Project Charter
Sustainable Land Management Vision Team

Name of the Project: Sustainable Land Management In Support of Healthy Watersheds	
Date Issued: February 28, 2008	**Estimated Due Date:** February 2008
Project Leader: Dan Niles	
Project Sponsor: Lisa McCann	
Core Members: Corinne Huckaby David LaCaro Kristina Seley Brandon Sanderson Katie Di Simone Tamara Presser	**Supporting Members:** Shanta Keeling

Project Background:

Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff members seek to implement a vision for healthy functioning watersheds within the Central Coast Region. Central Coast Water Board management assembled teams to accomplish improved water quality and ways to measure positive outcomes using a number of water quality indicators. Central Coast Water Board management initiated and authorized creation of four "vision teams" consisting of staff members and senior management members. The purpose of the vision teams is to establish courses of action for achieving three goals. The focus of this charter is "Goal 2," which is:

> **By 2025, 80% of lands within any watershed will be managed to maintain healthy watershed functions, and the remaining 20% will exhibit positive trends in key watershed parameters.**

The "Sustainable Land Management Vision Team" (SLMVT) is one of the four teams and was tasked to develop a charter addressing Goal 2 for determining how land management activities affect key watershed parameters and how we can improve land management activities to improve and maintain healthy watersheds. Two categories of key watershed parameters include:

Urban key parameters:

- Percentage of new projects using "low impact development."
- Percentage of impervious surfaces, or effective imperviousness, in watersheds.
- Buffer zones for aquatic habitat.

Agriculture key parameters:

- Relative percentage of land with adequate "best management practices."
- Efficiency of pesticides and fertilizer application.
- Efficiency of irrigation.
- Toxicity of runoff.
- Buffer zones for aquatic habitat.

- Riparian and wetland indexes from Goal 1 (Health Aquatic Habitat).

In order to have healthy watersheds on the Central Coast, land users must use practices or techniques to improve already degraded waters, as well as future land uses that protect water quality and watersheds. Proper land management is essential for water resource protection. Ultimately, our goal is to optimize our current regulations, and develop regulatory tools and requirements for land management practices that proactively protect healthy, functioning watersheds.

We define "sustainable land management" as: the use of land resources (including water) by humans, while ensuring the long-term productive potential of resources, and the maintenance of environmental functions. Sustainable land management means managing land to maintain ecological processes and biological diversity. It requires continuation of the following key components:

- Biodiversity: The variety of species, populations, habitats and ecosystems.
- Ecological integrity: The general health and resilience of natural life-support systems, including their ability to assimilate wastes and withstand stresses.
- Natural capital: The stock of productive soil, fresh water, forests, clean air, ocean, and other renewable resources.

Land is utilized in many ways encompassing urbanization, agriculture, conservation, biological resources, and water supply and habitat. The Central Coast Water Board must consider and integrate long-term sustainability, economic, social and environmental factors into sustainable land management approaches and policies.

Central Coast Water Board regulations affecting land management need to be better integrated in support of the above-mentioned sustainable land management concepts. Current tools (e.g., construction, industrial, and municipal stormwater permits; agriculture regulation, Total Maximum Daily Loads, Non-Point Source, Water Quality Certifications, Site Cleanup Program, California Environmental Quality Act) cover certain activities, but how are these tools currently being implemented and what is their relative effectiveness in achieving intended outcomes (i.e., improved water quality)? In response, the SLMVT proposes a "Phase I Literature Review and Ground Truthing Exercise," contained herein, as a first step toward addressing and achieving Goal 2. Following this exercise, staff will recommend and implement changes to existing tools, or new tools to achieve sustainable land management in the Central Coast Region.

Problem/Opportunity Statement:

Central Coast Water Board staff members have an opportunity to improve protection and restoration of watersheds to healthy functions—water quantity and quality in surface and ground waters—in the Central Coast Region by promoting and requiring sustainable land management.

Decreasing water quantity and quality is occurring as a result of the poor management of urban, rural, agricultural, industrial, and transportation-related land uses as well as forest management, and recreational use of open space, and water resource planning (naturally sustainable watershed supply vs. demand). For example, new development that brings increased pollutant loading and impervious surface, vegetation removal, hydromodification of streams, losing recharge areas and capacity, cause watershed impacts that decrease water quantity and quality.

