A table that corresponds with the projects shown on the cumulative development scenario graphic will be prepared and will include details of each project including size and status.





ENVIRONMENTAL IMPACT ANALYSIS

Issue Area Study Methodology

An introduction to the environmental impact analysis portion of the EIR will be given to familiarize readers with the project site and surrounding area characteristics, as well as the format of the environmental analysis. Each issue of the environmental impact analysis will be divided into a description of the following:

1. Existing Conditions;
2. Regulatory Setting;
3. Thresholds of Significance (as determined by the County);
4. Impact Assessment and Methodology;
5. Project-specific Impacts, Mitigation Measures, and Residual Impacts;
6. Secondary Impacts of Mitigation Measures (if applicable); and
7. Cumulative Impacts, Mitigation Measures, and Residual Impacts.

The mitigation measures will specify the method of implementation and degree of effectiveness. Mitigation measures will be written in a format that includes a “timing” milestone and a method by which the measure can be monitored. Timing milestones will coincide with the various stages of the planning and permitting process. Mitigation will be designed to be incorporated as Development Standards, where applicable.

Issue Areas to Be Included in the EIR

The following issue areas will be the focus of the EIR analysis. Refer to Table 1 for a summary of our approach to each issue. These issues may result in potentially significant impacts, would require peer review of the applicant’s submitted documentation, and/or would require additional technical analysis or field work. The issue area headings are consistent with the County Initial Study headings.

Aesthetics

The assessment of aesthetic resources will include a photographic and written inventory of existing site conditions and establish the baseline visual character. Overall extent and quality of proposed project visibility will be documented. The aesthetic resources analysis will specifically identify the visual resources on-site and any related landforms and other features which are of significance from key viewing areas along Highway 58. Critical viewing areas and durations will be identified, and photographs will be taken from each of the key viewing areas and used as the basis for further analyzing the potential effects of the project.

AESTHETICS
Bob Carr, ASLA

The primary potential aesthetic effects of the project are anticipated to be due to excavation slopes and stockpiles, structures and operational equipment, trucks, access road improvements, signage and landscaping, and night lighting, if proposed.

Through the use of computer modeling, cross-sections, and reference pylon placement as needed, the Aesthetics section will compare the existing visual condition with the project features as proposed and will identify any potential impacts to views and visual character. The Aesthetics section will make recommendations and present alternatives if necessary to

preserve aesthetic resources. Potential aesthetic changes will be identified in terms of long-term operational effects and short-term impacts as well as phasing. Construction activities and disturbance will be addressed.

The Aesthetics section will discuss the aesthetic changes over the expected lifespan of the quarry operation. Photo-simulations will document the project, evaluate the appearance of the proposed changes, and show the effectiveness of any recommended mitigation measures. The photo-simulations will thoroughly identify alterations to the site and to the area's visual character as a result of the project. The photo-simulations will provide a valuable method of public disclosure as well as a tool for project approval discussion. The analysis methodology will also evaluate the cumulative effect that the project may have on the visual character of the surrounding landscape. The analysis will differentiate between views from public roadways and private residences. If the proposed project or mitigation measures include planting, plant growth rates and size potential will be considered.

Specific project impacts will be determined by evaluating the physical changes proposed by the project in the context of the existing and surrounding landscape, as seen from important and representative viewing locations on Highway 58. Project impact determinations will be based on CEQA Guidelines and will be consistent with community scenic values as identified in the County planning policy, ordinances, and goals. Expected viewer sensitivity will be assessed and considered as part of the analysis. This section of the EIR will be prepared by Bob Carr, Aesthetics sub-consultant, with review by Keith Miller of SWCA, and include the following scope of work:

Itemized Scope of Work

1. Initiate analysis through consultation with County staff to understand the project's design, phasing, and other critical issues. Determine critical factors including County guidelines, visual policies, and previous studies applicable to the site. Review public comments regarding visual resources and ensure that their concerns regarding visibility will be addressed.
2. Determine and document overall visibility of the project from along Highway 58 and the surrounding area. Identify key viewing areas based on visual access to the site, viewer-group expectations, and sensitivity, along with applicable County policies. Key views will be selected based on field analysis including view exposure and duration.
3. Establish on-site locations of critical project features and proposed landforms. Project features will be established by a combination of computer modeling and the placement of on-site reference pylons and flagging. The specific locations of critical site-development components will be based on the project plans and additional information provided by County staff or project representative.
4. Develop graphic cross-sections, as necessary, by use of scaled topographic information of the surrounding view corridors, existing site conditions, and the proposed grading plan. Cross-sections will identify critical sight-line information and will be used to analyze the existing visibility and the proposed landform changes over time.
5. Develop baseline photographs taken from key viewing areas.





6. Evaluate project impacts by superimposing the proposed project onto the baseline images. In conjunction with field studies, three computer generated photo-simulations showing “before and after” conditions will be used as the basis for the analysis. The analysis will evaluate the project’s impacts relative to the overall landscape context including surrounding land use, visual harmony with the existing landform and landcover, consistency with existing landscape character, and seasonal variation. These physical attributes will be considered along with the viewer’s expected response to the proposed changes. In addition, the proposed project will be analyzed for consistency with applicable planning policies and guidelines.
7. Identify and quantify general and specific visual impacts including the potential cumulative effects caused by the proposed project, based on the above analysis and per CEQA guidelines. A general discussion of off-site visual impacts associated with truck traffic will be included, if queuing or waiting areas are to be located off-site.
8. Provide mitigation measures which directly relate to identified impacts
9. Prepare photo-simulations of the project from each key viewing area showing applied mitigation measures and illustrating potential effectiveness.
10. Costs for additional optional visual simulations at each mining phase have been included; this would entail an additional four simulations from each key viewing area, for a total of 12 simulations. This optional task would provide the EIR readers with a potential visual picture at each mining phase.

Agricultural Resources

The project proposes the disturbance of approximately 60 acres on two parcels, east of the community of Santa Margarita, totaling approximately 203 acres. These parcels are in the Rural Lands category. The lands are not classified as prime farmland or as farmland of statewide importance, although they may be considered Important Soils based on the County’s recently adopted Conservation and Open Space Element. There are no Williamson Act contracts or other agricultural preserves associated with the two parcels. Surrounding properties are also in the Rural Lands category and, according to the Initial Study, are currently in residential or industrial uses.

AGRICULTURAL RESOURCES
 Emily Creel
 SWCA

The project would result in the temporary conversion of approximately 60 acres of land used for livestock grazing and ranching activities. These areas would be used for excavation, stockpiling, equipment staging, and access roads for the duration of the mining activity. Other potential impacts identified in the Initial Study include the introduction of invasive weeds and creation of dust, which could increase the occurrence of dust mites and Valley Fever.

There are other general incompatibilities between surface mining and agricultural production, such as the presence of heavy machinery, excavation and blasting activities, and disturbing the natural contour of the land. The applicant-submitted project description includes plans for site reclamation and revegetation, including sloping and recontouring disturbed areas as appropriate for continued future use as ranching and grazing lands. Long-term impacts to ranching activities are proposed to be minimized by restoration of

the site, including recontouring of the excavated slopes and the replanting of the site with native species.

Preparation of the Agricultural Resources section of the EIR would include a thorough analysis of the existing information, the site's soil characteristics, and the applicant-proposed reclamation plan. SWCA will consult with the County Department of Agriculture to determine if any residual impacts may exist despite the applicant's efforts at reclamation. One focus of the impact analysis will be on the distinction between potential short-term and long-term impacts because, as proposed, the project would be permitted for a maximum of 30 years. The Agricultural Resources section of the EIR would be completed by Emily Creel of SWCA and include the following scope of work:

Itemized Scope of Work

1. Consult with the County Department of Agriculture to determine critical factors including guidelines, agricultural policies, and previous studies applicable to the site and surrounding vicinity.
2. Summarize baseline conditions of the project site. This includes descriptions of existing and historical agricultural/grazing uses and practices, soil classifications, and evaluation of applicable ordinances, policies, and regulations regarding agricultural protection and compatibility. This task includes reviewing documents submitted by the applicant and summarizing surrounding agricultural activities.
3. Evaluate project-related impacts. This section will evaluate impacts related to loss of agricultural soils, loss of grazing lands, impacts to surrounding agricultural land uses, and policy inconsistencies. Short-term, long-term, and cumulative impacts resulting from the construction and implementation of the project will be identified and evaluated. SWCA will analyze the potential impacts associated with the proposed project related to the removal of existing agricultural resources/uses on the site (cattle grazing), potential impacts of the proposed project on off-site adjacent agricultural operations, and potential impacts on any proposed future agricultural development of the site.
4. Recommend mitigation measures. This task will consist of developing mitigation measures designed to reduce, to the degree possible, the significant, adverse impacts associated with implementation of the proposed project. Feasible methods to reduce impacts to agricultural resources will be identified, including applicable dust control and invasive weed control measures.
5. Identify impacts that cannot be reduced to a level of insignificance and which may require findings of overriding consideration

Air Quality

An air quality impact assessment was not included in the applicant's submittal; therefore, an independent air quality assessment will be included in the EIR. San Luis Obispo County is considered in attainment for all national air quality standards (NAAQS), but is currently in non-attainment for State standards with respect to ozone and particulate matter less than 10 microns (PM₁₀). The proposed project would result in total land disturbance of approximately 60 acres, of which approximately 54 acres would be designated as the

AIR QUALITY
Greg Chittick
MRS





extraction area with an additional 4.5 acres for processing quarried materials and 1.5 acres of on-site roads.

Operation of the project would emit criteria air pollutants such as Reactive Organic Gases (ROG) and Oxides of Nitrogen (NO_x), which are ozone precursors, and diesel toxics by the emission of diesel particulate matter (PM). GHGs (carbon dioxide [CO_2], methane, nitrous oxide [N_2O]) would also be emitted through the use of heavy machinery for resource extraction and additionally through diesel powered processing equipment and transportation of materials to and from the site. Fugitive dust (PM_{10}) would inherently be generated through the various extraction and material stockpile operations and equipment and truck travel on unpaved haul roads. Hauling the processed material to various off-site locations would generate diesel truck emissions. There are known sensitive air receptor locations along the proposed haul routes on Highway 58 (Santa Margarita Elementary School) as well as residences located to the west and south of the project site.

Air pollutant emissions generated by construction activities may exceed SLOAPCD thresholds. SLOAPCD is currently in the process of developing a Climate Action Plan and an updated Clean Air Plan. While these documents may not be adopted prior to preparation of the EIR, SWCA will consult with SLOAPCD to identify any potential inconsistencies with proposed policies or standards. Mitigation strategies will be developed specific to the project to ensure feasibility and effectiveness. The Air Quality section of the EIR will be prepared by Greg Chittick of MRS and include the following scope of work:

Itemized Scope of Work

1. Discuss the existing air quality setting of the proposed project. This includes baseline air quality and trends, regional climate, and prevailing wind patterns and their affect on air quality, and a discussion of federal and state attainment status. In addition, this section will discuss the applicable regulatory setting, and project impact significance thresholds, based on consultation with SLOAPCD.
2. Calculate short-term construction and long-term operational emissions. This will be conducted per SLOAPCD guidelines and as applicable through the use of the CalEEMod modeling program. The CalEEMod program is the most recent version of URBEMIS incorporating GHG emissions of non- CO_2 pollutants as well as CO_2 . Emission estimates will be included in an appendix for reference. Project-related impacts evaluated will include short-term, long-term, and cumulative impacts, if any, resulting from the construction and implementation of the project. Impacts associated with project implementation will be compared to thresholds of significance as defined by the most recent SLOAPCD CEQA thresholds.
3. Emissions of fugitive dust will utilize the CalEEMod approach for vehicle travel on dirt roads or the most recent AP-42 methods, which have been developed specifically for industrial haul roads and may be more applicable to this project. SLOAPCD will be consulted in regards to the appropriate approach. Fugitive dust from graded and exposed areas will utilize the approach defined in CalEEMod.
4. Examination of health risks associated with diesel particulate emissions. Emissions of diesel particulate emissions would occur at the project site and along area roadways. Impacts to residences and to sensitive receptors along transportation routes will be conducted using the AERMOD modeling program in combination with the unit risk factors for diesel particulate emissions.

5. Evaluate the consistency of the project with the County’s Clean Air Plan. This task will include a background discussion of the potential impacts of climate change, including any potential inconsistencies with the County’s Climate Action Plan and updated Clean Air Plan (if available).
6. Recommend mitigation measures. This task will consist of developing mitigation measures designed to reduce, to the degree possible, the significant, adverse impacts associated with implementation of the proposed project. Mitigation measures could include the application of soil binders to dirt roads, the application of water to dirt areas, limits on vehicles speeds, etc. Numerous measures are tabulated by the SLOAPCD in their CEQA Guidance manuals and these will be incorporated, as applicable, along with other measures, to reduce fugitive dust emissions. Emissions of criteria or toxic pollutants could be mitigated by requirements to utilize certain model year or later trucks or construction equipment or the application of diesel particulate filters on trucks or construction equipment.
7. Identify impacts that cannot be reduced to a level of insignificance and which may require findings of overriding consideration
8. Conduct Health Risk Screening Analysis air quality modeling, if necessary, utilizing AERMOD modeling software as applicable for both on-site operations and truck travel on area roadways.

Biological Resources

In October 2009, a Sensitive Species and Habitat Survey report was prepared for the Las Pilitas Rock Quarry by LFR (an Arcadis Company); the emphasis of our work effort will be to peer review this report for accuracy and applicability. This report provides a detailed description of the site, the biological resources likely to be found in the project area, observations and surveys conducted to confirm the presence of any special-status biological resources on the site, the possible impacts to these resources that could result from the proposed project, and mitigation measures recommended to reduce impacts to less than significant levels.

**BIOLOGICAL
RESOURCES**
Travis Belt
SWCA

SWCA has conducted a preliminary review of the Sensitive Species and Habitat Survey report, and understands that the findings of the biological survey indicate that at least four sensitive plant communities occur at the site, including coast live oak woodland, foothill woodland, Central Coast live oak riparian forest, and seasonally flooded vernal swale. Coast live oaks, blue oaks, valley oaks, and gray pines occur at the site and are considered locally important. While no state or federally listed threatened or endangered species were observed at the site during the 2009 surveys, five sensitive plant species were observed including shining navarretia, La Panza mariposa lily, straight-awned spineflower, Brewer’s red maids, and trumpet-throated gilia. One sensitive wildlife species was also observed, coast horned lizard. In addition, the site provides suitable habitat for a number of other sensitive wildlife species including the American badger, which is associated with oak woodland and chaparral habitat. Numerous protected raptors and bird species also utilize the site for foraging and potentially nesting.

The site supports wetland communities including Central Coast live oak riparian forest and seasonally flooded vernal swale. In their study, LFR opined that: 1) CDFG would assert jurisdiction over some or all of an ephemeral drainage that traverses the site (via the





Section 1602 Streambed Alteration Agreement process); and 2) drainages on-site would not be subject to U.S. Army Corps of Engineers (USACE) jurisdiction under Clean Water Act Section 404. While the County's revised Initial Study for the project indicates that Clean Water Act Section 401 may apply, the Section 401 permitting process is implemented by the RWQCB and typically triggered by the Section 404 permitting process. No formal wetland delineation/preliminary jurisdictional determination has been conducted of the site to date, and these aforementioned regulatory agencies have yet to conduct site visits or verification of jurisdiction on-site.

Project development would result in the direct loss and/or fragmentation of vegetation and habitats found on the project site, as well as indirectly impacting habitats surrounding the proposed project. The biological report prepared for the project recommends avoidance as the primary measure to reduce impacts. The report also provides measures intended to reduce impacts such as the permanent protection of the areas outside the quarry construction boundary, on-site habitat restoration, oak tree replacement, replanting, and the protection of seasonally-flooded vernal swales and coast live oak riparian resources. In addition to these measures, the project also includes the restoration of mined areas in accordance with the requirement for a Reclamation Plan per SMARA.

