REPORT TO COUNCIL
City of Sacramento

915 I Street, Sacramento, CA 95814-2671
www. CityofSacramento.org

Staff Report
January 24, 2006

Honorable Mayor and
Members of the City Council

Subject: Drainage Infrastructure, Master Planning and Rehabilitation Report, Department of Utilities

Location/Council District:

City Wide

Recommendation:

This is a report back on the current status of the Department of Utilities drainage infrastructure, master planning and rehabilitation efforts as requested by the City Council. No action is required.

Contact: Dave Brent, Engineering Services Manager, 808-1420; Andy Hunt, Supervising Engineer, 808-1408

Presenters: Gary Reents, Director of Utilities; Dave Brent, Engineering Services Manager; Andy Hunt, Supervising Engineer

Department: Utilities

Division: Engineering Services

Organization No: 3332

Summary:

The Department of Utilities first presented the "Utility Infrastructure Report" to the City Council in November 1995. The original report was updated and presented as the "Utility Infrastructure Report, Master Planning and Rehabilitation" to the City Council in April 2000. The information in this report provides an update of the progress made in master planning and constructing drainage improvements since 1995 as requested by City Council on September 27, 2005.

Committee/Commission Action:

None.

Background Information:

The Department of Utilities' drainage and flood control objectives are two-fold: to prevent interior flooding, for which we are directly responsible; and to assist other agencies such as SAFCA, the State Department of Water Resources, Reclamation District 1000, American River Flood Control District, and the US Army Corps of Engineers, in preventing catastrophic flooding.

Interior flooding results when runoff within a given area exceeds the capacity of pipes, pump stations and storage facilities resulting in street flooding and/or structure flooding. In Sacramento this type of flooding is usually shallow, about a foot or two deep, and it rarely exceeds 3 or 4 feet because the source of water is limited to surface run-off over a small area. Interior flooding, although shallow and limited in area, may occur very rapidly as a result of a very high intensity storm passing through an area and its effect may result in property damage of some individual structures; delay of emergency response vehicles; or traffic accidents.

Catastrophic flooding occurs when a major water source such as the Sacramento or American River exceeds its capacity or suffers a levee failure. The resulting flooding may be deep and swift, creating a more treacherous scenario. Depths of catastrophic flooding from a breech in the levee are predicted to approach 20 feet or more in some parts of Sacramento.

This update report focuses on the Department of Utilities' efforts to rehabilitate and improve the City's drainage system to meet the City Council's adopted levels of service goals for drainage and minimize the occurrences and likelihood of interior flooding. This report was requested by City Council during the City Council meeting on post-Hurricane Katrina actions on September 27, 2005.

The Department of Utilities originally produced the "Utility Infrastructure Report" (Infrastructure Report) in March 1993. The report was modified in November 1995 and the drainage portion is included herein as Attachment 1. The purpose of the Infrastructure Report was to establish goals and set priorities for improvement of the City's sewer, water, and drainage infrastructure. Based on the Infrastructure Report, the City Council adopted Resolution 95-718 on December 12, 1995 establishing the following goals for service:

- For storm drainage, to prevent street flooding higher than the top of the curb during 10-year return storms (storms having a 1in 10 chance of occurring in any given year) and to prevent flooding of structures during 100-year return storms (storms having a 1-in-100 chance of occurring in any given year) at complete buildout in each drainage basin.

- For sanitary sewers, to prevent sewer overflows by providing sufficient conveyance and pumping for peak sanitary flows and infiltration from a 10-year return storm at complete buildout in each sanitary basin.

- For water, to maintain at the maximum day, peak hour, a minimum residual pressure of 30 pounds per square inch (psi) at all water connections; at the average day with a fire flow, a minimum residual of 20 psi in the area where the fire flow is occurring; and to provide a minimum volume of storage equal to 20 percent of the maximum day average demand.

- For drainage, sewer, and water, to provide for backup power where appropriate.

The Infrastructure Report included a rating system for each drainage basin and priorities were established by comparing historical drainage problems (basin rating), pump station reliability (pump station rating) and development activities (development rating) within each basin. Basins were prioritized into A, B and C categories (category A being the highest - see attachment 1) and color coded maps were produced showing the prioritized basins. A map indicating the priority A, B, and C and the completion status of each basin is included as attachment 2.

The master plans have identified capital improvement projects many of which have been incorporated into the Department of Utilities' Capital Improvement Programs over the past 10 years. A comprehensive list showing all the resultant improvement projects over the past 10 years is included as Attachment 3.

In April 1999, Utilities also completed an "Infrastructure Rehabilitation Study." The Rehabilitation Study estimates the long-term average annual replacement/rehabilitation costs for all existing drainage infrastructure. This report takes into consideration areas where infrastructure has exceeded its estimated life, will exceed its life in the next 20 years, or has more than 20 years of remaining life. Drainage pipes are less vulnerable to age based, structural failure than water pipes or sewer pipes because water pipes are often made of steel, which is subject to corrosion, and sewer pipes are subject to corrosion due to hydrogen sulfide gases. Drainage pump stations and their electrical and mechanical components are subject to deterioration over time. Generally, factors which govern the need for improvements and rehabilitation in drainage are more related to inadequate capacity than to age or structural integrity.

Drainage Infrastructure

Drainage Master Planning

To bring all drainage areas of the City up to the level of service adopted by the City Council, we have modeled the most critical drainage basins within the City. Since the Infrastructure Report was completed in 1995, 43 drainage basin master plans have been completed. Of a total of 128 drainage basins in the City, fourteen (14) were considered to be very critical or "A" basins. Twenty-five (25) were considered critical or "B" basins and the remaining eighty-four (84) basins were considered less critical.

Priority A Basins:

To date, thirteen of 14 "A" priority basins have been master planned. The basin originally designated G202 (North Natomas) and Basin G272 (a large Teichert aggregate quarry) were ranked as "A" priority basins 10 years ago due to their development potential. North Natomas has since been subdivided into 14 separate basins, of which all but one has been master planned in accordance with the established standards and for which the core drainage infrastructure has been constructed. Basin G272, has not been developed.

Priority C Basins:

To date, eight of 25 "B" priority basins have been master planned.

Priority C Basins:

Of the less critical "C" priority basins, 12 have been master planned out of 89, most of which were completed prior to the establishment of the present ranking system.

Attachment 2 is a map showing all the "A," "B," and "C" basins and which basins have been master planned to date.

Drainage Projects

As a result of our experience in completing a number of master plans, Utilities has emphasized the use of detention as a primary solution to flooding to minimize pipe up-sizing and to reduce costs. Constructing detention basins has been a high priority because of their superior economic and hydraulic value.

Of 64 detention basins identified by our master plans 26 have now been completed, including 13 built by developers in North Natomas. Another two are now under construction and a third is in the planning stages. A $2.5 million capital improvement project (CIP) was approved by City Council several years ago to acquire property in advance for seven detention basins to help avoid high property costs. All but two properties were purchased, one is being negotiated, and basins are either constructed or under construction on five of the properties.

In compliance with the City's NPDES Stormwater Permit, City detention basins are required to include components to meet water quality requirements to the maximum extent practicable. Our focus on detention helps improve water quality over traditional drainage systems. Each project is designed with the best water quality aspects possible and specifications require adherence to all regulatory requirements during construction.

Department of Utilities applies a power back-up policy for pump stations. The storms of 1995, which included heavy rainfall combined with high winds, resulted in 5 pump stations losing power in the Valley Hi area alone, and resulted in area wide flooding and

property damage. The current policy was developed as a result of that experience and stipulates that all pump stations will have a means of providing backup power supply to operate at design rating. The policy is included in the 1995 "Utility Infrastructure Report."

The following rehabilitation and replacement projects and improvement projects, valued at over $61 M, have been completed in the last ten years:

Rehabilitation and Replacement Projects:

- Fourteen (14) pump stations have been significantly rehabilitated or entirely reconstructed.
- Thirty-six (36) antiquated pump station electrical systems have been replaced, eighteen (18) pump stations have been provided with onsite backup power facilities, eighteen (18) portable generator units have been added to our fleet and all remaining pump stations have been equipped with quick hook-up capability.

Improvement Projects:

- Twenty-six (26) drainage detention basins have been constructed, including Thirteen (13) in North Natomas. Two more are under construction and two are being designed.
- Sixty-two projects have been completed for the upgrade of existing drainage infrastructure, most often involving the up-sizing of pipes and replacement and upgrade of drain inlets.

Attachment 4 shows many of these key drainage improvement projects constructed in the last ten years that help prevent flooding.

FUTURE PROJECTS

The Utilities Department is engaged in developing an asset management program referred to as The Infrastructure Rehabilitation And Management Program (IRAMP). The IRAMP assesses the criticality and condition of existing assets in accordance with council approved standards and sound business practices to develop a list of priority rehabilitation and replacement projects. This approach coupled with the drainage master plans results in a CIP program that is based first on critical rehabilitation and replacement needs and secondly on improvement projects.

In the drainage program, all drainage pump stations have been inspected and analyzed by operations and maintenance personnel as to the age and condition of the equipment and structure and have received a condition assessment from 1 (Poor) to 5 (Excellent). Drainage channels have been likewise inspected and received a condition assessment ranking. Furthermore, the adequacy of existing pipes, pump stations and other infrastructure in the most critical drainage basins has been determined by means of completed master plans and alternative improvements have been recommended

therein. Using this information, all recommended future improvements have been divided into the following five categories in descending order of importance:

A. The project eliminates an existing public safety hazard caused by the 100 year storm
B. The project eliminates existing 100 year property flooding
C. The project eliminates existing 10 year street flooding
D. The project advances development (eliminates future flood hazard only)
E. The project improves storm water quality only

A map showing all of these improvements throughout the City and a spreadsheet listing the projects in order of priority is included herein as Attachments 5 and 6. All identified future improvement projects are valued between at $1 billion to $1.2 billion. These prioritized projects will allow the development of a long term capital improvement program with the goal of bringing the city up to the City Council approved standard for drainage.

Financial Considerations:

The estimated cost for replacement or rehabilitation of life-cycled drainage infrastructure over the next 20 years is $40 million. The estimated average annual expenditure needed to sustain the replacement/rehabilitation program over the long term for drainage is approximately $2M/year. In addition to the rehabilitation and replacement needs the current estimated cost for all identified improvement projects to meet the master planning goals for drainage is $1 billion.

Prior to the passage of Proposition 218, which mandates voter approval to increase drainage rates, the funds allotted for new drainage CIPs was about $8M per year. Due to inflation, regulatory requirements for water quality, and the absence of rate increases for the past 9 years, the amount available for drainage CIPs has steadily declined and has been reduced from $8M to less than $3M per year (see attachment 7).

Due to this steady decline in available funding, the Department of Utilities has limited the focus of the CIP program the past 2 years to priority rehabilitation and replacement projects other than improvement projects that were previously approved by City Council. Within the next 3 to 4 years, with no changes in the current program, we project that there will be no funds available for necessary rehabilitation and replacement drainage CIPs.