Central Coast Water Board staff desires to improve or increase sustainable land management with better intra-agency/interagency communication concerning cross-purpose regulations and/or programs, better enforcement of existing regulations, better leveraging of other agencies regulatory authorities, implementing new regulations and other management approaches for land uses that impact watersheds, and allocating resources on highest priority issues.

Project Objective Statement:

The Central Coast Water Board has already indentified irrigated agriculture and urbanization as land uses that need on-going and improved regulation to insure they are conducted sustainably and in ways that promote good water quality and watershed functions. In order to determine effective practices and areas of improvement for these priority land uses, and to determine additional land use threat and improvements to watersheds, the SLMVT will conduct, in series or in parallel, a "literature review" and a "ground truthing exercise." The *literature review* will consist of interviewing internal stakeholders, analyzing existing permits, policies, and data to 1) determine the current level of effectiveness in measuring sustainable land management protection provided by land use practices, 2) further identify opportunities for enhancing and developing new measures for key watershed functions related to land uses, and 3) prioritize and indicate new land management approaches that will improve watershed health. The *ground truthing exercise* will include an inventory of land management-related problems in the environment.

In a second phase (Phase II), but to be started in parallel with Phase I, the SLMVT will also identify and pilot areas of opportunity for improving land management (e.g., regulatory tools and measures for tracking key watershed parameters). Examples of short term activities the team will take on to address urbanization and promote low impact development in Phase II include:

- Search out effective recharge protection ordinances from outside the region (July 2008).
- Compare to land management regulations in Central Coast Region counties (September 2008).
- Identify significant future growth areas and redevelopments via contacts from city and county planners (September 2008).
- Determine stage of development and opportunity for incorporating low impact development requirements for existing and future projects (December 2008).
- For critical areas identified above, determine recharge areas, soil types, and groundwater levels (coordinate with Groundwater Team).
- List high priority sites from above data gathering.
- Pursue use of model recharge protection ordinances in these high priority areas.
- Investigate use of low impact development assistance experts (Central Coast Water Board funded or cost shared) for highest priority sites (December 2008).
- Coordinate such assistance, and track results.

Additionally, the team will consider implementing the following activities towards broader sustainability goals:

- Identify water related technologies to reduce changes to watershed hydromodifications.
- Identify entities in water project development stage.
- Share technologies with those entities and promote usage.

Objectives for Phase I:

- Central Coast Water Board staff members will analyze and recommend integration of land management regulations that close gaps between regulatory tools (i.e., tools for grading and erosion controls on farmland).
- Central Coast Water Board staff members will determine measures of success or operational measures for changes, and actions recommended.
- Central Coast Water Board staff members understand the connections between land management practices and healthy watershed functions to facilitate changes in regulatory approaches and to affect improved land use.
- Central Coast Water Board staff members understand the content and importance of the SLMVT's objectives and how their work can help achieve these objectives.
- Central Coast Water Board staff members have the internal resources needed to collect and analyze data necessary to inform the process.

The SLMVT expects to culminate the Phase I and II tasks into a report with recommendations within six months of project approval and execution. As noted above, the SLMVT will recommend opportunities and measures for immediate action to the project sponsor as they are identified early on in the process for "fast-tracking" toward Goal 2. The team will develop measures of success (or operational measures) for any actions to be implemented.

The SLMVT identified resources necessary to accomplish Phase I. One resource includes working with the Assessment Team to identify water quality data that is accessible, can be integrated into usable formats, and available for analyses consistent with identifying key parameters for healthy functioning watersheds related to various land uses; in particular urban and agricultural.

The SLMVT also identified other data and information needs to satisfy Phase I including:

- Information about baseline land use conditions (urban and agricultural).
- Determining when 'concentration' and/or 'load' is the most appropriate measure of pollutant amounts.
- Trend monitoring data and key parameters assessed.