This section of the EIR will contain a detailed discussion of biological resources as they pertain to the subject site. The existing biological report will be reviewed and supplemented with further industry research as needed to provide a detailed biological impact assessment of the proposed project. The technical peer review and a supplemental reconnaissance field survey will determine if additional field survey and/or revised mitigation measures are necessary. If these are determined to be necessary, SWCA will contact the County to provide recommendations. The EIR will analyze the reclamation efforts proposed by the applicant, as well as the mitigation recommended in the biological report and will include performance standards for the purpose of ensuring the implementation and function of reclamation and required mitigation. The Biological Resources EIR section will be prepared by Travis Belt of SWCA, with review by Keith Miller, and will include the following scope of work:

Itemized Scope of Work

1. Review and compile existing project information. A list of sensitive species with potential for occurrence will be compiled based on review of relevant reports (including the Sensitive Species and Habitat Survey report), the CNDDDB, and other pertinent literature. Where necessary, appropriate resource agencies, including USFWS and CDFG will be contacted regarding special-status wildlife species with potential to occur in the project vicinity. In addition, resource conservation organizations such as the California Native Plant Society (CNPS) and local conservation groups will be consulted, as appropriate. Information obtained from review of existing literature and discussions with resource experts will be used to identify issues of biological concern within the project site and, if necessary, focus any subsequent field survey efforts.
2. Conduct reconnaissance "ground-truth" field survey. Qualified SWCA biologists will conduct a reconnaissance survey of the site to facilitate field verification of previous biological field surveys and update existing information as appropriate. It is assumed that no additional floristic botanical surveys, formal protocol wildlife surveys, or habitat mapping of the project area will need to be conducted under this scope of work. It is also assumed that SWCA will be provided with a full set of GIS (or compatible) site plans, topography files, and aerials as well as any

previously collected habitat mapping data to allow for overlays of habitat mapping and quantification of impacts.

3. Prepare Biological Resources section for the EIR. Using our review of existing information, the reconnaissance survey, and the wetland delineation/preliminary jurisdictional determination report, SWCA will evaluate the proposed project with respect to short-term, long-term, and cumulative impacts to biological resources. Project maps will be reviewed to determine the impact areas relative to potential sensitive resources. The focus of the impact assessment will be on determining potential project-related effects on special-status plant and animal species as well as sensitive habitats and potentially jurisdictional waters. Impacts on biological resources associated with project implementation will be compared to defined thresholds of significance based on pertinent federal, state, and County plans and policies. Biological resources concerns expressed by the EIR scoping meeting public comments will also be addressed.
4. Recommend mitigation measures. Upon assessing impacts, mitigation measures will be included to reduce, to the degree possible, any potentially significant adverse biological resources impacts associated with implementation of the proposed project. Mitigation will focus measures that are reasonably feasible and effective, and will be developed in sufficient detail to allow monitoring for compliance. Long-term protective measures for sensitive habitats of the project site and adjacent areas will be identified as part of this task, and specific methods for avoiding or minimizing direct impacts to special-status species or degradation of sensitive habitats will be discussed.
5. Identify impacts that cannot be reduced to a level of insignificance and which may require findings of overriding consideration.
6. Optional Task: Prepare Wetland Delineation/Preliminary Jurisdictional Determination. As part of the reconnaissance “ground-truth” field survey, SWCA will make field observations to verify the potential jurisdictional status of waters on-site such as drainages. If more detailed technical information is required to resolve any uncertainty regarding potential regulatory jurisdiction over federal or state waters within the site, SWCA proposes to conduct a formal wetland delineation/preliminary jurisdictional determination as an optional task. If authorized by the County, SWCA will delineate the boundaries of potentially jurisdictional wetlands and waters as defined by USACE and CDFG for the project area.

Geology and Soils

The proposed project would include significant topographic alteration and site disturbance on 60 acres within a 203 acre project site. The project would require the movement of significant amounts of material and require the development of steep slope faces within the active quarry. These slopes would be developed over time as mining progressed. As noted in the Initial Study, the mass movement of material within the project site would potentially increase erosion. This is of particular concern given the proximity of the project site to the Salinas River.

The applicant has provided an Engineering Geology Report for the project. The report provides specific measures to guide development of the quarry in a manner that maintains their stability during the phased mining and long-term reclamation. Our proposed scope



**GEOLOGY AND
SOILS**
Geosyntec



of work includes a peer review of the Engineering Geology Report for accuracy and completeness. The results of the peer review will be summarized in a technical memo. In the event that the memo indicates that additional field work or technical analysis is required before a defensible Geology and Soils section can be prepared, SWCA will contact the County immediately. The peer review of the Engineering Geology Report will be prepared by a Geosyntec Professional Geologist and Certified Engineering Geologist; The Geology and Soils section of the EIR will be prepared by Gordon Thrupp of Geosyntec, and will include the following scope of work.

Itemized Scope of Work

1. Review and compile of existing geology and soils information. This will include review of available published geologic, soils and seismic data for the approximate project area, including geologic maps, soil survey information, previous soil and geologic reports, and the Engineering Geology Report.
2. Perform a visual field reconnaissance by a Professional Geologist.
3. Preparation of a technical memo indicating deficiencies, if any, in the existing report that must be addressed prior to preparation of the Geology and Soils section of the EIR. The memo will also include additional recommendations for mitigation, as necessary.
4. Summarize the existing geologic setting. Description of soil profiles and site geology, based upon observations and available geologic literature and reports, aerial photos, and lithologic logs of borings and wells.
5. Analyze and discuss potential geologic and soils hazards and impacts. Potential hazards and impacts related to soils, geology, and seismicity, such as seismic ground shaking, erosion, liquefaction, differential settlement and lateral spreading will be evaluated and discussed. Potential seismic impacts, including the potential for fault rupture and seismic shaking, will be discussed.
6. Recommend mitigation measures. This task will consist of developing mitigation measures designed to reduce, to the degree practicable, the significant, adverse geologic/soil impacts associated with implementation of the proposed project.

Greenhouse Gas Emissions

A GHG Emissions evaluation and Climate Change study were not part of the applicant’s submittal to the County. Operation of the project would emit GHGs (CO_{2e}) through the use of heavy machinery for resource extraction and additionally through diesel powered processing equipment and trucks traveling to the site and hauling aggregate material away from the site. This section of the EIR will include an analysis of GHG emissions, and the project’s contribution to the cumulative effects of global climate change. The GHG and climate change section would provide information on the existing meteorology and air quality with respect to GHG emissions in the project area. The EIR section will include emission estimates for various source categories using standard engineering methods and the approach defined in the CalEEMod program. This section will include estimated GHG emissions from direct, energy indirect and other indirect (referred also as Scopes 1, 2, and 3) sources, known emission reductions would be included (i.e., the state renewable portfolio standard for electricity production and air

GREENHOUSE GAS
EMISSIONS
Greg Chittick
MRS

district rules). Results of these calculations would then be compared to CEQA thresholds of SLOAPCD and the questions in Appendix G of the CEQA Guidelines, as amended in 2009.

SLOAPCD is currently in the process of developing a Climate Action Plan and an updated Clean Air Plan. While these documents may not be adopted prior to preparation of the EIR, SWCA will consult with SLOAPCD to identify any potential inconsistencies with proposed policies or standards. Mitigation strategies will be developed specific to the project to ensure feasibility and effectiveness. The Greenhouse Gas Emissions section of the EIR will be prepared by Greg Chittick of MRS, with review by Keith Miller of SWCA, and include the following scope of work:

Itemized Scope of Work

1. Discuss the existing GHG setting of the proposed project, including baseline and trends and their effect on local and global emissions with respect to climate change. This section will discuss the applicable regulatory setting, and project impact significance thresholds, based on consultation with SLOAPCD.
2. Calculate short-term construction and long-term GHG emissions per SLOAPCD guidelines and as applicable through the use of the CalEEMod program. Emission estimates will include on-site emissions, off-site emissions from transportation and off-site emissions from electrical or water use. Emission estimates will be included in an appendix for reference.
3. Evaluate project-related impacts. Short-term, long-term, and cumulative impacts, if any, resulting from the construction and implementation of the project will be identified. Impacts associated with project implementation will be compared to defined thresholds of significance where applicable. This task will include a background discussion of the potential impacts of climate change, including any potential inconsistencies with the County’s Climate Action Strategy.
4. Recommend mitigation measures. This task will consist of developing mitigation measures designed to reduce, to the degree possible, the significant, adverse impacts associated with implementation of the proposed project. Feasible methods to reduce GHG emissions will be identified, including applicable energy efficiency measures.

Hazards and Hazardous Materials

The applicant submitted information that is pertinent to the discussion of hazards (including a blasting report) and hazardous materials; Leaks of fuel and residue of explosives used for the quarrying operations may impact the environment in the vicinity of the proposed project. Of major concern is the potential for hazardous materials to enter the Salinas River.

HAZARDS AND HAZAROUS MATERIALS
Emily Creel
SWCA

Other hazard issues include the potential for increased risk of fire and emergency vehicle access and trespass issues, the potential effects on the existing high pressure fuel line in the area, and the potential for flooding (discussed under hydrology and water resources). The applicant has provided mitigation measures that are included in the Initial Study; this and other information available from affected agencies will be reviewed and included in the evaluation. The Hazards and Hazardous Materials section will include a review of





applicant-prepared materials in the context of local, state and federal regulations. The EIR section will be prepared by Emily Creel of SWCA and will include the following scope of work:

Itemized Scope of Work

1. Review of available information on proposed use and handling of explosives and fuel for the project. Blasting background information and the regulatory environment will be reviewed.
2. Identify potential hazards impacts associated with blasting, use of fuels, fires, and worker safety.
3. Assessment of proposed mitigation measures to minimize potential exposure to hazards and hazardous materials. Additional mitigation measures will be recommended as necessary, and standard conditions from affected agencies will be incorporated (such as County conditions of approval and fire safety information).
4. Recommend any additional measures which may be required to mitigate potential impacts to a less than significant level.

Noise and Vibration

The project site is located in a rural area northeast of the community of Santa Margarita. Based on the Initial Study, surrounding land uses mostly include industrial operations and scattered rural residences. Residences in the area are generally located on large parcels and homes are setback from the existing active quarry operations. The Hanson quarry is located to the west of the proposed project site and contributes to the noise environment. Based on the Initial Study/EIR Scoping Documents and review of the project area, two main noise sources will be addressed in the EIR.

NOISE AND VIBRATION
Greg Chittick
 MRS

The proposed project is expected to generate noise from both stationary and mobile sources. Operation of the project would generate long-term noise resulting from mechanical equipment and machinery used to process materials, which would include tractors, loaders, and potentially other types of heavy equipment such as excavators, loaders, and graders moving and hauling excavated material and daily cover as necessary. The quarry also includes the use of heavy processing machinery, frequent blasting to expose the aggregate, and earthmoving equipment used on-site to extract and produce the aggregate material. A secondary long-term noise component is created with increased traffic due to heavy trucks hauling the quarried and processed material to various locations, which would use several surrounding roadways and Highway 58.

Noise from blasting is also an issue that will be addressed in this section. Blasting also causes ground vibration that could extend off-site. SWCA will utilize information from blasting studies conducted at other hard rock mines to estimate the potential for off-site noise and vibration impacts from blasting on-site.

The Noise section of the EIR will review and augment the applicant-supplied Noise Study (Dublink 2009), which identified sensitive receptors adjacent to the project site and transportation routes that have direct exposure to the additional project generated traffic noise. Using the applicant-supplied noise study, augmented by verification of noise

measurements conducted by SWCA, predicted levels will be developed utilizing the SoundPlan noise modeling software, which takes into account terrain and meteorological conditions particular to the project site to estimate noise impacts in the area. These levels will be compared to County thresholds to identify potential impacts, including the use of incremental noise increases at nearby residences to estimate the impacts of noise. Feasible noise reduction mitigation measures will be developed if necessary. Noise emissions from the quarry will be evaluated, determined at the property line of the nearest sensitive land use as defined by County policies and thresholds, in conformance with Section 65302(f) of the California Government Code. Development of the Noise and Vibration section of the EIR will be prepared by Greg Chittick of MRS and include the following scope of work:

Itemized Scope of Work

1. Peer review existing report and perform preliminary noise review. This task includes a review of the proposed project and site and its relation to standards in the County's Noise Element, background noise research, and correspondence with project personnel. This task includes an on-site field review of the proposed project area to confirm the findings of the applicant supplied noise study and identify sensitive land uses within close proximity of the project site.
2. Conduct field noise measurements. Existing baseline stationary source measurements would be taken in several locations in and around the project site in sufficient quantity to accurately assess ambient noise conditions and confirm the findings of the applicant supplied noise study report.
3. Identify noise impacts. Using the applicant supplied noise study report, additional noise measurements conducted as part of this scope of work and noise levels defined by literature (such as the Environmental Protection Agency (EPA) and California Department of Transportation [Caltrans]), potential future noise levels at the project site and surrounding sensitive receptors will be evaluated and compared to County noise thresholds and incremental noise threshold levels (in the range of 3-5 dBA increases). Levels exceeding County Noise Element or incremental thresholds would be identified. Existing baseline stationary source measurements would be compared to the projected noise levels produced by operation of equipment used on-site. Note that noise impacts change depending on topographic conditions and these will be taken into account through the use of the sophisticated SoundPlan noise model.
4. The blasting study will be used in conjunction with results of other blasting studies that SWCA has conducted in the central valley granitic areas, as well as literature on blasting impacts (such as Caltrans) to determine the potential noise and vibration impacts on adjacent land uses during blasting episodes. Note that terrain will influence the noise associated with blasting, and estimates of blasting noise will be assessed through the use of noise models.
5. Develop mitigation measures to address potential on-site operational (including blasting) and truck traffic noise impacts to existing or proposed residences associated with implementation of the project. Recommended mitigation will be tailored to feasible and effective measures and developed in sufficient detail to allow for compliance monitoring. Mitigation measure could include equipment placement, limiting quarry operations to specific areas, limits on equipment types and conditions, requirements on blasting procedures, etc.





Recreation

The proposed project would not create a significant need for additional park, natural area, or recreational resources. Based on the Initial Study, the Salinas River Trail corridor is located within the southwest corner of the project site. While the area of the site that intersects the identified trail is not proposed for disturbance, implementation of the project could create significant impacts related to use of the trail, including negative effects on public safety or visual and aesthetic qualities of the trail. The applicant is proposing reclamation and revegetation of the site at the conclusion of its 30-year lifespan. These measures would seek to return the site to its existing condition, and the EIR will assess this aspect of the project to determine long-term effects to the proposed trail system.

RECREATION
Emily Creel
 SWCA

Preparation of the Recreation section of the EIR will include a thorough analysis of the existing information, the County Parks and Recreation Element, and the applicant-proposed reclamation and revegetation plan. SWCA will consult with the County Department of Parks and Recreation (County Parks) to determine whether any residual impacts may exist despite the applicant's efforts at reclamation. One focus of the impact analysis will be on the distinction between potential short-term and long-term impacts because, as proposed, the project would be permitted for a maximum of 30 years. The scope of work for this section would be completed by Emily Creel of SWCA and include the following scope of work:

Itemized Scope of Work

1. Consult with County Parks to determine critical factors including guidelines and recreational policies and needs applicable to the site and surrounding vicinity. SWCA will discuss and analyze the benefits and/or detriments to realignment of the trail for the 30-year life of the project or long-term.
2. Summarize baseline conditions of the project site, including descriptions of existing recreational facilities and areas on-site as well as in the surrounding vicinity, and evaluation of applicable ordinances, policies, and regulations regarding recreational resource protection and compatibility. This task includes reviewing the County Parks and Recreation Element and Trails Map and summarizing surrounding recreational opportunities and usage information.
3. Evaluate project-related impacts. This section will evaluate impacts related to loss of on-site recreational resources, namely the Salinas River Trail, any impacts on surrounding recreational uses, and policy inconsistencies. SWCA will analyze the potential impacts related to general incompatibilities that will be created between mining activities and the Salinas River Trail in its current location.
4. Recommend mitigation measures and evaluate potential for alternative trail routes. This task will consist of developing mitigation measures designed to reduce, to the degree possible, the significant, adverse impacts associated with implementation of the proposed project on the Salinas River Trail corridor. Feasible methods to reduce impacts to recreational resources will be identified, including possible realignment of the Salinas River Trail corridor or dedication of a recreational trail easement.