Considerations to help fund the drainage and flood protection CIP programs are discussed below:

- It is recommended that the City council support legislation to modify the state constitution and allow for council approved increases in the drainage rates in the same manner that water, sewer, and solid waste rate increases are approved.

- A separate regulatory fee to fund mandated programs for water quality should be considered. Such a fee will allow the mandated regulatory programs to be self-sustaining.

- The development of a drainage development fee. Infill areas within the city are becoming more desirable for development but drainage infrastructure is usually not available or is inadequate for development in these areas. Many of these areas are subject to flooding. Other agencies have instituted a drainage development fee for each acre or lot developed which allow infrastructure to be constructed by the agency in advance of development. This will not fund any projects to prevent flooding in areas that are already built-out.

Environmental Considerations:

Not applicable for this report. Environmental determinations will be completed prior to construction of individual projects.

Policy Considerations:

The infrastructure report sets consistent, long-term goals for drainage, sewer, and water services. The master planning process results in priorities for improvement projects. Ultimately, a functional and fully funded drainage CIP program will result in all City customers having both high quality and equal levels of drainage service.

Emerging Small Business Development (ESBD):

Not applicable to this item as no services or purchases are being approved.

Respectfully Submitted by: _____
for David L. Brent
Engineering Manager

Approved by: _____
Gary A. Reents
Director of Utilities

Recommendation Approved:

_____
RAY KERRIDGE
Interim City Manager

Table of Contents:

CITY OF SACRAMENTO
DEPARTMENT
OF UTILITIES

CITY OF SACRAMENTO

Department of Utilities
Engineering Services Division

UTILITY INFRASTRUCTURE REPORT

November 1995

SECTION 1

DRAINAGE SYSTEM PLANNING

10/20/95
tlp

INTRODUCTION

General: This chapter of the infrastructure report develops a planning strategy for the city's drainage systems. Planning for the *combined sewer and drainage system* is a separate, ongoing activity, being performed in response to requirements and schedules established by the Regional Water Quality Control Board, and is not considered herein.

History of Existing Facilities: The City of Sacramento is situated at the confluence of the American and Sacramento Rivers. Consequently, from the city's first day it has experienced flooding and the potential for flooding exists. In the early years, when flooding occurred, the State Legislature proceedings and local business were basically put on hold. This inconvenience prompted a series of flood control projects. One of the first projects literally raised the city streets one story above the natural ground.

Since this street raising effort, additional flood control projects have been completed. Today, the city is protected by a flood control system composed of levees, dams, weirs and by-pass channels. The development of this flood control system has had its influence on the city's urban drainage system; a system that was originally designed to drain by gravity. More specifically, with the construction of the levees, many of the existing gravity systems have had to be converted to a system that has to be pumped over the levee.

In the early days, the city constructed combined sewer and drainage facilities. This practice continued until 1946, at which time 7000 acres of the city was being served by this combined system. After 1946, separate sewer and drainage facilities were constructed. Today, the city's drainage system is divided into 116 drainage basins; 28 flowing by gravity, 88 pumping over levees (4 of which are contained within the combined system). The majority of these existing facilities were completed in the late 1950's and early 1960's.

Storm Drainage Basins: As previously mentioned, there are 116 drainage basins in the city. Of these, 88 flow to a pump station and 28 flow by gravity into receiving canals, creeks and rivers. Four of the pumped drainage systems handle both rainfall and sanitary sewage, and service approximately 7000 acres, including the central city and surrounding areas. The location of the drainage basins are shown in Exhibit "D3", on page 1-16.

The drainage system within each basin consists of drain inlet structures, and collector and trunk storm drain lines. In some cases, an open channel or ditch serves as a collector or trunk line. The pumped systems also includes a pump station commonly referred to as a "sump". Each drainage system discharges into one of the canals, creeks, or rivers that pass through the city. Examples of these receiving bodies of water are: Natomas East Main Drainage Canal, Dry Creek, Morrison Creek, Hagginwood Creek, American and Sacramento rivers.

Since the drainage basins are adjacent to one another and the land is relatively flat, stormwater from one basin can spill over into an adjacent basin when a system problem occurs, such as a pump station losing electrical power or a flap gate sticking. This occurrence causes a higher water surface in the receiving basin.

Flooding Mechanisms: Flooding, for purpose of this report, is defined as the accumulation of water in areas which cause property damage or block the flow of traffic. This flooding can occur from the regional streams and rivers and from local creeks and drainage canals that divide the city.

Regional Flooding: Regional flooding occurs when regional streams and/or rivers break out of their natural channels or when the man-made levees of regional streams and/or rivers fail or are overtopped. An example of a near regional flood event occurred in 1986. Since the city's drainage facilities do not handle regional flood waters, the solution for regional flooding problems will be addressed in this report.

Localized Flooding. When local drainage facilities operate improperly or experience a storm event slightly in excess of their capacity, flooding can occur. Generally this flooding is caused by water flowing out the drainage inlets. This level of flooding usually causes little or no property damage or inconvenience to residents.

As a storm event gets significantly larger than the capacity of a drainage system, streets flood and block the flow of traffic. Depending on the magnitude of the storm, this flooding can stop the flow of traffic and cause damage to vehicles that may become stranded. Although the inconvenience caused by street flooding is generally for a short duration, it can be dangerous when it prevents emergency vehicles or utility repair vehicles from responding to fires, utility outages, or other emergency situations.

Street flooding, however, has a beneficial effect; it reduces the size of downstream facilities and the potential for downstream flooding. Streets act as detention facilities holding the water back and allowing it to be discharged over a longer period of time. This flooding should be held to a minimum (maximum up to top of curb) as it can quickly lead to flooding of homes in low-lying parcels.

Pump station failures, such as electrical power outages and blocked trash racks, can increase the potential for flooding. Additionally, if the pump station is accessed by a road which is itself subject to flooding, and should need repairs, then the ability of the repair crews to access the site in order to take corrective action will be hampered,

compounding the flooding problem.

Localized flooding can be caused by other factors as well. Often, leaves and other debris clog storm drain inlets, causing localized flooding. Smaller collector pipelines can also become clogged with debris, restricting or blocking flow completely.

GOALS AND OBJECTIVES - STORM DRAIN SYSTEM

Drainage System Goal: The Department of Utility's goal is to provide a safe, reliable drainage system that will meet the needs of a growing community. To meet this goal, improvements to existing facilities within each drainage basin will be sized so that the 10-year water surface will not rise above the top above the curb and the 100-year water surface will not rise above the first floor of any structure.

For new drainage systems, the drainage facilities will be designed so that the 10-year water surface will be 6 inches below the drainage inlets and the 100-year water surface will be 12 inches below the first floor of any structure.

All master planning and facilities design work will be targeted at satisfying these criteria. Calibrated models will be used to identify necessary improvements for existing drainage facilities.

Performance of Existing Facilities: For the most part, the existing drainage facilities have been effective in draining streets and reducing damage to structures. In the 1995 event there were, however, areas where floodwater came very close to invading homes and other areas where electrical power was lost and homes flooded. Many of these inundated areas have a history of flooding and will require their drainage system to be evaluated in order to determine what improvements are possible. This section presents a program that will identify and respond to these concerns in a cohesive, organized manner.

DRAINAGE INFRASTRUCTURE DESIGN CRITERIA

Drainage Criteria: The existing drainage system was designed and constructed, primarily following two basic sets of criteria. The two criteria were simple peak flow-per-acre runoff coefficients with separate runoff coefficients for residential and commercial areas as follows:

1.	Prior to 1964:	residential	0.12cfs/acre
		commercial	0.25 cfs/acre

(provides less than a 2-year protection)

2.	1964 to present:	residential	0.20 cfs/acre
		commercial	0.30 cfs/acre

(provides about five year protection depending on area)

It should be noted that since 1964 some drainage systems have been designed to 0.5 cfs/acre.These drainage systems, however, have been designed at the discretion of the city, mostly in areas where a new drainage facility was being planned. The 0.5 cfs/acre criteria provides about a ten year protection depending on the tributary area.

In 1986, staff of the Flood Control and Sewer Division of Public Works adopted a policy that allowed the use of county criteria for new drainage systems. Generally, the county criteria uses the "Nolte runoff curves" to estimate drainage flow. Using these curves, the runoff coefficient for a 200 acre watershed would be as follows:

New development:	residential	0.40 cfs/acre
	commercial	0.50 cfs/acre

(provides about a 10 year protection)

Today, the design requirements for new drainage systems flowing into existing drainage facilities or flood control channels are governed by the City of Sacramento, Department of Public Works, Design and Procedure Manual and Improvement Standards dated September 1, 1990. For infill projects that connect into an existing system, the runoff coefficients are as follows:

New into older system:	residential	0.20 cfs/acre
	commercial	0.30 cfs/acre

For new systems that discharge directly into a natural or improved channel, the drainage system shall be designed to accommodate a 10-year rainstorm. The method of determining the flows of the 10 year event is at the discretion of the developer's engineer, subject to the approval of the Utility Department. To be acceptable, however, the method will need to use the rainfall intensity-duration-frequency data and basin-specific flow routing techniques to calculate runoff volumes. With this approach, the drainage system can be designed to accommodate a 10-year rainfall. The 10-year design storm is a storm of such intensity that it would have a 10% chance of occurring in any given year.

As a result of changing criteria, the design capacity of drainage facilities vary throughout the city. On the average, the existing drainage facilities can handle between a 2 and 5 year event. To resolve this inequity, all future planning, design, and construction work will be targeted at satisfying the 10/100 criteria.

Use of 10/100 Criteria: Use of the 10-year/100-year criteria will not be burdensome for new construction in presently undeveloped basins. In contrast to this, upgrading existing drainage systems to satisfy this new standard will require large capital outlays which will most likely be unjustified in light of the fact that the city, in the past, has foregone minimal flood damages. Because of this, *interim* standards may be used in certain circumstances. The use of these interim standards, however, should not deter from the ultimate goal to build facilities which ultimately satisfy the 10/100-year design criteria. The interim standards, as a minimum, need to satisfy the requirements in Chapter 11 of the Design and Procedures Manual and Improvement Standards.

New Developments: In areas where there is no drainage system, the drainage facilities shall be designed so that the 10-year water surface will be 6 inches below the drainage inlets and the 100-year water surface will be 12 inches below the first floor of any structure. When determining the hydraulic grade lines (HGL), the beginning water surface elevation at the receiving canal, creek, or river, will be the 10- and 100-year, respectively. If the 10-year water surface in the receiving canal, creek or river makes it impossible to satisfy the above criteria, the Engineer, subject to the approval of the Director of Utilities, may allow the 10-year water surface to rise up to the top of the curb.

Infill Development: In areas where a new development will be connecting into an existing drainage system, the new drainage facilities will be designed such that the maximum discharge from the new development will be limited to the original design of the existing drainage system. For example, if the new system was connected to an existing drainage system, constructed prior to 1964, the maximum flow that would be allowed to discharge from the new development would be calculated using 0.12 and 0.25 cfs/acre for residential and commercial property, respectively. If connecting to a existing drainage system constructed after 1964, the maximum allowable flow that would be allowed to discharge from the new development would be calculated using 0.20 and 0.30 cfs/acre.

