

Marin County Flood Control and Water Conservation District

**FLOOD CONTROL ZONE 3 ADVISORY BOARD MEETING
APRIL 10, 2014**

STAFF REPORT

Item 1 - Approval of Meeting Minutes: May 9, 2013

Recommended Action: Approve minutes.

Item 2 - Open Time for Items Not on the Agenda

Comments will be heard for items not on the agenda (limited to three minutes per speaker).

Item 3 - Annual & Preventative Maintenance Plan

Staff will present this year's plan, including:

a) **Pump Stations**

Individual pumps and motors are scheduled for major maintenance on a six year interval at each of the zone's five stations. Due for maintenance this upcoming year (i.e., FY 2014 – 2015) are pump #4 at Crest Marin Pump Station, and pump #1 and #4 at Shoreline Pump Station. An invitation for bids to perform the maintenance was released in March 2014 and staff will prepare a recommendation to the Board of Supervisors to award a contract to the lowest qualified bidder following the receipt of bids on April 14, 2014. The amount budgeted for Zone 3 for completing this work is \$80,000.

Pumps No. 2 and 3 at Crest Marin Pump Station underwent major maintenance this year (i.e., FY 2013 – 2014). Other work performed included: 1) installation of a new tide gate and stairs to access the wet well, both at Cardinal Pump Station, and 2) upgrades to the Crest Marin Pump Station, including reattachment of rain gutters and replacement of engine exhaust covers. Preventative maintenance at all pump stations also takes place every year, including the inspection, testing, and as needed replacement of electrical and mechanical components.

In response to requests to assess opportunities to improve tidal circulation into Terwilliger Marsh received at the Advisory Board's last meeting, District staff has reconsidered the operation of the Ryan Creek Tide Gate. Instead of automatically closing the gate in mid-October and reopening the gate in mid-April, staff now monitors weather forecasts and also plans to open the gate during extended periods of dry weather during the winter to allow tidewater to enter the marsh. The District has been coordinating its operations with the City of Mill Valley.

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b) Vegetation

Maintenance will occur within all flood control easements and will include fire suppression mowing and creek vegetation removal. In addition, staff proposes the District enter into its maintenance agreement with the City of Mill Valley, which reimburses the City annually for up to \$35,000 in creek maintenance work performed within city limits. The District is presently in discussions with the City to alter the agreement from a one year term to a five year term.

c) Sediment Removal

In 2013 sediment was removed from the Laurel Way Silt Basin, Enterprise Concourse, and Crest Marin Creek in the vicinity of the Ross Dr. footbridge. The District is presently in the process of securing permits from the Regional Water Quality Control Board and U.S. Army Corps of Engineers which would allow continued maintenance at these (and other) sites. It is not known, however, if permits can be secured in time to remove the sediment prior to November, as would be required under the permits. If permits cannot be secured by this time, then work would be deferred until the time permits are secured, possibly in the summer or fall of 2015.

d) Levee Rodent (Gopher) Control

Rodent control efforts have been underway for the last four years, are ongoing, and are conducted in accordance with the County's Integrated Pest Management policy. Traps will be set this spring and again this fall and, following successful rodent removal, holes will be filled with bentonite grout to restore the levee fill material. Residents who notice rodent activity can contact the District to request information on how to fight burrowing rodents in their yards and/or report problems in nearby levees to have traps set near the levees.

Item 4 - Project Status Report

a) Coyote Creek Sediment Removal

Sediment was last removed from Coyote Creek's middle reach (i.e., downstream of the concrete channel to the Shoreline Highway bridge) in 2003 and, in response to your board's recommendation, the District has proceeded with a project to remove sediment from the creek. Last year Noble Consulting Engineers was selected to provide professional engineering services to assess sediment removal needs and begin preparations necessary for proceeding with a sediment removal project. Services provided under the \$282,276 professional services contract include surveying, hydraulic analysis, environmental review and regulatory permitting, sediment sampling, design, and bid assistance.

To date, surveying and hydraulic analysis are complete and environmental review and regulatory permitting are partially complete. Surveying and hydraulic analysis demonstrate that, despite some sediment accumulation, the creek successfully passes its (20 year) design flow. (The creek passing the 20 year flow means that the flow which has a 1-in-20 chance of occurring in any given year remains below the top of bank.) Staff is working with the consultant to identify the timing of the next sediment removal project and secure the required permits to proceed with the project's construction phase. At this time staff is preparing to remove sediment from the concrete channel in 2015.