Transportation and Circulation

The Initial Study suggests that the proposed project would result in more than 200 trips per day, with the majority being truck trips. The proposed project would include a single access point on Highway 58 for both ingress and egress of trucks and employees. The applicant is also proposing to construct an eastbound left-turn lane on Highway 58 at the project driveway. The haul route for truck trips would primarily include Highway 58 through the community of Santa Margarita to north or southbound Highway 101. Some trips may also follow Highway 1 (El Camino Real) northbound, avoiding the commercial district.

TRANSPORTATION AND CIRCULATION Rick Engineering

This route already includes a number of traffic constraints, including operational issues at the Estrada Avenue intersection, Highway 58 and Highway 101 intersection, Union Pacific Railroad (UPRR) crossing, and Santa Margarita commercial area. In addition, Highway 58 is relatively narrow and sinuous in the vicinity of the project site, making traffic safety an issue. There may also be a need for significant queuing of trucks close to or on-site during busy periods. County code requires surface mine operations to enter into an agreement with the County Department of Public Works that requires reimbursement for damage to local roads caused by hauling material. A similar agreement may be necessary with Caltrans. Further, it was noted in the Initial Study that there is no existing "fair share" fee mechanism in place to accept contributions from projects which contribute to circulation issues in the Santa Margarita area.

A traffic study was prepared for the project in May 2009 and a subsequent site survey was prepared as well. The EIR traffic impact analysis will provide a peer review of the original traffic information and present an analysis for the project based on the results of that review and any changes to the project description or local conditions. The analysis will update the appropriate existing conditions information, the project trip generation estimates, and the analysis of cumulative impacts. An evaluation of safety along the haul route(s) will also be performed and will also be presented in a Traffic Impact Analysis Report to be prepared by Larry Hail, of Rick Engineering. Keith Miller of SWCA will incorporate the results into the Transportation and Circulation section of the EIR.

Itemized Scope of Work

1. Project Coordination and Data Collection. This task includes collecting all available material necessary to conduct the analysis and prepare the traffic report. A letter will be forwarded to County staff and Caltrans requesting copies of any recent traffic count data and information regarding other local proposed projects (approved or pending). Daily traffic count data will also be referenced from the County's website. Staff at Caltrans will be contacted to discuss the current project and identify issues. Traffic accident data for the local street system will also be requested from the California Highway Patrol. This scope does not include the collection of any traffic count data; the layout or design of any improvements (i.e., signal, signing, striping, etc.);
2. Visit Project Site. A visit to the project area will be conducted to review existing conditions (roadway alignment, traffic control devices, pavement markings, queuing distances etc.) and observe current peak hour operations. The appropriate sight distance measurements and a sampling of vehicle speeds on Highway 58 will also be recorded. The intersections along the haul route will also be visited.





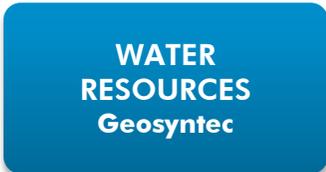
3. Estimate Trip Generation. This task includes updating the project trip generation estimates and assignment of trips to the street system. The assignment of project trips by haul route to the street system will be based on existing information.
4. Evaluate Potential Project Impacts. This task includes an evaluation of the potential project impacts. Potentially significant impacts will be identified using “level of significance” criteria defined by San Luis Obispo County and the California Environmental Quality Act (CEQA). The evaluation of cumulative traffic impacts will be conducted using data contained in the original traffic study and provided by the County and/or Caltrans. This information will be used to update the analysis presented in the 2009 traffic report. The following scenarios will be analyzed:
 - Existing Traffic Conditions
 - Existing-Plus-Project Traffic Conditions
 - Cumulative Traffic Conditions (No Project)
 - Cumulative Plus Project Traffic Conditions

The analysis of potential impacts will also evaluate safety and access to Highway 101 through the Community of Santa Margarita. This will include a review of local roadway conditions and sight distance. Appropriate mitigation measures will be defined as necessary to offset any identified potentially significant impacts. Caltrans and County Public Works will be consulted regarding the fair share contributions towards necessary road improvements.

5. Prepare Traffic Impact Analysis Report. The Report will include a summary of existing traffic conditions, an estimate of the project trip estimates and evaluation of potential impacts. The draft report will also review applicant-proposed mitigation measures and identify additional measures, as necessary.
6. Incorporate results into EIR. The results of the Traffic Impact Analysis Report will be summarized in the Transportation/Circulation section of the EIR. The report will be included as an appendix.

Water Resources (Surface and Groundwater)

As described in the Initial Study, water would be required for dust control, facility operations, operation of a restroom, and for irrigation of areas to be revegetated during reclamation. The extent to which aggregate or other products would need to be washed prior to export is unclear at this time. No specific estimates of potential water demand by the proposed project are available. The applicant is proposing to use an on-site well to meet potential demands. Depending on the total demand and local groundwater characteristics, on-site supply may not be able to meet demand. If the water demand were high enough, groundwater use on-site potentially change the availability and movement of groundwater in the local aquifer. These changes could potentially affect water-associated habitat on and offsite, and the availability of water for neighboring land uses.



The proposed project would result in the eventual disturbance of surface soils and the underlying bedrock on approximately 60 acres of the 203-acre site. The on-site drainage patterns would be modified throughout the phased development of the quarry. A series of drainage basins have been proposed to accommodate stormwater runoff during the

phased development of the quarry. In addition to sediment from the quarry slopes, surface water could be affected by sediment from the stockpiles and “fines” which would potentially result from processing activities. Stormwater runoff could also be affected by fuels and lubricants used on the heavy machinery on-site. Runoff from stockpiled concrete and asphalt to be recycled would also potentially affect surface water quality.

To address potential water resource impacts to groundwater, our scope of work includes performing a water demand assessment based on a review published data and any background technical material provided by the applicant. The capacity of the on-site well would be evaluated through review of any applicant supplied well data and potentially through the performance of a 72-hour well pump test. While not an explicit requirement in the RFP, based on our knowledge of groundwater availability in the area, and the potentially high water demand required for the production and processing of aggregate, we strongly recommend that well testing be performed. We have included costs to perform either a 72-hour or 10-day pump test, at the County’s discretion. This analysis will allow for an assessment of the capability of the proposed well to supply water to the site sustainably over the long-term (through reclamation).

To address stormwater, erosion, and sedimentation, our scope of work includes a peer review of the applicant-provided drainage calculations, and a preliminary Erosion Control Plan. These reports provide specific measures to guide development of the quarry slopes, to accommodate changes to the on-site drainage patterns, and to prevent erosion. The applicant has proposed several drainage basins to be phased and developed over time. In the event that additional field work or technical analysis is required before a defensible EIR can be prepared, SWCA will contact the County immediately. The peer review of the drainage calculations and erosion control plan will be performed by a Geosyntec Certified Hydrogeologist, Professional Engineer, and stormwater specialist. The Water Resources section will be prepared by Gordon Thrupp of Geosyntec and will include the following scope of work:

Itemized Scope of Work

1. Prepare water demand assessment based on published literature, and review of project components.
2. Compile and review available reports and information on water wells and groundwater production in the vicinity of the project. Review public comment letters with regard to hydrology and water quality issues. Consult with relevant agencies.
3. Evaluate any existing water well testing data for consistency with the protocols for the pumping tests and analyses specified by California Water Code regulations and guidelines. Compile, review, and analyze existing water well testing data to assess sustainable groundwater pumping rates.
4. Conduct additional water well testing if the available testing data are inadequate or inconclusive. SWCA has provided cost estimates for two additional pump tests, either a 72-hour pump test or a 10-day pump test, to be performed at the County’s discretion and after review of all existing well data.
5. Assess potential hydraulic connection between the proposed water well and other water wells in the vicinity. Review and discuss potential implications of climate change for future drought conditions and implications groundwater recharge,





sustainability of groundwater production, and potential impact of long-term groundwater pumping on other wells, creeks, and riparian corridors in the project vicinity.

6. Summarize the existing drainage setting including soil profiles, runoff patterns, and other hydrologic conditions based upon observations and available literature and reports, aerial photos, and well data. Perform peer review of drainage calculations and erosion control plan.
7. Analyze and discuss potential drainage impacts. Impacts associated with drainage basin design and/or capacity, surface water quality, discharge, and changes to on-site and offsite drainage patterns will be discussed. The analysis will consider potential surface water quality impacts that could result from aggregate washing and asphalt and concrete recycling as well.
8. Recommend potential mitigation measures to minimize identified groundwater and surface water impacts.

Issues with Insignificant Impacts

Based upon the review of the Initial Study and applicant-submitted reports, this section would cover those issues that are not likely to have a significant effect on the environment. The results of applicant-supplied information, information contained in the Initial Study, and other information available on specific issues, the following environmental topics would be included in this section, which will be prepared by Emily Creel of SWCA.

Cultural Resources

The County determined that the cultural resources report prepared by Thor Conway was adequate and that there were insignificant cultural resources impacts. This section will be included under Issues with Insignificant Impacts. It should be noted that the public raised the question as to whether the site contained the staging area for the construction of the Salinas Dam. Our preliminary review indicated that the location of the dam is six miles away from the project site and it is therefore unlikely that the site was used for a staging area. The records search conducted by Mr. Conway included a search for historic sites, and the results of the search did not indicate any historic sites at the project location. SWCA has cultural and historic resources staff available to conduct further evaluations, should information be provided that would lead to the conclusion that the project site or related off-site activities would affect cultural or historic resources.

Land Use/Planning and Mineral Resources

The project is a mining project proposed within an Energy Extractive 1 Combining Designation overlay area. Since the proposed project is consistent with land use policies, it was determined by the County to be an insignificant impact. Land Use and Mineral Resources consistency issues would be included in the Environmental Setting section and an evaluation of the project’s consistency with land uses would be provided in tabular form in the appendix. The land use analysis would be expanded to include discussion of minerals resources availability and the state-wide need for mineral resources. The mining of aggregates in this location is consistent with statewide policy and the area is identified and protected by the state for minerals extraction. The County also indicates that this area is suitable for minerals extraction.

Population and Housing

The cumulative effects of mining and related jobs and need for housing is not considered significant. This section will rely on the County's Initial Study.

Public Services/Utilities

Public Services such as police and fire would be discussed in the Hazards section. Water resources will be discussed in the Water section.

Wastewater

Wastewater is not considered a significant issue in the Initial Study. Other public services issues, such as solid waste and police services, will be discussed under Issues with Insignificant Impacts.

ALTERNATIVES ANALYSIS

CEQA Guidelines require an EIR to describe a reasonable range of alternatives to a project, including the location, which could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. An EIR should also evaluate the impacts of the alternatives relative to each other and the project.

This section of the EIR will: 1) describe the range of reasonable alternatives to the project realizing that this project is minerals dependent and can only be located where the mineral resources are located; 2) examine and evaluate resource issue areas where significant adverse environmental effects have been identified and compare the impacts of the alternatives to those of the project; and 3) identify the Environmentally Superior Alternative, which could potentially be a combination of the various components of the alternatives discussed above. Alternatives that may be considered include alternative mining methods, alternative transportation routes, alternatives to reduce water usage, a reduced project alternative, and a project phasing alternative.

The Alternatives Analysis will be conducted in a general or qualitative level of detail. The analysis will include project-specific level analysis of selected alternatives based on the availability of information. Keith Miller of SWCA, in conjunction with SWCA staff and sub-consultants, will prepare the Alternatives section of the EIR, which will consist of the following scope of work:

Itemized Scope of Work

1. Identify significant impact resulting from the proposed project and, in consultation with County staff, identify potential project alternatives which would reduce these impacts. Potential alternatives are unknown at this time; however, to address cumulative impacts, which are likely to be a significant issue in the EIR, they may include alternative mining methods, alternative transportation routes, alternatives to reduce water usage, a reduced project alternative, and alternative phasing, among others.
2. Prepare a matrix displaying the major characteristics and significant environmental effects of each alternative, and a discussion of any other significant effects that may result from an alternative in addition to those caused by the project.



3. Identify the preferred alternative. If the “No-Project” alternative is determined to be the preferred alternative, an Environmentally Superior Alternative will be recommended among the other alternatives, or combination of their components.

GROWTH INDUCING IMPACTS

CEQA Guidelines (§15126.2(d)) state that for the preparation of EIRs, growth-inducing effects are defined as “...ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” The CEQA Guidelines expand upon this description by stating, “Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow more construction in service areas).”

The public has also questioned why this area must bear the burden of multiple quarries, and although this is not specifically a “growth inducing impact” this section will provide information with regard to cumulative growth in minerals resources, and the effects that minerals resources growth would have on population growth and “quality of life”. It will also refer the reader to other discussions in the EIR related to this issue.

This section of the EIR will analyze the project in terms of its potential to substantially induce growth in the surrounding area. Emily Creel of SWCA will be responsible for the preparation of the Growth Inducing Impacts section, which will consist of the following scope of work:

Itemized Scope of Work

1. Review and summarization of all applicable planning documents as they relate to growth inducing impact information.
2. Discuss the surrounding minerals resources and how development of these resources could foster additional growth in the area and how it would remove obstacles to growth by providing job opportunities, and other growth-related issues.
3. Review of the project in terms of its potential for fostering economic or population growth, either directly or indirectly, within the study area.
4. Identification of significant growth inducing impacts.

MITIGATION MONITORING AND REPORTING PROGRAM

Public Resources Code §21081.6 requires an agency making findings pursuant to CEQA to adopt a reporting or monitoring program to ensure implementation of mitigation measures to avoid or minimize significant environmental effects. SWCA has prepared many Mitigation Monitoring and Reporting Programs (MMRP) as part of the CEQA process and is familiar with the monitoring program preparation techniques currently used by the County. The purpose of the MMRP will be to ensure compliance with all recommended mitigation measures identified in the EIR. Mitigation measures will be presented in the standard county format. A draft MMRP will be prepared as part of the EIR in order to allow the reviewing agencies to comment. The monitoring program will contain procedures that are reasonable and feasible to implement given the current contracting procedures and construction techniques. Jaimie Jones of SWCA will be responsible for the preparation of the MMRP.

CUMULATIVE EFFECTS

CEQA Guidelines §15065(c) states that “cumulatively considerable” environmental impacts pertain to the incremental effects of an individual project that are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Cumulative effects of the project that are deemed “considerable” will be discussed as a sub-topic within each of the above environmental issue areas. The cumulative development scenario identified for each environmental resource will also be described in this section.

OTHER REQUIRED EIR SECTIONS

SWCA will prepare the EIR following all CEQA and County requirements. Other required sections, including Significant Irreversible Environmental Effects and References, will be included in the document.

B. RESPONSE TO COMMENTS

SWCA has prepared numerous EIR Response to Comments sections, and has developed a thorough and cost-effective methodology to prepare responses in an efficient manner. SWCA anticipates focused neighborhood interest in the project and have therefore included a total of 100 hours of SWCA staff time. In addition, a budget for our sub-consultants has been included for responding to public and agency comments on the Draft EIR. Typically, many of the comments generated for a project overlap in content and can be responded to by one individual comment (or a “Master Response”). Comments such as these would be considered one comment and SWCA’s budget would include responding to approximately 50 individual and substantive comments. Should preparation of this section significantly exceed 50 individual and substantive comments or 100 hours (i.e., by 10% or more), SWCA will notify the County and request a revised scope of work for this task. Keith Miller of SWCA will coordinate the responses to comments and will be assisted by the project team.

C. CEQA FINDINGS

A total of 50 hours (time and materials) have been included as part of the scope of work for preparation of CEQA Findings. SWCA has prepared Findings on EIRs in the past for the County and is familiar with this procedure. SWCA will prepare these Findings in a format approved by the Department of Planning and Building and provide the County with two hard copies and one electronic version. Emily Creel of SWCA will prepare the CEQA Findings.

