

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF FEBRUARY 8, 2008**

Prepared on January 3, 2008

**ITEM NUMBER: 9**

**SUBJECT: Proposed Allocation of Guadalupe Settlement Funds for the Central Coast Low Impact Development Center, the Central Coast Ambient Monitoring Program, Coastal Property Acquisition, and Proper Abandonment of Water Board Monitoring Wells**

**SUMMARY**

In 2003, the Water Board directed staff to prioritize water quality issues, and actions to address the issues, and to propose allocation of the Guadalupe settlement funds to those priority actions. The Board directed staff to consider "regional benefit" and "leveraging" when developing proposals for funding. This is a fundamental shift from the previous "request for proposals" process that resulted in an overwhelming number of proposals that often missed our priority targets and lacked accountability. It is also a shift from a focus on symptoms of watershed degradation to a focus on the problems that cause the degradation. Staff and the Water Board have worked together for the past three years to identify and prioritize our water quality issues, develop a vision and goals, and align the organization to achieve those goals. Two of the most important issues we face are watershed degradation due to urban sprawl, and the need to establish our accountability for producing tangible results by measuring key watershed parameters over time.

This staff report recommends that the Water Board allocate Guadalupe Settlement funds as follows:

1. Allocate \$2.1 million to establish and support a Central Coast Low Impact Development Center, or otherwise provide Low Impact Development services, to help create model developments on the Central Coast. \$2 million would be set up as an endowment, and only the interest would be used. \$100,000 would be used immediately to start providing services, so we would not have to wait for interest to accrue on the \$2 million. If the project does not perform well, the Water Board can redirect these funds elsewhere. The short term goal is to help create model developments that demonstrate compliance with the Water Board's increasing requirements regarding Low Impact Development. The longer term goal is to help implement all aspects of Low Impact Development and facilitate the cultural shift to sustainable development on the Central Coast.
2. Allocate an additional \$4.65 million to the Central Coast Ambient Monitoring Program (CCAMP) endowment. The purpose of this endowment is to increase the Water Board's ability to track the physical condition of our region over time, identify and prioritize problems, and measure our performance at resolving priority problems and achieving our goals. CCAMP is also a major foundation for developing, implementing, and defending the Water Board's requirements, such as the irrigated agriculture program. CCAMP is a fundamental tool for establishing our accountability to protect and restore resources for future generations.

3. Allocate \$900,000 to the Land Conservancy of San Luis Obispo County (as subcontractor to The Nature Conservancy) to acquire and permanently preserve the 143 acre Paradise Beach property, including approximately one half mile of beach frontage, located just north of Point Sal, and south of the Guadalupe Dunes. This project is an excellent opportunity to permanently conserve a relatively pristine coastal property near the Guadalupe Dunes. In 1998, the Water Board allocated \$2 million from the Guadalupe settlement funds for the purchase and conservation of coastal habitat. This project would use the remaining \$900,000 from that original allocation.
4. Allocate \$950,000 to the American Land Conservancy to help conserve the 2,400 acre Avila Ranch, located in the Irish Hills near Avila Beach. Avila Ranch is a coastal watershed that drains to Avila Bay. This project is a major conservation effort that is part of a plan to establish a 4,000 acre state park.
5. Allocate \$120,000 to properly abandon twelve monitoring wells that were installed as part of a previously funded Water Board study. The Water Board previously funded the study from the Guadalupe settlement funds. This project is necessary to protect groundwater quality and to eliminate the Water Board's liability associated with these monitoring wells.
6. Any unused funds will be reserved for the Board to consider allocating to the Watershed Coordinator proposal expected later this year, and if not used for that purpose, allocated to CCAMP.

The Guadalupe Water Quality Fund has approximately \$8.76 million remaining as unallocated monies. If the Water Board approves the projects listed above, which total \$8.72 million, the Guadalupe fund will be essentially fully allocated (staff also recommends that any small remaining amounts, due to fund fluctuations or rounding, be allocated to the CCAMP endowment to fully allocate the Guadalupe account).

Also, the amount available in the Guadalupe account may increase if the Water Board cancels contracts or allocations for other previously approved projects due to non-performance.

Staff also reviewed many other projects and ideas that were submitted for consideration, which are discussed in this staff report. Some of these other projects may be eligible for funding under other grant programs. There are tens of millions of dollars available through the Water Board's grant programs, which are specifically targeted for local watershed activities on a competitive basis. The Guadalupe settlement fund is not a grant program; it is a settlement fund that the Board can allocate to its highest priorities.

Staff recommends allocation of the Guadalupe funds to the five projects listed above and as described in this staff report.

## DISCUSSION

*Vision without action is a daydream; action without vision is a nightmare.*  
Japanese Proverb

Our vision for the future of the Central Coast is: *Healthy Watersheds*<sup>1</sup>

<sup>1</sup> Healthy Watersheds function well ecologically and are sustainable; support healthy, diverse aquatic habitat; have healthy riparian areas and corridors; and have near natural levels of sediment transport and near natural levels and quality of groundwater. A Healthy Watershed sustains these characteristics through measures that ensure the dynamics that provide these

We (the Regional Water Board and the staff) developed three main goals with respect to aquatic habitat, sustainable land management<sup>2</sup>, and groundwater to realize this vision for healthy watersheds. For the past two years, we have been aligning the organization to achieve our vision and goals, by defining where we are going, focusing on tangible results for our efforts, and having clear distinctions between funding and work efforts that will achieve the correct results vs. those that are not directly on target.

This staff report furthers that effort by proposing the following high priority projects:

1. Allocate \$2.1 million to establish and support a Central Coast Low Impact Development Center. This project would occur in phases, as described later in this report.
2. Increase the Central Coast Ambient Monitoring Program endowment by an additional \$4.65 million.
3. Allocate \$900,000 to the Land Conservancy of San Luis Obispo County (as subcontractor to The Nature Conservancy) to acquire and permanently preserve the 143 acre Paradise Beach property, including approximately one half mile of beach frontage, located just south of the Guadalupe Dunes.
4. Allocate \$950,000 to the American Land Conservancy to help conserve the 2,400 acre Avila Ranch, located in the Irish Hills near Avila Beach. Avila Ranch is a coastal watershed that drains to Avila Bay. This project is a major conservation effort that is part of a plan to establish a 4,000 acre state park.
5. Allocate \$120,000 to properly abandon twelve monitoring wells that were installed as part of a previously funded Water Board study. The wells are owned by the Water Board and must be properly abandoned. Any unused funds from this allocation will be returned to the Guadalupe settlement fund account.
6. Any unused funds will be reserved for the Board to consider allocating to the Watershed Coordinator proposal expected later this year, and if not used for that purpose, allocated to CCAMP.

Water Board staff considered many possible uses for the Guadalupe funds, including several projects and ideas that were submitted by other organizations. These include funding for watershed management plans, property acquisition, individual water quality related projects, agricultural best management practices, municipal works, and support for environmental organizations. When considering potential projects, we focus on the Board's priorities for the Central Coast and the scale of tangible outcomes. We also consider if the proposed improvements could or should be done by the land owner through our regulatory

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healthy factors and functions are protected. Healthy sustainable watersheds have more vegetative cover and canopy, less energy use for imported water, fewer greenhouse gas emissions, and a lesser carbon footprint than unhealthy watersheds. Our goal of Healthy Watersheds is compatible, supportive, and in coordination with the larger issue (beyond water quality) of Sustainability and the State's Global Warming Solutions Act

<sup>2</sup> Sustainability: The ability to meet the needs of the present while living within the carrying capacity of supporting ecosystems and without compromising the ability of future generations of humans and other species to meet their own needs. (modified from U.C. Berkeley Sustainability web page)

process. These considerations filter out most submittals, as they tend to be relatively high cost and highly localized, and often focus on symptoms instead of resolving the problems that cause watershed degradation.

At this time, we do not recommend funding for projects that would pay for installation of agricultural management practices that may end up being removed due to food safety concerns. There are many organizations that support agriculture and best management practices, and the Water Board has directed millions of dollars to this effort. However, the food safety crisis has caused some growers to remove vegetative management practices and riparian vegetation in some areas. We have ongoing projects where grantees are having a very difficult time finding growers who will install such practices. Also, the Water Board will be considering renewal of its agricultural regulatory program permit in 2009, and can address this land use issue in a comprehensive manner during that process. We also avoid projects that can be accomplished relatively easily by Water Board requirements, such as fencing cattle out of riparian and wetland areas.

We also avoid projects that do not address the cause and effect relationship between poor land use practices (such as overgrazing or excessive impervious surfaces) and their symptoms (such as erosion and down cutting of streams). Projects that address the symptom and not the cause are often high cost/low benefit projects.

There are also tens of millions of dollars available through many other funding sources that are designed for these more localized projects, and we have been encouraging project proponents to pursue these other funding sources, as described in Attachment 1. For example, the County of Santa Barbara and the County of San Luis Obispo submitted proposals for funding from the Integrated Regional Water Management Grant Program, and both proposals were reviewed and invited back for consideration in round two of the grant process (\$25 million for Santa Barbara County and \$12 million for San Luis Obispo County). We encourage local organizations to coordinate with each other, integrate their proposals, and apply for the many fund sources available.

Our intent is to direct settlement funds toward achieving our Vision and Goals, and the greatest possible outcome for the Central Coast Region over the long-term. The Guadalupe Water Quality Fund and our proposed projects are discussed in more detail below.