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b) Coyote Creek Maintenance and USACE Rehabilitation & Inspection Program Compliance

In 2011 the U.S. Army Corps of Engineers (Corps) notified staff that, based on their assessment of the Coyote Creek Flood Control Project, that the project's right (i.e., south) bank did not meet all of the criteria necessary to achieve a *minimally acceptable* rating in the Corp's Rehabilitation and Inspection program (RIP). The Corps' assessment also indicated that the project's left (i.e., north) bank did meet all of the criteria necessary to achieve a *minimally acceptable* rating. Since that time staff has been working with the Corps to ensure that the right bank attains no less than a *minimally acceptable* rating. A *minimally acceptable* rating or higher in the RIP is required for the District to be reimbursed for the cost of repairs to the project following a federally declared emergency.

To date staff has resurveyed the project, provided a draft update of the project's Operation & Maintenance Manual to the Corps, and maintained vegetation which was identified as a concern. Additionally, in 2013 the District submitted a letter of intent (LOI) to create a System-wide Improvement Framework (SWIF) plan and is presently awaiting the Corps' approval of the LOI. If the LOI is approved, the District would have up to two years to create the SWIF plan, which would include a description of the tasks and schedule for addressing items currently not meeting the criteria necessary to receive a minimally acceptable rating.

If the SWIF is approved, Coyote Creek would remain eligible for reimbursement for the cost of repairs to the project following a federally declared emergency while the SWIF is being created and improvements are carried out. Work performed under the SWIF would include a detailed video based inspection of all pipes draining to the project, completion of updates to the project's Operation & Maintenance Manual, creation of an emergency action plan, and a resolution to encroachments on the levee and floodwall. The schedule for completing this work would be included in the SWIF, but the majority of items are expected to be completed within a 1 to 2 year timeframe following creation of the SWIF.

c) Coyote Creek Levee Evaluation

At its last meeting your Board recommended that Zone 3 undertake the Coyote Creek Levee Evaluation. The project includes an evaluation of the current condition and level of flood protection provided by Coyote Creek's flood walls and earthen levees from Maple St. to the Mill Valley-Sausalito Path, as well as an assessment of improvement alternatives. Project tasks include surveying, hydrology and hydraulic modeling, geotechnical exploration and failure analysis, and alternative assessment. Considered alternatives will consist of those which satisfy Federal Emergency Management Agency requirements for accreditation and comply with U.S Army Corps of Engineers' specifications for operation and maintenance.

On April 1, 2014 the Board of Supervisors awarded a professional services contract with GEI Consultants, Inc. of Rancho Cordova to assist the District with completing a substantial portion of the evaluation including hydraulics, geotechnical engineering, and alternatives. Work is scheduled to conclude in fall 2015. The below table provides a breakdown of the total project cost:

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Project Cost Breakdown

Task	Zone 3	Grant	Total
GEI Contract	\$ 265,758	\$ 269,815	\$ 535,573
Staff Labor	\$ 78,041	\$ 82,188	\$ 160,229
Contract (Other)	\$ 73,610	\$ 27,878	\$ 101,488
Sum	\$ 417,409	\$ 379,881	\$ 797,290

d) Creek Restoration at Boyle Park

The restoration project is complete! The site was re-graded and rocks were brought in to create a natural cascading channel for storm flows to Warner Creek. The site has been replanted with native trees, shrubs, and grasses by local students. A perimeter split rail fence protects the new plants and an existing access path through the site was maintained.

The project was funded entirely through a \$370,000 grant from the U.S. Environmental Protection Agency. Grant funds will be used to pay for crews from Point Blue to maintain the vegetation until it becomes established. A celebration of the Boyle Park restoration project will be held later this year. The celebration will share the success of the project and outreach to the community on the water quality and habitat benefits. There will be stewardship opportunities (e.g., stormdrain stenciling and site maintenance) as well as short tours of the completed project

Item 5 - Southern Marin Watershed Program

Background

The Southern Marin Watershed Program is a joint effort of the County and partner agencies. Primary goals of the program include:

- Develop cost effective solutions to help reduce flooding
- Protect, enhance, and restore sensitive creek and wetland habitat and water quality
- Identify multi-benefit projects that will improve the ability to compete for state and federal funding
- Identify the impacts of sea level rise and develop project concepts that could be adapted to rising tides
- Evaluate the beneficial re-use of dredged sediment from Coyote Creek and other sediment removal projects for wetland restoration, levee maintenance, and shoreline protection
- Improve efficiency of existing flood maintenance operations

Visit the Southern Marin Watershed Program webpage at http://marinwatersheds.org/southern_marin.html to learn more about the program and to view and download documents. All deliverables and supporting documents will be posted to the website. A schedule for upcoming work is included as an enclosure to this staff report.

