

2002–2004

BIENNIAL REPORT



WATERSHED MANAGEMENT DIVISION

## WATERSHED ENGINEERING, MAPPING, FEMA AND LACDA

VACANT, Section Head

## Section Background

This Section combined various functions in an effort to bring integrated support and services to the general public and to help facilitate the delivery of Public Works' projects. Support and services are provided in four major categories: groundwater recharge planning, development of projects, FEMA and mapping coordination, and environmental document reviews.

One of the objectives of the Groundwater Planning/Special Projects Unit is to explore opportunities to enhance water conservation efforts throughout Los Angeles County without compromising Public Works flood control functions. The Unit works with the watershed sections when a project has a potential water conservation benefit. The Unit works on projects to develop tools for the watershed sections to assist them in assessing and evaluating groundwater opportunities. The Unit also supports the Water Quality Section with special reports and projects related to TMDL requirements.

The Drainage Unit tracked and maintained historical files for over 2,500 unmet drainage needs and 1,500 flooding complaints. Based on the degree of urgency, determined by the cities and the LACFCD, a significant number of established drainage needs had been alleviated by construction projects. In August 2003, the flooding complaints and

non-storm engineering advice functions were transferred to Water Resources Division. The unmet drainage needs function was transferred to the watershed sections.

The FEMA and Mapping Coordination Unit ensures the County of Los Angeles is in compliance with FEMA regulations which allow for reduced flood insurance premiums to residents of the County of Los Angeles. This Unit also assists the public, banking and lending institutions, realtors, and other divisions with floodplain-related questions or issues.

The Environmental Document Review Unit is responsible for coordinating review of environmental documents within Public Works. This Unit screens and then distributes documents to appropriate divisions for review and comments. Comments received are compiled into a response to be sent to the submitting agency. This function was transferred to Land Development Division July 1, 2004.

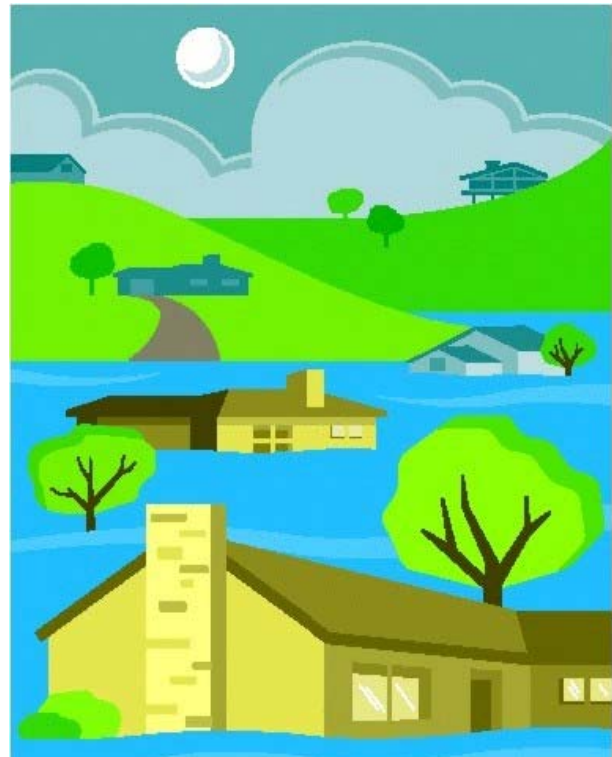


## Mission

*To provide engineering based support and high quality service that ensure proactive groundwater recharge planning, compliance with FEMA regulations, and coordination of the environmental document review.*