#### **Guadalupe Settlement Fund**

The Central Coast Regional Water Quality Control Board is responsible for allocating the \$15 million Water Quality Fund established by a 1998 settlement with Unocal and others regarding illegal discharges at the Guadalupe Oil Field. Unocal is still responsible for oilfield cleanup and restoration of any resources directly affected by the spills and leaks, so the settlement funds are not used for that purpose.

Since 1998, the Water Board allocated approximately \$10 million for nineteen projects. Ten of the nineteen projects were completed and nine projects remain active. The unallocated amount is approximately \$8.76 million (the amounts add up to more than the original \$15 million due to interest).

The 10 completed projects include:

- 98-289-01 Aerial Photo Archive (\$21,545)
- 98-289-02 City of Guadalupe – Wastewater Treatment Plant (\$1.3 Million)
- 98-289-03 City of Guadalupe – Wetlands Restoration (\$288,857)
- 98-289-05 Komex – Oil Field Assessment (\$587,146)
- 98-289-06 San Jose State Univ. – Sand Crab Study (\$288,788)
- 98-289-08 California Coastal Conservancy – Santa Maria River and Estuary Enhancement (\$436,149)
  
- 98-289-09.1.1 TSC – Monarch Lane, near Nipomo, Cleanup (\$237,000)
- 98-289-11 Central Coast Remedial Resource, Inc. – Nipomo Water Quality Protection (\$52,620)
- 98-289-20 Regional Water Quality Control Board – Central Coast Ambient Monitoring Program (\$2,200,000)
- 98-289-21 Kennedy Jenks Consultants – Salinas LID Design (\$119,257)

The 9 remaining active projects include:

- 98-289-04 The Nature Conservancy – Land/Easement Purchase (\$2 Million Encumbered / \$900,000 remaining)
- 98-289-10 The Dunes Center – Nipomo Dunes Complex Management (\$500,000 Encumbered / \$0 Expended<sup>3</sup>)
- 98-289-12 Central Coast Wine Growers Association Fdn. – Central Coast Watershed Coordinator with significant work in Santa Maria Valley (\$658,103 Encumbered / \$592,292 Expended)
- 98-289-13 Students – (\$6984 remains) Note: 98-289-14 & 17 were rolled into this one.
- 98-289-15 UC Cooperative Extension, SLO County – Central Coast Farm Water Quality Courses (\$79,784.00 Encumbered/ \$36,446.04 Expended)
- 98-289-16 Central Coast Water Quality Preservation, Inc. – Central Coast Cooperative Monitoring Program (\$622,321 Encumbered/\$560.494 Expended)
- 98-289-22 Sustainable Conservation – Central Coast Water Quality Permit Coordination (\$466,000 Encumbered/\$192,739 Expended)

Another major part of the Unocal settlement was a \$9 million Restoration Fund, which is overseen by the Department of Fish and Game (DFG) and the Coastal Conservancy. The Restoration Fund provides for resource restoration (plant and animal species, habitat, water quality) for off-site resources similar to those affected by the spills and leaks. DFG and Coastal Conservancy established an endowment with a major portion (\$8M) of those funds and are allocating funds for restoration projects on an on-going basis.

The process for allocating funds from the Water Board's Water Quality Fund is different than the process for allocating funds from the DFG and Coastal Conservancy Restoration Fund,

<sup>3</sup> This amount has not been contractually obligated, but it is not available for other purposes without Board action.

as defined in the settlement agreement and Memorandum of Understanding. The Water Board has sole authority to allocate funds from its account, and must meet four main conditions: The Water Board must allocate funds to water quality type projects; the Water Board must make decisions to allocate funds in a public meeting; the funded projects must be within the Board's Central Coast jurisdiction; and the Board must allow for comments from DFG and the Coastal Conservancy. The Water Board also drafted its own criteria to consider when allocating funds. The criteria are not requirements, they are for consideration, and the Board can change the criteria at any time (as they did in 2003). The criteria the Water Board considers are described later.

DFG and Coastal Conservancy staff use a different process for the Restoration Fund. Their process includes the Dunes Collaborative, a group of local agencies and non-profit organizations (website: <http://www.dunescollaborative.org/>). The Dunes Collaborative advises DFG and Coastal Conservancy staff on how to allocate the Restoration Funds, and DFG and Coastal Conservancy staff make the decision. The funds are usually allocated to Dunes Collaborative members.

As far as the Water Board's Water Quality funds that have been allocated, the list of projects above shows that the vast majority of allocated funds have been in the Santa Maria/Guadalupe area, even though geographic nexus is one of several criteria that the Board considers, and it is not a required attribute of projects. The Water Board has allocated about \$6 million locally, and DFG and the Coastal Conservancy are allocating all of their Restoration Fund locally. The combined amount allocated locally is about \$15 million.

In 2003, after the Water Board allocated the majority of its funds (primarily based on a "request for proposal" process), the Board decided to change the process to focus on the regional priority water quality issues. In developing our Vision, as briefly described above, we have been defining those priorities. One of our three Measureable Goals is sustainable land use within our watersheds. The Board has been striving to implement Low Impact Development as a key component of sustainable land use. The Water Board has made implementation of LID design standards a top priority to reduce urban pollutant loading, erosion, sedimentation, and stream modifications, and to maintain the natural recharge of groundwater.

Our remaining two Measureable Goals are for riparian areas and clean and adequate groundwater, which are also both greatly assisted by LID. An overarching necessity of being able to measure achievement of Measureable Goals is a comprehensive performance monitoring program (our Central Coast Ambient Monitoring Program, or CCAMP).

In response to these established priorities, and as directed by the Board to identify projects for funding that target those priorities, staff developed two proposals: the LID Center and CCAMP improvements. Both our proposals are set up as endowments, with the interest and earnings used for specific, high priority, tangible results. Accountability is built in, because the Board will be able to monitor effectiveness of this funding. If the Board is not getting the performance it should, the Board can return the principal to the Guadalupe Fund account and redirect the funds to other projects.

We propose a formal performance review of the LID Center and CCAMP projects every three years, and we would invite other agencies and organizations to participate (CCAMP

already undergoes peer review from outside experts on a regular basis). We also propose providing progress reports to the Water Board on at least a quarterly basis (similar to our usual reports on CCAMP activities and findings).

### Central Coast Low Impact Development Center

Although we are using the term "Central Coast LID Center," we are not proposing the creation of a new organization. Creating a new organization was a concern mentioned by some of the people staff met with over the past few months, so it is important to clarify that we will use an existing non profit organization or university to provide the LID services described below:

- **Technical Expertise:** Provide interdisciplinary technical expertise to envision, design, and implement LID projects and sustainable development. The Center will have high-level, practical expertise in engineering design and project implementation. It is critical that the Center be staffed by experts who have successfully implemented all aspects of LID projects and larger scale sustainable development. Center staff will assist with site specific tasks, using experience from other completed projects and local site specific information (soil types, hydrology, etc.)
- **Socio-economics and Cultural Change:** Provide services to resolve the socio-economic and cultural issues that inhibit LID projects and sustainable development. The Center will be able to draw from past successes and failures to foresee and address the concerns of stakeholders, including city and county planners, engineers, elected officials, community groups, regulators and the public.
- **Education and Outreach:** Provide educational services to municipalities, agencies, developers, and consultants on the technical, socio-economic, cultural, and environmental benefits of LID and sustainable development. The Center will work to revise curriculum throughout university level programs (civil and environmental engineering, landscape architecture, natural resource management, etc.) to include the principles and practical application of LID and sustainable development. A cultural shift requires that the next generation of practitioners understand and implement these concepts. It is very difficult to simply add classes or modules to existing curricula. Cal Poly, San Luis Obispo, for example, has been under pressure recently to **reduce** unit graduation requirements in the Civil and Environmental Engineering Departments. However, educating students for sustainable development requires more of a shift in mindset rather than replacing large elements of what is already done in the curriculum; it requires a small change in what educators present and a larger change in how educators present it<sup>4</sup>.
- **Agency Coordination:** Provide guidance and assistance with regulatory permitting processes, and help coordinate agency permitting efforts to implement LID projects and sustainable development, and identify and remove regulatory barriers.

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<sup>4</sup> *Cultivating Sustainable Thinking in Engineering Students: Effective Methods to Inspire Sustainable Engineering Solutions,*

Linda Vanasupa, Katherine C. Chen, and Frank G. Splitt, Materials Engineering Department, California Polytechnic State University, San Luis Obispo

- **Reference Library:** Develop and manage a web-based LID and sustainable development reference library specific to the Central Coast community, including a list of consultants, contractors, LID project designs, LID maintenance manuals, and research sources. The reference material must be user-friendly for technical and non-technical individuals.
- **Leveraging:** Leverage funding and efforts with other organizations to maximize effectiveness and the likelihood of success.

This project will proceed in phases to provide the services described above. If the Board approves the proposal for \$2.1 million, we would start using \$100,000 right away for Phase 1 and not wait for interest to accrue. The remaining \$2 million would be set up as an endowment, and only the interest would be used. Subsequently, the interest would be used for Phase 1 and Phase 2.