Additionally, the 10 and 100 year 6 hour volumes, generated by the new development, minus the pre-development 10 and 100 year, 6 hour volumes, shall be mitigated onsite or in a regional detention basin. The streets can be used to mitigate the additional 10 and 100 year volumes, and the maximum water surface for the 10 year shall be the top of the curb and the maximum 100 year water surface shall be below the first floor of the lowest structure.

DESIGN CRITERIA FOR PUMP STATIONS

General Requirements: The design of pump stations shall conform to the requirements of Section 12 of the Design and Procedure Manual and Improvement Standards, dated September 1990, or any subsequent revisions, as well as the criteria herewithin.

Capacity: All pump stations will be designed to adequately discharge the design capacity of the drainage system. In all pump stations there shall be at least one additional pump, equal in size the largest pump, to act as a backup pump. A minimum of two pumps shall be required. If only two pumps are used, each pump shall have the ability to pump at the design capacity of the drainage system.

All pump stations shall be designed to allow for future expansion to accommodate the higher flows resulting from upsizing the drainage system to handle the 10/100 year criteria.

Backup Power: All pump stations shall have a means of providing backup power supply, capable of running the pumps that are needed to discharge the design capacity of the drainage system. Possible secondary power sources are as follows:

1. A secondary power feed with an automatic transfer switch.
2. An Automatic starting backup generator with an automatic transfer switch.
3. A trailer mounted generator.

The secondary power supply can also be accomplished by installing gas or diesel motor driven pumps. The onsite backup generators or engine-driven pumps will be equipped with a 1-day supply of fuel.

Access Roads: All pump stations shall have an access road that is passible during a severe flood and an alternate access shall be provided where possible. Generally, it will not be possible to design access roads to be serviceable during a catastrophic levee failure or other area-wide flood.

Floodplain Consideration: All motors and electrical equipment shall be elevated 2 feet above the 100 year water surface.

STANDARD DESIGN REFERENCES

In general, the *Sacramento City/County Drainage Manual* , with some modifications, will form the basis for drainage planning and design work within the city. In particular, the hydrologic assumptions and design storm portions of the *Manual* are appropriate for use within the city. The city uses the SSWMM91 model (versus the HEC model presented in the *Manual)* for analyses within individual basins. Other models can be used on a case-by-case basis.

Detailed design of facilities will conform to the criteria contained in this infrastructure report and to the *Design and Procedures Manual and Improvement Standards* published by the City of Sacramento Department of Public Works.

DRAINAGE SYSTEM PRIORITY LIST

All 116 drainage basins, except for the 4 combined sewer basins, have been rated and prioritized for future study. The priorities have been grouped into A, B and C categories with category A being the highest priority, and subsequently the first to be studied. Table 1-1, page 1-8, is a list of the A and B Drainage Basins.

Basins were rated and their priority established by comparing their historical flood problems (basin rating), their pump station reliability (pump station rating) and their development activities (development rating) with that of the other drainage basins. A detail description of the how the drainage basins were rated and prioritized can be found in Exhibit "D1", pages 1-9 to 1-12. Exhibit "D3", page 1-16, contains a map showing the location of the prioritized drainage basins .

Since the boundaries of the category A basins coincide with the boundaries of category B and C basins, and since these lower priority basins may be hydraulically linked or might spill into, or receive overflow from, a category A basin, it may be necessary to include these lower priority basins with the study of category A basins. The priority lists are therefore not intended to be a hard-and-fast ranking. Rather, the lists identify which drainage basins have the most problems and the greatest need of study.

Costs of the Drainage System Master Planning and Improvements: Fourteen priority A basins, and twenty eight priority B basins are listed. The size of each of these basins (in acres) and the estimated cost for planning and constructing the improvements are also indicated in Table 1-1. Costs were estimated on the basis of $230 per acre for master planning, and $15,000 per acre for improvements. Unit cost for planning and improvements were based on the results of ongoing and/or completed master planning work.

The costs shown in Table 1-1 are based on the assumptions that all of the basins will require an equal level of planning effort per acre and that the construction of the needed improvements will result in similar capital costs per acre within each basin when implementing the recommended improvements. It should be recognized that this is a significant simplification. Because of this, the costs listed in Table 1-1 should be used only for rough planning purposes. As the priority list is updated in the future, more recent experience with the master planning and CIP processes should be incorporated into the costs contained in Table 1-1.

TABLE 1-1
PRIORITY A&B SUMMARY STORM DRAINAGE BASINS*

Basin	Final Rating	Priority	Acreage	Approximate Planning Cost	Approximate Improvement Cost
67	2.3	A	896	210,000	13,440,000
157	2.3	A	1,928	440,000	28,920,000
22	2.3	A	368	90,000	5,520,000
43	2.3	A	815	190,000	12,230,000
68	2.3	A	280	60,000	4,200,000
151	2.0	A	1,058	240,000	15,870,000
69	2.0	A	1,115	260,000	16,730,000
G256	2.0	A	95	25,000	1,430,000
31	2.0	A	803	190,000	12,050,000
158	2.0	A	465	110,000	6,980,000
10	2.0	A	696	160,000	10,440,000
G272	2.0	A	510	120,000	7,650,000
108	2.0	A	160	40,000	2,400,000
G202	2.0	A	7,000	@	@
128	1.7	B	567	130,000	8,510,000
99	1.7	B	384	90,000	5,760,000
155	1.7	B	158	40,000	2,370,000
129	1.7	B	1,365	310,000	20,480,000
130	1.7	B	405	90,000	6,080,000
132	1.7	B	2044	470,000	30,660,000
139	1.7	B	194	40,000	2,910,000
63	1.7	B	481	110,000	7,220,000
142	1.7	B	111	25,000	1,670,000
141	1.7	B	310	70,000	4,650,000
25	1.7	B	70	25,000	1,050,000
33	1.7	B	684	160,000	10,260,000
89	1.7	B	1,201	280,000	18,020,000
83	1.7	B	12	25,000	250,000
113	1.7	B	-	25,000	250,000
104	1.7	B	1,924	440,000	28,860,000
152	1.7	B	1,479	340,000	22,190,000
G255	1.5	B	60	25,000	900,000
90	1.5	B	-	25,000	250,000
50	1.5	B	82	25,000	1,230,000
G252	1.5	B	1,176	270,000	17,640,000
G201	1.5	B	1,676	390,000	25,140,000
G265	1.5	B	95	25,000	1,430,000
34	1.5	B	687	160,000	10,310,000
G270	1.5	B	706	160,000	10,590,000
G203	1.5	B	545	130,000	8,180,000
144	1.5	B	581	130,000	8,720,000
100	1.5	B	-	25,000	250,000
ROUNDED TOTAL				**6,200,000**	**394,000,000**

@The cost for planning, development, and constructionin the North Natomas area (basin G202) are to be paid by the developers and are therefore not reflected in the rounded totals.

STORM BASINS-O&M RATING MATRIX

Basin	Flood Incidents 1986 (1)	1990 (2)	1995 (3)	Total Damage (4)	Totals (5)	Ratings Basin (6)	Pump Station (7)	Development (8)	Total Rating (9)	Priority A,B,C (10)
4	0	0	0	0	0	1	2	1	1.3	C
5	2	0	19	0	21	1	1	1	1.0	C
8	8	0	11	0	19	1	2	1	1.3	C
10	26	0	91	2	127	2	3	1	2.0	A
19	7	0	123	4	150	2	1	1	1.3	C
22	25	22	128	5	200	3	3	1	2.3	A
24	6	0	31	0	37	1	2	1	1.3	C
25	0	3	30	1	38	1	3	1	1.7	B
26	41	0	94	2	145	2	1	1	1.3	C
27	0	0	3	0	3	1	1	1	1.0	C
28	1	0	0	0	1	1	1.5	1	1.2	C
30	2	1	5	0	8	1	1	1	1.0	C
31	32	1	92	2	135	2	3	1	2.0	A
33	34	6	162	6	232	3	1	1	1.7	B
34	3	1	50	1	59	1	2.5	1	1.5	B
37	2	0	28	1	35	1	2	1	1.3	C
38	0	1	0	0	1	1	2	1	1.3	C
39	0	1	16	0	17	1	1	1	1.0	C
41	2	1	0	1	8	1	1	1	1.0	C
43	5	0	10	1	20	1	3	3	2.3	A
44	0	0	4	0	4	1	2	1	1.3	C
46	1	0	6	0	7	1	1	1	1.0	C
47	1	0	0	0	1	1	1	1	1.0	C
50	0	0	7	0	7	1	2.5	1	1.5	B
51	0	0	2	0	2	1	2	1	1.3	C
52	0	0	34	0	34	1	2	1	1.3	C
54	2	0	74	4	96	1	2	1	1.3	C
56	1	0	0	0	1	1	1	1	1.0	C
58	9	0	0	0	9	1	1	1	1.0	C
63	5	12	12	0	29	1	3	1	1.7	B
65	15	0	9	1	29	1	2	1	1.3	C
66	0	0	0	0	0	1	1.5	1	1.2	C
67	14	0	162	26	306	3	3	1	2.3	A
68	2	0	107	47	344	3	3	1	2.3	A
69	1	0	115	8	156	2	3	1	2.0	A
70	3	0	5	1	13	1	2	1	1.3	C
71	4	1	6	0	11	1	1	1	1.0	C
73	1	0	0	0	1	1	1	1	1.0	C
83	3	0	3	0	6	1	3	1	1.7	B
89	5	7	21	0	33	1	3	1	1.7	B
90	0	0	0	0	0	1	2.5	1	1.5	B
91	1	0	27	0	28	1	1	1	1.0	C
92	6	0	42	3	63	1	2	1	1.3	C