D. STAFF MEETINGS, PUBLIC MEETINGS, AND HEARINGS

Under this scope of work, SWCA’s Project Manager will be available to meet with County staff on six occasions, including a “kick-off” meeting and at least five other agency meetings. The scope of work includes SWCA’s Project Manager and selected project team members attending up to four public hearings. SWCA will attend these meetings only if authorized by the County and will be prepared to respond to questions, make presentations, and/or participate in an advisory capacity relating to preparation of the EIR. The cost would be on a time-and-materials basis, applying the rates shown in Table 7. Note that a considerable budget has been provided for attendance at meetings and hearings by Geosyntec and MRS. Water, Geology, and Noise appear to be substantial topics and having the geologists and hydrologists present at the hearings or at selected meetings is advised.



SECTION 4. PROPOSED SCHEDULE

A. TASK TIMETABLE

From the time of authorization of a contract at the Board of Supervisors, we estimate a timeframe of approximately 16 months for completion of the Final EIR, assuming the estimates for the County review periods of each deliverable are accurate and a 45-day Draft EIR public review period (refer to Table 3). We understand that timing is of the essence; however, controversial and complex projects with high levels of public, applicant, and agency scrutiny typically require a longer timeframe for completion.

SWCA will make every effort to complete tasks and prepare deliverables ahead of schedule, if possible. Should the Draft EIR receive considerable public comments during the public review period, it may delay completion of the Final EIR by one to two weeks. This delay is included in the schedule given in the following table.

Table 3. EIR Preparation Schedule

Milestone/Deliverable	SWCA Completion Period	Estimated County Review Period
Draft EIR Style Guide and Outline	2 weeks	1 week
Draft Project Description (based on complete responses for information submitted to project applicant)	3 weeks	2 weeks
Draft Cumulative Development Scenario	1 week	1 week
Peer Review of Applicant Prepared Reports (Memo)	4 weeks	2 weeks
Administrative Draft EIR (based on no further studies or information requirements upon peer review of technical reports)	20 weeks	4 weeks
Camera-ready Draft EIR	4 weeks	1 week
Public Comment Period	n/a	6 weeks (or 45 days)
Draft Response to Comments	6 weeks	2 weeks
Administrative Final EIR	2 weeks	1 week
Camera-ready Final EIR	2 weeks	n/a
Total	44 weeks	20 weeks
<i>Total EIR Preparation Period (included public review of Draft EIR)</i>		<i>16 months</i>

B. DELIVERABLES

Under this Scope of Work, SWCA anticipates preparation of the following deliverables (refer to Table 4), as detailed in the RFP.

Table 4. EIR Deliverables

Task	Copies Submitted
Draft Project Description and EIR Outline	<p>5 Copies</p> <ul style="list-style-type: none"> ▪ 4 hard copies, stapled ▪ 1 electronic copy (CD) (Word, Excel, etc.)
Administrative Draft EIR with MMRP and Appendices	<p>5 Copies</p> <ul style="list-style-type: none"> ▪ 4 hard copies, in three-ring binders ▪ 1 CD (Word, Excel, etc.)
Draft EIR with MMRP and Appendices	<p>45 Copies</p> <ul style="list-style-type: none"> ▪ 5 hard copies, in three-ring binders ▪ 15 hard copies, bound, with appendices as a CD in an envelope ▪ 25 CDs (searchable PDF) ▪ 10 separately bound hard copies of the appendices ▪ 1 CD (Word, Excel, etc.) ▪ 1 CD in an HTML format, or other acceptable web-friendly format (PDF) for placement on the County web site
Administrative Final EIR with MMRP and Appendices	<p>5 Copies</p> <ul style="list-style-type: none"> ▪ 2 hard copies, three-hole drilled ▪ 2 hard copies, bound ▪ 1 CD (Word, Excel, etc.)
Final EIR with MMRP and Appendices	<p>55 Copies</p> <ul style="list-style-type: none"> ▪ 5 hard copies, in three-ring binders ▪ 25 hard copies, bound, with appendices as a CD in an envelope ▪ 25 CDs (searchable PDF) ▪ 15 separately bound hard copies of the appendices ▪ 1 CD (Word, Excel, etc.)
Draft and Final EIR, MMRP, and Appendices	<ul style="list-style-type: none"> ▪ 1 set of CDs (Word, Excel, etc.; including any ArcGIS layers, and .SHP / .PRJ files.)
CEQA Findings (Optional Task)	<ul style="list-style-type: none"> ▪ 2 unbound copies, 1 CD





The EIR will be printed two-sided on white recycled paper at 8 1/2x11 vertical format with 11x17 graphic insertions when needed. Color graphics will be used where necessary to assist in understanding complex information. All documents will be spiral bound or three-hole punched per directions in the RFP. Working drafts for staff use will be presented in three-ring notebook binders large enough to handle the Final EIR. SWCA will submit a master copy of the Draft and Final EIR, MMRP, and Appendices on a compact disc in Microsoft Word 7.0 or earlier version for use by the County in preparing staff reports. Spreadsheet and databases developed for the EIR will be included on this disc using the latest County spreadsheet software. All other computer-produced materials will be submitted to the County in the proper programs and formats (i.e., Microsoft Excel 7.0, AutoCAD, and ArcGIS).

SECTION 5. COST ESTIMATES

The costs to prepare the EIR document are summarized by task in Table 5, and are shown in detail in Table 6, EIR Preparation Detailed Cost Estimate. Analysis of the issues outlined in the above Scope of Work and preparation of the EIR will be performed for a fixed fee of **\$313,315**. Table 7 contains a proposed time-and-materials budget of **\$36,115** for attendance of the Project Director, Project Manager, and selected sub-consultants at staff meetings and public hearings on an as-needed basis. Table 8 details the costs of optional tasks for the project, including CEQA Findings and additional technical studies and visual simulations.

Table 5. EIR Preparation Cost Summary

Task	Estimated Cost
Project Administration	\$20,259
Task 1.0 – Administrative Draft EIR Preparation	\$217,732
Task 2.0 – Draft EIR Preparation	\$15,904
Task 3.0 – Administrative Final EIR Preparation	\$48,832
Task 4.0 – Final EIR Preparation	\$10,588
TOTAL ESTIMATED FIXED-FEE COST	\$313,315
Task 5.0 – Meetings & Hearings (T&M)	\$36,115
TOTAL ESTIMATED TIME AND MATERIALS COST	\$36,115
TOTAL ESTIMATED COST	\$349,430





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Table 6. EIR Preparation Detailed Cost Estimate

	Project Director	Project Manager/Senior Planner	Environmental Planner	Associate Biologist	GIS/CAD Specialist	Technical Editor	SWCA - Labor Total	Direct Costs	Robert Carr	Geosyntec	Rick Engineering	Marine Research Specialists	TOTAL
	<i>Hourly Rate</i>												
	\$158	\$121	\$79	\$100	\$110	\$79							
PROJECT ADMINISTRATION													
Project Management (General Tasks)		100				16	\$13,364	\$575					\$13,939
Quality Assurance / Quality Control (Document Review)	40						\$6,320						\$6,320
<i>Subtotal</i>	40	100	0	0	0	16	\$19,684	\$575	\$0	\$0	\$0	\$0	\$20,259
TASK 1.0 ADMINISTRATIVE DRAFT EIR PREPARATION													
1.1 Executive Summary		4	8			16	\$2,380						\$2,380
1.2 Introduction			8				\$632						\$632
1.3 Project Description		40	8		32		\$8,992	\$50					\$9,042
1.4 Environmental Setting (including Consistency with Plans and Policies)		4	40		4		\$4,084						\$4,084
1.5 Aesthetics		8			2		\$1,188		\$9,048				\$10,236
1.6 Agricultural Resources		8	32		4		\$3,936						\$3,936
1.7 Air Quality		16					\$1,936					\$13,560	\$15,496
1.8 Biological Resources				108	16		\$12,560						\$12,560
1.9 Geology and Soils		16			8		\$2,816			\$20,350			\$23,166
1.10 Greenhouse Gas Emissions		8					\$968					\$5,500	\$6,468
1.11 Hazards and Hazardous Materials		8	40		8		\$5,008						\$5,008
1.12 Noise and Vibration		8			24		\$3,608					\$14,524	\$18,132
1.13 Recreation			32		4		\$2,968						\$2,968
1.14 Transportation/Circulation		40			4		\$5,280				\$26,500		\$31,780
1.15 Water Resources		32	8		8		\$5,384			\$38,500			\$43,884
1.16 Issues with Less than Significant Impacts			32				\$2,528						\$2,528
1.17 Alternatives Analysis	8	60	8	8	8		\$10,836						\$10,836
1.18 Growth Inducing Impacts			16				\$1,264						\$1,264
1.19 Mitigation Monitoring and Reporting Program		2				16	\$1,506						\$1,506
1.20 Technical Editing						60	\$4,740						\$4,740
1.21 Review and Reproduce Administrative Draft EIR (4 hard copies - \$85/copy, 1 CD - \$10/copy)		40				24	\$6,736	\$350					\$7,086
<i>Subtotal</i>	8	294	232	116	122	116	\$89,350	\$400	\$9,048	\$58,850	\$26,500	\$33,584	\$217,732
TASK 2.0 DRAFT EIR PREPARATION													
2.1 Incorporation of County Staff Revisions to Draft EIR	8	50	24			32	\$11,738						\$11,738
2.2 Reproduce Draft EIR and Appendices (20 hard copies - \$85/copy, 27 CDs - \$10/copy)						12	\$948	\$1,970					\$2,918
2.3 Reproduce Draft EIR Appendices (10 hard copies - \$30/copy)						12	\$948	\$300					\$1,248
<i>Subtotal</i>	8	50	24	0	0	56	\$13,634	\$2,270	\$0	\$0	\$0	\$0	\$15,904

		Project Director	Project Manager/Senior Planner	Environmental Planner	Associate Biologist	GIS/CAD Specialist	Technical Editor	SWCA - Labor Total	Direct Costs	Robert Carr	Geosyntec	Rick Engineering	Marine Research Specialists	TOTAL
		<i>Hourly Rate</i>	\$158	\$121	\$79	\$100	\$110	\$79						
TASK 3.0 ADMINISTRATIVE FINAL EIR PREPARATION														
3.1	Response to Public Comments	8	76	8	8		16	\$13,156		\$1,000	\$12,650	\$4,600	\$10,380	\$41,786
3.2	Incorporation of County Comments on Responses		16				24	\$3,832						\$3,832
3.3	Administrative Draft of Response to Comments		8				16	\$2,232						\$2,232
3.4	Reproduce Administrative Final EIR, Appendices, Response to Comments (4 bound - \$85/copy, 1 CD - \$10/copy)						8	\$632	\$350					\$982
	<i>Subtotal</i>	8	100	8	8	0	64	\$19,852	\$350	\$1,000	\$12,650	\$4,600	\$10,380	\$48,832
TASK 4.0 FINAL EIR PREPARATION														
4.1	Incorporation of County Staff Revisions to Final EIR	8	24				16	\$5,432						\$5,432
4.2	Reproduce Final EIR (30 hard copies - \$85/copy, 26 CDs - \$10/copy)						8	\$632	\$2,810					\$3,442
2.3	Reproduce Final EIR Appendices (15 hard copies - \$30/copy)						16	\$1,264	\$450					\$1,714
	<i>Subtotal</i>	8	24	0	0	0	40	\$7,328	\$3,260	\$0	\$0	\$0	\$0	\$10,588
TOTAL FIXED FEE BUDGET (Hours, Labor, Direct Costs)		72	568	264	124	122	292	\$149,848	\$6,855	\$10,048	\$71,500	\$31,100	\$43,964	\$313,315
TOTAL FIXED FEE BUDGET														\$313,315

Table 7. Meetings and Hearings Cost Estimate

		Project Director	Project Manager	Environmental Planner	Associate Biologist	GIS/CAD Specialist	Technical Editor	SWCA - Labor Total	Direct Costs	Robert Carr	Geosyntec	Rick Engineering	Marine Research Specialists	TOTAL	
		<i>Hourly Rate</i>													
TASK 6.0 MEETINGS & HEARINGS (T&M)															
6.1	Kick-Off Meeting (1), 4 hrs/mtg.		4					\$632	\$325					\$957	
6.2	Staff Meetings (5), 2 hrs/mtg.	6	10					\$2,528				\$1,250		\$3,778	
6.4	Public Hearings (4), 8 hrs./hrg. (includes preparation time)		32	8				\$5,688	\$1,800		\$13,200		\$10,692	\$31,380	
	<i>Subtotal</i>	6	46	8	0	0	0	\$8,848	\$2,125	\$0	\$13,200	\$1,250	\$10,692	\$36,115	
TOTAL TIME & MATERIALS BUDGET (Hours, Labor, Direct Costs)		6	46	8	0	0	0	\$8,848	\$2,125	\$0	\$13,200	\$1,250	\$10,692	\$36,115	

TOTAL TIME & MATERIALS BUDGET														\$36,115
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Table 8. Optional Tasks Cost Estimates

		Project Director	Project Manager/Senior Planner	Environmental Planner	Associate Biologist	GIS/CAD Specialist	Technical Editor	SWCA - Labor Total	Direct Costs	Robert Carr	Geosyntec	Rick Engineering	Marine Research Specialists	TOTAL	
		<i>Hourly Rate</i>													
OPTIONAL TASKS (T&M)															
1.1	CEQA Findings		10	40				\$4,740						\$4,740	
1.2	Wetland Delineation/Preliminary Jurisdictional Determination		2		40	8		\$5,196	\$50					\$5,246	
1.3	72-Hour Pump Test and Analysis		16					\$2,528			\$17,600			\$20,128	
1.4	10-Day Pump Test and Analysis		16					\$2,528			\$27,500			\$30,028	

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SECTION 6. OBJECTIVITY

SWCA's Project Director, Mr. Henry, and Project Manager, Mr. Miller, certify that the analysis and preparation of the Oster (Las Pilitas Quarry) CUP/Reclamation Plan EIR will consist of a completely independent, objective, and unbiased effort and will result in a product of the same high degree of objectivity. SWCA will ensure that its employees and subcontractors will adhere to the above principals and will replace any of the project team should it become apparent at any point in the process that they are not capable of completing an unbiased or neutral analysis. Over the past 20 years, SWCA's objectivity has never been called into question and Mr. Henry and Mr. Miller consider conducting the environmental review in any other manner completely unacceptable.

SECTION 7. PROPOSAL TERMS AND CONDITIONS

A. ACKNOWLEDGEMENT OF CONTRACT PROVISIONS

SWCA has reviewed the indemnification and insurance provisions required by the County and included in the RFP. SWCA also recognizes that provisions that will be outlined in the contract are non-negotiable.

B. STATEMENT OF OFFER AND SIGNATURES

Mr. Henry, SWCA San Luis Obispo's Office Director and the Project Director, provides the following signature so as to bind the offer set-forth in this proposal for a period of 90 days. SWCA also agrees that all work associated with the tasks outlined in this proposal will be performed at a not-to-exceed price.



Bill Henry, AICP, Office and Project Director

May 20, 2011

Date

Mr. Henry is the only individual in the San Luis Obispo office of SWCA authorized to sign contract(s) that may result from this offer, binding SWCA to services with the County.





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Attachment A. Project Team Resumes





Education / Training

- M.C.R.P., City & Regional Planning, emphasis in Environmental Planning, California Polytechnic State University, San Luis Obispo, 1999
- B.S., Geological Engineering, University of Nevada, Reno, 1996

Expertise

- CEQA/NEPA Compliance
- City and regional planning
- SMARA compliance
- Infrastructure projects
- Project management
- Agricultural impacts analysis

Relevant Projects

- Cold Canyon Landfill Environmental Impact Report; San Luis Obispo, California
- Morro Bay to Cayucos Connector Environmental Impact Report; San Luis Obispo, California
- North Fort Bragg Coastal Trail EIR/EA; Fort Bragg, California
- Coalinga Wastewater Treatment Plant Master Environmental Impact Report; Coalinga, California
- Arroyo Grande Creek Waterway Management Program Environmental Impact Report; San Luis Obispo, California
- SMARA Services; County of San Luis Obispo, California
- Cantinas Ranch Constraints Analysis; San Luis Obispo, California

Mr. Miller has over nine years of experience in land use and environmental planning, with an emphasis in implementing the California Environmental Quality Act (CEQA) and the national Environmental Policy Act (NEPA). Mr. Miller has experience working in both the public and private sectors, managing a wide range of projects from General Plan Update Environmental Impact Reports (EIRs), to discretionary land use and coastal development permits. He has managed the preparation of environmental constraints analyses and environmental documents including Mitigated Negative Declarations and Environmental Impact Reports.