Phase 1: Staff will initially focus on retaining leading experts to help municipalities create large scale LID projects, with an emphasis on Guadalupe, Santa Maria, Orcutt, and Nipomo area, then moving north to San Luis Obispo, Paso Robles, and Salinas. However, we will also consider willingness to participate, and will not pass up great opportunities that arise. Staff has already started exploring these opportunities with developers and municipalities. We estimate these services will cost between \$100 and \$200 an hour (hourly rate for hiring LID experts). We will likely retain the services from organizations like the LID Center in Maryland, the UC Davis Center for Land and Water Use, local universities, or similar organizations. An endowment of \$2 million will generate approximately \$100,000 per year (at a 5% rate of return). At \$150/hour, we would be able to provide about 660 hours of services per year.

Phase 2: If Phase 1 is successful, and if we can obtain additional funding from other sources, we will coordinate with existing non profit organizations, including universities, to hire an LID implementation expert, or experts, to provide the services described above on an ongoing basis. This employee, or employees, would work for an existing non profit organization, not the Water Board. The employee could be housed at various locations (including at our office for no cost).

If the Water Board approves this project, staff will use the commitment of \$2.1 million to attract additional funds and will work with other organizations to develop the second phase of the project. Since the July 2007 Board meeting, when we described our proposal to continue development of this concept, we have discussed this proposal with the Dunes Collaborative, the Department of Fish and Game, the Coastal Conservancy, the Ocean Protection Council, Cal Poly San Luis Obispo, Low Impact Development experts from Seattle, the State Water Resources Control Board (members and staff), and the Resources Legacy Fund Foundation. With Regional Water Board approval, we will be well positioned to seek matching funds that may be available from various sources. Matching funds will allow us to leverage funds allocated to this project from the Guadalupe settlement, amplifying the benefit of those funds. We will assess the effectiveness of the project with regular reports to the Board, and if we are able to attract leveraged funds, we will hire additional staff for the Center as needed (not Water Board staff). Our primary initial focus is on getting experts in the field and working in the highest priority areas for LID benefits.

### **Need for the Project**

The Pew Oceans Commission report, *Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States*, describes how watersheds break down and stop functioning due to pollutant loading, impervious surfaces, and habitat consumption. The



report also documents the increasing migratory population shift of people to coastal areas in the United States. The Central Coast of California is one of the most desirable places to live in the world, and is located between two major metropolitan areas. These conditions create a high degree of certainty for major development on the Central Coast over the next few decades; the question is not whether the development will occur, but whether it will be managed such that watersheds and their component functions are protected for future generations. For example, Water Board staff recently provided comments on a 6,000 home development in Santa Maria; the City of Paso Robles has several plans for major developments; the City of Salinas has approved plans for up to 18,000 new homes. These development projects are an indication of what is to come, and the time to act is now.

The Director of the Department of Fish and Game, L. Ryan Broddrick, sent a letter of support for our LID Center proposal (and CCAMP), saying this project is exactly what we need to do now to address our large-scale priorities. Mr. Broddrick emphasized the need for DFG and the Water Boards to work together to protect watersheds and Marine Protected Areas by comprehensively addressing land management issues.

Various initiatives and policies also affect development within watersheds. Through open space easements and watershed protection measures, for example, developable lands within watersheds are squeezed. However, such policies are often developed in a vacuum as far as watershed health and functionality are concerned. Consequently, such policies may force development into areas of the watershed that are actually more detrimental to the watershed's ability to continue to function in a healthy manner. We need to consider these issues in a comprehensive manner.

Another issue is the Global Warming Solutions Act of 2006, signed by Governor Arnold Schwarzenegger on September 27, 2006. It sets up the first enforceable state-wide program in the U.S. to cap all greenhouse gas emissions from major industries that includes penalties for non-compliance. In signing the bill into law, Schwarzenegger declared, "We simply must do everything we can in our power to slow down global warming before it is too late... The science is clear. The global warming debate is over."

The Bill (AB 32), authored by Assembly Speaker Fabian Nuñez (D-Los Angeles) and Assembly Member Fran Pavley (D-Agoura Hills), was agreed between Schwarzenegger and Democratic legislators on August 30, 2006. It requires that by 2020, the state's greenhouse gas emissions be reduced to 1990 levels, a roughly 25% reduction under business as usual estimates. The California Air Resources Board is to prepare plans to achieve the objectives stated in the Act.

Land use in watersheds plays an important role in greenhouse gasses (GHGs), as more vegetation provides greater CO<sub>2</sub> uptake. Many LID features (including more vegetation) also provide less solar reflection, and more shade, reducing heat reflection back into the atmosphere. Conventional development increases impervious surfaces. If such practices are extensive, watershed recharge capacity is lost, rainwater runs out of the watershed rather than being retained as recharge, groundwater is depleted, and the watershed is rendered unsustainable. This is a waste and unreasonable use of water. LID retains water within watersheds via recharge, reducing demand for imported water. In California, about 19% of all electricity use (with its associated GHGs and carbon footprint) is for moving and treating water. Consequently, sustainable watersheds and LID are important components of Global Warming Solutions. Global sustainability is not the Water Board's priority issue in

this regard, it's water quality. But this compatibility is a valuable side benefit of LID.

The Water Board has made implementation of LID design standards a top priority to reduce urban pollutant loading, erosion, sedimentation, and stream modifications, and to maintain the natural recharge of groundwater. While providing education and outreach to municipalities, developers, and consultants over the past two years, staff learned two important lessons. First, while many people support the idea of LID, it is often not implemented because many practitioners do not have the necessary practical experience, and they do not yet understand the socio-economic benefits associated with LID projects and sustainable development. As with any new approach, there is misunderstanding, fear, and resistance to change.

The second important lesson is that many municipalities and practitioners believe that implementation of LID design standards is not actually required (staff is addressing this separately by better defining explicit LID requirements and expectations).

The answer to the first issue is to provide education, outreach, and LID design and implementation expertise to municipalities, developers, and consultants, and to facilitate the cultural change to sustainable development. The Low Impact Development Center in Maryland is an example of an organization that provides services similar to what we are proposing: <http://www.lowimpactdevelopment.org/> However, the level of services that we are proposing does not exist locally and Water Board staff cannot provide them.

One of the reactions to our proposal (from the State Board perspective) is that we have to coordinate things like the State Board's Training Academy course on LID, workshops held in various regions, and our LID Center. This is true to a degree; however, we are proposing to provide site-specific expertise on actual LID projects. If we are successful, our LID projects would be case studies for the Training Academy course and LID workshops.

The Training Academy provides instruction on LID via U.C. Davis Extension: "A Low Impact Design Approach to Storm Water Management." This is a six-hour course that is an overview of the topic of the LID approach. The course includes presentations on street and on-site design improvements utilizing landscaping, trees, bio-sales, rainwater gardens, permeable paving and water harvesting techniques to manage runoff and filter pollutants.

The techniques are neither site specific, nor appropriate for all locations, so the course also discusses technique constraints or limitations and how they may be incorporated into larger storm water management strategies. However, it provides no site-specific design assistance.

The UC Davis Center for Water and Land Use's mission is to "increase awareness and understanding of the relationships between water resources and land use policies and practices through education, training, applied research, collaboration and dissemination of information," is for more general education on land and water use rather than site specific assistance. However, the Center is also providing additional services to Regional Boards and we will coordinate and possibly use their expertise on specific projects.

Another group, the California Water and Land Use Partnership (CA WALUP) is an informal partnership among state and federal agencies and non-profits that have a strong interest in improving water quality in California. The mission of CA WALUP is to protect natural resources by providing technical information and practical tools for informed land use decision-making at the local level. This group seems to have a Southern California

emphasis, and again provides education for local land use decisions, but not site-specific assistance.

We have also provided (organized, sponsored, and conducted) workshops in our region on stormwater management techniques as well as a large (over 100 people) conference on LID. Part of the aftermath was that we were overwhelmed with requests for more detailed site-specific LID implementation assistance. We could not staff those requests in an adequate way, and as described above, that assistance is not available in a six-hour overview class by U.C. Extension. A recent more comprehensive conference (Rohnert Park and elsewhere) went into more detail, but obviously still could not provide site-specific consulting expertise and services. Some attendees from municipalities came back from that conference all fired up about LID but again asked us the same questions regarding site-specific implementation. This problem led us to the local LID Center as a solution to the problem of obtaining site specific assistance.

Our local Center will go beyond what the above-mentioned forums offer in their overviews (which are education, not implementation). Our local Center will have the expertise to implement all aspects of low impact development projects—to envision, design, and implement LID projects and sustainable development. The Center will have high-level, practical expertise in engineering design and project implementation. It will provide guidance and assistance with regulatory permitting processes, and help coordinate agency permitting efforts to implement LID projects that include pre- and post-construction monitoring. The Center will work with individual project staff (including agencies, developers, and their consultants) to develop the plans and specifications. In some cases, already existing specifications will be examined during this process to identify how they need to be modified for the specific LID practices. This process would include an evaluation of the storm water design and construction standards, including pre-treatment. For example, the Center might work on specifications for bio-retention that more accurately reflect the flow characteristics of the local, site-specific soil media, using locally developed knowledge, as well as improvements to the media itself that might make it more effective and sustainable.

Local, site-specific data needed for successful LID implementation will be compiled in a web-based LID and sustainable development reference library specific to the Central Coast watersheds, including a list of consultants, contractors, LID project designs, LID maintenance manuals, and research sources.