STORM BASINS-O&M RATING MATRIX

Basin	Flood Incidents 1986 (1)	1990 (2)	1995 (3)	Total Damage (4)	Totals (5)	Ratings Basin (6)	Pump Station (7)	Development (8)	Total Rating (9)	Priority A,B,C (10)
94	0	0	0	0	0	1	1	1	1.0	C
95	0	0	40	0	40	1	1	1	1.0	C
96	14	0	21	0	35	1	1	1	1.0	C
97	12	2	20	4	54	1	1	1	1.0	C
98	1	0	52	0	53	1	2	1	1.3	C
99	11	0	55	0	66	1	2	2	1.7	B
100	0	0	0	0	0	1	2.5	1	1.5	B
101	1	0	63	2	74	1	1	1	1.0	C
102	2	1	21	0	24	1	2	1	1.3	C
103	13	0	26	4	59	1	1.5	1	1.2	C
104	16	16	49	9	126	2	2	1	1.7	B
108	15	5	86	3	121	2	3	1	2.0	A
109	0	0	17	0	17	1	1	2	1.3	C
110	0	0	6	0	6	1	1	1	1.0	C
111	3	0	22	0	25	1	2	1	1.3	C
112	1	1	1	0	3	1	1	1	1.0	C
113	0	0	0	0	0	1	3	1	1.7	B
114	1	0	1	0	2	1	1	1	1.0	C
115	4	0	36	0	40	1	1	1	1.0	C
116	3	0	0	0	3	1	1	1	1.0	C
117	11	0	11	0	22	1	1	1	1.0	C
128	19	0	59	28	218	3	1	1	1.7	B
129	50	18	79	7	182	2	2	1	1.7	B
130	4	0	10	2	24	1	2	2	1.7	B
132	32	19	86	4	157	2	2	1	1.7	B
138	2	2	2	0	6	1	1	1	1.0	C
139	0	0	75	12	135	2	2	1	1.7	B
140	2	2	18	5	47	1	1	1	1.0	C
141	2	0	13	7	50	1	2	2	1.7	B
142	1	0	0	0	1	1	1	3	1.7	B
144	4	0	10	4	34	1	2.5	1	1.5	B
147	0	0	7	0	7	1	1	1	1.0	C
148	0	0	0	0	0	1	1	1	1.0	C
149	3	0	0	0	3	1	1	1	1.0	C
151	34	10	53	15	172	2	3	1	2.0	A
152	15	4	26	4	65	1	3	1	1.7	B
153	5	3	8	3	31	1	2	1	1.3	C
154	32	6	70	10	158	2	1	1	1.3	C
155	5	0	9	2	24	1	3	1	1.7	B
157	43	2	136	8	221	3	3	1	2.3	A
158	14	3	51	16	148	2	3	1	2.0	A
159	3	4	35	3	57	1	2	1	1.3	C

STORM BASINS-O&M RATING MATRIX

Basin	Flood Incidents 1986 (1)	1990 (2)	1995 (3)	Total Damage (4)	Totals (5)	Ratings Basin (6)	Pump Station (7)	Development (8)	Total Rating (9)	Priority A,B,C (10)
G200	0	1	1	1	7	1	N/A	1	1.0	C
G201	8	3	102	14	183	2	N/A	1	1.5	B
G202	2	0	0	1	7	1	N/A	3	2.0	A
G203	1	0	0	0	1	1	N/A	2	1.5	B
G204	1	0	7	1	13	1	N/A	1	1.0	C
G205	0	0	0	0	0	1	N/A	1	1.0	C
G251	0	0	0	0	0	1	N/A	1	1.0	C
G252	24	5	148	3	192	2	N/A	1	1.5	B
G253	6	9	7	0	22	1	N/A	1	1.0	C
G254	0	0	4	0	4	1	N/A	1	1.0	C
G255	1	0	1	0	2	1	N/A	1	1.0	C
G256	0	0	2	0	2	1	N/A	3	2.0	A
G257	2	0	0	0	2	1	N/A	1	1.0	C
G258	1	0	41	3	57	1	N/A	2	1.5	B
G259	0	0	6	0	6	1	N/A	1	1.0	C
G260	0	0	0	0	0	1	N/A	1	1.0	C
G261	0	0	2	0	2	1	N/A	1	1.0	C
G262	0	0	0	0	0	1	N/A	1	1.0	C
G263	2	0	18	0	20	1	N/A	1	1.0	C
G264	0	0	0	0	0	1	N/A	1	1.0	C
G265	0	0	7	0	7	1	N/A	2	1.5	B
G266	0	0	0	0	0	1	N/A	1	1.0	C
G267	0	0	0	0	0	1	N/A	1	1.0	C
G268	0	0	0	0	0	1	N/A	1	1.0	C
G269	0	0	2	0	2	1	N/A	1	1.0	C
G270	0	0	52	3	67	1	N/A	2	1.5	B
G271	0	0	0	0	0	1	N/A	1	1.0	C
G272	0	0	0	0	0	1	N/A	3	2.0	A

(1) Total of reported flood incidents, i.e. complaints, phone calls, etc. for Feb. 1986 storm.
(2) Total of reported flood incidents, i.e. complaints, phone calls, etc. for Feb. 1990 storm.
(3) Total of reported flood incidents, i.e. complaints, phone calls, etc. for Jan. 1995 storm.
(4) Total number of properties having flood damage since 1986.
(5) The addition of columns 1, 2, 3 and five times column 4. Column 4 was multiplied by 5 to give greater weight to actual damage.
(6) Totals of column 5 rated as follows:

0 - 100	=1
100 - 200	=2
200 - greater	=3

(7) Plant Services rating for each sump.

(8) Percent of proposed acreage that was actually developed within the basin since 1993; i.e., total acres built on, divided by total acres, rated as follows:

0 - 5%	area developed	= 1
5 - 20%	area developed	= 2
20 -100 %	area developed	= 3

(9) The "Total Rating" column is the average of columns 6, 7 and 8.
(Note: for the gravity basins (i.e. G201), columns 6 and 8 were averaged since there are no pumps within these gravity basins.)

(10) Total of column (10) are rated as follows:

total rating	letter rating
2.0 - 3.0	A
1.5 - 2.0	B
1.0 - 1.5	C

STORM DRAINAGE BASIN PRIORITY LIST (BY RANKING)

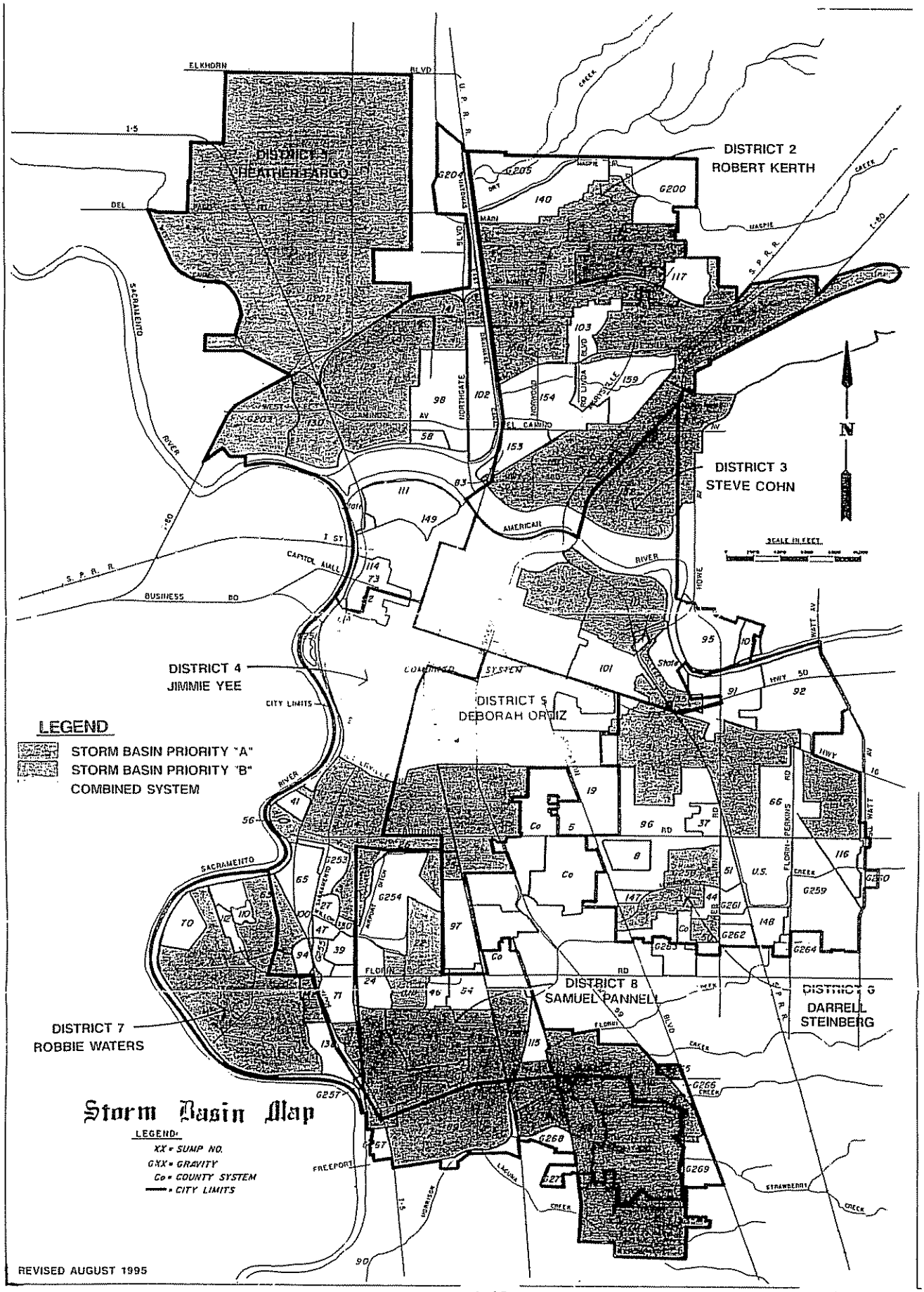
Basin	Final Rating (1)	Priority A,B,C (2)
67	2.3	A
68	2.3	A
43	2.3	A
22	2.3	A
157	2.3	A
31	2.0	A
G202	2.0	A
158	2.0	A
69	2.0	A
151	2.0	A
108	2.0	A
G272	2.0	A
G256	2.0	A
10	2.0	A
83	1.7	B
63	1.7	B
139	1.7	B
132	1.7	B
113	1.7	B
104	1.7	B
89	1.7	B
130	1.7	B
129	1.7	B
128	1.7	B
141	1.7	B
152	1.7	B
99	1.7	B
142	1.7	B
33	1.7	B
155	1.7	B
25	1.7	B
144	1.5	B
100	1.5	B
G270	1.5	B
G265	1.5	B
90	1.5	B
G252	1.5	B
G203	1.5	B
G258	1.5	B
G201	1.5	B
50	1.5	B
34	1.5	B
153	1.3	C