## Accomplishments

- Reviewed 15 consultants' applications for Letters of Map Revision (LOMRs) and Conditional Letters of Map Revision (CLOMRs) prior to submittal to FEMA. Approved LOMRs generally result in the waiver of flood insurance requirements for homeowners.
- Obtained a letter of grant obligation from FEMA, in the amount of \$1.8 million, for the elevation of the 17 repetitive loss property homes in Malibou Lake.
- Completed the creation of the Flood Zone website and developed a database to track Flood Zone calls.
- As part of the County of Los Angeles requirements to comply with the National Flood Insurance Program regulation, the Section prepared and submitted the County of Los Angeles' Annual Community Rating Systems Recertification report to FEMA for 2002, 2003, and 2004.
- As part of Public Works' annual obligation to the Department Operation Center (DOC), the section provides staff to the DOC to handle all flood-related incoming calls from the public.
- Public Works hired a private environmental law firm specializing in NEPA/CEQA regulations to train Public Works employees in 2002. As a result, the Environmental Document Review Unit gained a better understanding of its duties.
- Public Works hired a private consultant to facilitate streamlining of the Environmental Document Review Unit. All the divisions involved in the reviews, and the County of Los Angeles Department of Regional Planning, came together, explained their review process, and discussed their concerns at the end of these meetings. The Unit was able to:
  - a) Gain a better understanding of other divisions' requirements which helped the Unit develop a more effective document screening process.
  - b) Provide a better work plan to Information Technology Division for the streamlining and computerizing of the Unit's processing.
- Coordinated the implementation of the 8-Point Plan with affected divisions. The purpose of the 8-Point Plan is to study the effectiveness of eight selected trash reduction BMPs.
- Prepared a recommendation report based on the findings of the 8-Point Plan.
- Coordinated with the Corps and with the County of Los Angeles Department of Beaches and Harbors on the Los Angeles County Shoreline Beach Erosion Study.
- Completed all basic requirements obligated under the Proposition 13 grant for the San Gabriel River Rubber Dams No. 2 and 3 project.
- Assisted the Water Quality Section in the preparation of a BMP Technical Report requested by the LARWQCB.
- Co-chaired the working group formed to develop a workplan in support of Management Appraisal and Performance Plan (MAPP) Goal # 4 for the creation of a Water Quality Data Reduction and Analysis Unit.
- Completed Phase I of the groundwater recharge study.
- Transferred to electronic format (scanned) all environmental documents from 1996 to the present.

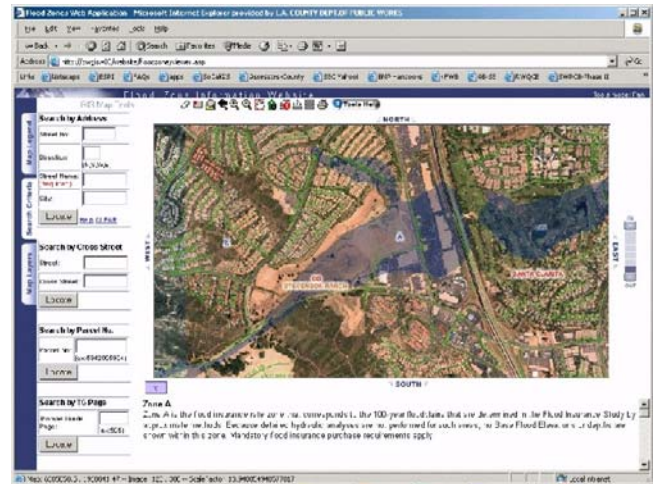


# Projects in the Watershed Engineering, Mapping & FEMA Support

## Flood Zones Website

Created with the assistance of Information Technology Division, the flood zone website will assist the public in retrieving flood zone information for their properties.

Currently, the website is fully operational for internal use only, pending resolution of certain legal issues.



## San Gabriel River Rubber Dams Construction

During storms, water flows rapidly down the San Gabriel River. While this protects local communities from flooding, large amounts of fresh water that could be added to the local groundwater supply is lost.

By capturing this valuable resource and recharging it into the groundwater supply, it can reduce the dependency on imported water from northern California and create a healthier environment for both regions.

Rubber dams are long, hollow tubes filled with air that can be inflated to capture water or deflated to allow storm flows to pass.

This project is to construct two additional rubber dams



in the San Gabriel River to hold back water long enough to percolate and recharge the groundwater supply. The expected annual yield of water conserved by this project is 3,600 acre-feet.

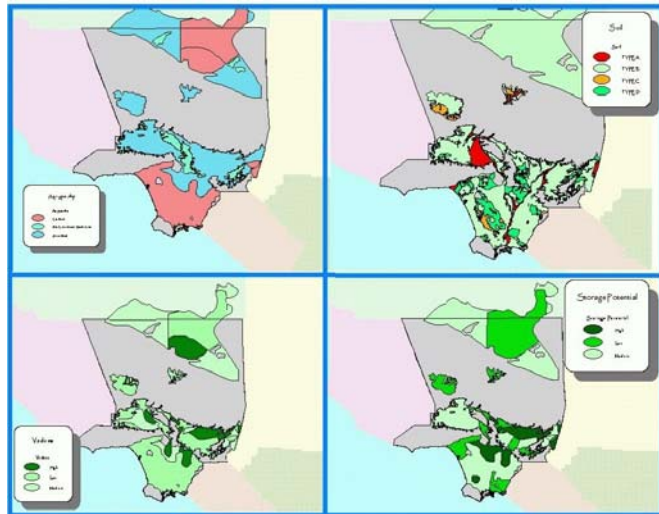
The estimated total construction cost is approximately \$6.6 million. Of the \$6.6 million, \$2.15 million will be funded by a Proposition 13 grant from the California Department of Water Resources.