All of the above efforts (classes, conferences, workshops, LID Center) fill a need and a niche in our statewide quest for better land and water use. They do not necessarily need to be coordinated; they do need to be compatible. They are all compatible and necessary components of a strategy to implement LID.

Another State Board reaction to our proposal was that we should create a statewide presence in LID throughout the water boards, including a Central Coast LID Center, or maybe we should endorse 'centering' our efforts (or a clearly defined part of our efforts) in a Central Coast LID Center that supports statewide learning and training.

We believe the best response to these comments is to:

"Create a Central Coast LID Center, with a goal of expanding to a statewide presence in LID throughout the water boards, including on-going efforts through coordination with LID related

efforts by USEPA, CA WALUP, and the Training Academy. That is, if the Central Coast LID Center is successful, it could be used elsewhere in the state." This concept and recommendation is included in the current draft of the Statewide Strategic Plan for the Water Boards.

Therefore, we are proposing establishment of a Central Coast LID Center, in a phased approach that is based on whether the project is successful, to provide these services for the next several years. The Water Board's Guadalupe settlement fund is an appropriate source of funding for this priority project, as discussed below.

### **Guadalupe Settlement Fund Criteria with Respect to the LID Center**

In July 2003, the Water Board approved a "Blueprint for Expenditure of the Guadalupe Settlement Fund." The Blueprint established included seven criteria for the Board to consider when funding projects. The first five of these were incorporated into the Settlement Agreement. The Water Quality Focus criterion is the only "required" criterion; the others are "considered" when evaluating projects. The LID Center project meets all seven criteria, as follows:

#### 1. Water Quality Focus:

To be eligible for Settlement Funds, a project must "directly benefit or study ground water or surface water quality and the beneficial use of ground water or surface water," including planning and other activities needed to support the project.

Development and urbanization increase pollutant loading, runoff volume, and discharge velocity above background levels, which causes erosion, creek downcutting, degradation of habitat, and decreased groundwater recharge and base flows in streams. Pollutants in storm water include, but are not limited to:

- petroleum hydrocarbons
- polycyclic aromatic hydrocarbons
- certain heavy metals
- sediments
- pathogens
- bacteria
- trash
- pesticides
- herbicides
- nutrients that cause or contribute to the depletion of dissolved oxygen and/or toxic conditions in the receiving water

The LID Center's work will result in long-term treatment and reduction or elimination of municipal storm water pollutants and water quality degradation typically associated with increased urban runoff volume and velocity.

#### 2. Geographic Nexus:

The primary purpose of the LID Center is to implement LID and sustainable development throughout the Central Coast Region, including the Guadalupe area and the entire watershed that drains to the Santa Maria River mouth. The project meets this criterion with respect to direct benefits to the Santa Maria River watershed. This watershed has a potential to benefit from LID implementation that is as great as any watershed in our region,

due to the potential impacts of urban sprawl in the Santa Maria, Orcutt, and Guadalupe areas. Although not all of the funds would have a geographic nexus, staff expects that the initial \$2.1 million to act as seed money, with larger contributions from other sources. These matching funds could eventually result in a benefit to the geographic area that exceeds the total \$2.1 million investment from the Settlement Fund.

3. Waste Type or Violation:

Urban areas are a major source of petroleum pollutants. The LID Center will directly address this issue and therefore the project meets this criterion.

4. Beneficial Use Protection:

Projects that protect or restore beneficial uses of water that were affected by the Guadalupe Oil Field discharges are given credit under this criterion. Those beneficial uses include drinking water and agricultural supply [present or potential water supplies], aquatic habitat [fresh and saline] and aquatic endangered species habitat. The LID Center will directly assist with the study, restoration and protection of these beneficial uses in all developing and urban area watersheds.

5. Institutional Stability and Capacity: This is a measure of a project proponent's ability to complete the funded project. If the Water Board approves the project, staff will define the institutional stability and capacity criteria that any project proponent must meet. Staff is working on this issue by considering existing organizations, such as state universities and non profit organizations that could be strong candidates.

6. Leveraged Funding:

Staff is working to obtain additional leveraged funding, and the project is set up in phases to help accomplish this. The funds will be set up as an endowment, and if the project is not successful, the Water Board can direct the redirect the principal and any time. Municipalities will also provide "leveraging" via the time they commit to participating in LID and sustainable development activities, and via any fees that they may pay for LID Center services.

7. Region-wide Use or Benefit:

This criterion is described in the Blueprint as: "A project may benefit both a local geographic area and have broader application throughout the region or statewide." As described in number 2, above, the LID Center will provide major benefits to multiple stakeholders and the environment on a region-wide scale. Our efforts could very well pave the way (pun intended) for statewide improvements in watershed management and protection.

This LID Center proposal meets the above seven criteria very well, fits with our current Vision for Healthy Watersheds, and also fits extremely well with the priorities discussed by the Board in late 2004, and raised again by Chair Young at our annual big picture Board meeting in June 2007, while discussing our Vision for the Central Coast Region. The consensus of the Board at that time was to focus on three issues that are intertwined:

- Riparian Buffer Zones
- Low Impact Development
- Innovative Stormwater Management

Therefore, staff recommends the Water Board allocate 2.1 million to this project, and staff will begin Phase 1 right away, and will provide quarterly updates to the Board regarding our progress.

### **Central Coast Ambient Monitoring Program**

This is a request to augment the Water Board's Central Coast Ambient Monitoring Program (CCAMP) endowment with an additional \$4.65 million to increase the effectiveness of the program. CCAMP is a primary tool for the following:

1. Measuring our performance in achieving tangible results in our watersheds, and to inform us of changes needed in our strategies.
2. Prioritizing our work to focus on the most important issues.
3. Help determine Water Board requirements, and support and defend those requirements.

Additional funding will allow us to do the following:

1. Add additional parameters, such as biological and physical indices, to our existing basic water quality and flow monitoring
2. Add stations to cover areas of watersheds not currently being addressed.
3. Increase the resolution of our data, for some data types, down to the parcel level, and thereby better identify sources of problems and whether we are improving and maintaining watershed health.
4. Develop analytical tools to assess watersheds, and support the Water Board's requirements. For example, staff is developing more comprehensive requirements for the protection of riparian areas, more comprehensive requirements for storm water management plans, and the Board will be renewing its irrigated agriculture permit requirements in 2008. Our ability to obtain and assess comprehensive data is key to successfully implementing and defending these requirements.

Our goal is to build a comprehensive program that measures the physical condition of the Central Coast Region over the long term, and reaching this goal will require significant increases in funding, even beyond the request we are making here.

The Central Coast Region consists of 11,000 square miles, and the existing annual monitoring budget of \$390,000, which fluctuates dramatically depending on the State budget, is not adequate to effectively cover such a large geographic area. The monitoring budget is constantly threatened, and has been cut up to 50% in some years. For reference, large point-source dischargers, such as the Diablo Canyon Power Plant, often have annual monitoring budgets that are similar to or even greater than the CCAMP budget—for a single discharge. Our CCAMP project manager, Karen Worcester, has done a remarkable job of building a program on a shoestring budget; a program that is often referred to as the "model" program in the State. Now that we have developed our Vision and Goals, we need to continue building CCAMP to include biological and physical parameters (in addition to water quality and flow measurements) to adequately measure the physical condition of our region. This task will require major funding increases, and our best avenue is an increase in the endowment. Our longer term goal is to build the endowment to \$20 million, which would generate a stable funding source of approximately \$1 million annually, and would allow us to add groundwater elements, and high level analysis of all CCAMP data.

In the meantime, staff is requesting that the Water Board augment the CCAMP endowment with an additional \$4.65 million to increase the total endowment to \$7.32 million. This will provide approximately \$366,000 per year in stable funding (assuming a 5% return). If the

State Water Board funding averages approximately \$240,000 per year, the total budget would be approximately \$606,000 per year.

One of the benefits of an endowment is that the principle amount (\$7.32 million) is never spent. The Water Board can track staff's performance on building and implementing CCAMP, and reallocate the funds if we do not meet the Board's expectations. We will also seek additional funding from other sources to further augment the CCAMP budget. The program we are building is a major benefit to other agencies and organizations, and we intend to capitalize on that benefit. Also, in March 2007, the Water Board approved the transfer of the existing CCAMP endowment to the Bay Foundation of Morro Bay, which allows us to increase stakeholder participation in the program and better leverage our funding and efforts with other organizations.

#### **Central Coast Ambient Monitoring Program – Accomplishments**

The Central Coast Ambient Monitoring Program is celebrating its 10<sup>th</sup> year of monitoring this year. CCAMP staff began sampling in the Pajaro watershed in January, 1998, with borrowed sampling gear, borrowed sampling staff, and a budget patched together from TMDL funds, State Mussel Watch money, and grants from local collaborating agencies. Since that time, we have collected over 200,000 individual water quality measurements, have completed one full rotation of monitoring through our five watershed areas and are well into our second rotation, and have accumulated six years of trend data at our coastal confluence sites. We have written nine peer-reviewed watershed assessment reports and a harbor status report, and have collaborated on numerous journal articles related to marine mammal health issues and watershed toxicity. All of these reports and articles are available on our web site at [www.ccamp.org](http://www.ccamp.org).