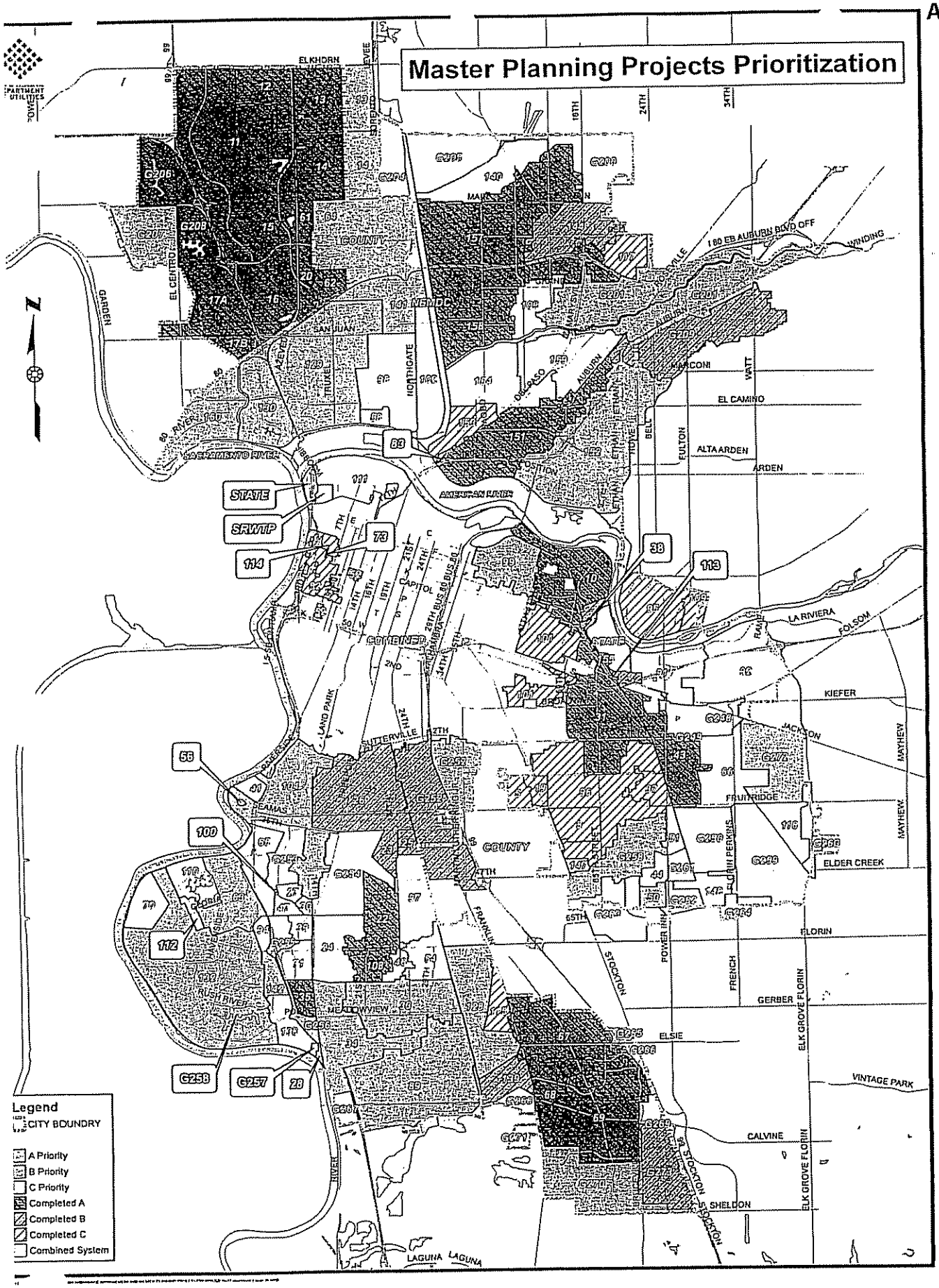
STORM DRAINAGE BASIN PRIORITY LIST (BY RANKING)

Basin	Final Rating (1)	Priority A,B,C (2)
102	1.3	C
109	1.3	C
154	1.3	C
111	1.3	C
159	1.3	C
98	1.3	C
4	1.3	C
54	1.3	C
24	1.3	C
92	1.3	C
44	1.3	C
70	1.3	C
26	1.3	C
19	1.3	C
38	1.3	C
8	1.3	C
65	1.3	C
37	1.3	C
52	1.3	C
51	1.3	C
28	1.2	C
103	1.2	C
66	1.2	C
47	1.0	C
41	1.0	C
39	1.0	C
46	1.0	C
G261	1.0	C
G264	1.0	C
G263	1.0	C
G254	1.0	C
G205	1.0	C
G204	1.0	C
30	1.0	C
G200	1.0	C
G255	1.0	C
G262	1.0	C
G257	1.0	C
G259	1.0	C
G260	1.0	C
149	1.0	C
G251	1.0	C
58	1.0	C

STORM DRAINAGE BASIN PRIORITY LIST (BY RANKING)

Basin	Final Rating (1)	Priority A,B,C (2)
148	1.0	C
147	1.0	C
G271	1.0	C
G268	1.0	C
G269	1.0	C
101	1.0	C
96	1.0	C
97	1.0	C
G266	1.0	C
95	1.0	C
94	1.0	C
5	1.0	C
G267	1.0	C
110	1.0	C
56	1.0	C
112	1.0	C
73	1.0	C
27	1.0	C
140	1.0	C
138	1.0	C
71	1.0	C
117	1.0	C
91	1.0	C
116	1.0	C
115	1.0	C
114	1.0	C
G253	1.0	C


DISTRICT 1
HEATHER FARGO
DISTRICT 2
ROBERT KERTH
DISTRICT 3
STEVE COHN
DISTRICT 4
JIMMIE YEE
DISTRICT 5
DEBORAH ORTIZ
DISTRICT 6
DARRELL STEINBERG
DISTRICT 7
ROBBIE WATERS
DISTRICT 8
SAMUEL PANNELL
LEGEND
STORM BASIN PRIORITY "A"
STORM BASIN PRIORITY "B"
COMBINED SYSTEM
Storm Basin Map
LEGEND:
XX = SUMP NO.
GXX = GRAVITY
Co = COUNTY SYSTEM
= CITY LIMITS
REVISED AUGUST 1995
N
SCALE IN FEET
ELKHORN BLVD
DEL PASO BLVD
NORTHGATE BLVD
EL CAMINO AV
ARCADE CREEK
MAGPIE CREEK
SACRAMENTO RIVER
AMERICAN RIVER
I-5
I-80
U.S. 50
S.P.R.R.
BUSINESS RD
CAPITOL MALL
I ST
WATT AV
HOWE AV
FLORIN-PERKINS RD
FREEPORT BLVD
CITY LIMITS
COMBINED SYSTEM
FREEPORT
STRAWBERRY CREEK


Master Planning Projects Prioritization
ELKHORN
I 80 EB AUBURN BLVD OFF
WINDING
GARDEN
EL CENTRO
NORTHGATE
TRUXEL
SAN JUAN
AUBURN
RIVER
SACRAMENTO RIVER
AMERICAN RIVER
MARCONI
WATT
EL CAMINO
FULTON
BELL
ALTA ARDEN
ARDEN
STATE
SRWTP
CAPITOL
COMBINED
LA RIVIERA
FOLSOM
KIEFER
JACKSON
MAYHEW
FRUITRIDGE
ELDER CREEK
FLORIN
FRENCH
GERBER
ELK GROVE FLORIN
ELSIE
VINTAGE PARK
CALVINE
SHELDON
STOCKTON
POWER INN
FRANKLIN
LAND PARK
SUTTERVILLE
MEADOWVIEW
LAGUNA
COUNTY
Legend
CITY BOUNDRY
A Priority
B Priority
C Priority
Completed A
Completed B
Completed C
Combined System

BASIN MASTER PLANNING AND IMPROVEMENT PROJECTS

BASIN	PRIORITY	MASTER PLAN	Project Number	FY BID	PROJECTS Rehab	PROJECTS Improvement	Improv $ SPENT	Approved $	Rehab $ SPENT
					A PRIORITY BASINS				
10	A	C	WF81	96/97		Sump 10 All Weather Access	118,000		
10			XM34	98/99		Lagomarsino Way Drainage Imp	171,000		
10			WJ16	99/00	Sump 10 Electrical Improvements				120,000
10			WG16	97/98		Breckenwood Way Drainage Imp.	210,000		
10			WH31	98/99	C Street/40th St Drainage				100,000
10			WK76	01/02	42" Main Sandburg Dr.				150,000
10			WM81	99/100	42" Main Sandburg/Carrington Dr.				241,000
22	A	C	XB41	94/95	Sump 22 Switch Gear replacement				53,000
22			WG66	98/99		Sump 22 Access Improvements	82,000		
31	A	C	WF91	95/96		Louis Way/Elvas Ave Drainage	453,000		
31			WI11	99/00		Outfall at CSUS Levee	300,000		
31			WI46	00/01		S31 Discharge Pipelines	1,317,000		
31			WM51	06/07		Basin 31 Pipes		144,000	
31			WK06	05/06		Basin 31 Detention 65th & Broadway		4,000,000	
35	A	C	WG56	97/98		S35 Pump Station	2,966,000		
35						S35 Drainage Extension	399,000		
43	A	C	WI26	99/00	Sump 43 Switchgear Replace				197,000
43			WA66	99/00		Power Ridge Detention Basin	1,580,000		
67	A	C	WF21	94/95		Elder Creek Low Flow Channel & Confluence	297,000		
67			WH05	96/97	Morrison Creek Flood Repair				58,000
67			WC02	97/98	Drainage ditch Access Ramps				315,000
67			WK31/36	01/02	S67/69 Electrical Improvements				538,000
68	A	C	4051	95/96		Sump 68 Procurement - Pumps	83,000		
68			WH06	95/96		Sump 67, 68, 69, 139 Drainage	645,000		
68			WH96	99/00		Unionhouse Creek Detention Basin	872,000		
69	A	C	WH04	96/97	North Elder Creek Flood Repair				43,000
69			WH06	96/97		Valley Hi Drainage Improvements	556,000		
69			WF07	97/98		Back-up Power Receptacle	43,000		
69			WH51	98/99		Kasier South Detention Basin	253,000		
69			WH41	00/01		Dention at CRC	1,737,000		
108	A	C				*Connection of overflow manhole*	10,000		
108			WL91	02/03	S108 Electrical				223,000
151	A	C	WB66	93/94		Oxford/Oakmont Drainage Imp.	826,000		
151			WF51	96/97		Woodlake business Park Drain Imp	960,000		
151			WA56	94/95		Highway 160 So. Drainage Imp	189,000		
151			WC26	96/97		Evergreen SPRR Drainage Imp	314,000		
151			WF76	96/97		Sump 151 Improvements	2,323,000		
151			4924	97/98	Leisure Lane Storm Drain Repair				66,000
151			WK76	96/97		Sump 151 Channel Lining	213,000		