The Los Angeles County Board of Supervisors awarded a construction contract for the project on June 29, 2004. The construction is scheduled to begin on September 16, 2004, and is anticipated to be completed by April 15, 2005.



## Los Angeles Basin Groundwater Recharge Study and GIS Tool

The purpose of this study is to identify favorable groundwater recharge sites throughout Los Angeles County and to develop a planning device to facilitate groundwater recharge planning efforts. About a third of Los Angeles County's local water supplies come from local groundwater sources. Identifying additional sites, for recharge, will help Public Works plan additional facilities to capture more local runoff and reduce the dependency on imported water sources.



In addition to a hard copy of the study findings, the consultant will provide a GIS Smart Tool. The GIS-based tool will consist of an interface that will query and draw information from a spatial database that identifies the fundamental suitability of a property for groundwater recharge, based on evaluation parameters including aquifer type, surface soil type, infiltration capacity, vadose zone quality, and storage potential.

The Beta version of the GIS tool has been completed and staff is conducting tests to determine its functionality, ease-of-use, and versatility.

## Environmental Document Review

The Environmental Document Review Unit acted as a clearing house for Public Works and received California Environmental Quality Act documents or Joint Documents of National Environmental Policy Act documents from various outside agencies for review. The Unit received and processed approximately 350 documents per year.



## Hazard Mitigation Grant Program Malibou Lake

During major storms, rising water floods most homes near Malibou Lake. This usually results in multiple disaster relief claims filed with FEMA. Homes that have filed two or more claims, in the last 10 years, are classified as “repetitive loss property homes.” This classification requires the communities where these homes are located to conduct a floodplain management plan study to mitigate the flooding problem. Failure to develop and implement a solution will result in the loss of rights to file future claims.



Public Works obtained a grant from FEMA in the amount of \$1.8 million (\$1.4 million Federal-share and the \$0.4 million homeowners' share) for the elevation of seventeen homes in the Malibou Lake community of Agoura Hills. Per the instruction of the new State Office of Emergency Services program manager, the Malibou Lake homeowner requested for an additional \$1.8 million to augment the currently approved grant of \$1.8 million.

## Lessons Learned

The Section has benefited from its experiences and learned the following lessons:

- As a supporting Section, lessons are drawn from projects that always affect one or more watersheds. The Section has come to realize that it is essential to work closely with affected watershed managers on all projects. Conversely, the Section should be aware of projects originating in other sections in order to maximize efficiency and avoid duplication of efforts.
- The public is gradually increasing its awareness and understanding of the available options for dealing with flood hazards as well as the need to promote prudent use and management of the Nation's floodplains. Proper planning and employment of constructive land use techniques will create a balance on issues of human habitation on floodplains.
- The current method of processing environmental documents is cumbersome and manually intensive. Based on examination of the current process, the Section has developed five recommendations for streamlining the coordination efforts for environmental document review.

## Future

### Groundwater Planning/Special Studies

In addition to the existing responsibilities, the future role of the Groundwater Planning/Special Studies Unit will include the development of new program concepts to provide a set of guidelines and standards for protection of groundwater supplies, water conservation and water quality, and water recycling and reuse. In addition to traditional means of groundwater recharge, the Unit will continue to explore nontraditional means of groundwater recharge and look to enhance quality of life issues by focusing on multiuse projects.

The Groundwater Planning/Special Studies Unit will also provide technical support to the different Sections in the Division. This includes Geographical Information Systems (GIS) support in the form of development



of end-user applications, data creation, and analysis of spatial data. In addition, the Unit will provide data management support for the creation and maintenance of tabular databases that will either be performed independently or in conjunction with GIS applications or spatial data sets.



### FEMA and Mapping Coordination

FEMA's current map modernization program will produce updated nationwide digital flood insurance rate maps for convenient public access. These digitized maps are expected to be more accurate in flood zone delineations than the existing flood insurance rate maps. This effort will enhance, in a large measure, our overall ability to manage floodplain related issues and problems.