Mr. Miller also represents local agencies in the planning process and is responsible for preparation of staff reports and presenting information at public hearings, including advisory council, planning commission, and board of supervisors hearings. He has experience working with various resource and government agencies, advisory groups, concerned neighborhoods and applicants during the development and environmental review process. In the past nine years, Mr. Miller has coordinated projects and established working relationships with the California Coastal Commission, CDFG, RWQCB, DoC, APCD, ACOE and USFWS.

Most recently Mr. Miller's focus has been on infrastructure and public facilities projects, including flood control facilities, wastewater treatment plants, multi-use trails, and solid waste disposal facilities. As a local contact for surface mine activity in unincorporated San Luis Obispo County, Mr. Miller frequently interacts with the various resource agencies involved with surface mining, and has built effective relationships with representatives from those agencies, and with the mine operators.

In addition to project management and document preparation, Mr. Miller has prepared impact analyses for all 16 California Environmental Quality Act (CEQA) issue areas for use in EIRs, Mitigated Negative Declarations (MNDs) and other documents. He has prepared Farmland Impact Analyses, Air Quality Reports, and performed noise and air quality modeling. Mr. Miller has a background in engineering geology which has allowed him to be an effective planner in projects where geologic constraints are an issue.

Education

- M.C.R.P., Masters of City and Regional Planning, California Polytechnic State University, San Luis Obispo, 1991
- B.S., Natural Resources Management, California Polytechnic State University, San Luis Obispo, 1988

Registration / Certification

- American Institute of Certified Planners, District of Columbia, 1998

Expertise

- Project management
- Research and technical analysis
- Environmental monitoring
- Permitting

Relevant Projects

- Chevron Tank Farm Restoration and Redevelopment Project
Environmental Project Manager; San Luis Obispo City/County, California
- Guadalupe Oil Field Restoration Project Lead Agency Environmental Services Manager; San Luis Obispo County, California
- San Miguel Ranch General Plan Amendment EIR Lead Agency Environmental Services Manager; San Luis Obispo County, California
- Morro Bay Golf Course Waterline Replacement Permitting Project Management; San Luis Obispo County, California
- AT&T/AAG Cable Pulling Project; San Luis Obispo County, California
- WorldCom Fiber Optic Cable Project EIR; San Luis Obispo County, California

Mr. Henry has 20 years of professional experience in environmental and land use planning involving preparation, coordination and processing of numerous types of environmental documents, construction monitoring plans, revegetation plans, technical reports, resource agency permits and resource protection studies. He is responsible for project management and coordination, client representation, permitting, and research and technical analysis. Mr. Henry oversees the quality of staff deliverables and documents, marketing and proposal preparation, and directs the day-to-day activities of the office.

Mr. Henry has been project manager and contributor to more than 100 environmental determinations, including but not limited to environmental impact reports (EIRs), expanded initial studies (ExISs) and mitigated negative declarations during his tenure as an environmental planner. Projects managed by Mr. Henry include environmental documents for fiber optic cable projects, governmental development projects, residential subdivisions, commercial developments, mineral extraction projects, and golf courses and recreational facilities.

Mr. Henry has served for the past six years as a project manager to the County of San Luis Obispo in-charge of implementing and overseeing the County's environmental review process. This has included managing County consultants, serving as a liaison between the project applicant and the County, coordinating and attending multi-agency committee meetings, coordinating scoping meetings, preparing staff and other agency reports, and presenting projects to the decision making bodies.

Mr. Henry has been involved in the environmental monitoring discipline as a project manager and compliance monitor beginning with the passage of AB 3180 in 1989. Experience gained by Mr. Henry during years of field monitoring has proven extremely valuable in the management of mitigation monitoring projects and in the preparation of construction management programs.

Mr. Henry has experience in the area of multi-agency negotiations after being retained by several clients to facilitate the process of identification and acquisition of compensatory property for impacts to the federally endangered Morro shoulderband snail.

Education / Training

- J.D., Indiana University School of Law; Bloomington, Indiana, May 2005; Focused studies on property, land use and environmental law; Federalist Society; Environmental Law Research Group
- B.A., Political Science, Arizona State University; Tempe, Arizona, May 2002

Expertise

- Property and environmental law
- Civil pleading requirements and CEQA litigation
- Legal research and writing
- Researching, drafting and orally arguing various environmental law and motion matters

Relevant Projects

- AG Creek Waterway Management Program and EIR; San Luis Obispo County, California
- AT&T SLO to LA Fiber Optic Cable EIR; San Luis Obispo, Santa Barbara, Ventura, and Los Angeles Counties, California
- City of El Paso De Robles WWTP CEQA Services; San Luis Obispo County, California
- Coalinga Housing Element; Fresno County, California
- Grover Beach Land Use Element Update and EIR; San Luis Obispo County, California
- Hildreth Creek Quarry; Madera County, California

Ms. Creel is a Planner at SWCA's San Luis Obispo, California office. She obtained her JD in 2005 and has been practicing environmental, property, municipal, and land use law in San Luis Obispo County for more than three years. She has a specialized background in environmental and property law, and has more than seven years of environmental law experience. Ms. Creel is well versed in state and federal environmental laws and regulations, the administrative process, local county and municipal codes, and California Coastal Commission regulations. She is proficient in researching and analyzing the formulation and interpretation of reliable legal precedence through common law court decisions and any resulting referencing authority of such decisions. Three years of legal practice have given Ms. Creel a working knowledge of available legal research resources, the San Luis Obispo County Superior Court system, and the ability to handle complex environmental and legal issues.

Ms. Creel's environmental law experience has been primarily in California's central coast area, but she has past legal experience on projects related to Texas's oil and gas industry and the industrial arena of the Midwest as well. She has been involved in complex litigation related to CEQA analysis of San Luis Obispo County projects and Coastal Commission processes. She has an in depth knowledge of viable legal causes of action and legal procedures under state and federal environmental statutes and regulations. Ms. Creel has analyzed EIRs and CEQA review for compliance with relevant federal, state and local laws and has advised developers and property owners of their legal rights and responsibilities under the environmental legal framework.

Her recent environmental planning experience has included involvement in the preparation of EIRs for the Grover Beach Land Use Element Update and the AT&T fiber optic cable project extending from San Luis Obispo to Los Angeles, and participation in expanded CEQA analysis of the Arroyo Grande Waterway Management Program, the proposed Hildreth Creek Quarry, and Paso Robles Wastewater Treatment Plant proposed expansion project.

Education / Training

- B.S., Forestry & Natural Resources, emphasis in Watershed Management, minor in Fire Management, California Polytechnic State University; San Luis Obispo, 2001
- Erosion Control and Grading Techniques for Sediment Reduction, RCD; Atascadero, California, 2007
- USACE Wetland Delineation Training, Wetland Training Institute; San Diego, California, 2006
- CEQA Workshop Series, AEP, San Luis Obispo, California, 2005

Registration / Certification

- Certified Applicator of Restricted Pesticides, Hawai'i State Department of Agriculture; Hawai'i, 2004

Expertise

- Biological surveys assessment
- Habitat restoration
- Biological monitoring
- Wetland determinations
- Mitigation planning
- Land rehabilitation

Relevant Projects

- Willow Road Extension Habitat Creation, Conservation, and Enhancement Plan; SLO County, California
- Monterey Airport Runway Extension Botanical Resources Survey Report and Environmental Impact Report; Monterey County, California
- Olancho Cartago 4-Lane Project Bio Studies; Inyo County, California
- Cholame Valley Road Wetland Assessment, SLO County, California

Mr. Belt has more than seven years experience with natural resources management, in both California and Hawai'i. He has surveyed and monitored endangered species populations, conducted botanical inventories, performed biological assessments, conducted land rehabilitation projects, and propagated native plants. Mr. Belt has prepared and participated in the preparation of numerous biological reports for private landowners and public agencies. In addition to biological expertise, Mr. Belt has implemented land rehabilitation and erosion control projects on military installations, public lands, and private properties.

Mr. Belt has conducted numerous sensitive species surveys in California and Hawai'i. He has designed and implemented focused surveys for special-status species, been a USFWS-approved biologist for California red-legged frog and a NMFS-approved biologist for steelhead on projects requiring federal Biological Opinions. Mr. Belt is authorized to survey for and handle the federally endangered Morro shoulderband snail under permit TE-824123-4.

Representative biological reports that Mr. Belt has produced includes: California Department of Transportation Natural Environmental Study for State Route 108; San Luis Obispo County Mitigated Negative Declarations for Major Grading Permits; Biological Resources Survey Report, California red-legged frog Site Assessment Report, and Wetland Assessment Report for the Pennington Creek Fish Weir Repair in San Luis Obispo County; and several Habitat Mitigation and Monitoring Plans for Army Corps of Engineers mitigation requirements.

Mr. Belt has eight years of residential and commercial construction experience. He has participated in the management and implementation of construction projects throughout San Luis Obispo County. His construction experience gives him knowledge that is critical when monitoring or assessing construction projects in biologically sensitive areas. Examples of projects that he has monitored include: Jonata Bridge Replacement in Buellton, Foothill Bridge Replacement Project in San Luis Obispo, Picay (Romero) Creek Bridge Repair Project in Montecito, and Picachio Bridge Replacement in Cayucos.

Education / Training

- B.S., Forestry and Natural Resources Management; California Polytechnic State University, San Luis Obispo, 1998
- Annual workshops at the ESRI International User Conference; San Diego, California

Expertise

- GIS data development / management
- GPS data collection
- Sensitive habitat / species surveys
- Geodatabase design
- GIS / GPS hardware specialist

Relevant Projects

- Proposed Solar Energy Development; Tehachapi, California
- Proposed Solar Energy Site; California Valley, California
- Chevron Site Remediation; Santa Maria Valley, California
- Hickam Air Force Base; Hawai'i
- Rice Ranch Biological Site Survey; Santa Barbara County, California
- Morro Bay to Cayucos Connector Path EIR; Morro Bay, California
- Price Canyon Sensitive Species and Habitat Survey; San Luis Obispo County, California

Mr. Doyle is a GIS/CAD specialist in SWCA's San Luis Obispo, California office. He has been working in the GIS industry for over ten years, where he has shown the ability to evolve in the constantly changing IT/IS world, and has demonstrated expertise in situations requiring rapid development of unique solutions to customers' needs.

Mr. Doyle has recent project experience working on proposed solar energy developments. He worked as a GIS Analyst to prepare maps and data for field crews and then used his background in natural resources management to join the field crews in sensitive species protocol surveys including the Blunt-nosed Leopard Lizard.

Mr. Doyle previously led the database management and mapping/graphics department for LFR's Central Coast office, which is home to LFR's Ecological Services division. As such, Mr. Doyle was involved on a near daily basis with the transfer of GPS data into GIS data to create or update habitat maps for flora and fauna species. He worked in concert with staff biologists, plant ecologists, and planners in developing species-specific maps. Mr. Doyle is an expert GIS user and is well trained in core GIS applications and high-level GIS analysis, and is fluent in all applicable GIS data entry, data analysis, and data output modes and procedures. His academic background in Forestry and Natural Resources Management, coupled with his extensive field work using GPS receivers and GIS experience, enable him to analyze, quantify, and visually translate habitat data into high quality, accurate resource databases and maps.

Mr. Doyle was an integral member of the GeoBase Integration Office (GIO) at Hickam Air Force Base where he was responsible for installation and administration of all ArcGIS applications across the 15th Air Base Wing. He was an invaluable source of technical support for many other GIS Coordinators at a crucial stage of their development. Working on-site for the military has provided Mr. Doyle excellent experience working directly within a client's network on a daily basis and he has established a positive working rapport with senior-level military personnel.

Education / Training

- Coursework, Focus on Liberal Arts and Fire Science, Los Angeles Harbor College, 1999-2003
- CEQA Basics Workshop Series, Association of Environmental Professionals (AEP); Santa Barbara, California, 2006
- California AEP Annual Conferences; 2007, 2009, 2010, 2011

Expertise

- Quality control
- Environmental planning
- Environmental document coordination, preparation, and compilation
- Proposal and SOQ preparation and coordination
- Project management assistance

Relevant Projects

- Yosemite Environmental Education Center EIS; Yosemite National Park, California
- Parkwide Communication Data Network Environmental Assessment; Yosemite National Park, California
- Tenaya Lake Area Plan Environmental Assessment; Yosemite National Park, California
- Coalinga General Plan Update Master EIR; Fresno County, California
- Fiscalini Ranch Preserve Master EIR; San Luis Obispo County, California
- Oak Shores Wastewater Treatment Plant Upgrade EIR; San Luis Obispo County, California
- Cold Canyon Landfill Expansion EIR; San Luis Obispo County, California

Ms. Jones has over six years of professional experience in environmental planning, with an emphasis on environmental document coordination, editing, and preparation. She regularly works with representatives of local, state, and federal agencies; coordinates with project applicants, and has developed a reputation for problem solving and conflict resolution.

As Technical Editor, Ms. Jones monitors document quality control to ensure that content and formats meet SWCA and agency standards. She has directed compilation of more than 100 CEQA and NEPA environmental documents, including Environmental Impact Reports, Negative Declarations, Caltrans Natural Environment Studies, Environmental Impact Statements, Biological Assessments, Wetland Delineations, permit applications, and a variety of other planning and biological studies. She assists project managers by organizing projects and schedules, assisting in the delegation of team responsibilities, preparing public notices and adhering to the requirements pertaining to these notices, and assisting with management of and correspondence with sub-consultants.

Ms. Jones is responsible for all aspects of facilitating public scoping meetings, including preparing PowerPoint presentations, meeting attendance sheets, and informational handouts. She attends meetings and assists in the presentations, and records public comments for future project reference. Ms. Jones also prepares mitigated negative declarations under the County of San Luis Obispo open-ended contract.

Ms. Jones is responsible for preparation of proposal and Statement of Qualifications packages, and also produces mapping and graphics materials for a variety of planning staff reports, presentations, environmental documents, and reports.

ROBERT G. CARR, ASLA

Visual Resource Specialist, Landscape Architect CA. Lic. 3473

EXPERIENCE SUMMARY

Mr. Carr is a licensed Landscape Architect specializing in visual impact analysis. He has over 19 years of professional project experience, both as a private consultant and in the public sector. Mr. Carr has extensive experience in preparing a wide variety of aesthetic studies for controversial projects involving high quality visual resources and sensitive viewer groups. The results of Mr. Carr's analysis have been presented at numerous public hearings and before several boards and local and state commissions.

REPRESENTATIVE EXPERIENCE

Comprehensive Analysis of Private Development. Primary analyst and technical expert on over fifty visual studies of privately funded development, including but not limited to environmental impact reports (EIRs), expanded initial studies (ExISs) and mitigated negative declarations since 1988. Projects studied by Mr. Carr include environmental documents for large commercial building and shopping centers, residential subdivisions, single family residences on sensitive sites, wireless communication facilities, fiber optic cable projects, mining operations, parks and golf courses. Representative project analysis of large-scale commercial development includes Aesthetic sections of EIRs for Home Depot and Costco, and the Orcutt Plaza shopping center. These studies addressed controversial projects located on identified community gateways. Large scale residential subdivision analysis includes Santa Ysabel Ranch in Paso Robles, Mission Vineyard Estates in San Miguel, Laetitia agriculture cluster development in Arroyo Grande, Four Creeks mixed-use development, Bowden Ranch, Prefumo Creek and DeVaul Ranch in San Luis Obispo, Monarch Grove in Morro Bay, and Alhambra Valley Estates in Contra Costa County. Several of Mr. Carr's studies have been used to establish limits of building envelopes and development on critical sites, ridgelines and in the Coastal Zone. Wireless communication facility studies involved AT&T, Sprint, and Castle Communications. Each of these facilities were proposed for a highly sensitive site requiring especially creative mitigation solutions. Fiber optic communication projects include the AT&T Los Angeles to San Luis Obispo route and the MCI/Worldcom facility from San Luis Obispo to Los Osos.