Upon completion of Phase I, the SLMVT will make recommendations for "Phase II." Phase II will implement actions to achieve Goal 2. A few examples may include:

- Drafting regulatory requirements for land management activities, such as zoning restrictions in groundwater recharge areas.
- Buffer zones for aquatic habitat.
- Hydromodification controls for new and existing developments.
- Effectively determining and implementing measures for gauging trends in water quality coupled with land uses; e.g., linking management measures to changes in surface or groundwater quality.
- Engaging internal and external stakeholders to create actions aligned with sustainable land management objectives, including low impact development methods. Forecasting effects of land use changes to existing and needed programs and regulatory mechanisms, thus maintaining momentum towards Goal 2.

- Leveraging existing programs and staff members activities toward increased recharge, water reuse, recycling, and conservation practices.
- Address water supply forecasts associated with growth and global warming impacts and develop locally available supply options to achieve a long-term sustainable water supply.
- Ensuring low impact development maintains or increases recharge rates, thus maintaining local groundwater as a locally available supply.
- Look for opportunities for low impact development methods as sustainable practices to benefit water supplies, water quality protection within the individual watersheds, and in the downstream marine habitat.

Project Stakeholders:

For this phase of the project, the SLMVT identified stakeholders, which are listed in three categories. A brief description of these follows here: *Primary Stakeholders* are the members of the SLMVT and other three vision teams. They represent the knowledge of a large cross section of the agency's programs and policies. *Secondary Stakeholders* are members of staff that have a particular familiarity with certain programs that may be able to provide information and/or land use data for the Central Coast Region. *External Stakeholders* are: 1) entities that may have information about land uses that could be useful in understanding the impacts of land management on water quantity and quality, 2) entities useful to identifying needed improvements in land uses affecting water quality and quantity, 3) entities responsible for control of land uses, and 4) entities that may be affected by implementation of regulations, plans, and policies related to achieving Goal 2.

Primary Stakeholders: SLMVT

Staff Member:	**Knowledge of:**
Dan Niles	Cleanup regulations; groundwater cleanup; solid waste disposal; hydrology; hydrogeology; National Pollutant Discharge Elimination System permits; Industrial Stormwater Permit; contaminant fate and transport; public outreach; Waste Discharger Requirements; Cease and Desist Orders; Cleanup and Abatement Orders; field sampling; data validation; statistics.
Corinne Huckaby	Agricultural waiver program, 401 Program, Non-point Source
David LaCaro	Point source regulations (National Pollutant Discharge Elimination System permitting, Waste Discharge Requirements, Animal Feedlot Operations); municipal, construction, and industrial stormwater management.
Kristina Seley	Groundwater cleanup regulations (federal defense sites and historical industrial facilities) All point source discharges: Volatile Organic Compounds, perchlorate, total petroleum hydrocarbons. Some Geographical Information System knowledge. Familiar with General National Pollutant Discharge Elimination System permit and Waste Discharge Requirements permits.
Brandon Sanderson	Stormwater regulations (Construction, Municipal and Industrial). Geographical Information Systems development.
Tamara Presser	New staff: learning stormwater regulations, low impact development concepts, principles, and practices; planning level meeting with external stakeholders.
Katie Di Simone	Experience as a staff person for a municipality (San Luis Obispo and Paso Robles) implementing municipal wastewater, recycling and stormwater management programs, engineering and ground water cleanup expertise;

	cost analyses, project planning and implementation.
Shanta Keeling	Total Daily Maximum Loads, 303(d) list, bacteria, watershed assessment. Familiar with different sources of pollution (e.g. bacteria, sediment, metals, etc.) and land uses that typically contribute this type of pollutant from Total Daily Maximum Load assessment experience. Basin Planning.

Secondary Stakeholders: Other staff members of the Central Coast Water Board

Staff Member:	**Knowledge of:**
Alison Jones	Agriculture.
Karen Worcester	Central Coast Ambient Monitoring Program, Monitoring data.
Angela Schroeter	Grant projects and data collected for resulted project impacts on water quality—i.e., outcomes of projects.
Bill Hoffman	Watershed planning groups.
Larry Harlan	Geographical Information Systems.
Dave Paradies	Monitoring, computer programming.
Francis McChesney	Legal aspects and support.
Peter Meertens	Ag water quality data, parcel data (except SLO/Santa Clara).