BASIN	PRIORITY	MASTER PLAN	Project Number	FY BID	PROJECTS Rehab	PROJECTS Improvement	Improv $ SPENT	Approved $	Rehab $ SPENT
A PRIORITY BASINS - continued									
157	A	C	WB01	94/95		Sump 157 Electrical Feed	341,000		
157			WF12	97/98		Sump 157 Acces Road Imp.	74,000		
157			WF11	95/96	Sump 157 Rehab				713,000
157			XG41	99/00		Emmons and Stillwell Sewer/Drain	266,500		
158	A	C	WB71	95/96	Sump 158 Reconstruction				259,000
158			WH26	97/98		Mabel Street Drainage Imp.	699,000		
158			WE23	01/02		S158 Outfall Lining	98,000		
158			WK96	02/03	S158 Electrical Improvements				557,000
158			WH46	99/00		Del Paso Nuevo - Detention	400,000		
158			WH41	99/00		Stawberry Manor Drainage Ph II	716,000		
G202	A	C	WE81	96/97		B Drain Improvements	280,000		
G248	A	C							
G249	A	C							
G272	A								
						SUBTOTAL	19,791,500	4,144,000	3,633,000
North Natoms Basins - formerly Basin G202									
11	A	C	4821	98/99		N N Interim Drainage Basin 1	885,000		
11			4821	99/00		North Natomas Drainage Basin 1	11,000,000		
11			4821	03/04		Secondary channel Improvements	504,000		
11			4821	03/04		Primary channel Improvements	104,000		
11			4821	03/04		Primary channel extand Basin 1	2,485,000		
11			4821	07/08		Primary channel landscaping		774,000	
12	A	C	4822	99/00		North Natomas Drainage Basin 2	7,000,000		
12	A		4822	99/00		Elkhorn Pipeline	691,000		
12	A		5796	00/01		Elkhorn Pipeline - 2001	851,000		
13	A	C	4823	00/01		North Natomas Drainage Basin 3	2,981,000		
13	A		4823	01/02		S13	1,859,000		
13				07/08		NN Basin 3 East Portion SOI		1,500,000	
14	A	C	4824	98/99		NN Basin 4 Improvements	1,400,000		
14			4824	98/99		NN Basin 4 Water Quality Imp	1,908,000		
14			4824	99/00		Sump 14	995,000		
14				07/08		NN Basin 4 East Portion SOI		1,500,000	
15	A	C	4825	98/99		North Natomas Drainage Basin 5	5,000,000		
16	A	C	4826	98/99		North Natomas Drainage Basin 6A	4,000,000		
16			4826	99/00		NN Western Portion Drain Basin 6B	5,700,000		
17A	A	C	4827	98/99		North Natomas Drainage Basin 7a	5,000,000		
17B	A	C	4827	99/00		North Natomas Drainage Basin 7b	7,000,000		
17B	A	C	4827	00/01		NN Basin 7B Lanscaping	93,000		
20	A	C				NN Basin 20 Improvements			
G206	A	C	4828	99/00		North Natomas Drainage Basin 8a	3,400,000		
G207	A	C	4828	99/00		North Natomas Drainage Basin 8b		3,400,000	
G208	A	C	4828	98/99		North Natomas Drainage Basin 8c	1,300,000		

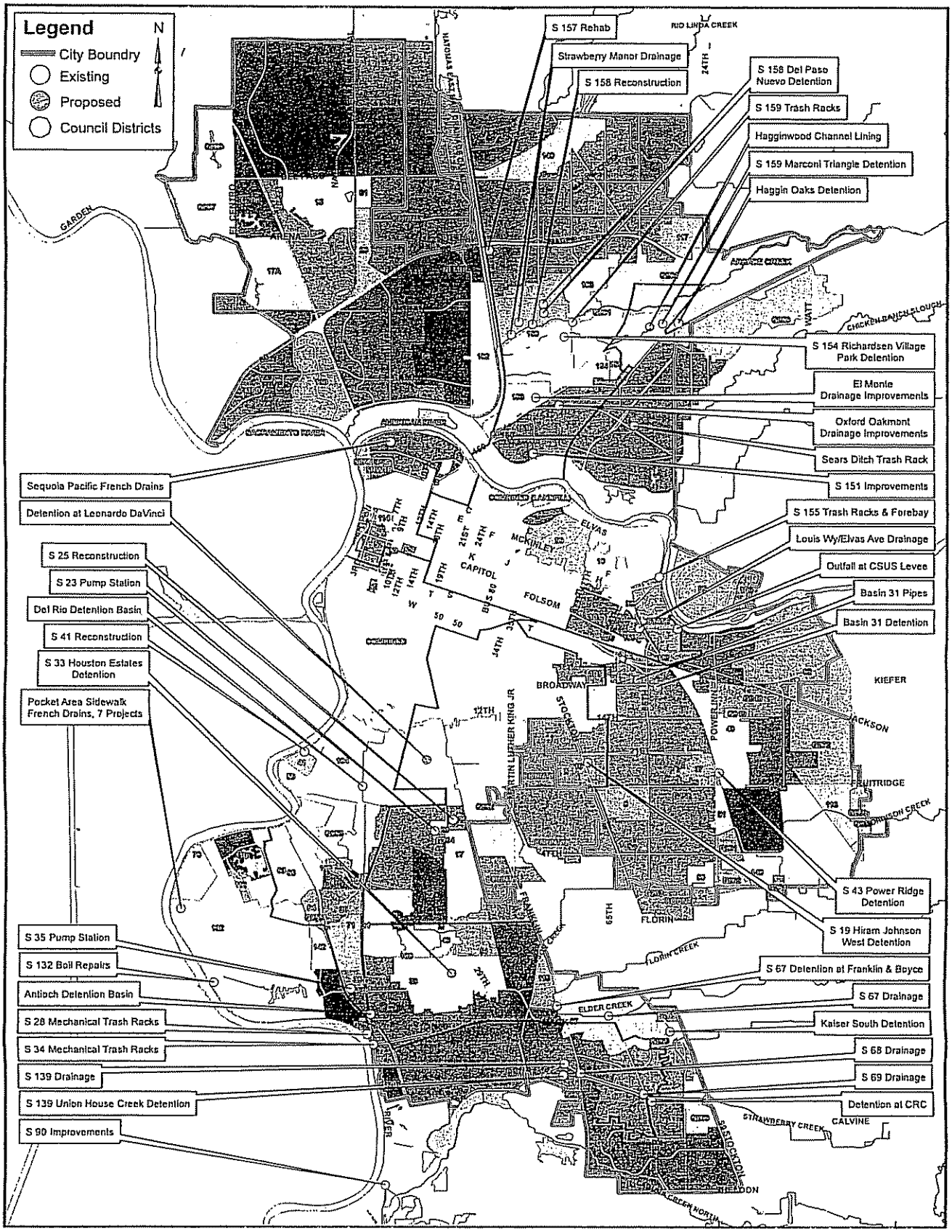
BASIN	PRIORITY	MASTER PLAN	Project Number	FY BID	PROJECTS Rehab	PROJECTS Improvement	Improv $ SPENT	Approved $	Rehab $ SPENT
North Natoms Basins - formerly Basin G202 - continued									
61	A	c		03/04		Goldenland Drainage Improvements			
62	A	c		05/06		Fong Properties Drainage Imp.			
64	A	c		06/07		Bell Properties Drainage Imp.			
						SUBTOTAL	64,156,000	7,174,000	0
BASIN	PRIORITY	MASTER PLAN	Project Number	FY BID	PROJECTS Rehab	PROJECTS Improvement	Improv $ SPENT	Approved $	Rehab $ SPENT
B PRIORITY BASINS									
23	B	c	WG36	97/98		S23 Pump Station	732,000		
25	B	c	WB81	99/00		Sump 25 Reconstruction	1,205,000		
26	B	c	WI71	99/00		Detention at Leonardo DaVinci		1,800,000	
26	B		XF96	97/98	Corp Yd Storm Drain Liner				14,000
26	B		WJ81	01/02		Del rio Detention Basin	188,000		
27	B		WL36	02/03	Sump 27 Electrical				95,000
33	B	m	WJ96	05/06		Sump 33 Detention Basin		750,000	
33			WH21	98/99	Sump 33 Switchgear Replacment				216,000
34	B	m	WF56	94/95		Sump 34 and 28 Mechanical Trash Racks	1,660,000		
34	B		WN01	03/04		Antioch church Detention	142,000		
50	B		WK66	02/03	S50 Electrical Improvements				155,000
63	B		WJ56	99/00	Sump 63 Pump Station Electrical				248,000
83	B	c				*Sump 83 Improvements*			
89	B	m	WL81	02/03	Sump 89 Electrical				266,000
90	B		WG11	99/00		Sump 90 Improvements	678,000		
90			WH86	99/00		Sump 90 County Levees	50,000		
99	B		WH31	98/99	C Street and 40th St Drainage Imp				103,000
99			WL66	02/03	Sump 99 Electrical				350,000
100	B								
104	B		WJ51	99/00	S104 Electrical Improvements				486,000
113	B	c							
128	B		WF22	96/97		Levee Access Road Improve	156,000		
128			WH36	97/98		Sump 128 Generator and ATS	225,000		
129	B		WP71	96/97		Sump 129 Access Improvements	45,000		
129	B		WL96	05/06	Sump 129 Electrical				336,000
130	B								
132	B		WH01	95/96	Brewster Avenue French Drains				75,000
132			WH08	96/97	Sidewalk French Drains				107,000
132			4798	97/99	Sidewalk French Drains				390,000
132			WH61	97/98	Sump 132 Forebay Boil Repairs				150,000
132			WG86	97/98	Sidewalk French Drains				245,000
132			WG87	98/99	Orleans Way French Drains				64,000
132			WG88	99/00	Bay, Big Black River French Drains				112,000
132			WG89	00/01	Pocket Area French Drains				132,000
132			WL01	01/02	S132 Generator				16,000

