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

STAFF REPORT FOR REGULAR MEETING OF SEPTEMBER 9, 2005

ITEM: 28

SUBJECT: LOW IMPACT DEVELOPMENT PILOT PROJECT

I. PROJECT DESCRIPTION

Water Board staff recommends funding for a three-part pilot project (Pilot Project) to be implemented in a City in the Central Coast Region The proposed Pilot Project will provide on-going water quality benefits, and will encourage Low Impact Development (LID) techniques throughout the Central Coast Region. In summary, the proposed project includes:

1. Funding assistance to a city to update their design standards and city ordinances.
2. Funded workshops for City planners, developers, and the community at large to introduce LID methodology and explain how this methodology will promote low cost housing and meet Permit[1] requirements.
3. Funding for an on-the-ground pilot project that demonstrates and incorporates LID design standards.

This Pilot Project will be a model for implemented LID design standards that other municipalities may follow and/or improve upon. The Pilot Project will therefore provide a long-term water quality benefit on a local and regional scale.

The Task Estimate and Time Frame table included at the end of this Staff Report lists detailed scenarios that may be incorporated into this Pilot Project. The level of detail and intensity of the Pilot Project components could vary considerably depending on funding, as is reflected in the table. Total cost estimates vary from $27,000 to $225,000. Water Board staff are recommending funding for all the project components. We believe the most comprehensive set of tasks will result in the most successful project. In this case, a successful project is defined as one that:

1. Achieves ongoing water quality benefits, both in the project area and beyond.
2. Results in permanent incorporation of LID design standards in a local municipality.
3. Demonstrates to other municipalities, the development community, and the public at large, the benefits and feasibility of LID.

A successful Pilot Project will help initiate LID design standards throughout our Region. The cost is minimal compared to the potential long-term, far-reaching benefits.

II. NEED FOR THE PROJECT

This project will demonstrate the benefits of LID design standards, including cost effectiveness, feasibility, reduced pollutant loads, and increased ground water recharge. The Water Board encouraged staff to pursue LID pilot projects in the Central Coast Region for this purpose.

Water Board staff identified the City of Salinas as a municipality that would benefit from timely implementation of this proposed Pilot Project. The City of Salinas is reviewing a combined Sphere of Influence Amendment and Annexation (dated April 19, 2005) to include a phased annexation of a portion of the Future Growth Area located north and east of Boronda Road.

The first annexation phase is a 2,457-acre area with three Specific Plans, which will result in about 11,761 new housing units and 3.9 million square feet of non-residential uses in several mixed-use neighborhoods. After annexation of Phase I, the City assumes future

[1] NPDES Permit NO. CA0049981, Waste Discharge Requirements Order NO. R3-2004-0135 for the City of Salinas Municipal Storm Water Discharges

requests for development and annexation will come from interests in four remaining Sphere of Influence areas surrounding the City. Because no requests have been received at this time, the City cannot determine the exact order of phasing for these remaining areas. However, development of the four remaining areas will result in about 3,488 new dwelling units and 12.2 million square feet of non-residential development.[2]

Urban areas are known pollution sources. Development and urbanization increase pollutant load, volume, and discharge velocity above background levels. The common result of increased impervious surfaces in urban areas is increased volume and velocity of urban runoff. Urban pollutants are quickly carried to natural water bodies, and increased runoff volumes result in increased erosion rates in receiving waters. Pollutants in storm water include, but are not limited to:

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

Excessive flow rates of storm water may cause or contribute to:

- downstream erosion
- excessive sediment discharge
- deposition in stream channels

The quality and quantity of Municipal Separate Storm Sewer System (MS4) discharges may vary considerably because of the effects of hydrology, geology, land use, season, and sequence and duration of precipitation events.

The Salinas Phase I Annexation and development are imminent, but plans are still in draft form and are subject to change. The City of Salinas is required by its Municipal Storm Water Permit to update its Development Standards and ordinances to address post-construction runoff issues described in the above paragraph. Therefore, the City of Salinas is an ideal place to introduce LID concepts, and the timing is excellent.

III. FUNDING REQUEST

Water Board staff recommends that funding for all of the described Pilot Project be directed from the 1998 Unocal Guadalupe Settlement Fund (Fund). According to the July 2003 "Blueprint for Expenditure of the Guadalupe Settlement Fund" Staff Report (Blueprint), a portion of the Fund

> ...is reserved for currently unspecified projects that will be determined as current efforts progress, thus clarifying additional water quality priorities and projects. This Fund blueprint component is also planned for expenditure on options that are currently unavailable, such as land acquisitions, or research on, and/or pilot testing of new treatment technologies, with the stipulation that any new, selected project funded from this portion must be consistent with the water quality priorities and criteria used in determining the other portions of this blueprint.

This Pilot Project meets the Blueprint design for "unspecified projects" by providing a "pilot testing of new treatment technologies." The treatment technologies, specifically LID design standards, proposed in this Pilot Project have been utilized successfully in other locations to remove urban pollutants and minimize detrimental effects of increased urban Stormwater runoff. LID design standards will provide long-term treatment, reduction, and in some cases, elimination of municipal storm water pollutants and water quality degradation typically associated with increased urban runoff volume and velocity.