Visual Impact Reports for Public Works Projects. Mr. Carr has personally conducted visual resource studies for over 100 public works projects at the state and local level. Recent public works projects for the County of San Luis Obispo include the New County Administration Building in San Luis Obispo. As the Visual Resources Coordinator for the California Department of Transportation District Five office, Mr. Carr has is responsible for all in-house and consultant-prepared visual studies in San Luis Obispo, Santa Barbara, Monterey, Santa Cruz, and San Benito Counties. Representative projects include the seismic retrofitting of eight Historic arch bridges on the Big Sur Coast, Highway 1 realignment north of San Simeon, Route 1 median barrier north of San Luis Obispo, Highway 46 widening from Paso Robles to Cholame, The Highway 41/101 interchange, Cuesta Grade retaining wall aesthetics, Price Street extension in Pismo Beach, Gaviota and Goleta median barriers, Santa Barbara six-lane widening, and the Linden/ Casitas Overcrossings in Carpinteria. As Scenic Highway Coordinator for the Department of Transportation, Mr. Carr's responsibilities included guiding the County of San Luis Obispo through the Scenic Highway process for Highway 1. Other public works projects have included the New County Government Center ExIS prepared for the County of San Luis Obispo, the City

of Pismo Beach Waste Water Treatment Facility, and the Paso Robles South Reservoir Facility. Mr. Carr's study of visual impacts includes programmatic-level analysis of planning documents such as the city of Coalinga General Plan Update, the San Luis Obispo/Zone 9 Watershed Management Plan, and the Coast Highway Management Plan for Route 1 on the Big Sur Coast

Design and Implementation. As part of Mr. Carr's experience as a licensed Landscape Architect, he has designed several successful projects on the central coast. Representative projects include the Piedras Blancas Vista Points, the JP Burns Big Sur landslide, the Toro Park Interchange on Route 68, Highway 41 realignment landscaping, revegetation projects on Route 1, 41, 58, 101, and 227, the Cuesta Grade retaining walls, Route 1 median barrier, and Brizzolara Street sound wall. In addition, Mr. Carr has designed and constructed site work and landscaping on several private residences in the area.

Special Committees and Studies. Mr. Carr has been involved with several community design groups regarding the planning and design of public and private projects. Representative involvement includes responsibilities as the Chair of the Aesthetics Design Committee for the SLO Route 1 median barrier, Chair of the Aesthetics Design Committee for the Pitkins Curve signature bridge and rockshed on Route 1 in Big Sur, the Cuesta Grade Aesthetics Advisory Committee, and the North Chorro Street Traffic Calming Community Group. Mr. Carr has presented his findings and recommendations at over forty official public hearings and informational meetings. In addition Mr. Carr serves as a guest lecturer for the Cal Poly Landscape Architecture Department on the subject of visual analysis. In his involvement with the Department of Transportation, Mr. Carr was one of six invited members throughout the state to evaluate Caltrans' visual impact assessment methodology and consistency with CEQA and NEPA, recommend improvements, and develop a state-wide training strategy.

EDUCATION

B.S.L.A., 1988, Landscape Architecture, California Polytechnic State University San Luis Obispo.

PROFESSIONAL HISTORY

Visual Resource Analyst Consultant, 1997 to present, San Luis Obispo, California.
California Department of Transportation (Caltrans), 1988 to present, District 5 Visual Resource Specialist Landscape Architect, San Luis Obispo, California.
B&B Landscape Design and Construction, Principal, 1988 to 1990, San Luis Obispo, California.

PROFESSIONAL AFFILIATIONS

California Licensed Landscape Architect license no. 3473
American Society of Landscape Architects (ASLA)
National Society of Photoshop Professionals (NAPP)

Greg Chittick

Mr. Chittick is a senior scientist with Marine Research Specialists, Inc., with over 20 years of experience specializing in air quality analysis, noise analysis, safety, risk, aesthetics and GIS systems. At MRS, he has been involved in preparing air quality and noise studies and environmental impact assessments, environmental technology studies, computer mapping analysis, modeling accidental releases of hazardous materials and conducting risk analysis studies for small and large facilities.

In 1985, Mr. Chittick received a B.S. in Mechanical Engineering from the University of California at Santa Barbara; and in 1987, he received an M.S. in Mechanical and Environmental Engineering from the University of California at Berkeley. Mr. Chittick worked previously at Lawrence Berkeley Laboratory and for Arco at oil and gas facilities along the California Coast. Mr. Chittick also worked for over 10 years with Arthur D. Little, Inc., based in Boston, MA, on risk and EIR analysis. Mr. Chittick is a member of the American Society of Mechanical Engineers, Southern California Association of Risk Analysis, the Chlorine Institute and a member of the International Institute of Ammonia Refrigeration.

Listed below are some specific areas of expertise with which he has been involved.

Environmental Impact Assessment

- Mr. Chittick has managed a number of environmental impact studies, including analysis on pipeline transportation of crude oil and oil and gas processing facilities. Projects were all related to the California Environmental Quality Act.
- Mr. Chittick has performed impact analysis related to EIR and EIS projects in a number of different impact areas including air quality, noise analysis, risk and hazardous materials, traffic analyses, visual impacts and environmental justice.
- Mr. Chittick has completed numerous air quality analyses for over 50 CEQA documents over the past 20 years. Analysis have included assessment of criteria pollutants, including emissions from hydrocarbon impacted soil handling activities associated with the Guadalupe project, toxic pollutants, including AB2588 health risk assessments, CO hot spots analysis and greenhouse gas emissions analysis, including electrical grid assessments and indirect emissions. Modeling conducted as part of these analyses have included AERMOD, ISC, SLAB, ACE, HARP, CALINE4, URBEMIS, CALEEMOD, amongst numerous others.
- Noise analysis has included impacts of increased traffic, construction equipment operations, as well as in-field measurements of noise levels. Analysis included modeling of noise generated from a range of equipment, including assessing the attenuation of noise levels over barriers and terrain and assessing the effectiveness of a range of noise mitigation methods. The analysis included the development of location-specific models to assess potential noise impacts.
- Has conducted over 30 in-field noise measurement and assessments studies, including noise associated with construction equipment, sheetpile installation, railway noise, truck noise, processing equipment noise, including pumps and compressors, and natural noise sources, including ocean waves and surf. Studies of noise mitigation have included the measurement

Arthur D Little

Greg Chittick (Continued)

of the effect of noise barriers, noise blankets and the effects of vegetation on noise attenuation. Assessments have included A weighted, linear and octave band analysis. Noise impacts are assessed utilizing a range of noise models, including the FHWA Traffic Noise Model and SoundPlan, both of these utilized on a range of oil and gas projects, transportation projects as well as construction projects.

- Mr. Chittick utilizes GIS analysis in almost all projects that he has been involved. GIS enables the accurate analysis of populations, impact zones and spatial relationships between project components that is critical to high quality reports.

Related and Applicable MRS Projects

Huasna Valley Oil Exploration and Production Project EIR (Excelaron Project)

Client: The County of San Luis Obispo

MRS staff prepared an EIR for the County of San Luis Obispo that evaluated environmental impacts associated with the development of an oilfield in Huasna Valley. The project included extensive air quality analysis, including emissions from offsite transportation and operations. Noise analysis and monitoring was conducted related to construction, drilling and transportation activities utilizing the SoundPlan model.

Whittier Oil Field Development EIR

Client: The City of Whittier, Los Angeles

MRS staff prepared an EIR for the City of Whittier that evaluated environmental impacts associated with the development of an oilfield in Whittier, California. The project included extensive air quality analysis, including emissions from offsite transportation, health risk analysis and operations. Noise analysis and monitoring was conducted related to construction, drilling and transportation activities utilizing the SoundPlan model.

Guadalupe Oil Field Remediation and Abandonment EIR and Monitoring

Client: The County of San Luis Obispo and the RWQCB

MRS staff prepared an EIR for the County of San Luis Obispo that evaluated environmental impacts associated with the remediation and abandonment of the Guadalupe Oil Field by Unocal. The project included extensive air quality analysis, including emissions from offsite transportation and emissions from contaminated material. Noise analysis and monitoring was conducted related to construction, excavation and sheetpiling activities.

Avila Beach Remediation EIR

Client: The County of San Luis Obispo and the RWQCB

MRS staff prepared an EIR for the County of San Luis Obispo that evaluated environmental impacts associated with the remediation and abandonment of the Guadalupe Oil Field by Unocal. The project included extensive air quality analysis, including emissions from contaminated material. Noise analysis and monitoring was conducted related to construction, excavation and sheetpiling activities.

Baldwin Hills Community Standards District EIR

Client: Los Angeles County Department of Regional Planning

MRS staff prepared an EIR for the County of Los Angeles that evaluated environmental impacts associated with the expanded development at an urban oilfield in Los Angeles. The project was proposing the drilling of up to 500 new wells in an urban areas. Detailed air quality, health risk, noise analysis were conducted. The project included follow-up monitoring of mitigation measures to ensure compliance by the operator, including noise monitoring and barrier design and implementation.

GORDON THRUPP, PhD

Associate

**hydrogeology
aquifer testing
groundwater modeling**

EDUCATION

University of California, Santa Cruz: Ph.D. Earth Sciences, 1987

Stanford University: B.S., Geology, 1980

REGISTRATION

Certified Hydrogeologist: California No. 541

Registered Geologist: California No. 5849

PROFESSIONAL HISTORY

Geosyntec Consultants, Associate Hydrogeologist, 2005 – Present

S.S. Papadopulos & Associates, 2000 - 2005

Geomatrix Consultants, Inc., Senior Hydrogeologist, 1992 – 2000

Mackie Martin & Associates, Sydney, Australia, Hydrogeologist, 1990-1992

Macquarie University, Sydney, Australia, Computer Systems Officer, 1990

Macquarie University/CSIRO, Sydney, Australia, Macquarie Research Fellow, 1987-1990

University of California, Santa Cruz, California, Research and Teaching Assistant, 1980-1987

Texas Testing Laboratories, San Antonio, Texas, Physical Science Technician, 1980

Conoco, Inc., Falls City, Texas, Geologist, 1979-1980

Stanford University, Stanford, California, Field Assistant, Geophysics Department, 1978

U.S. Geological Survey, Menlo Park, California, Physical Science Technician, 1977-1979

REPRESENTATIVE SKILLS AND EXPERIENCE

Dr. Thrupp has over twenty-five years of experience in the evaluation of geological and hydrogeological problems. As a consultant, he has focused on quantitative analysis of flow of groundwater. For numerous projects, he has designed wells and hydraulic testing programs, evaluated aquifer-testing data to estimate hydraulic properties, and developed groundwater flow models as tools for assessing water resources and engineering design alternatives. For several projects he has designed production wells and overseen installation, development and testing. Applications of his groundwater modeling include:

- Water resource evaluations
- Evaluation of hydraulic connection between surface water and groundwater
- Investigation of the potential for contaminant migration and evaluation of hydraulic containment alternatives
- Location and design of municipal supply wells
- Design of sewage and groundwater infiltration basins
- Assessment of the impact of open-pit mines on groundwater systems
- Prediction of seepage rates into excavations for dewatering feasibility studies
- Evaluation of contaminant fate and transport and natural attenuation

Representative project experience includes:

- *Groundwater Resources Evaluation, El Toro Area, Monterey County* — Directed an evaluation of groundwater resources of the El Toro Area of Monterey County, California. Tasks included compilation, review, and evaluation of existing geologic and hydrologic data including available information for over one hundred water wells. The objective was to evaluate groundwater resource capacity, and as appropriate recommend revisions to the extent of zoning that restricts development.
- *Groundwater Production Capacity and Impact Study, Briones Hills, California* Evaluated groundwater production capacity of fractured bedrock for a proposed development in Briones Hills Agricultural Preserve in Contra Costa County. Reviewed aquifer testing analysis that was done in support of the proposed development. The aquifer testing analysis was technically flawed and did not support that the new well could sustain the design flow rate for the proposed project. Gordon advocated that the aquifer test should not be used in support of a mitigated negative declaration for environmental impact.
- *Bedrock Irrigation Well Feasibility Study, Tamalpais Valley Community Service District, California* — Conducted a feasibility study of installing water wells at community facilities to provide irrigation water. Compiled and reviewed geologic data, 70 driller's well logs, evaluated irrigation water needs and costs for well installation. Based on geologic information and statistical analyses of well production data, determined that probability is greater than 75% that a single well installed to a depth of approximately 200 feet in Tam Valley will produce enough water of adequate quality to meet the irrigation needs at community facilities
- *Water Resource Capacity Study, Nipomo Mesa*. Conducted a groundwater resource capacity evaluation of the Nipomo Mesa area for San Luis Obispo County Departments of Planning and Public Works. This project includes review of DWR and consultant's reports and regional models, compilation of hydrogeologic data for the area, and recommendations to the County that will be used in determining appropriate limits on growth rates and development on Nipomo Mesa.
- *Water Needs Assessment and Hydrogeologic Characterization*: For the Bridgeport Indian Colony (BIC), Mono County California, Gordon conducted a water needs assessment including overview of watershed and geohydrologic information, assessment of water supply and water demand and water rights. Also conducted a geohydrologic evaluation that included characterization and documentation of geology, alluvial aquifers, and groundwater at the BIC. Evaluation included assessment of potential impacts to the BIC groundwater resources by a nearby landfill and wastewater treatment facility. Installed monitoring wells and planned test production well.
- *Injection well design, Morgan Hill, California* – Gordon cited and designed, installed, and tested three injection wells in an alluvial aquifer. The wells have 8-inch-diameter, stainless-steel wire-wrap screens wells and were installed using air rotary casing hammer (ARCH) drilling. They are used to re-inject treated groundwater into a shallow alluvial aquifer. Well performance is monitored regularly and re-development will be conducted to maintain well performance.

- *Basin Evaluation and Water Supply Feasibility Study, Soquel Creek Water District.* Gordon assisted in evaluation of alternatives to enhance the water supply in the Soquel Creek Water District. Alternatives include additional groundwater pumping, enhancement of recharge, a shared County desalinization plant, diversion from Soquel Creek or exchange of water with an adjacent district and groundwater banking with aquifer storage and recovery (ASR) wells. The project is part of an environmental impact report (EIR) for a required CEQA process involving several consulting firms and agencies.
- *Hydrogeologic Evaluation of Engineering Alternatives for a Landfill Subsurface Drainage System, Arizona* – Groundwater modeling to evaluate feasibility and optimize design of a subsurface drainage system to depress the water table beneath a landfill expansion area so that the basal grade of the landfill could be lowered to gain airspace. Transient modeling runs indicated that the necessary drop of the water table could not be achieved in a reasonable time frame with an economically feasible system of drainage trenches. Modeling supported the feasibility of an alternative approach using a basal drainage layer to lower the water table, maintain an inward gradient, and protect groundwater.
- *Water Supply Feasibility Study and Preliminary Engineering Report, Josephine County, Oregon* — In the Illinois Valley in Southern Oregon, domestic wells were the sole source of drinking water for the town of Kerby. Historically, water in an irrigation ditch provided recharge to shallow alluvial aquifers and sustained the production from many of the domestic wells, but many wells dried-up when diversion from the Illinois River to the ditch was stopped. Also, water quality was a serious health concern in the center of town where separation distances between septic systems and wells was inadequate. Gordon evaluated alternatives for a community drinking water supply including a system of community wells, a reservoir in a local drainage, diversion from the Illinois River, and connecting to a municipal system at the adjacent City of Cave Junction. He prepared preliminary design and cost estimates for each alternative. Connection to the Cave Junction Municipal Water System was recommended as the most reliable and cost-effective solution.