CCAMP data are also available on the CCAMP website, in graphic, tabular and map formats. The website has been used by many for education and outreach; for example, it has been used by technical service providers in the field, as they address agricultural watershed groups about solving water quality problems specific to the watershed in question. CCAMP data and staff have also supported a number of direct efforts by Water Board staff to improve water quality through inspections, enforcement, regulatory decision-making, and outreach and funding activities. Our data has generated 75 listings on the 303(d) list of impaired waters in 38 different water bodies, has been used in numerous Total Maximum Daily Load (TMDL) development efforts, and form the basis for compliance monitoring for a number of TMDLs that have been adopted by this Board. We anticipate that our data will drive many more 303(d) listings in the upcoming 2008 listing process. The extent of impairment in the surface waters of our Region is significant, and CCAMP data will form the basis for showing long-term improving trends in water quality in years to come.

CCAMP data also played a major role in the development and adoption of the Water Board's irrigated agriculture permit—the first such regulatory program in the United States. CCAMP data demonstrated the significant water quality problems associated with irrigated agriculture, such that growers, environmental groups, and other agencies were able to see and understand the need for the regulatory program. Having such data makes it possible to demonstrate the need for requirements, and to defend the requirements if necessary.

CCAMP data are documented and maintained at the highest level of data quality, as defined by the State's Surface Water Ambient Monitoring Program (SWAMP), and all of our data through 2006 has been delivered to the SWAMP data management system. We set the standard for data quality in our Region. We have reviewed dozens of other data sets for the

purpose of 303(d) listing, and have found none that are as thoroughly documented and error free as our own. In fact, some of these data sets have had to be disqualified from the listing process, or qualified as "estimated," because of poor documentation or obvious errors. CCAMP staff continues to work with other monitoring programs, through Quality Assurance Program Plan development and review, monitoring program interactions, workshops, and other venues, to improve data quality throughout our Region. Of the program data we have reviewed, the Cooperative Monitoring Program for Agriculture is notable for its generally high level of data quality documentation.

CCAMP monitoring has generally consisted of monthly sampling at over 60 sites. These include 33 ongoing coastal confluence sites for trend data collection, and 30 additional sites in one of five watershed rotation areas (which we rotate through in a five-year period). At each site, we collect a comprehensive monthly suite of conventional analytes, including nutrients, salts, solids, pathogen indicators, physical parameters and flow. At a subset of these sites, we collect water toxicity data (three species twice a year), sediment toxicity (once) and benthic community assemblages (two consecutive spring time sample runs). We occasionally have been able to collect sediment and tissue chemistry data. Our site coverage for these additional program elements is entirely dictated by the State program budget, which fluctuates greatly from year to year.

Our regional site coverage, particularly for long-term trend detection, has been significantly enhanced by collaborative program design with the Cooperative Monitoring Program for Agriculture and, to a lesser extent, the City of Salinas' storm water monitoring program. These two programs add fifty-five long-term trend sites throughout urban and irrigated agricultural areas of the Region. Our program is also closely coordinated with the Monterey area's Central Coast Environmental Assessment Network (CCLEAN), a nearshore ocean discharger monitoring program. We now provide all of the monthly stream mouth flow and water quality monitoring data for CCLEAN, as well as the stream flow model that has been used by CCLEAN to calculate stream and river loading to the ocean.

CCAMP data has documented extensive problems associated with nutrient contamination throughout the Region, particularly in areas with intensive irrigated agricultural activities. We have shown that fecal coliform levels commonly violate standards in urban areas and other areas of higher intensity land use. Several salts, particularly boron, and acidity (pH) commonly violate site-specific objectives. In some cases, these violations appear to be resulting from objectives that were set at levels that are generally higher than ambient conditions and should be addressed through Basin Plan amendment. We have documented extensive sediment and water toxicity in both agricultural and urban areas, from both organophosphate and pyrethroid pesticides. In some locations we are just beginning to document significant changes in water quality, both improving and degrading. In a report recently released as a draft by the Central Coast Water Quality Data Synthesis Assessment and Management (SAM) Project (at the Monterey Bay National Marine Sanctuary), 264 trend tests were performed on CCAMP coastal confluence data, and 24 significant trends were detected. For example, nitrate levels at San Lorenzo and Old Salinas rivers appear to be increasing, and ortho-phosphate concentrations on Gazos and Arroyo Burro creeks appear to be decreasing.

#### **CCAMP Present Program Focus**

Because we are just now beginning to have enough data to detect statistically significant trends over time, CCAMP will be working on new approaches and analytical tools in the



coming year(s) to better incorporate these data into our overall decision making for the organization. We have two sets of watershed rotation data now to compare, and over five years of coastal confluence trend data, so assessment for change is becoming a feasible undertaking. This effort is where our relatively data-rich sampling design of monthly sampling will really pay off. As always, the more variable the data, the more data it takes to show significant change. Also, a lot of change (for example, more than 30%) is easier to detect than a little change (under 10%).

CCAMP flow data have been used to validate a daily flow model that we have developed over the past year to support CCLEAN loading calculations, U.C. Davis marine mammal research on pathogen risk, and other purposes. This model achieves a correlation with measured flow at most sites in the 70 to 90% range. It is based on a USGS model, but has been improved by selection of local flow gages best suited for each site. All of our coastal confluence sites have now been modeled, and we have also created a dilution model that assesses coastal freshwater influence at half-kilometer increments along the coast on any given day. This enables us to predict coastal influence of pollutant loads that we measure leaving our watersheds. We hope to make this tool available to other researchers and managers interested in coastal pollution issues, for example related to management of Marine Protected Areas. Virtually all mainland Marine Protected Areas are adjacent to one of our coastal confluence monitoring sites.

Because of our current office focus on teamwork to meet our Vision goals, CCAMP has been working with other staff on new tools to improve the flow of information from field observation to staff action. Staff has observed that some types of problems found in the field fall through our "programmatic cracks"; in other words, it is sometimes unclear how and who should address them. CCAMP is providing technical support for development of watershed "wikis" – interactive websites where we are tracking and reporting on field incidents, so that these problems can be prioritized relative to other staff workload, and assigned for action as appropriate.

CCAMP is also playing a large role in developing metrics of "health", in response to our office Vision assessment needs. Working with the Vision Assessment Team, we are building our data resources related to land management activities, to improve our capacity to link water quality changes to management activities, such as those reported through the Cooperative Monitoring Program for Agriculture. We have already piloted a biological index that utilizes biostimulation, bioassessment and toxicity to characterize watershed site health. We have also developed the tools to attach these and other site "scores" to adjacent upstream stream reaches. This approach will ultimately enable us to characterize whole watersheds relative to health risk. One obvious obstacle to this effort is that few sites have been characterized robustly by all monitoring approaches (due to budget). Also, site coverage is not sufficient to assess entire watersheds for health with reasonable certainty; more upstream site coverage, in combination with a risk-based land use assessment, would address this limitation.

Over the past year we have implemented a major revision in CCAMP data handling tools to accommodate data delivery requirements by SWAMP, to uptake data from other programs in a format that is compatible with our own, to develop tools to evaluate multiple data sources for listing purposes, and to improve and update our web data browser to utilize open source Internet mapping resources and incorporate other data sources. Our web-based data delivery system piloted with the Cooperative Monitoring Program for Agriculture is

going to be utilized as part of a recently approved CalFED grant to develop a grants data "handler" for the SWAMP program. This is a huge accomplishment for us because it means Region 3 methods will be institutionalized on a statewide scale. This means the tools we are developing will be compatible with and supported by a statewide approach to data uptake. A number of our existing local monitoring programs, including several non profits and volunteer programs, are already using this tool, so the transition to the statewide approach will be relatively seamless.

CCAMP staff is reorganizing and quality checking data from numerous sources for the 2008 303(d) listing, and compiling this data into a format that is consistent with our own data delivery format. Additionally, we have partnered with the SAM project to incorporate data compiled by that project into the listing effort. The dataset includes data from volunteer programs, local agency monitoring programs, U.S. Geological Survey, university research projects, regulatory monitoring programs, and others. We have developed tools to scan the data for quality assurance information, as well as to develop "lines of evidence" for each "project - pollutant - water body - beneficial use" combination. For each line of evidence, the scanning tool attaches information on level of quality assurance documentation, applicable criteria and beneficial uses, sample count, criteria exceedance count, etc. We expect to generate over five thousand lines of evidence to be considered in development of fact sheets for the 303(d) listing process.

#### **CCAMP Budget**

CCAMP has two primary funding sources: the State Board's Surface Water Ambient Monitoring Program and the CCAMP Endowment. The latter is a \$2.67 million endowment created by the Water Board (from the Guadalupe settlement and the PG&E/Duke Energy settlement). The Water Board created this endowment to provide a stable funding source for CCAMP to carry out the basic monitoring program. We estimate that the existing endowment will provide approximately \$133,000 per year over the long term (based a conservative 5% interest earnings rate). Table 1 shows our current level of funding for 2008, as well as the minimum and maximum amounts we have received from our primary sources. Typically, \$150,000 of SWAMP funds goes to our private lab contract, where analysis is done for our monthly sampling. The remaining SWAMP funding is typically spent on water and sediment toxicity testing, and benthic bioassessment through a State master contract with the Department of Fish and Game and U.C. Davis. We are spending almost our entire Endowment fund income on staffing, now that we are able to provide workers compensation and benefits by using staff hired through the Morro Bay Foundation. The endowment income provides one full time field staff (Erin Kersthald), one part-time field staff (currently unfilled), and a stipend for our data management and software developer (Dave Paradies). Without this fund, we would be a far less effective program. For example, if we paid SWAMP contractors to conduct our field work, at our current rate of monthly sampling, it would cost us close to a million dollars a year just to collect (not analyze) the samples.