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Ongoing Efforts

Southern Marin Watershed Plan

A Request for Proposals (RFP) has been drafted for preparation of a Southern Marin Watershed Plan. The RFP will be released this spring and a consultant team will be hired to edit and prepare content, design graphics, and layout the plan. The Plan is expected to be complete in 2015. It will incorporate information developed through several watershed studies including:

- Existing conditions report (posted as content for the website)
- Review of existing flood studies, past and present (by subwatershed)
- Compiled project lists from each watershed (by subwatershed)
- Updated hydrology and hydraulics data
- Flood control infrastructure data and maintenance practices
- Habitat assessments and fish passage barrier data
- Richardson Bay Shoreline study (climate change and rising sea levels)

Based on the above documents, the Southern Marin Watershed Plan will:

- Describe watershed history and existing conditions
- Describe watershed structure and functions
- Describe watershed habitats and sensitive species
- Describe types of flooding (street, riverine, tidal), FEMA-designated flood areas and flood history
- Discuss climate change, sea level rise (SLR), and future conditions
- Explain predicted SLR scenarios and describe adaptation strategies
- Describe the history and current maintenance and capital activities in Flood Control Zones
- Provide an overview of the six sub-watersheds in Richardson Bay
- Link past and current studies, projects, and priorities within each sub-watershed and incorporate stakeholder recommendations for future project implementation
- Describe a financial strategy for leveraging local funds to attract state and federal grant funds.
- Describe a process and schedule for Watershed Plan updates

The goal of the Watershed Plan is to communicate the risks and beauty of the landscape both natural and man-made. Flood protection is the underlying theme, but the plan will describe the interconnectedness between flooding, habitat, natural disasters, and future rising tides so that the community understands the basis for possible flood protection options.

The Watershed Plan will be used as starting point for decision-making and project implementation. Construction projects will require additional revenue, which could be raised through passage of a fee or tax measure. The Plan will be used as a tool for outreach and consensus building in the community. The Southern Marin Watershed Program staff will take the lead with community outreach for the review of the plan with partners and stakeholders.

Richardson Bay Shoreline Study

The Richardson Bay Shoreline Study will assess vulnerabilities within the Inner Richardson Bay shoreline (including Zones 3 and 4) to various scenarios of sea level rise based on inundation modeling. The study will describe flooding issues and possible impacts to infrastructure and built areas related to direct sea level rise inundation. In October 2014, preliminary maps of sea level rise inundation for two scenarios (+16 and +55 inches of sea level rise) along with a series of preliminary shoreline direct coastal inundation defense alignments were presented to the Technical Working Group. As part of the study, Point Blue Conservation Science has been

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retained to support the County's effort by developing improved sea level rise maps for the Richardson Bay shoreline. Point Blue will update figures of inundation for the shoreline and will work with County staff to map wave attenuation and inundation at a variety of sea level rise scenarios along the Richardson Bay shoreline. The Shoreline Study will present the range of potential shoreline adaptation alternatives along with pros/cons for each approach for climate change scenarios. The anticipated completion date for the Richardson Bay Shoreline Study is fall 2014.

A pilot Shoreline Resilience Demonstration Project has been identified for studying the effectiveness of natural bay shoreline analogue approaches to protect eroded areas of the Richardson Bay shoreline from current and anticipated increases in wind and wave shoreline erosion associated with sea level rise. Various design concepts and locations are being considered as part of a grant submittal for a Proposition 84 Bay Area Integrated Regional Water Management project. Grant funding would help the County proceed with a demonstration project for studying the effectiveness of the various adaptation measure designs. Knowledge gained through the demonstration project would aid in the design of flood control infrastructure which aims to protect the shoreline from anticipated sea level rise. County staff anticipates learning about the funding status of the grant submittal by the end of 2015, which would be after the completion of the Southern Marin Watershed Program.

Upcoming

The City of Mill Valley is working to schedule a community workshop for the Arroyo Corte Madera del Presidio Flood Study this spring.

The PAC will meet on April 30 to review the status of the watershed studies.

The Technical Working Group (TWG) will meet this spring to discuss the Watershed Plan and will receive updates on the sea level rise shoreline study and other ongoing studies. The last TWG meeting was held on October 29, 2013. The agenda included an update on the Arroyo Corte Madera del Presidio Flood Study, progress on the hydrology and hydraulics, existing flooding conditions mapping, and the Richardson Bay Shoreline Study. Input was requested from the TWG on the methods and information collected to date.