AFFILIATIONS

National Groundwater Association
Groundwater Resources Association of California
American Geophysical Union
Geological Society of America

PUBLICATIONS

Dr. Thrupp has published nine articles in major journals or books and over 25 abstracts in proceedings for professional conferences. A selection follows:

Thrupp, G., J. Fortuna, H. Franklin, P. Kwiek., 2008, **Evaluation of Groundwater Resources for Sustainable Development, El Toro Planning Area, Monterey County, California.** *Abstract accepted for AWRA 2008 Annual Water Resources Conference, New Orleans, November 2008.*

- Pearson, A., B. Janke, G. Thrupp, G. Criollo, and H. Franklin, 2008, **Spatial Analysis of Groundwater Resources in El Toro, Monterey County.** *AWRA 2008 Spring Specialty Conference - GIS and Water Resources V, March 17-19 in San Mateo, California. Abstract and poster.*
- Morel, D., M. Verwiël, G. Thrupp, and W. Fowler, 2007, **Study of Basalt Dikes Influence on Groundwater Flow, Waimanalo Gulch Sanitary Landfill, Oahu, Hawaii.** *Proceedings of Sardinia 2007: Eleventh International Waste Management and Landfilling Symposium*, eds. R. Cossu, L. Diaz, R. Stegmann, CISA, Cagliari, Italy.
- Thrupp, G., and J. Oster, 2005, **Beware of Limitations of Jacob Methods for Aquifer Analyses.** *California Water & Environmental Modeling Forum (CWEMF) Annual Meeting, Monterey (Asilomar), California, March 2005. Abstract and poster.*
- Thrupp, G., and C. Neville, 2004, **Modeling Tidal Dilution of Groundwater Discharging to Surface Water.** *California Water & Environmental Modeling Forum (CWEMF) Annual Meeting, Monterey (Asilomar), California, February 2004. Abstract and poster.*
- Neville, C., G. Thrupp, M. Riley, 2002, **Modeling Tidal Dilution of Groundwater Discharging to San Francisco Bay.** *Geological Society of America Cordilleran Section Meeting*, Corvallis, Oregon, May 2002, Abstracts with Programs, vol. 34, no. 5, p. A-111.
- Verwiël, M., G. Thrupp, S. Purdy, S. Rogers, 2001, **Landfill Expansion Beneath the Water Table in Central Arizona.** *Proceedings of Sardinia 2001: Eighth International Waste Management and Landfill Symposium*, eds. T.H. Chirstensen, R. Cossu, R. Stegmann, CISA, Cagliari, Italy, Volume 4, pp 77-86.
- Thrupp, G., J. Baker, and J. Gallinatti, 1998, **Leakage Controls Radius of Influence of Landfill Gas Extraction Wells.** *Proceedings of the 20th International Madison Waste Conference*, pp. 363-372.
- Thrupp, G., J. Gallinatti, and K. Johnson, 1996, **Tools to Improve Models for Design and Assessment of Soil Vapor Extraction Systems.** *Subsurface Fluid-Flow Modeling, ASTM STP 1288*, eds. J.D. Ritchey and J.O. Rumbaugh, American Society for Testing and Materials, Philadelphia, pp. 268-285.
- Thrupp, G., L. Edwards, K.A. Johnson, 1994, **Tracer experiments to investigate soil gas flow associated with soil vapor extraction,** *EOS, American Geophysical Union Transactions*, v. 75, no. 44, p. 276.
- Thrupp, G., L. Edwards, 1994, **Implementation of soil gas tracer to assess and optimize the performance of soil vapor extraction systems,** *Groundwater*, v. 32, pp. 859-860.
- Thrupp, G. and D. Wuthrich, 1994, **Earthquake-Induced Water Level Fluctuation Recorded in Chino Basin Wells,** *EOS, American Geophysical Union Transactions*, v. 75, pp. 103-104.
- Gallinatti, J., G. Thrupp, and D. Wuthrich, 1993, **Horizontal to Vertical Anisotropy of Hydraulic Conductivity in an Alluvial Fan Aquifer.** *EOS, American Geophysical Union Transactions*, v. 74, pp. 273-274.

JEFFREY G. ZUKIN

**geology and hydrogeology
groundwater resources
environmental and hazardous waste investigations
environmental impact analyses
water quality
geochemistry**

EDUCATION

University of Southern California: M.S., Geological Sciences, 1986
University of California at Los Angeles: B.S., Geology, 1982

PROFESSIONAL REGISTRATION

Registered Professional Geologist, Tennessee, 1997
Professional Geologist, California, No. 5715, 1993
Certified Engineering Geologist, California, No. 1814, 1993

PROFESSIONAL HISTORY

Geosyntec Consultants, Santa Barbara, California, Senior Hydrogeologist, 2001 - Present
Dames & Moore (URS), Senior Geologist, 1988 - 2001
Department of Geologic Sciences, University of Southern California, Research Technician,
1986 - 1987

REPRESENTATIVE EXPERIENCE

Mr. Zukin has over 20 years of experience in managing and performing groundwater resource and environmental investigations around the United States. Mr. Zukin has managed groundwater resource studies that have involved both regional exploration as well as site-specific development projects. His groundwater resource experience includes evaluation of groundwater basins and bedrock aquifers, aquifer testing, well field design, long-term groundwater yield analyses, and watershed protection management. Environmental hydrogeology work has included the assessment of potential impacts of contaminants on drinking water aquifers and the characterization of numerous types of facilities including manufactured gas plant sites, landfills, LUFT sites, oil fields, railroads, tank farms, oil refineries, and industrial contaminated chlorinated solvent sites. He has also completed numerous hydrogeologic and geologic environmental impact analyses as well as engineering geology projects. Representative experience includes:

Groundwater Resources

- Consultant to a national spring water bottling company. Projects have included the evaluation and development of a shallow alluvial groundwater aquifer in Owens Valley, California and a fractured volcanic bedrock aquifer in Mt. Shasta, California. Work performed has included: basin and watershed reconnaissance and analysis, aquifer testing and evaluation, production well design and installation, and spring box design and installation. Long-term monitoring programs for water quality, groundwater levels, and spring flow have been designed and implemented to properly manage and protect the groundwater sources. Other work has involved certification of

sources under state and federal labeling rules, review of EIRs and planning documents for neighboring projects, and litigation support services.

- Senior Hydrogeologist responsible for assessing the potential impact of a rural community groundwater production well on groundwater levels beneath neighboring properties in the Santa Ynez Valley, California. An aquifer test was performed in the community well and groundwater levels were monitored in adjacent water wells to estimate aquifer parameters. Groundwater modeling was subsequently performed using future community groundwater use estimates and calculated aquifer parameters to predict potential long-term drawdowns in neighboring water wells. Community groundwater use estimates were developed based on number of residences and crop acreage.
- Conducted a groundwater resource evaluation for a public school site in Gaviota, California. The investigation included the evaluation of a fractured consolidated bedrock aquifer (Vaqueros Formation) and the drilling and installation of a deep water supply well.
- Managed a regional groundwater resource evaluation of approximately 35 desert groundwater basins in southeastern California for a national real estate development company. Groundwater recharge to the basins was estimated by delineating basin and watershed boundaries using GIS and employing the Maxey-Eakin method.
- Senior Geologist for a well design and aquifer test project for the City of Pomona, California. Two 20-inch diameter municipal water supply wells were designed and tested for the City.
- Performed a hydrogeological evaluation of a region located in the Blue Ridge Mountains of the State of Tennessee including geologic mapping and watershed reconnaissance. Several bedrock test wells and water production wells were installed and aquifer testing was performed to evaluate groundwater yield. Due to the karst limestone topography in the region, protection of groundwater sources from surface water influence and bacteriological contamination originating from creeks was a major project issue.
- Conducted water supply investigations for several proposed landfills in Ventura and Santa Barbara Counties in California. The investigations have included installation of bedrock wells in the Pico, Careaga and Monterey Formations and long-term yield analyses.
- Senior Geologist for a spring water supply evaluation project located in America Samoa. The spring source was evaluated using federal bottle water labeling regulations.
- Performed a hydrogeological evaluation of a region located in the Blue Ridge Mountains of the State of Tennessee including geologic mapping and watershed reconnaissance. Several bedrock production wells were installed. Due to the karst limestone topography in the region, protection of groundwater sources from surface water influence and bacteriological contamination originating from creeks was a major project issue.
- Managed a groundwater resources development project in the desert regions of Inyo County for a proposed water diversion project. Work included evaluation of basin perennial yield and installation of a deep production well that produces more than 1,000 gallons per minute long term.

Water Quality Studies

- Task Manager for a regional groundwater quality study for the Central Basin in southern California. The study was completed for the Southern California Water Replenishment District. The project involved developing a database so that water quality data could be effectively managed and compared to state and federal regulations and water quality goals. Once the database was developed the data was evaluated for regional water quality problems and monitoring inadequacies. A ranking system was developed to rate the significance of various water quality issues.
- Managed an assessment of a large septic tank and drywell system on local groundwater in Santa Barbara County. Monitoring wells were installed and monitored for various water quality parameters associated with sewage disposal. Effluent data was also analyzed to evaluate potential nitrate loading issues.

Environmental Impact and Planning Studies

- Performed a water supply and demand planning study for coastal areas along Ventura, Santa Barbara, and San Luis Obispo Counties for the Bureau of Land Management.
- Documented and analyzed Santa Barbara County's water supply system, including groundwater basins and surface water supplies, in support of the preparation of the County's Programmatic EIR. The work was completed for the Santa Barbara County Water Agency.
- Performed geologic and groundwater EIR studies for proposed sedimentation control projects and sand & gravel mines in Ventura County.
- Conducted a geological hazards evaluation for a proposed 560-acre overburden pile at an open pit mine in Boron, California. The work was conducted as part of an Environmental Assessment (EA) overseen by the Bureau of Land Management.
- Evaluated regional geology conditions, groundwater conditions, and potential environmental impacts for several major oil and water pipeline routes in southern California as part of EIR studies.

Environmental Investigations

- Senior Hydrogeologist for the investigation of the Ascon Landfill Site in Huntington Beach, California. Managed a well installation and groundwater sampling program and prepared a Groundwater Remedial Investigation (GW RI) Report with DTSC oversight. As part of the investigation a conceptual hydrogeologic model was developed that explained the relatively low amounts of dissolved phase impacts in groundwater occurring below waste material. The GW RI was accepted by DTSC.
- Principal Investigator of Preliminary Endangerment Assessments (PEAs) and Remedial Investigations (RIs) for gas manufacturing plants in San Pedro, Long Beach, and Santa Barbara, California. The RIs and PEAs were conducted with Department of Toxic Substance Control (DTSC) oversight.
- Senior Hydrogeologist responsible for identify major aquifers beneath a former refinery located in the West Coast Groundwater Basin in Los Angeles County. Water well logs, continuous core logs, and geophysical logs were used to develop cross-sections showing the lateral and vertical extent of regional aquifers beneath the former refinery. The cross-sections

were used to develop a site hydrogeologic conceptual model and to predict the potential migration of contaminants to potable groundwater sources.

- Project Manager responsible for oversight of numerous leaking underground fuel tank (LUFT) sites. Managed both site characterization and remediation phases of the work.
- Project Manager and Principal Investigator for a landfill project in Santa Barbara County. Work was conducted under a state Cleanup and Abatement Order (CAO) and included geologic mapping, geophysics, monitoring well installation, and groundwater and landfill gas monitoring. The project involved extensive interaction with surrounding landowners, RWQCB staff, county staff, and legal counsel. Responsibilities included expert witness and litigation support work.
- Managed the characterization of several industrial sites with chlorinated solvent contamination. Sites have included an aerospace industrial property, a film-processing laboratory, a bulk loading terminal in Long Beach Harbor, and dry cleaning facturing facilities. Projects were conducted under DTSC and RWQCB oversight.
- Completed aquifer tests and groundwater modeling to evaluate the capture zone of a pump & treat system in a shallow alluvial aquifer located in a canyon in the San Gabriel Mountains.
- Conducted a study of the hydrogeology and groundwater in the vicinity of the Dominguez Gap Barrier Project in Wilmington, California. The study evaluated the effects of the migration of oil field contaminants into drinking water aquifers.
- Managed and conducted a tidal response study and aquifer testing program at a federal EPA RCRA site (oil refinery) on the island of Oahu, Hawaii to evaluate a groundwater monitoring network.
- Supervised a field drilling program that included the installation of six deep monitoring wells in fractured granite and fanglomerate units in Needles, California. The wells served as a monitoring network for three retention basins at a gas compressor station.

Engineering Geology

- Conducted a field study of the Palisades Bluffs in Santa Monica, California. The objective of the study was to identify areas of marginal stability along the bluff area and the potential impacts to the park and highway.
- Performed a slope stability and erosion control investigation in an oil field located on steep terrain in Saugas, California. The investigation included an evaluation of the stability of cut and fill areas associated with oil field equipment and access roads.
- Conducted several fault studies and/ or geohazard studies in southern California for proposed landfill sites, housing projects, and resorts. Work has included field mapping, trench logging, and evaluation of fault activity.
- Managed a geochemical study at the Lower South Haiwee Dam in Owens Valley, California for the Los Angeles Department of Water and Power. The study evaluated the potential for the dissolution of dam abutment due to seepage as part of a dam stability evaluation that was being reviewed by the California Division of Mines and Geology.

PUBLICATIONS

- Zukin, J.G., Hammond, D. E., Ku, T.-L, Marton, W.A., 1985, Uranium and thorium radionuclides in the Salton Sea geothermal brines: *Trans Amer. Geophys. Union*, v. 66, no. 46, p 1144.
- Zukin, J.G., Hammond, D.E., Ku, T.-L, Jalajas, E.W., Elders, W.A., 1986, Disequilibrium of U-Th series radionuclides and fluid migration rates in the Salton Sea Geothermal Field: *Trans. Amer. Geophys. Union*, v. 67, no. 44, p. 1258.
- Zukin, J.G., Hammond, D.E., Ku, T.-L, Elders, W.A., 1987, Uranium-Thorium series radionuclides in brines and reservoir rocks from two deep well holes in the Salton Sea Geothermal Field: *Geochim. Cosmochim. Acta*, v. 51, p. 2719-2731.
- Hammond, D.E., Ku, T.-L, and Zukin, J. G., 1987, Uranium and thorium series radionuclides in the SSSDP: *Trans. Amer. Geophys. Union*, v. 68, no. 16, p. 439.
- Hammond, D.E., Zukin, J. G., and Ku, T.-L, 1987, The kinetics of radioisotopes exchange between brine and rock in a geothermal system: *Jour. of Geophys. Res.*, v.93, no. B11, p. 13,175-13,186.
- Berelson, W.M., Hammond, D.E., O'Neill, D.O., Xu, X-M., Chin, C., Zukin, J., 1990, Benthic fluxes and pore water studies from sediments of the central equatorial north Pacific: Nutrient diagenesis: *Geochim. Cosomochim. Acta.*, v. 54, p. 3,001-3,012.
- Sheahan, N.T. and Zukin, J.G., 1993, Developing spring water under the proposed FDA rules. *The Professional Geologist*, a publication of the American Inst. of Prof. Geologists, v. 30, no. 8, p. 9-11.

BRANDON M. STEETS, P.E.