Assuming an average funding level from the State Board of \$260,000, and \$130,000 from the endowment, our total annual budget is approximately \$390,000 (as illustrated above these are estimates and the actual amounts vary significantly due to the State budget). The State Board funding and the endowment funding together are barely sufficient to conduct our basic regional monitoring effort, and shortfalls in funding are common, which means that at various times, we must abandon some of the basic monitoring elements. We also end up spending staff time on monitoring program changes necessitated by funding level changes, which further takes away from our staff's ability to conduct the program.

CCAMP has accomplished much with its current level of funding of around \$400,000 per year, though we are now noting that inflation is beginning to compromise our current level of activity. For example, SWAMP costs per sample for bioassessment have risen from \$458 to \$681 since 2004; our costs for field sampling have doubled since the inception of the program because of hourly pay increases and cost of benefits and worker's compensation. We have had to eliminate bioassessment monitoring from our 2008 Santa Barbara area monitoring, because we don't have the budget to do both toxicity and bioassessment sampling adequately. We do not currently anticipate any significant increases in funding from the SWAMP program, and decreases are a constant threat.

**Table 1. Annual CCAMP funding sources (not including two full-time State staff positions)**

Fund Source	Maximum	Minimum	Current
SWAMP	\$310,000	\$170,000	\$260,100
CCAMP Endowment	\$272,000 (during the 2006 Salinas sampling year, when PG&E settlement funds were available)	\$60,000 (Guadalupe funds only)	\$130,000 (Guadalupe + PG &E funds at the Bay Foundation)

### Proposed Expansion of CCAMP Activities

If the Board increases the CCAMP Endowment by \$4.65 million as requested by staff, this would bring the total CCAMP Endowment to approximately \$7.32 million. The financial manager for the Bay Foundation, who also manages endowment funds for Cuesta College and Cal Poly State University foundations, concurs that a 5% estimate of spending income from this endowment is a reasonable and conservative figure for budgeting purposes. This yield would mean the annual CCAMP income from the Endowment would be \$366,000. Combined with an estimated SWAMP income of \$240,000, the annual CCAMP budget would be approximately \$606,000. This increase over our current budget would allow for significant program expansion, improvement and effectiveness in solving our highest priority water quality problems, leading to healthier watersheds and marine habitat.

This proposal to expand CCAMP funding includes three elements:

1. **Fully implement the existing program design already underway:** The proposed \$4.65 million endowment augmentation will increase sampling resolution in upper watershed areas that provide critical habitat for steelhead and other aquatic species, and will ensure that a robust suite of parameters can be measured more comprehensively. It will also allow us to assess our riparian stream health at each site, and will provide for a fund to follow up on identified problem areas (this has long been lacking in the CCAMP budget).
2. **Increase CCAMP's capacity by including additional parameters and analysis:** The Water Board vision teams are identifying key parameters (chemical, biological, and physical) to assess watershed health. For example, key parameters for riparian

health such as shade, buffer zones, bioassessment, toxicity, and nutrients; key parameters for overall watershed health, such as imperviousness; also, key parameters for groundwater such as salts and nitrates. The data are not enough to effect change; we must analyze the key parameters (and in some cases develop the analytical tools) and incorporate the results in our decision making process. Obviously, all of these tasks cost money and would be prioritized. CCAMP is a tremendous resource, already established and successfully functioning, on which to build this added capacity.

The increased endowment will also provide CCAMP staffing support at the Bay Foundation, to do the following:

- Additional coordination/integration/quality assurance of volunteer and NGO monitoring programs
  - Integration with agency beach pathogen programs
  - Continuing integration of CCAMP with urban runoff monitoring (assuming storm water programs include water quality monitoring) and agricultural runoff and percolation monitoring
  - Integration of water quality data with land management and land use data, pesticide use data from DPR, impervious surface imagery, and other GIS based measures of watershed status.
3. **Obtain additional leveraged funding to fully implement CCAMP region wide:** Several program elements, including coastal confluence monitoring for toxic pollutants and deployment of instrumentation to assess river mouth contaminant loads entering to the ocean, would improve our understanding of pollutant loading to Marine Protected Areas, particularly in combination with our model that predicts coastal confluence flow and dilution in the nearshore area. Several instrumented sites are already in existence through other programs. From our CCAMP and CCLEAN efforts, we have coastal confluence data demonstrating the loading of significant nutrients and pesticides (toxicity) from many of our watersheds. This program element could potentially be endowed by the Ocean Protection Council or other funding sources to support our understanding of pollutants which flow off the land and enter the ocean, and our ability to reduce those pollutant loads.

#### **Areas for CCAMP Expansion and Approximate Costs**

(Cost estimates are taken from SWAMP and private laboratory pricing.)

#### **Priority Program Elements**

	<b>Per Site Cost</b>	<b>Per Year</b>
Add twenty additional monthly sampling sites for conventional water quality to watershed rotation to improve resolution in upper watersheds	\$219	\$52,560
Adequately fund CCAMP data management and software support (Increase by 0.5 positions)		\$30,000
Increase field team to support additional sampling effort		



The Guadalupe settlement fund criteria are described above in the discussion about the Central LID Center, and are not repeated here. The Water Board previously considered the Guadalupe settlement fund criteria when it established the original CCAMP endowment, and determined that CCAMP funding meets the criteria.

We fully realize that sampling and analysis are not enough. Our job is to reduce pollutant loading and protect beneficial uses for future generations. CCAMP helps us make informed decisions regarding priorities, helps us adjust our direction, establish and defend the Water Board's requirements, and measures our effectiveness at achieving tangible results. Therefore, staff recommends that the Board increase the CCAMP endowment by \$4.65 million.

### **Paradise Beach Property Acquisition and Preservation**

In 1998, the Water Board allocated \$2 million from the Guadalupe fund for the acquisition and preservation of coastal dunes habitat. The project was set up to allow the Executive Officer to review and approve acquisition proposals. The Nature Conservancy is the contractor for this project; however, the Land Conservancy of San Luis Obispo County has been the project proponent for the acquisitions that were submitted and approved (as a subcontractor). The Land Conservancy is also the project proponent for the Paradise Beach property acquisition. The Executive Officer could have approved this project based on the Board's previous allocation of funds for this purpose, but decided to include the proposal in this staff report because the timing coincides with our other proposals.

The Paradise Beach property is located just north of Point Sal, fronting the Paradise Beach area, and includes about ½ mile of beach property. The property is adjacent to BLM and Santa Barbara County Parks land, which in turn is adjacent to Point Sal State Park. Santa Barbara County Parks has expressed an interest in the long-term ownership and management of the parcel if the conservation project is successful.

The Gragnani family has agreed to sell the property to the Land Conservancy for its market value of \$2.15 million. Coastal Conservancy staff is recommending that its Board allocate \$1.25 million for the acquisition (at their Board meeting on January 17, 2008). Water Board staff recommends that the Water Board allocate \$900,000 to the acquisition. The Land Conservancy has submitted the substantial documentation required by the contract for these funds, and the documents appear to be in order (but are still subject to the legal review by the Board's counsel).

This represents great leveraging of the Guadalupe funds to conserve an important coastal property. The property is described in detail in the Land Conservancy's Proposal for Grant Expenditure, included here as Attachment 2.

### **Avila Ranch Project**

The American Land Conservancy submitted a request for \$950,000 to help fund the acquisition and preservation of the 2,400 acre Avila Ranch property, located in the Irish Hills near Avila Beach, as described in Attachment 3. This project proposes to purchase the existing 160 year lease that controls all use of the Avila Ranch, including all development, for \$24 million. In a separate but related action, the American Land Conservancy is also working to obtain the underlying fee interest for Avila Ranch (the fee interest controls the ranch after 160 years), which is owned by PG&E. This is an outstanding large-scale, coastal watershed conservation opportunity of regional significance. As stated in the proposal, the Irish Hills are recognized as one of California's outstanding conservation areas by The

Nature Conservancy, The David and Lucile Packard Foundation, the San Luis Obispo County Land Conservancy, and the American Land Conservancy.

In 2003, the Water Board recognized the value of this conservation project by allocating \$1.25 million (from the Avila Settlement Fund) to the purchase of the 160 year lease; however, the pending deal fell through and the owner proceeded with development plans. Access to this property is readily available just north of Avila Beach, and development is likely if the property is not protected. This is a second chance to protect the Avila Ranch (for a lesser amount of Regional Water Board allocated funds), and the American Land Conservancy is working to obtain funds from the following sources to purchase the 160 year lease:

California State Parks:	\$8 million
Coastal Conservancy:	\$7 million
Wildlife Conservation Board:	\$6 million
State Environmental Enhancement and Mitigation Program:	\$1.5 million
State Transportation Improvement Program:	\$0.35 million
Private Funding:	\$0.20 million
Central Coast Water Board:	\$0.95 million
<hr/>	
Total:	\$24 million

This project is also part of a larger conservation effort. The American Land Conservancy is working with the San Luis Obispo County Land Conservancy and State Parks to combine Avila Ranch with the adjacent, pristine Hibberd Preserve to form a new state park of approximately 4,000 acres, with resource protection and recreational opportunities.