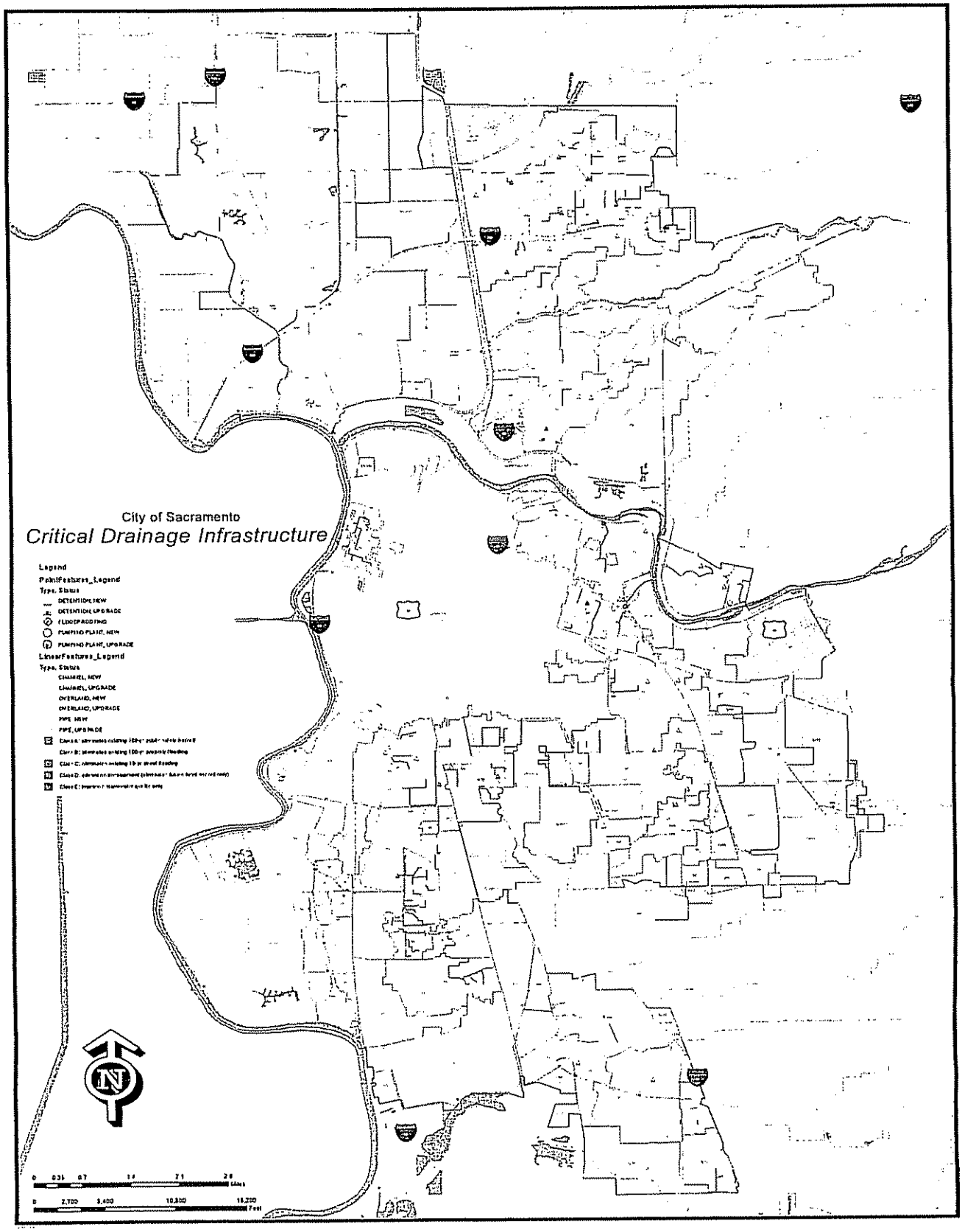
BASIN	PRIORITY	MASTER PLAN	Project Number	FY BID	PROJECTS Rehab	PROJECTS Improvement	Improv $ SPENT	Approved $	Rehab $ SPENT
B PRIORITY BASINS - continued									
132			WM41	00/01	Pocket Area French Drains				81,000
132			WM71	06/07	Pocket Area French Drains			75,000	
132			WL21	06/07	Pocket Area French Drains			75,000	
139	B	c							
140	safca	c							
140			WJ41	99/00		Sump 140 Generator & ATS	499,000		
141	B		WM01	03/04	Sump 141 Electrical				62,000
142	B								
144	B	c	WI91	99/00		Young's Heights Improvements	400,000		
144			WK51	02/03	N. Sac Rural Drainage Repair				175,000
152	B		WH02	96/97	Sears Ditch Damage Repair				140,000
152			WI56	99/00		Trash Rack at Sears Ditch		332,000	
152			WJ06	99/00		Sump 152 forebay Imp.	200,000		
152			5573	98/99		Permanent Mounted Generator	658,000		
154			WJ01	99/00	Sump 154 Electrical Improvements				287,000
154			WF66	96/97	Sump 154 Channel Improvements				129,000
155	B	c	5511	97/98		H St Carlson Junction Box	124,000		
155			WE22	98/99	Sump 155 Relining Discharge Pipe				73,046
155			WJ11	99/00		Sump 155 Trash Racks and Forebay	868,000		
G201	B		WI66	99/00		Haggin Oaks Detention	1,400,000		
G209E	B	m	1950	93/94		2150 Auburn Blvd Drainage	188,000		
			WB56	94/95		Arcade Creek Flapgates	42,000		
			LK02	94/95		Marconi Triagle Detention	279,000		
G209W	B	c							
G252	B	c							
G258	B	m/l							
G265	B								
G270	B					Laguna Creek Wetland Remediation	255,000		
						SUBTOTAL	9,994,000	3,032,000	4,507,046
Natoms West Basin - formerly Basin G203									
160			9733	95/96		Willow Creek A/D - Outfall	741,000		
160			9733	96/97		Willow Creek II A/D	10,044,000		
						SUBTOTAL	10,785,000	0	0
BASIN	PRIORITY	MASTER PLAN	Project Number	FY BID	PROJECTS Rehab	PROJECTS Improvement	Improv $ SPENT	Approved $	Rehab $ SPENT
C PRIORITY BASINS									
City Wide			WI31	98/99		Transformers at 7 Sumps	300,000		
City Wide			WI06	99/00		Storm Drain Inlet replacement		400,000	
City Wide			WE22	97/98	Pump Station Outfall Phase 2				410,000
City Wide			WE23	98/99	Pump Station Outfall Phase 3				323,000
City Wide			WJ76	99/00		Detention Basin Property Citywide	2,500,000		
City Wide			WF97	98/99		Sump Outfall Stairs	149,000		
City Wide			WA52	97/98		Storm Drain Inlet replacement	281,000		

BASIN	PRIORITY	MASTER PLAN	Project Number	FY BID	PROJECTS Rehab	PROJECTS Improvement	Improv $ SPENT	Approved $	Rehab $ SPENT
C PRIORITY BASINS - continued									
City Wide			WH11	98/99		Alert Gage FY98	40,000		
City Wide			WF07	97/98		Trailer Mounted 350 KW Generators	187,000		
City Wide			WK91	02/03		Drain Inlet Replacement	250,000		
City Wide			WM11	03/04		Drain Inlet Replacement	250,000		
City Wide			WL26	05/06		Trailer Mounted 800 KW Generators		293,000	
5	C	c							
8	C	c	WI21	99/00	Sump 8 Switchgear Replacement				152,000
8	C		WJ81	99/00		63rd St & 39th Ave Drainage Imp	140,000		
19	C	c	WK01	03/04		Hiram Johnson West Detention	1,136,000		
24			WE81	96/97		Sump 24 Improvements	89,000		
24			WL41	00/01	Sump 24 Electrical				137,000
24			WM46	06/07		Airport ditch Lining		388,000	
28	C		WJ36	99/00		Sump 28 wet well Reconst	250,000		
28			WC71	94/95	Sump 28 Access Roads				222,000
28			WC73	96/97	Sump 28 Electrical Upgrade				1,450,000
28			WC72	96/97		Sump 28 Channel Improvements	389,000		
28			WL06	05/06	S28/S70/S111 Outfall Stabilization				149,000
28			WL11	01/02	Sump 28 Outfall Lining				146,000
37	C	c	WM56	06/07	Sump 37 Electrical			220,000	
38	C	c							
39	C	l							
41	C		WC06	92/93		Sump 41 Reconstruction	700,000		
44	C		WM56	06/07	Sump 44 Switchgear Replacement			124,000	
46	C	l	WG91	97/98	Sump 46 Switchgear Replacement				147,000
52	C	c	WH16	97/98	Sump 52 Electrical Service Upgr				14,000
52	C		WJ46	99/00	Sump 52 Electrical Improvements				515,000
54	C	m	WG96	98/99	Sump 54 Switchgear Replacement				153,000
58	C		WM91	05/06	Sump 58 Electrical				250,000
66	C		WM86	05/06	Sump 66 Electrical			300,000	
70	C		WM96	04/05	Sump 70 Electrical				220,000
71	C		WM56	03/04	Sump 71 Electrical				90,000
73	C	c							
91	C		WG76	97/98	Sump 91 Electrical Upgrade				107,000
92	C		WE22	98/99	Abandon CMP at S91/92				78,000
92			WI96	99/00	Sump 92 Pump Sta Electrical				297,000
95	C	c	WL71	03/04	Sump 95 Electrical				293,000
96	C	c	WK41	03/04	Sump 96 Electrical				710,000
97	C		WM61	05/06	Sump 97 Electrical				293,000
98	C		WM76	03/04	Sump 98 Pump Sta Electrical				273,000
100	C		WG71	98/99		Sump 100 Trash Racks	108,000		
101	C	c	WH91	99/00		Generator at Sump 101	571,000		
101	C		XM44	98/99		U.C.D. Med Center Storage	5,200,000		
102	C		WL86	02/03	Sump 102 Electrical				275,000

BASIN	PRIORT	MASTER PLAN	Project Number	FY BID	PROJECTS Rehab	PROJECTS Improvement	Improv $ SPENT	Approved $	Rehab $ SPENT
C PRIORITY BASINS - continued									
103	C	m							
109	C	c	WG16	97/98		Breckenwood Way Drainage Imp	210,000		
109	C		WK46	01/02	S109 electrical Improvements				228,000
111	C		5561	98/99		Sequoia Pacific French Drains	84,000		
111	C		WL76	03/04	Sump 111 Electrical				269,000
114	C	c							
115	C	j							
117	C	c							
153	C	c	WB86	95/96		El Monte Drainage Improvements	765,000		
154	C		WF66	97/98	Sump 154 Fence Replacement				9,000
154	C		WF66	96/97		Sump 154 Channel Improvements	129,000		
154	C		WM16	06/07		Hagginwood channel Lining		150,000	
159	C		WJ26	99/00		Trash rack at Sump 159		225,000	
159	C		WJ21	99/00	Sump 159 Electrical Improvements				571,000
159	C		WK86	01/02		Richardson Vg Park Intake Structure	41,000		
G255	C								
G200	C								
G205	C								
G251	C								
G253	C								
G254	C								
G255	C								
G257	C								
G259	C								
G260	C								
G261	C								
G262	C								
G263	C								
G264	C								
G266	C								
G267	C								
G268	C								
G269n	C								
G269s	C	c							
G271	C								
G273	C	c							
						SUBTOTAL	13,769,000	2,100,000	7,781,000
						A PRIORITY BASINS	19,791,500	4,144,000	3,633,000
						B PRIORITY BASINS	9,994,000	3,032,000	4,507,046
						C PRIORITY BASINS	13,769,000	2,100,000	7,781,000
						TOTAL ALL BASINS	43,554,500	9,276,000	15,921,046
						TOTAL SPENT - Rehab + Improvement	59,475,546		

Key Drainage Improvement Projects Including Detention Basins




City of Sacramento
Critical Drainage Infrastructure
Legend
PointFeatures_Legend
Type, Status
DETENTION, NEW
DETENTION, UPGRADE
FLOOD PROOFING
PUMPING PLANT, NEW
PUMPING PLANT, UPGRADE
LinearFeatures_Legend
Type, Status
CHANNEL, NEW
CHANNEL, UPGRADE
OVERLAND, NEW
OVERLAND, UPGRADE
PIPE, NEW
PIPE, UPGRADE
N