External Stakeholders: Entities outside the Central Coast Water Board

Entity:	**Knowledge of:**
Local Municipalities, County Health, County Planning, Flood Control, Public Works, Building Departments	Local issues, Geographical Information Systems layers, spill clean up, county land use planning, General Plans.
Watershed working groups	Local issues, identified projects, stakeholders.
Dept of Public Health	Studies of local contamination, water quality data.
Coastal Commission	Local coastal zone issues, land use planning.
United States Fish and Wildlife Service	Land use maps.
Land Conservancy	Land use data.
United States Geologic Survey	Land use data maps.
Channel Keeper	Water quality data.
Surfrider Foundation	Water quality data.
Caltrans	Transportation data, erosion and sediment control data, mitigation data.
Grants Team and Project Proponents	Low impact development projects—identifying sources of monitoring data.
Monterey Bay National Marine Sanctuary	Volunteer Monitoring Program.
Department of Pesticide Regulation	Pesticide use reports.
Agriculture Commissioner's Office	Pesticide users information, crop data.
Farm Bureau	Agriculture representation and land stewardship.
Central Coast Vineyard Team	Sustainable land management for vineyards.
Natural Resource Conservation Service, Resource Conservation District	Management practices, soil conservation.
Project Clean Water	Pervious/impervious surfaces study in our region, water quality data.
Bren School of Environmental Science and Management	Report on effects of urbanization/watershed modifications.
State Board	Research guy: Low Impact Development paper,

	Geographical Information Systems data that we don't have.
Local Certified Unified Permitting Agencies	Industrial land use.
Department of Toxic Substance Control	Hazardous waste storage data.
Bureau of Land Management	Large land owner.
US Forest Service	Large land owner.
Department of Fish Game	Riparian zones, endangered species and habitat protection, streambed alteration agreements.

Description of known assumptions and constraints, including expected completion time and resource limitations that may directly affect the project:

Assumptions: Factors considered certain.

- Assessment team can help with data analyses.
- Staff members' time will be consistently available to complete the Phase I portion of the project in 6 months based on minimum 0.1 Personal Year allocations.
- Make decisions and advise Central Coast Water Board staff members based on best available data.
- Include issues that may lack concrete data, but for which the weight of anecdotal evidence suggests actions by staff members are appropriate (e.g., vehicular particulate deposition and runoff, conservation measures for sustained groundwater basin yields, designing for intensification of rainfall to runoff patterns with effects from climate variations).

Constraints: Factors that limit the project team's options.

- Cost of data—may not be able to afford proprietary database data.
- Software integration and/or compatibility.
- Data analyses not complete—some useful studies are underway but not complete.
- Availability and acquisition of land use management data.

Issues that could cause the project to fail:

- Making decisions based on unrealistic analyses if it turns out that there are a lot of data and only a small amount is accessible—this could mean data are limited and more are needed.
- Political influences that impede technical work and timely decision making necessary for implementing changes to challenging land use issues.
- Significant Budget cuts.

Related/Dependent Projects:

Primary Related/Dependent Projects:

Project:	**Nature of Relation or Dependency:**
Groundwater Vision Team	Map of infiltration areas, cleanup sites, and redevelopment areas; identification and mapping of critical recharge zones essential to maintaining and improving beneficial uses of water including supplies and base flow in surface

	waters; identification and mapping of sources of percolation detrimental to groundwater quality and quantity (e.g., industrial ponds, septic systems).
Aquatic Habitat Vision Team	Definitions for healthy aquatic habitat and parameters used to measure such health; identification of riparian corridors and adjacent areas, along with descriptions of compatible land uses; establishing a baseline for evaluating health parameters integral for gauging trends aquatic habitats.
Assessment Vision Team	Data sources, collection and analyses (including causation and trends); development and maintenance of graphic data interfaces for staff members uses.

Secondary Related/Dependent Projects:

Project:	**Nature of Relation or Dependency:**
Grant Team	Grant project information and realignment of proposals to match Vision Goals.
Total Daily Maximum Loads	Data collection and analyses establishing causative effects on water quality parameters defining needs for Total Daily Maximum Loads.
All Water Board Programs	Efficacy of current approach to water quality improvements and efficient use of allocated funds.

Critical Success Factors: Key areas of activity or support in which favorable results are necessary for the project to reach its goals.

- High level of participation by SLMVT members and other staff asked to provide information.
- Project remains a priority (our time on this project, as determined by management).
- Data availability and analytical skills for assessments thereon.