This project meets the requirements of the Guadalupe Water Quality fund because it is a very large scale water quality project that will protect multiple coastal watersheds and miles of riparian habitat. Also, the watersheds drain to Avila Bay, which is a 303(d) listed water body requiring protection.

Staff recommends the Water Board allocate \$950,000 to this project.

### **Proper Abandonment of Monitoring Wells**

In 2000, the Water Board retained Komex H2O Science (Komex) to assess potential oil field-related impacts to water in the Santa Maria and Cat Canyon oil fields. The Water Board funded this project from the Guadalupe settlement fund.

Komex evaluated impacts associated with oil field development and production in five different areas throughout the Santa Maria basin. Komex reviewed historical oil field information from 2002 through 2004, and collected sediment samples, soil samples from borings, and surface water samples from ephemeral streams during storm events. Komex also collected groundwater samples from drive-point borings, private drinking water supply wells, and twelve monitoring wells installed specifically for the study. In September 2005, Water Board staff received Komex's final report.

One of the recommendations of the final report was that the Water Board either transfer ownership of the wells or abandon them. Consequently, Water Board staff plan to properly destroy the twelve groundwater monitoring wells Komex installed as part of the oil field

study. Well destruction will protect groundwater quality and eliminate the Water Board's potential liabilities regarding ongoing well ownership. Groundwater monitoring wells are required to be properly maintained; if not maintained, the wells are direct pathways for any waste from the surface to be directly discharged to groundwater. The scope of work covered in proper abandonment of these wells includes:

- Obtaining Santa Barbara County well destruction permits;
- Retaining a contractor with a C-57 drilling license to destroy the wells in accordance with Department of Water Resources regulations; oversee site field activities;
- Containing, sampling, characterizing, and disposing of waste materials (water, soil, well casing, etc.) generated, at the appropriate landfill; and
- Submitting completed well destruction documentation to Santa Barbara County, the Department of Water Resources, and the Water Board upon project completion.

We estimate the cost of this work to be up to \$120,000, with about half the cost going to waste laboratory analysis, trucking, and disposal at the local landfill. We recommend that the Water Board allocate \$120,000 for this work, and also recommend that any unused funds be reserved for the Board to consider allocating to the Watershed Coordinator proposal expected later this year (described below), and if not used for that purpose, allocated to the CCAMP endowment.

#### **Proposals from the Dunes Collaborative**

The Dunes Collaborative submitted several project proposals, as described briefly in Attachment 4. Some of these projects may be eligible for funding under the Water Board's other grant programs, which are described in Attachment 1. We do not recommend funding these projects from the Guadalupe account because they are relatively smaller scale, higher cost projects that do not significantly address the Water Board's regional priorities, and in some cases the projects need much more development or are not appropriate for funding. If these projects are submitted for funding under the Water Board's other grant programs, we strongly recommend that they be coordinated with a more regional effort that focuses on sources of watershed degradation.

As the amount of money available and the number of grant projects has increased significantly over the past few years (e.g., the Water Board is managing an additional \$29 million in grant funds this year), the number of cases where grantees have been unable to meet the conditions of their grant contracts is increasing. In some cases, grantees have been unable to do the work due to underestimating the need for solid relationships with landowners and other parties before applying for grants, and underestimating the resources and expertise necessary to accomplish the work. This has resulted in hundreds of thousands to millions of dollars being lost, and cancelling of contracts. Staff and the Water Board need to be much more conscious of these issues. This is one of the reasons why the Water Boards have emphasized the need for local groups to coordinate their efforts and focus on watershed scale approaches, rather than higher cost, smaller scale, independent projects.

An example of success is the Water Board's allocation of \$7 million in mitigation funds to the Elkhorn Slough Foundation, near Moss Landing. Water Board staff considered many local organizations prior to recommending the Elkhorn Slough Foundation as the project manager to the Board. The Foundation had a proven track record of successfully implementing complex projects, building positive relationships with landowners, coordinating with other regional organizations and getting large scale buy-in, and solid financial management. The Water Board selected the Foundation to manage the funds and to do specific watershed



scale projects, and within one year the Foundation leveraged the \$7 million into \$21 million (in the bank). Since then, the Foundation has averaged a funding leveraging ratio of 11:1 for on-the-ground projects. This means the Water Board's \$7 million investment is on target for being leveraged into over \$200 million of watershed scale preservation and restoration work. This success would be hard to match, but it demonstrates the key components, and years of organizational infrastructure development, that are needed to achieve large scale, tangible results. So far, this includes 3,000 acres of preserved habitat, several hundred acres of restored wetlands, and nine miles of riparian restoration and protection. We could not have achieved this success by divvying up the mitigation funds among several organizations and focusing on individual smaller scale projects, as several groups proposed at that time.

Water Board staff attended Dunes Collaborative meetings regarding these proposed projects and explained that the Board's priorities are to address the sources of problems, such as implementing nutrient and irrigation management actions on specific agricultural lands, and applying Low Impact Development principals in the City of Santa Maria or Guadalupe (e.g., revise Specific Plans, Ordinances). The submitted projects do not reflect these Water Board priorities. We recognize that many of the Dunes Collaborative organizations do not do this kind of work; however, these are the Water Board's priorities.

The Dunes Collaborative has an opportunity to establish a more regional approach with other organizations to address larger scale issues. For example, the Resource Conservation Districts and municipalities could develop regional proposals to address the sources of watershed degradation, or find another established organization to do so, build in accountability for achieving tangible results, and apply for the tens of million of dollars in grant funds that are available for this type of work. As mentioned previously, the State invited the Counties of Santa Barbara and San Luis Obispo to round two of the Integrated Regional Water Management Grant Program process to further consider their proposals for \$25 million and \$12 million, respectively. This is only one of the grant programs available, as described in Attachment 1.

#### **Proposal from the Nipomo Community Services District**

The Nipomo Community Services District (CSD) is proposing a treatment plant expansion and treatment upgrade and asks for Guadalupe fund grant money to assist with the project. In the late 80's, the Nipomo CSD received very extensive grant funding to plan, design, and build its existing collection, treatment, and disposal system. Operators of such systems are required to have on-going capital improvement/replacement funds as part of their revenue programs. The Nipomo CSD has had 20 years to build up its fund for major capital improvements for a facility that was designed for a 20 year planning period. During that time, Nipomo CSD has had tremendous growth, presumably with connection fees for every new project. In general, such entities have a ready means of developing a revenue stream for this kind of project; they also have an obligation to plan financially to continue treating and disposing of their own wastewater. Projects such as the CCAMP or LID Institute do not have such a revenue stream, nor does any entity have an obligation to provide such funding for such proposals. We do not recommend funding for this project.

#### **Arroyo Grande Creek Watershed Management Plan**

The Executive Officer's November 8, 2007 letter to the City of Arroyo Grande commended the City for its efforts to protect Arroyo Grande Creek, but also noted that the Arroyo Grande Creek Watershed Management Plan focused on symptoms and not the land management

activities that caused the symptoms. The Executive Officer sent a similar letter with comments on how to improve the Plan on October 7, 2007. The Plan needs significant improvement to address the sources of the degradation it describes. We do not recommend funding for this Plan at this time.

#### **Central Coast Watershed Coordinator**

In 2003, the Water Board allocated \$658,103 from the Guadalupe fund to support a Central Coast Watershed Coordinator for Santa Barbara County. The funding for this position will be depleted in 2008. The Executive Officer and other staff met with Kevin Merrill, of Mesa Vineyard Management, Inc., in January 2008, to discuss the Watershed Coordinator position and additional funding beyond 2008. The Executive Officer encouraged Mr. Merrill to submit a proposal for additional funding and to pursue other grant programs. The Central Coast Watershed Coordinator is a valuable part of the Water Board's agricultural regulation program, bringing diverse agricultural operators together and providing education about the Water Board's requirements. Staff supports this type of coordination effort and will work to identify other sources of funding, including grant funds and Special Environmental Project funding associated with enforcement actions.

#### **COMMENTS AND RESPONSES**

Staff received several comment letters regarding its July 2007 staff report, included here as Attachment 5. Several letters supported staff's recommendation, and several other letters requested that the item be postponed to allow consideration of other more local proposals. Some letters also stated that the Water Board's Water Quality Fund must be allocated locally per the settlement agreement. Regarding postponing the item, that did occur because the Board could not complete its agenda in July. Regarding allocation of the Water Board's Water Quality Fund, it is not correct that the funds must be, or should be, allocated locally. The Water Board has allocated about \$6 million locally, but can allocate the funds anywhere within its Central Coast jurisdiction per the settlement agreement.

The following comments were also received, and staff responded in a July 2007 supplemental sheet, as follows:

**Michael Winn, President, Nipomo Community Services District:** As Board President of the Nipomo Community Services District I personally heartily support your proposal and have forwarded your message to our General Manager here for consideration. I don't know how much money a relatively small CSD could set aside to help fund such a project - none at all, I'm guessing - but a planning & design philosophy that centers around healthy aquifers is essential for our area--and the rest of the Central Coast. I would hope that we could support your effort in a number of other ways.

Wearing my other hat, as Chairperson of SLO County's Water Resources Advisory Committee (WRAC), I am sending a copy of your proposal to County Public Works staff, asking that we agendize a letter of support from the WRAC in our July 18 meeting. This cannot be done before your July 6 meeting in Watsonville, but perhaps the fact of its being agendized will be an encouragement.

