Question 5 / ATTACHMENT I:

The 2-page Project Description outlined in the proposal guidelines is presented below. However, as directed by the SWRCB, Detailed Project Descriptions and other information that can not fit within the Attachment size limits can be found at the following WEBLINK:

http://www.city.newport-beach.ca.us/Pubworks/grant/prop_84.htm

The Newport Coast Watershed covers approximately 10 square miles and extends from just South of Corona Del Mar to El Morro Canyon. Most of the watershed lies within the jurisdiction of the City of Newport Beach, adjacent to two Areas of Biological Significance and the Crystal Cove State Park. The ASBS support many of the beneficial uses outlined in the Ocean Plan, of which the most relevant relate to recreational uses of the beach and support of the special habitat within the ASBS. Priority constituents of concern (COC) that interfere with these beneficial uses include indicator bacteria, metals (copper and cadmium), sediment, and pesticides (diazinon and synthetic pyrethroids). Buck Gully, a coastal canyon which discharges into the ocean/ASBS #32 just south of Corona del Mar State Beach, has been designated "water quality-limited" for total and fecal coliforms under the federal Clean Water Act's Section 303(d). It is listed on the 2006 CWA Section 303(d) List of Water Quality Limited Segments. There are 17 high threat discharges to the Irvine Coast ASBS and 6 discharges to the Newport Beach ASBS, mostly consisting of runoff from urban areas, highways, golf courses, and garden centers. Canyon creeks in the developed watersheds flow year-round, carrying urban runoff to the ASBS in surface flow or infiltrated groundwater. Contaminated groundwater is one of the recognized high threat discharges to the Irvine ASBS.

Discharge Source	ASBS	Constituents of Concern	Source	Solution
Urban runoff	Newport Beach (#32), Irvine Coast (#33)	Pesticides, Sediment, Bacteria	Landscaping, irrigation	Runoff reduction program, pesticide management program, public impact reduction
Road runoff	Newport Beach (#32), Irvine Coast (#33)	Metals, Pesticides, Sediment, Bacteria	Aerial deposition, irrigation	LID porous pavement, runoff reduction program, pesticide management program
Buck Gully	Newport Beach (#32)	Sediment, Bacteria (TMDL)	Canyons, irrigation	Erosion controls, riparian wetland, restoration, fire breaks, runoff reduction program

The following Newport CWMP Phase I projects will improve water quality at public beaches and reduce bacterial loadings to the coastal waters. They were selected because concept designs are complete and permitting/final design is underway and will be ready for implementation.

Runoff Reduction: Project to focuses on reducing landscape irrigation runoff and pollutant loading (fertilizers, pesticides, and other landscape-related contaminants) from residential accounts and large landscapes, which drain to the ASBS. Existing irrigation systems will be replaced with adaptive controllers that adjust to evapotranspiration conditions. A rainwater capture and reuse system composed of rain barrels and a rain garden will be piloted at the Fire Station located at the intersection of Pacific Coast Highway and Ridge Park Road. This activity, in combination with education and outreach (Coastkeeper, IRWD) and direct site assistance with landscaping and irrigation performance monitoring, will reduce urban runoff. Outreach efforts will focus on landscape redesign (xeriscaping), improved irrigation coverage, improved maintenance and irrigation scheduling (with new controllers). The project: 1) addresses at least seven urban runoff discharges along Newport ASBS (gully and non-point sources NEW001-NEW0010) and up to 27 discharges to the Irvine Coast ASBS (gully and non-point sources) by reducing residential/irrigation runoff, 2) improves recreation quality of public beaches, 3) conserves water and energy, and 4) raises awareness and promotes environmental stewardship. Results will be shared with the City of San Diego. There are no expected adverse effects.