A community meeting had been planned for Fall 2013 to coincide with the City of Mill Valley's Arroyo Corte Madera del Presidio Flood Study. Given the delay in scheduling, a Watershed Program meeting will be scheduled this fall to discuss progress on the Watershed Plan and Richardson Bay Shoreline Study.

Item 6 - Zone Budget for FY 2014-2015

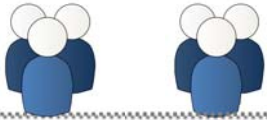
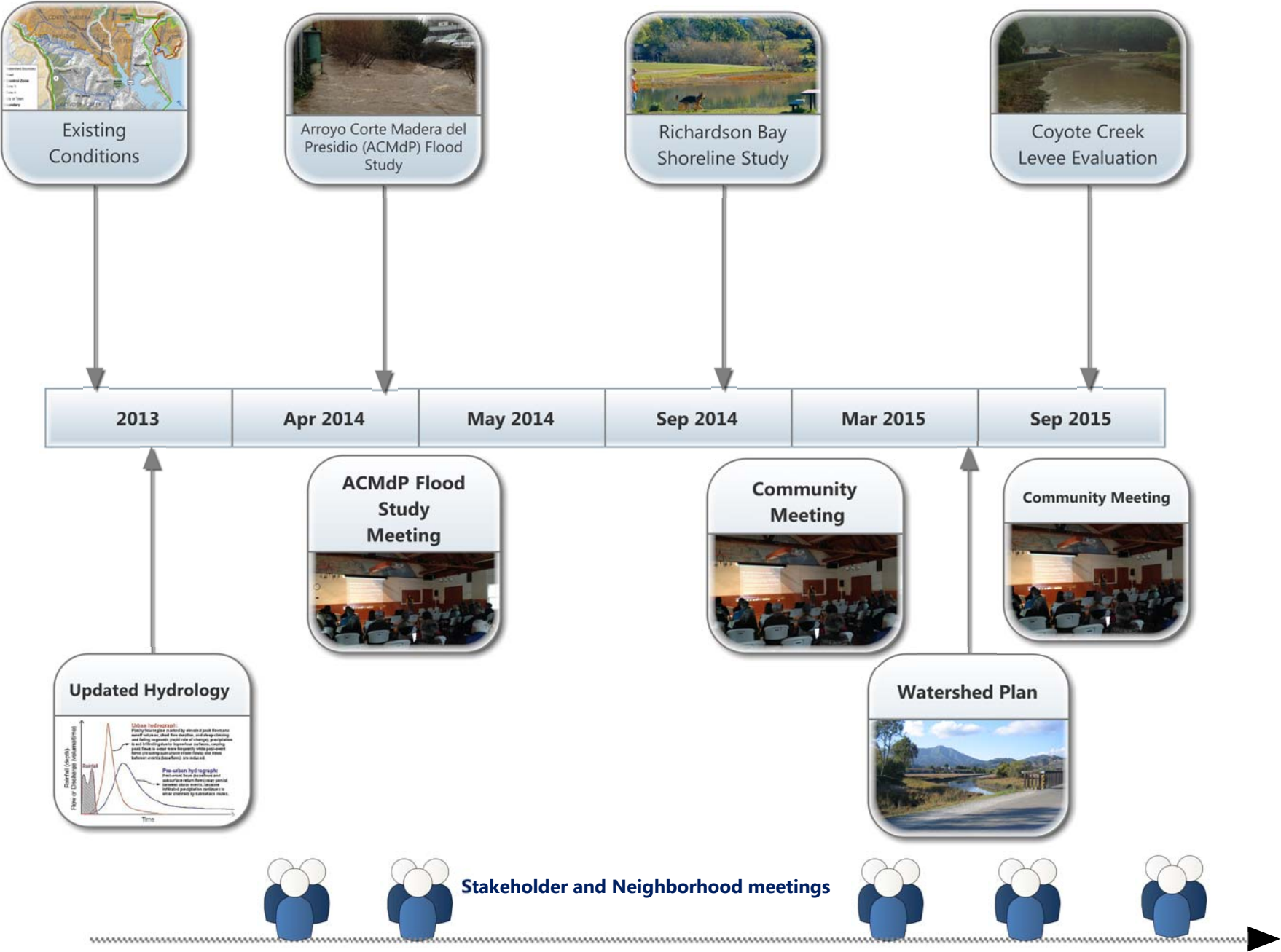
The Zone 3 budget for FY 2014-2015 (begins July 1, 2014 and ends June 30, 2015) is enclosed and will be presented to the Board of Supervisors for adoption at an upcoming meeting.