[Note: After submitting the above comments, the Nipomo CSD submitted a proposal to fund the CSD's wastewater treatment plant upgrade.]

**Bruce Buel, General Manager, Nipomo Community Services District:** The District would like to support your proposal. It appears your Board will review the concept at its July Meeting and then finalize the action next year. Please call me at 929-1133 so we can brainstorm ways that NCS D can help.

**Water Board Staff Response:** We appreciate the support, and if the Water Board approves staff's proposal for a Central Coast Low Impact Development Center, we will work with the Nipomo CSD to implement LID projects in the Nipomo area.

**A Dunes Collaborative Representative:** The representative expressed concern about the Water Board's process for recommending allocation of settlement funds.

**Water Board Staff Response:** The Water Board and its staff have been developing a Vision and Goals for the past two years, and have presented the process to the Board and public several times. The Water Board has also directed staff to focus on what it considers to be the highest priorities in our Region: Low Impact Development, protection of aquatic habitat such as riparian corridors, and better watershed monitoring to measure our effectiveness. Achieving our goals requires us to align our organization with our goals, which includes aligning all our various funding sources, such as settlements, grants, and special environmental projects.

The concept of a Low Impact Development Center derived from our extensive public education and outreach efforts for over two years. The loud and clear feedback we received from many stakeholders is that we need to provide more clear requirements for Low Impact Development (which we are actively developing), and we need to provide specific services to implement Low Impact Development projects and sustainable development. Our proposed projects are largely based on feedback from the Water Board and stakeholders over the past two years, and they address the biggest issues facing our region. Also, regarding our proposal to increase the endowment for the Central Coast Ambient Monitoring Program, this proposal is directly in line with our Vision and Goals and direction from the Water Board. While the Guadalupe Settlement Fund Memorandum of Agreement gives the Water Board sole authority to allocate its portion of the settlement funds at one of its regular public meetings with its normal public comment process, it also requires staff to specifically seek comments from the Department of Fish and Game and the Coastal Conservancy regarding our proposed projects. The Executive Officer and staff have met with representatives from these agencies, as discussed below.

**Sonke Mastrup, Deputy Director, Resources Management and Policy Division, California Department of Fish and Game:** The Executive Officer discussed these proposals with Mr. Mastrup on June 26. Mr. Mastrup said these proposals fit perfectly with the direction Fish and Game is going in implementing Marine Life Protection Act to protect marine ecosystems. Mr. Mastrup said the issues described in our staff report, sustainable land management practices and comprehensive watershed monitoring, are the same issues that were emphasized strongly in the Marine Life Protection Act public process; he also noted that these same issues are emphasized in the literature and during conferences on environmental protection. Mr. Mastrup said he looks forward to collaborating with the Water Board to implement these projects and better integrate watershed and marine protection, and that he would help in any way he could.

**Water Board Staff Response:** We appreciate Mr. Mastrup's support and emphatically agree that we need to collaborate with the Department of Fish and Game to achieve comprehensive watershed and marine system protection.

**Neal Fishman, Deputy Executive Officer, California Coastal Conservancy:** The Regional Water Board Executive Officer and staff talked to Mr. Fishman and his staff on June 22, 2007. Mr. Fishman said the projects looked favorable and that he wanted his staff to review them further, and he would send a comment letter at a later date. The Regional Water Board Executive Officer and Assistant Executive Officer went to the Coastal Conservancy/Ocean Protection Council office in Oakland on December 17, 2007, to meet with Mr. Fishman and several other of the agencies' staff. We presented the LID/CCAMP proposals and discussed our agencies' mutual goals with these proposals, reviewed our process for those proposals as well as other proposals in this agenda item, and answered all their questions. We discussed potential funding sources to leverage settlement monies. Mr. Fishman said he appreciated the Water Board's effort to identify its regional priorities and actively direct resources toward the highest priorities, rather than reacting to requests for funding.

**Barbara Lynch, Deputy Director of Public Works, City of San Luis Obispo:** Thank you for the opportunity to comment on the report. I am strongly supportive of the LID Center as I believe this is the most important activity to get underway. I think more of the \$7 million you are advocating for should be put toward this endeavor and less toward the monitoring work. If we don't get LID off the ground, we can be almost certain that the creek loadings will increase. Monitoring can always be increased at a future date when we have the LID implemented. We are all small cities with limited resources. If LID is to be implemented effectively, we will need the leadership of the Board. To do otherwise is to leave the agencies struggling to do something and probably not being very successful at it. It will be a frustration for you and for us, and the results will not be what they could be.

**Water Board Staff Response:** We appreciate Ms. Lynch's support. If the Water Board approves our Central Coast Low Impact Development Center concept proposal, we will actively seek additional funding from other sources, and a main task of the Center itself would be obtain ongoing leveraged funding.

**Timothy Lawrence, Ph.D., Center for Water and Land Use, University of California Davis Extension:** The Executive Officer and staff met with Mr. Lawrence on June 22, 2007, to discuss our Central Coast Low Impact Development Center proposal. Dr. Lawrence said the type of regional center we are proposing is "exactly what is needed to make low impact development a reality." Dr. Lawrence emphasized the need for the services we described on our staff report and local, on the ground projects to demonstrate Low Impact Development and sustainable development.

**Water Board Staff Response:** We appreciate Dr. Lawrence's support.

## CONCLUSION

The Water Board directed staff to determine our regional water quality priorities and act to make tangible progress on those priorities. The Board and staff have worked together for

the past two years to define a vision and tangible goals, and to align the organization to achieve the goals. With respect to the Guadalupe Water Quality Fund, the Board directed staff to consider "regional benefit" and "leveraging" when developing proposals for funding. This is a fundamental shift from "reacting" to proposals and requests for funds to actively directing funds to high priority actions. It is also a shift from a focus on symptoms of watershed degradation to a focus on the problems that cause the degradation.

Our proposals to fund the Central Coast LID Center and augment the CCAMP endowment are directed at two of the most important issues we face: watershed degradation due to urban sprawl, and the need to establish our accountability for producing tangible results by measuring key watershed parameters over time. The Paradise Beach and Avila Ranch Conservation projects are great opportunities to leverage the Water Board's funds to protect significant coastal habitat. The well abandonment project is necessary to for groundwater protection and to eliminate the Board's liability for these monitoring wells, and is the proper action to complete the work previously approved by the Board.

### RECOMMENDATION

Staff recommends the Water Board allocate, by Board motion, Guadalupe Settlement funds as follows:

1. Allocate \$2.1 million to establish and support a Central Coast Low Impact Development Center, or otherwise provide Low Impact Development services, to help create model developments on the Central Coast. \$2 million would be set up as an endowment, and only the interest would be used. \$100,000 would be used immediately to start providing services, so we would not have to wait for interest to accrue on the \$2 million. If the project does not perform well, the Water Board can redirect these funds elsewhere. The short term goal is to help create model developments that demonstrate compliance with the Water Board's increasing requirements regarding Low Impact Development. The longer term goal is to help implement all aspects of Low Impact Development and facilitate the cultural shift to sustainable development on the Central Coast.
2. Adopt Resolution No. RB3-2007-0064 (Attachment 7) to allocate an additional \$4.65 million to the Central Coast Ambient Monitoring Program (CCAMP) endowment. The purpose of this endowment is to increase the Water Board's ability to track the physical condition of our region over time, identify and prioritize problems, and measure our performance at resolving priority problems and achieving our goals. CCAMP is also a major foundation for developing, implementing, and defending the Water Board's requirements, such as the irrigated agriculture program. CCAMP is a fundamental tool for establishing our accountability to protect and restore resources for future generations.
3. Allocate \$900,000 to the San Luis Obispo Land Conservancy (as subcontractor to The Nature Conservancy) to acquire and permanently preserve the 143 acre Paradise Beach property, including approximately one half mile of beach frontage, located just north of Point Sal, and south of the Guadalupe Dunes. This project is an excellent opportunity to permanently conserve a relatively pristine coastal property near the Guadalupe Dunes. In 1998, the Water Board allocated \$2 million from the Guadalupe settlement funds for the purchase and conservation of coastal habitat. This project would use the remaining \$900,000 from that original allocation.
4. Allocate \$950,000 to the American Land Conservancy to help conserve the 2,400 acre Avila Ranch, located in the Irish Hills near Avila Beach. Avila Ranch is a coastal watershed that drains to Avila Bay. This project is a major conservation

effort that is part of a plan to establish a 4,000 acre state park.

5. Allocate \$120,000 to properly abandon twelve monitoring wells that were installed as part of a previously funded Water Board study. The Water Board previously funded the study from the Guadalupe settlement funds. This project is necessary for groundwater protection and to eliminate the Water Board's liability associated with these monitoring wells.
6. Any unused funds will be reserved for the Board to consider allocating to the Watershed Coordinator proposal expected later this year, and if not used for that purpose, allocated to CCAMP.

#### **ATTACHMENTS**

1. Summary of available grants
2. Paradise Beach project proposal
3. Avila Ranch project proposal
4. Water Board staff summary of Dunes Collaborative project proposals
5. Comment letters on staff's July 2007 staff report to the Water Board
6. Resolution RB3-2007-0064 approving use of Guadalupe Funds

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