LID Porous Pavement: Impervious pavement on one half of the existing large parking lot at Crystal Cove State Park LID will be replaced with porous pavement to increase infiltration and reduce erosion. Bioretention cells will be placed in key areas to further enhance infiltration, reduce runoff and erosion and enhance infiltration of metals, bacteria, oil and grease and other pollutants. Native vegetation shall be

planted along outer edges of channel and along banks. See Concept Designs at the weblink: http://www.city.newport-beach.ca.us/Pubworks/grant/prop_84.htm

The project reduces runoff and pollutant loads to the ASBS through infiltration. A small pond restoration project will be conducted as part of this project. Currently, nuisance flows near the Crystal Cove Parking Lot has created ponded, stagnant water with limited mixing and degraded habitat. The area will be restored using a bottom-laid aeration system and re-populated, if possible, with native fishes (e.g., tidewater goby). The project enhances habitat, increases environmental awareness, and improves water quality.

Ecosystem Impact Metric/Restoration: This project is part of the larger ASBS Protection Program outlined in the Central Orange County IRCWM Implementation Plan. The project will be a collaborative effort by the City and CalState Fullerton to: 1) investigate the effects of invasive brown alga Sargassum muticum on intertidal community structure at Little Corona del Mar through removal experiments, 2) provide new (e.g., sub-tidal habitats) and supplemental data for the Ecosystem Impact Metric. The project 1) improves recreational quality of public beaches, 2) improves habitat in the ASBS, 3) supports for the Marine Life Protection Act process within the South Coast Study Region, and 4) provides data and analysis associated with the Ecosystem Impact Metric that can be used statewide for managing coastal resources. An exchange of data and lessons learned will occur as related to the City of San Diego/UCSD-SIO Ecosystem Assessment efforts.

Buck Gully Erosion Control & Riparian Wetland: City will install grade controls, stabilize stream banks in lower Buck Gully to control erosion and reduce sediment loading to the ASBS. This project includes the construction of a freshwater, riparian wetland in lower Buck Gully to restore habitat, remove invasive vegetation and naturally treat flows and groundwater, an identified high threat discharge to the ASBS (NEW020 and NEW021). Project will reduce runoff and bacteria/sediment/nutrient loads, improve recreational quality of public beaches, address the 303(d) listing for indicator bacteria, and restore habitat within Buck Gully.

Public Impact Reduction: This project is part of the larger ASBS Protection Program. Project reduces the impacts to the ASBS by human visitors by excluding them from portions of the intertidal zone and determining the change in community composition in these excluded areas as compared to control areas. Goals will be achieved through educational signage, expanded docent program and alternative education programs (e.g. touch tanks, “show and tell,” web-based teaching). The project protects habitat in the ASBS and raises awareness and promotes environmental stewardship.

Pesticide Management Program: City to implement educational program aimed at residential sector and commercial sector (landscapers, golf courses, garden centers) that apply or sell pesticides. Program developed to promote BMPs, integrated pest management practices, and reduce application of pesticides containing synthetic pyrethroids and cadmium. The project reduces runoff and sediment/nutrient loads, improves recreational quality of public beaches, and raises awareness and promotes environmental stewardship.

S4S/Calswim Model: UC Irvine will integrate three existing models (CalSWIM, Newport Bay estuary model, NewportBay.s4s.com) to create a collaborative Adaptive Management system of similar type to the ecosystem restoration “best approach” adopted by the CalFed Science Program. The resulting adaptive management tool will allow policy makers to directly apply the best available science, assess lessons learned and implement efficient and effective solutions to the watershed issues that impact the Newport Beach ASBS. This project will follow PEAP protocols and results will be coordinated with related ASBS projects (in San Diego). This activity will also link to a focused bacteria study. The study will identify upper watershed sources of bacterial pollution, assess bacteria removal rates, quantify in situ re-growth in subtrophic soils and evaluate potential impacts to the ASBS and human health. Results from this study will allow more efficient strategies to address the future bacteria TMDL in Buck Gully and wider bacteria-related water quality problems.

Project Management: The City will undertake project management duties such as contract administration, invoicing, project coordination and progress reporting as related to the Newport CWMP.