The Blueprint adopted by the Water Board established seven criteria that must be

[2] Information taken from the "Sphere of Influence Amendment and Annexation, April 19, 2005"

considered for Fund expenditures. The first five of these were incorporated into the Settlement Agreement. The Water Quality criterion is the only required criterion; the others are for purposes of evaluating projects. This 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. The Pilot Project will directly improve water quality in multiple ways. The Salinas development area discharges to Natividad and Gabilan Creeks, which flow to Carr Lake, and on to the downstream Salinas Reclamation Ditch (former Alisal Creek). The Reclamation Ditch collects flow from other portions of the City as well and flows west from the City and eventually discharges to Tembladero Slough. Espinosa and Tembladero Sloughs discharge to the Old Salinas River. Three of these receiving waters are listed on the 303(d) List of Impaired Water Bodies for urban sources of pollutants. Gabilan Creek and Tembladero Slough are listed for fecal coliform, and Salinas Reclamation Canal is listed for fecal coliform and priority organics. The Pilot Project, by implementing LID design standards, will help reduce these priority pollutants. The LID implementation will also minimize other urban pollutants and stream degradation caused by increased urban runoff volume, velocity, and water temperature. The water quality benefits will continue in perpetuity, and will extend to the receiving waters beyond the City boundaries.

2. Geographic Nexus: One of the primary goals of implementing a LID pilot project in the Central Coast Region is to demonstrate to all municipalities in this Region that LID techniques are economically achievable and are a practical method to meet Phase I and Phase II storm water permit requirements. The Santa Maria valley, like the City of Salinas, is one of the fastest developing areas in our Region. If the Pilot Project is located in the City of Salinas, Water Board staff expect that this LID example will become a model for other development in our Region, regardless of location, including the Guadalupe-Santa Maria valley area. If the Pilot Project is located in Salinas, the geographic nexus criteria will be met if municipalities with a geographic nexus to the Guadalupe Oil Field take advantage of the transferable value of having a the Central Coast Region specific model project. In addition, personnel from the southern areas can attend the workshops, regardless of where the workshops are held.

3. Waste Type or Violation: The Pilot Project will help address petroleum products found in urban runoff, and therefore meets this criteria.

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 Pilot Project will directly benefit the restoration and protection of these beneficial uses in the project area watersheds, as well as in downstream receiving waters.

5. Institutional Stability and Capacity: This is a measure of a project proponent's ability to complete the funded project. Water Board staff will evaluate Request for Proposal responses for respondents' ability to successfully perform and complete the contracted tasks. Water Board staff will report progress to the Board on a regular basis during project implementation.

V. RECOMMENDATION

Water Board staff recommend the Board approve the full Pilot Project funding request of $225,000, to be directed from the Unocal Guadalupe Settlement Fund.

TASK ESTIMATE AND TIME FRAME

TASKS	ESTIMATED TIME FRAME	LEVEL OF DETAIL (several scenarios are possible, depending on funding)	COST ESTIMATE (cost range reflects the level of effort)
Pre-workshop meeting with City managers and planners	End of September 2005	Water Board staff will review Permit requirements with City representatives, and will present pros and cons of applying LID techniques as one method to meet Permit requirements.	Water Board staff to conduct meeting. No additional expenses other than staff time (which will not be funded by the grant).
Workshop to introduce Low Impact Development techniques to City managers, staff, and local developers	Late October 2005	Workshop presenters could include: 1. Water Board staff 2. City of Seattle representatives to discuss successful LID project in that city 3. LID-trained engineers to discuss methods of incorporating LID in a Salinas project (conceptual) 4. Public relations manager may be retained to help organize and possibly conduct the workshop. 5. Any or all of the above items combined.	1. If only item 1, then no additional expenses other than staff time (which will not be funded by the grant). 2. Item 2 cost estimate = $5000 3. Item 3 cost estimate total = $ 10,000 4. Item 4 cost estimate total = $10,000 5. All items together cost estimate total = $25,000
Re-design current development planned for Sphere of Influence area near Boronda Road. Re-design could be achieved by: a. Current developer with City oversight b. Hiring LID-trained engineering firm	October – December 2005	1. Conceptual redesign – map view only. 2. Full redesign, including storm water runoff calculations, and storm drain pipe sizing and layout. 3. Original design and LID design comparison of construction and long-term maintenance and repair costs, pollutant loading, and effects of runoff on downstream receiving waters. 4. Any or all combinations of the above	1. Item 1 cost estimate = $7,000 2. Item 2 cost estimate = $38,000 3. Item3 cost estimate total = $30,000 4. Total estimate of all three items combined = $75,000

TASK ESTIMATE AND TIME FRAME continued			
Public relations campaign to be directed by public relations consultants	October 2005 and prior to construction	P.R. consultants may be used for any or all of the following: 1. Conduct and/or collect Salinas-area data on public perception of environment and housing in order to determine successful tactics for presenting LID techniques. 2. Review and comment on pre-workshop and LID workshop content. 3. Provide and introduction to LID presentations at the pre- and LID workshops. 4. Carry out public awareness and education campaign on LID benefits to the public at large prior to and during pilot project construction. 5. Any or all of the above items combined	1. Item 1 cost estimate = $10,000 2. Item 2 cost estimate total = $5,000 3. Item 3 cost estimate total = $10,000 4. Item 4 cost estimate total = $40,000 5. Combination of all items above cost estimate = $65,000
Review and re-write, if necessary, the Salinas Design Standards and Ordinances. To be conducted by LID-trained consultants		1. Review and re-write only 2. Conduct stakeholder meetings prior to re-writing ordinances to obtain additional input.	1. Item 1 cost estimate = $10,000 2. Item 2 cost estimate total = $50,000
Cost Estimate Range for items listed above = $ 27,000 - $225,000			
Pilot Project construction	May 2006 – December 2006 (estimate subject to change)	1. Provide subsidy for incorporating LID techniques identified in the LID redesign	Subsidy amount and criteria may vary and should be determined as a second phase of this Pilot Project. Decisions will be based on the outcome of the initial tasks described above.