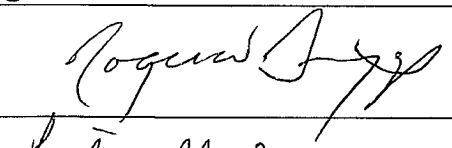
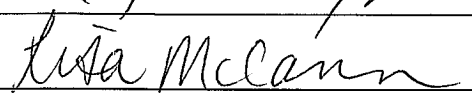
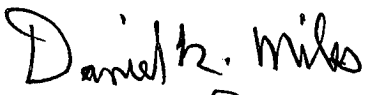
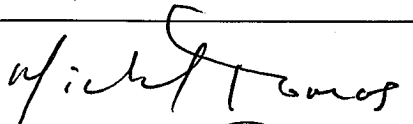
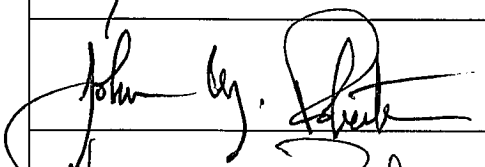
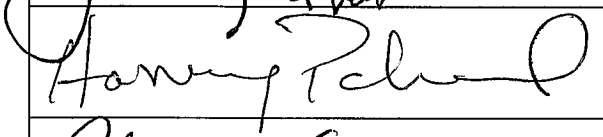
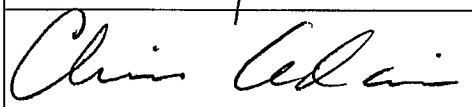
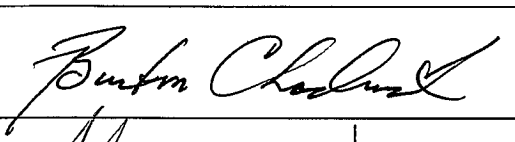
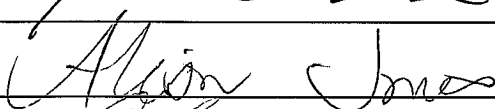
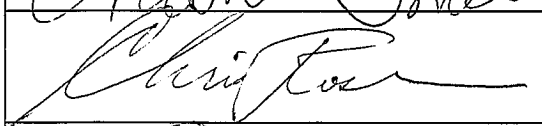
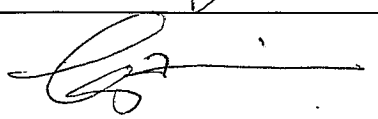
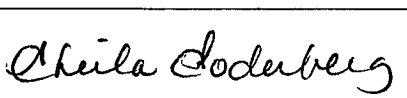
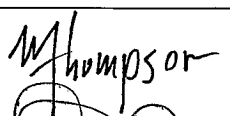
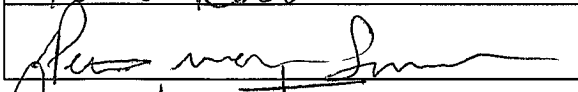
What is needed to ensure project success:

- Be sure decisions are well founded and supported.
- Maintain focus and adaptability during political influences.
- Be creative and efficient in using budget funds recognizing sustainable land management affects the breadth of our programs.

Resources (skills, capabilities, competencies) required:

- Geographical Information Systems.
- Information technology support, reliability, stability, and availability (e.g., hardware and software).
- Data analyses help from the Assessment team.
- Management (team member's seniors) setting aside time for vision work.

Other:

Signature:	Name and Vision Team Title:
	Roger Briggs Director- Central Coast Vision
	Lisa McCann Sponsor- Sustainable Land Management Team
	Dan Niles Team Leader- Sustainable Land Management Team
	Michael Thomas Sponsor- Assessment Team
	John Robertson Sponsor- Groundwater Team
	Harvey Packard Sponsor- Healthy Aquatic Habitat Team
	Chris Adair Senior
	Burton Chadwick Senior
	Alison Jones Senior
	Chris Rose Senior
	Angela Schroeter Senior
	Sheila Soderberg Senior
	Matt Thompson Senior
	Thea Tryon Senior and Team Leader- Groundwater Team
	Karen Worcester Senior and Team Leader- Assessment Team
	Peter von Langen Team Leader- Healthy Aquatic Habitat Team

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