Recommended Action: recommend that the Board of Supervisors approve the budget.

Item 7 - Next Meeting

Schedule the next meeting of the Zone No. 3 Advisory Board. The bylaws specify that the next meeting be held on the second Wednesday in August (i.e., on August 13, 2014).

Southern Marin Watershed Program



Stakeholder and Neighborhood meetings



**FY 2014 - 2015 Budget Report
FCZ #3 Mill Valley
Fund 23720**

Budget Summary				
Account Description		FY 2013-14 Budget	FY 2013-14 Projected	FY 2014-15 Budget
Fund Beginning Balance		\$6,182,600	\$5,955,880	\$5,894,493
Expenses				
	Salaries and Benefits	\$790,000	\$921,283	\$848,844
	Service and Supplies	\$1,655,980	\$640,158	\$1,314,428
	Capital Assets	\$0	\$0	\$0
	Total Expenditures	\$2,445,980	\$1,561,441	\$2,163,272
Revenue				
	Taxes	\$1,354,075	\$1,475,120	\$1,467,168
	Revenues From Use of Money and Property	\$16,000	\$15,034	\$14,984
	Intergovernmental Revenues	\$4,000	\$9,000	\$9,000
	Miscellaneous Revenues (inc. traffic)	\$900	\$900	\$900
	Total Revenue	\$1,374,975	\$1,500,054	\$1,492,052
	Fund Ending Balance	\$5,111,595	\$5,894,493	\$5,223,273

Major "Services & Supplies" Expenditures				
Professional Services				
	Coyote Creek Levee Evaluation (Grant Funded)	\$350,000	\$0	\$0
	Coyote Creek Middle Reach Dredging (Additional Studies)	\$25,000	\$0	\$25,000
	Coyote Creek USACE Compliance	\$25,000	\$35,000	\$0
	On-call Contracts	\$0	\$83,057	\$0
	Website	\$0	\$2,000	\$0
	Study Contingency	\$50,000	\$50,000	\$50,000
	Balance of previously encumbered contracts	\$0	\$160,769	\$0
	Total	\$450,000	\$330,826	\$75,000
Construction				
	Coyote Creek Middle Reach Dredging	\$900,000	\$0	\$900,000
	Total	\$900,000	\$0	\$900,000
Maintenance & Repair Services - Equipment				
	Major Pump Maintenance	\$60,000	\$60,000	\$80,000
	Miscellaneous	\$34,300	\$34,000	\$29,900
	Total	\$94,300	\$94,000	\$109,900
Maintenance & Repair Services - Land & Buildings				
	Rodent Abatement	\$ 15,000	\$ 15,000	\$15,000
	Conservation Corps North Bay	\$ 80,900	\$ 80,900	\$80,900
	Mill Valley Creek Maintenance MOU	\$ 35,000	\$ 35,000	\$35,000
	Miscellaneous	\$ 31,100	\$ 31,100	\$31,100
	Total	\$162,000	\$162,000	\$162,000
	Miscellaneous Services & Supplies	\$49,680	\$53,332	\$67,528

**FY 2014 - 2015 Budget Report
Expenses Detail
FCZ #3 Mill Valley
Fund 23720**

Account Description	FY 2013-14 Budget	FY 2013-14 Projected	FY 2014-15 Budget
Professional Services	450,000	330,826	75,000
Utilities	15,000	15,000	15,000
Maintenance & Repair Services - Equipmen	94,300	94,300	110,500
Maintenance & Repair Services - Land & B	162,000	162,000	162,000
Rent & Operating Leases	2,000	2,000	15,000
Professional Development Expense	7,400	7,400	8,880
Travel	2,080	2,080	2,496
Miscellaneous Services (Trade)	2,000	2,000	2,000
Countywide Dues & Memberships	3,200	3,200	3,200
Office Supplies	2,000	3,000	2,000
Maintainence & Repair Supplies - Equipm	8,000	8,000	8,000
Maintainence & Repair Supplies - Land &	5,000	7,352	7,352
Construction	900,000	0	900,000
Oil & Gas	1,000	1,000	1,000
Miscellaneous Supplies	2,000	2,000	2,000
<i>Service and Supplies</i>	1,655,980	640,158	1,314,428
Flood Control, Engineering, Real Estate	698,700	738,700	680,000
Building Maintenance	53,739	53,739	40,000
Roads	45,000	45,000	45,000
Special Cost Allocation	83,844	83,844	83,844
<i>Salaries and Benefits</i>	881,283	921,283	848,844
<i>Total Expenditures</i>	2,537,263	1,561,441	2,163,272