**stormwater quantity/quality modeling
stormwater BMP design
watershed & receiving water modeling & monitoring
TMDL development/implementation
NPDES permitting & strategic regulatory support**

EDUCATION

University of California, Santa Barbara: MS, Environmental Engineering, 2000
Rensselaer Polytechnic Institute, Troy, NY: BS, Environmental Engineering, 1998

PROFESSIONAL REGISTRATION

Professional Chemical Engineer, California, License No. CH6132

PROFESSIONAL HISTORY

GeoSyntec Consultants, Senior Engineer, 2004 to present
Integrated Water Resources, California, Project Engineer & Manager, 2000 to 2004

REPRESENTATIVE EXPERIENCE

Mr. Steets has significant experience in conducting and managing large water quality modeling and monitoring projects to support NPDES permitting, TMDL implementation, stormwater quality management/planning, and BMP design. His experience includes bacteria source investigations and implementation planning; watershed, receiving water, and stormwater quality modeling; water quality monitoring plan development, implementation, data analysis, and reporting; and stormwater BMP selection and design. His specific management and technical experience includes the following projects:

- **Construction SWPPP Support and BMP Design for Ascon Landfill Site, Huntington Beach, CA.** Manage acquisition of general statewide construction and industrial stormwater NPDES permits for non-waste areas of site. Develop SWPPPs and Monitoring and Reporting Plans (MRPs) for construction and post-construction project phases, including meeting the requirements of the new Statewide General Construction Permit. Manage conceptual through final designs of grass swales and detention basins for treatment of stormwater runoff from non-waste project areas, and ongoing stormwater monitoring.
- **TMDL Wasteload Allocation Attainment Plan (WAAP), San Luis Obispo County.** Development of a WAAP, to be submitted by the County (a Phase II MS4) as an attachment to their Stormwater Management Plan (SWMP) Annual Report, describing source and structural controls that are to be implemented in order to meet requirements of the San Luis Obispo Creek bacteria and nutrient TMDLs and the Morro Bay bacteria and sediment TMDLs.
- **Stormwater Expert Panel Facilitation and Large-scale Natural Treatment System Design and Implementation for Field Laboratory Testing Facility, Southern California.** Strategic regulatory support for a complex, high-profile industrial stormwater NPDES permit. Also site, select, design, permit, implement, and monitor multiple engineered natural treatment systems, as proposed by an independent Expert Panel, throughout over 600 acres of the site. Includes water quality monitoring and data analysis, long-term continuous

hydrologic modeling (using US EPA's SWMM), analysis of potential hydromodification impacts, stormwater treatability testing, bench and pilot-scale testing of bioretention media, engineering design, geotechnical field investigations, multiple agency coordination, and post-fire watershed recovery study. Also includes facilitation/coordination of an Expert Panel, consisting of leading stormwater researchers and practitioners, as part of the client's NPDES stormwater compliance program for the site.

- **NPDES, TMDL and Watershed Modeling Support for The Newhall Land and Farming Company (Newhall), Valencia, CA.** NPDES and Water Reuse permitting support, including surface water quality modeling (using the WARMF watershed model) of nitrogen and chloride in the upper Santa Clara River (SCR), to support evaluation of various effluent discharge/reuse scenarios for the Newhall Ranch Wastewater Reclamation Plant (WRP). Also technical review during development of the SCR nitrogen, chloride, and bacteria TMDLs, including detailed review of modeling studies including WARMF for surface water nutrient modeling and MODHMS for Groundwater-Surface Water Interaction (GSWI) chloride modeling. Also participation in TMDL development meetings and commenting on SWRCB's draft proposed 303(d) listings for the Upper SCR.
- **Los Angeles County-Wide Structural BMP Prioritization Project, Los Angeles County.** Phase I: Development of ASCE award-winning GIS-based Methodology for prioritizing structural BMPs opportunities – based on cost, effectiveness, and feasibility – for Heal the Bay, the City of Los Angeles, and the County of Los Angeles. Phase II: methodology demonstration for the Ballona Creek Watershed. Phase III: development of a GIS-based Graphical User Interface for the Strategic BMP Prioritization and Analysis Tool (SBPAT), and incorporation of modeling functions using U.S. EPA's SWMM for hydrology and Monte Carlo (statistical model) for water quality, including bacteria. The Methodology is a systematic, flexible, transparent, reproducible, and defensible approach for selecting and prioritizing BMP projects in a watershed. Information available at: www.labmpmethod.org.
- **NPDES Receiving Water Monitoring for the Newhall Ranch WRP, Valencia, CA.** Development and implementation of pre-startup receiving water monitoring plan for the proposed Newhall Ranch Wastewater Reclamation Plant (WRP), followed by implementation of NPDES permit receiving water monitoring program and submittal of quarterly/annual monitoring reports for the Regional Water Quality Control Board. Programs included frequent dry weather water quality, aquatic toxicity, and bioassessment monitoring at multiple surface water locations, as well as groundwater quality monitoring.

SELECTED PUBLICATIONS & PRESENTATIONS

Steets, B.M., and Holden, P.A. 2003. *A Mechanistic Model of Runoff-Associated Fecal Coliform Fate and Transport through a Coastal Lagoon*, Water Research, 37(3):589-608.

Pitt, R., Clark, S., and Steets, B. LID Conference 2010. Presentation title: *Evaluation of the Contaminant Removal Potential of Biofiltration Media*.

CASQA Conference 2009, November 2-4, 2009, San Diego, CA. Presentation title: *BMP Achievability Relative to Water Quality Standards – Are there Non-Compliance Risks for NPDES Permittees AFTER BMP Implementation?*

LISA AUSTIN

**stormwater management
CEQA/NEPA Support
NPDES permitting**

EDUCATION

M.S., Civil Engineering, Southern Illinois University at Carbondale, 1992

B.S., Environmental Engineering, Southern Illinois University at Carbondale, 1986

REGISTRATION

California Civil Engineer (PE) Number 74663

Washington Civil Engineer (PE) Number 30370

CAREER SUMMARY

Ms. Austin has 20 years of experience in water quality and stormwater management. She has in-depth knowledge of industrial and municipal National Pollutant Discharge Elimination System (NPDES) permitting; municipal stormwater program planning and operations; stormwater best management practice (BMP) selection, design, and maintenance; and construction erosion control. Ms. Austin serves as a Director on the California Stormwater Quality Association (CASQA) Board of Directors. Her role includes working with fellow Board members in developing policies and positions concerning regulations, legislation, and litigation potentially impacting CASQA members.

Ms. Austin's previous positions have given her the unique perspective of being both the regulator (the State) and the permittee (the City). Through this experience, she has developed an understanding of the complex relationships between Clean Water Act regulatory programs such as the NPDES permitting program and Total Maximum Daily Loads (TMDLs), and other environmental regulatory programs such as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Endangered Species Act.

Ms. Austin has prepared many CEQA Water Quality and Hydromodification Management Plans/Technical Reports for major new development and redevelopment projects in California. These reports identify regulatory issues, pollutants of concern and significance thresholds; identify selected treatment control and hydromodification control BMPs; model stormwater runoff volumes, flow rates, and water quality; develop and evaluate the effectiveness of water resource management plans; and assess the significance of potential water quality and hydromodification impacts.

CEQA/NEPA Support Projects

- ***Rancho Mission Viejo Stormwater Management Planning and CEQA Assistance, RMV Community Development, LLC, San Juan Capistrano, California.*** Ms. Austin is assisting Rancho Mission Viejo (RMV) in the development and implementation of a comprehensive water quality and quantity management strategy for the remaining 22,815 acres of the Rancho Mission Viejo in southeastern Orange County, California. A Conceptual Water Quality Management Plan (WQMP) was prepared in support of the General Plan Amendment/Zoning Change application as well as the water quality, geomorphic, and habitat goals of the endangered species protection planning processes in Southern Orange County. Ongoing water quality technical assistance to Rancho Mission Viejo, after successful completion of the Ranch Plan EIR Conceptual WQMP, includes preparation of a Master Area WQMP, five Subarea WQMPs, and two roadway Project-level WQMPs. These WQMPs comply with the requirements of the County of Orange Board of Supervisors Mitigation Monitoring and Reporting Program. The Master Area WQMP also supported the request for a Section 401 Certification from the San Diego Regional Water Quality Control Board associated with impacts to Waters of the United States and Report of Waste Discharge for impacts to “Isolated” Waters of the State for Planning Area 1. Each WQMP provides more specific information and detail concerning how the provisions of the Conceptual WQMP are being implemented within Planning Area 1.
- ***Newhall Ranch Stormwater Management Planning and CEQA Assistance, Newhall Land and Farming Company, Santa Clarita, California.*** Ms. Austin is assisting Newhall Land, a large landowner and developer, in developing and implementing company-wide strategies for addressing stormwater runoff from its development projects. Newhall Ranch is located in the unincorporated area of Los Angeles County approximately 30 miles north of the City of Los Angeles and is adjacent to and bisected by the Santa Clara River. Services include development of the *Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan*, which served as a technical appendix to the Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan EIR/EIS as well as the water quality section for this EIR/EIS. Ms. Austin is also responsible for the preparation of Water Quality Technical Reports and DEIR water quality section support for the four villages within the Newhall Ranch Specific Plan, the Entrada Project, and the Legacy Village Project; and entitlement support for various other Newhall Land projects.
- ***Irvine Company CEQA Support, The Irvine Company, Irvine, California.*** Ms. Austin has developed Water Quality Technical Reports and assisted in the preparation of the DEIR water quality sections for a number of Irvine Company projects. Efforts involved providing input to company decision processes for selecting site planning principals that will reduce runoff volumes and pollutant loads, as well as source control and on-site and regional treatment control BMP options. Projects included Planning Areas 12, 18, 39, and 40; residential and multi-use projects located in the City of Irvine. Special

considerations for these projects included the numerous TMDLs for San Diego Creek and Newport Bay. The Santiago Hills II and East Orange Planned Community Project in unincorporated Orange County, within the City of Orange Sphere of Influence, included site design, source control, and treatment control BMPs focusing on nutrient control for the protection of water quality and beneficial uses in Peters Canyon Reservoir, Irvine Lake, and Santiago Creek. The Mountain Park Development Project Water Quality Management Plan focused on protecting water quality in Gypsum Canyon Creek and the Santa Ana River. Ms. Austin's planning assistance supported The Irvine Company in successfully addressing CEQA requirements and obtaining regulatory approvals for each of these projects.

- ***Centennial Water Quality Technical Report, Centennial Founders, LLC, Valencia, California.*** Centennial Founders, a partnership of Tejon Ranch Company, Lewis Investment Company, Pardee Homes and Standard Pacific Homes, is developing a Specific Plan for a master-planned "new town" in Southern California. The project site consists of over 11,000 acres located in the northwestern portion of the Antelope Valley in Los Angeles County, contiguous to the southern boundary of Kern County. Geosyntec is providing technical and engineering support related to the Centennial Specific Plan Project and Phase One Implementation (concurrent vesting tentative tract maps within the Specific Plan). These services include development of drainage concepts, Standard Urban Stormwater Mitigation Plan development, programmatic and project-specific water quality and hydromodification impact analyses, and EIR support. Ms. Austin prepared a Water Quality Technical Report and provided EIR support for the project.
- ***ENTS Expert Panel Project, Southern California Field Laboratory, Ventura County, California.*** A large industrial client historically operated a field laboratory testing facility in Southern California where manufacturing and testing in support of the aerospace business was conducted. This project developed designs for Engineered Natural Treatment Systems (ENTS) to treat stormwater and maximize compliance with NPDES Permit effluent limitations for the site. Ms. Austin was responsible for the preparation of a Water Quality Technical Report in support of the CEQA Initial Study for this project.

PROFESSIONAL EXPERIENCE

Geosyntec Consultants, Los Angeles and Oakland, California, Senior Water Resources Engineer, 2002 to present
City of Bellevue Utilities Department, Bellevue, Washington, 2000 - 2002
Washington State Department of Ecology, Bellevue Washington, 1990 - 2000
CH2M Hill, Bellevue, Washington, 1988 - 1990

INVITED PRESENTATIONS

- American Public Works Association (APWA) Fall Conference, November 2002. Design Session 1 Treatment Control BMPs.
- Santa Clara Valley Urban Runoff Pollution Prevention Program BMP Maintenance Workshop, June 2005. Lakemont Facility – Operations and Maintenance Experience
- California Association of Stormwater Quality Agencies (CASQA) Conference, October 2005. Ballona Creek Watershed BMP Retrofit Study Phase 1: Conceptual Planning.
- Building Industry Association Greater Los Angeles/Ventura Chapter, March 2007. Proposed Ventura County MS4 Permit, Low Impact Development and Hydromodification Control.
- Lennar Communities, March 2007. Emerging MS4 Permit Issues Training Workshop.
- American Society of Civil Engineers (ASCE) Orange County Branch Technical Seminar, June 2007. Low Impact Development and Rancho Mission Viejo Conceptual WQMP Hydromodification Controls.
- StormCon Los Angeles Workshop, June 2007. Stormwater Management Issues and Solutions for Southern California.
- StormCon Conference, August 2007. A Comprehensive Approach to Water Quality and Quantity Management for New Development Projects.
- University of California, Los Angeles Civil and Environmental Engineering Water Resources Seminar, April 2008. Defining Hydrologic Ranges of Concern to Protect Stream Ecology in Developing Watersheds.
- StormCon San Mateo Workshop, June 2008. Future of Stormwater Management in the San Francisco Bay Area: Meeting Technical Challenges in the Municipal Regional Permit.
- California Association of Stormwater Quality Agencies (CASQA) Conference, September 2008. Site Specific Considerations for LID Feasibility and Effectiveness.
- University of California, Berkeley, Geomorphology Group, July 2009. Estimating Geomorphic Impacts of Land Use Changes.

PROJECT ASSIGNMENT

Principal In Charge
Project Manager

EDUCATION

B.S. in Civil Engineering
1987, Oklahoma State University

Continuing Education Courses
(1988-2010)

YEARS OF EXPERIENCE

23

REGISTRATION

Registered Civil Engineer
California, #53,279

Registered Traffic Engineer
California, #2,372

Professional Traffic Operations
Engineer #2,163

PROFESSIONAL AFFILIATIONS

Institute of Transportation
Engineers (ITE)

American Society of Civil
Engineers (ASCE)

Orange County Traffic Engineers
Council (OCTEC)

Traffic Signal Association (TSA)

Larry D. Hail is a Principal Traffic Engineer at Rick Engineering. He serves the company internal project needs, and primarily works out of the San Luis Obispo and Lake Forest offices. He manages a team of transportation planners and traffic engineers. Mr. Hail has completed a variety of transportation planning studies for the various environmental assessment documents (Initial Study, Environmental Impact Report, Project Study Report, etc). Transportation studies have included the evaluation of traffic, circulation, parking and safety impacts.

A few of Mr. Hail's representative projects include:

- **RANCHO LOS ROBLES SUBDIVISION EIR; MONTEREY COUNTY, CA:** The project was comprised of various residential, commercial and recreational uses. Mr. Hail provided a "peer review" of the initial traffic report and draft EIR Section. Comments were provided to County staff regarding the project development and analysis of traffic impacts. Mr. Hail subsequently performed the necessary revisions required to update the initial traffic report. The updated traffic report was incorporated into the project Final EIR document.
- **COLD CANYON LANDFILL EIR; SAN LUIS OBISPO COUNTY, CA:** The project included an expansion of the existing landfill disposal area and daily operational capacity. The project also included relocating the existing access on State Route 227. The primary focus of the traffic analysis was to evaluate the potential safety impacts to operations along State Route 227 (peak hour turning movement volumes, sight distance, turn lane requirements, truck turning movements, etc.). Improvement recommendations were summarized in the traffic impact analysis and EIR document.
- **NIPOMO COMMUNITY PARK (NCP) MASTER PLAN EIR; SAN LUIS OBISPO COUNTY:** The NCP Master Plan includes a variety of new recreational facilities and infrastructure improvements to be constructed over the next 20 years. The NCP Master Plan also includes numerous infrastructure improvements with a realignment of existing access roads at West Tefft Street and Pomeroy Road. Improvement recommendations were summarized in the traffic impact analysis and EIR document.
- **AT&T FIBER OPTIC SUPPLEMENTAL EIR; SAN LUIS OBISPO COUNTY TO LOS ANGELES COUNTY:** Potential impacts to traffic safety associated with the proposed AT&T Fiber Optic Cable were analyzed in the 2002 EIR. The proposed cable route passes through 4 counties encountering roads in rural, urban, agricultural, as well as areas with no existing roads or impacts to traffic safety. The project included 3 possible construction methods, (1) installation of cable, (2) conduit installation, and (3) boring. The traffic analysis included an evaluation of the potential safety impacts to operations along all proposed routes.