Drainage Utilities Assessment

Sump ID	Map ID	Basin	Asset Type	Location	Critical Infrastructure							Condition Assessment					FY 04/05 Budget		Notes
					Reliable, High Quality Customer Service	Compliance With Regulations and Enviromental Impact	Health & Safety of Employees and Public	Economic Impact (Community and Utility)	Ability to Restore Asset to Design LOS	Location/Critical Facility Impact	CI Total Score				CA Total Score	Total Combined Score	FY Proposed	Est. Amount	
				Weight	1	1	1	1	1	1		Pump	Motor	Electrical					
26	NN14	26	Sump 26	5711 Freeport Blvd	10	1	10	7	1	10	6.5	3	3	4	3.4	22.1	06	$280,000	
114	CC13	114	Sump 114	401 J Street	10	1	10	10	1	10	7.0	3	3	3	3.0	21.0			
4	II16	4	Sump 4	2600 Block 9th Ave/Curtis Park	4	1	7	3	5	7	4.5	5	4	4	4.6	20.7	10	$445,000	P#2 Sump Rehab
158	U17	158	Sump 158	300 Fairbanks Avenue	10	1	10	10	1	10	7.0	3	2	1	2.6	18.2			P#3 Auto Scrn Clnr
157	R16	157	Sump 157	#1 Morrison Avenue	10	1	4	7	1	10	5.5	3	3	3	3.3	18.2	06	$750,000	
5	MM19	96	Sump 5	5542 Fruitridge Road	10	1	4	7	1	6	4.8	4	4	3	3.7	17.9	09	$150,000	
97	PP15	97	Sump 97	6343 24th Street	10	1	7	4	1	10	5.5	3	3	0	3.2	17.6			
10	CC20	10	Sump 10	5105 Sandburg Drive	10	1	10	7	1	10	6.5	2	3	2	2.7	17.6			
151	Z18	151	Sump 151	600 Leisure Lane	10	1	7	7	1	10	6.0	2	2	4	2.9	17.4			
7	Z18	151	Sump 7	Exposition Blvd & RR Bridge	4	1	10	4	1	5	4.2	4	4	4	4.1	17.1			*Check*
39	QQ13	39	Sump 39	6792 South Land Park Drive	7	1	4	7	1	10	5.0	3	3	3	3.4	17.0	09	$150,000	
65	PP12	G253	Sump 65	1145 Silver Lake Drive	7	10	10	4	1	10	7.0	1	2	4	2.4	16.8	09	$250,000	
91	GG22	91	Sump 91	La Riviera Drive under Howe Avenue Bridge	10	1	10	10	1	10	7.0	2	2	2	2.4	16.8			
52	DD13		Sump 52	215 P Street/Crocker Art Gallery	10	1	10	10	1	10	7.0	2	2	2	2.2	15.4			
70	PP08	70	Sump 70	6482 Surfside Way	10	1	7	4	1	10	5.5	2	2	4	2.6	15.4	05	$250,000	
46	SS15	46	Sump 46	7271 24th Street	7	1	7	7	1	10	5.5	4	3	2	2.7	14.9			
153	X17	153	Sump 153	2301 Colfax	10	1	4	7	1	5	4.7	3	3	3	3.1	14.5	06	$220,000	P#4 Auto Scrn Clnr
132	UU09	132	Sump 132	7520 Pocket Road/Sacramento River	10	1	7	4	1	10	5.5	2	3	4	2.6	14.3			
73	CC13	52	Sump 73	4th & J Street Parking Garage/Lower Level Exit Ram	4	1	10	4	1	10	5.0	3	3	3	2.8	14.0			
98	U15	98	Sump 98	Northstead Drive/Across from Potomac Avenue	10	1	7	4	1	10	5.5	2	2	2	2.5	13.8			Completed
129	T13	129	Sump 129	3308 San Juan Road	10	1	4	4	1	10	5.0	2	2	4	2.7	13.5			
54	SS16	54	Sump 54	7201 25th Street	10	1	10	10	1	10	7.0	2	2	1	1.9	13.3			
101	FF20	10	Sump 101	5701 Elvas Avenue	10	1	7	4	1	10	5.5	2	3	3	2.4	13.2	10	$400	
141	S15	141	Sump 141	929 Elm Ridge Way	10	1	4	4	1	8	4.7	3	3	3	2.8	13.1			
37	LL22	37	Sump 37	4800 Power In Road	10	1	4	4	1	10	5.0	2	3	3	2.6	13.0			
104	MM12	104	Sump 104	5610 South land Park Drive/across from CWTP	10	1	4	4	1	10	5.0	3	3	2	2.6	13.0			
47	PP12	47	Sump 47	6610 13th Street	7	1	4	7	1	5	4.2	3	3	3	3.1	12.9	08	$150,000	
71	SS12	71	Sump 71	7342 Willow Lake Way/BTWN Two Houses	10	1	4	4	1	5	4.2	3	3	3	3.1	12.9	08	$200,000	Completed
66	LL24	66	Sump 66	Florin Perkins Road/RR Crossing	7	1	7	7	1	10	5.5	2	2	4	2.3	12.7	05	$300,000	*Check*
147	OO20	147	Sump 147	6260 Dias Avenue	10	1	4	7	1	7	5.0	2	2	4	2.5	12.5			
130	W12	130	Sump 130	2550 West El Camino	10	1	4	7	1	8	5.2	2	2	4	2.4	12.4	07	$300,000	
19	KK19	96	Sump 19	4500 52nd Street	7	1	4	4	1	6	3.8	3	3	4	3.2	12.3			
51	OO22	51	Sump 51	6161 Power Inn Road	7	1	4	7	1	7	4.5	2	3	3	2.7	12.2	08	$150,000	
154	V17	154	Sump 154	77 Arcade Blvd	10	1	4	4	1	10	5.0	3	0	1	2.4	12.0			P#1 Outfall Structure
112	PP10	112	Sump 112	201 Country Place Court	10	1	1	4	1	5	3.7	2	3	4	3.2	11.7			
30	QQ13	30	Sump 30	6704 land Park Drive	7	1	4	7	1	6	4.3	3	3	2	2.7	11.7			
138	UU12	138	Sump 138	7531 Maple Tree Way	10	1	1	7	1	5	4.2	2	3	3	2.6	11.7	07	$280,000	
68	XX19	68	Sump 68	8121 Franklin Blvd/Camino Royale/Union House	10	1	7	7	1	10	6.0	2	2	1	1.9	11.4			
103	U19	103	Sump 103	3230 Altos Avenue	10	1	1	4	1	5	3.7	3	3	3	3.1	11.4			
27	PP12	27	Sump 27	6420 South Land Park Drive	7	1	4	7	1	6	4.3	3	3	2	2.6	11.3			
44	OO22	44	Sump 44	6220 Sun River Drive	7	1	4	7	1	6	4.3	2	2	4	2.6	11.3			
142	TT12	142	Sump 142	7455 Greenhaven Drive	10	1	1	4	1	7	4.0	2	3	3	2.8	11.2			
38	FF20	38	Sump 38	5701 J Street	4	1	10	4	1	5	4.2	2	3	3	2.6	10.8			
34	WW13	34	Sump 34	7851 Freeport Blvd	10	1	7	7	1	10	6.0	2	2	2	1.8	10.8			
63	OO10	63	Sump 63	725 1/2 Clipper Way	7	1	4	4	1	10	4.5	2	2	2	2.4	10.8			

Drainage Utilities Assessment

					Critical Infrastructure							Condition Assessment					FY 04/05 Budget		
					Reliable, High Quality Customer Service	Compliance With Regulations and Enviromental Impact	Health & Safety of Employees and Public	Economic Impact (Community and Utility)	Ability to Restore Asset to Design LOS	Location/Critical Facility Impact	CI Total Score				CA Total Score	Total Combined Score	FY Proposed	Est. Amount	Notes
Sump ID	Map ID	Basin	Asset Type	Location	Weight	1	1	1	1	1	1		Pump	Motor	Electrical					
96	OO21	96	Sump 96	6525 65th Street Expressway		10	1	7	7	1	6	5.3	2	2	2	2.0	10.7			
8	NN20	8	Sump 8	5975 67th Street		10	1	4	7	1	6	4.8	2	3	1	2.2	10.6			
144	R19	144	Sump 144	4101 May Street/follow Driveway west to station		4	1	1	4	1	8	3.2	3	3	3	3.3	10.5			
159	U19	159	Sump 159	813 Arcade Blvd		10	1	4	4	1	5	4.2	4	3	1	2.5	10.4			
33	UU15	33	Sump 33	2190 Meadowview Road		10	1	10	7	1	10	6.5	1	1	2	1.6	10.4			
69	YY20	69	Sump 69	8241 Center Parkway/Arroyo Vista/Union Creek		10	1	7	7	1	10	6.0	2	2	1	1.7	10.2			
50	QQ22	50	Sump 50	6709 75th Street		7	1	4	7	1	10	5.0	2	2	1	2.0	10.0			
99	BB18	99	Sump 99	3401 Lanatt Street		10	1	4	4	1	10	5.0	2	2	1	2.0	10.0			
28	WW13	28	Sump 28	7788 Freeport Blvd/Below Meadowview WWTP		10	1	7	10	1	6	5.8	2	2	2	1.7	9.9			
58	X14	129	Sump 58	Azusa Street & Garden Highway		7	1	4	4	1	4	3.5	3	3	2	2.8	9.8	05	$250,000	In Const
67	VV20	67	Sump 67	7756 Center Parkway		10	1	7	7	1	10	6.0	2	2	1	1.6	9.6			
83	Y16	153	Sump 83	793 Del Paso Blvd & W.P.R.R.		4	1	10	4	1	4	4.0	2	2	2	2.4	9.6			
95	DD21	95	Sump 95	184 Cadillac Drive/Behind Apartments		10	1	1	6	1	8	4.5	2	2	2	2.1	9.5			
155	EE21	155	Sump 155	6201 Camellia Avenue		10	1	4	4	1	4	4.0	4	3	1	2.3	9.2			
41	LL12	104	Sump 41	1000 Rio Lane		10	1	4	4	1	5	4.2	2	2	2	2.2	9.2			
128	VV17	128	Sump 128	3951 Mack Road/Morrison Creek		10	1	4	4	1	6	4.3	2	2	4	2.1	9.1	06	$350,000	
43	LL22	43	Sump 43	4801 Power Inn Road Near RR Tracks		7	1	7	4	1	7	4.5	2	2	2	2.0	9.0			
116	NN25	116	Sump 116	88th Street south of 37th Avenue		10	1	1	4	1	7	4.0	2	2	2	2.2	8.8			
94	RR12	94	Sump 94	7005 Reichmuth Way		10	1	1	4	1	5	3.7	2	3	4	2.4	8.8			
31	GG21	31	Sump 31	6441 Elvas Avenue		10	1	7	7	1	10	6.0	1	1	1	1.3	7.8			
148	PP23	148	Sump 148	8200 Elder Creek Road		7	1	1	4	1	4	3.0	2	3	3	2.5	7.5			
92	FF24	92	Sump 92	Rear of 37 Grand Rio Circle North of La Riviera Dr		7	1	1	4	1	5	3.2	2	3	1	2.2	7.0			
26		26	Drains	All drains around Sump 26		10	1	10	7	1	10	6.5					6.5			
52			Drains	All drains around Sump 52		7	1	10	10	1	10	6.5					6.5			
152	AA19	152	Sump 152	East End of Tribute Road/Cal Expo Lot D		10	1	7	10	1	10	6.5					6.5			
200	XX21	69	Sump 200	8151 Bruceville Road		7	1	10	10	1	10	6.5					6.5			
10		10	Drains	All drains around Sump 10		7	1	10	7	1	10	6.0					6.0			
117	R21	117	Sump 117	In Village Green Mobile Home Park/Chennault Court		1	1	1	1	1	5	1.7	3	3	4	3.5	5.8			
33		33	Drains	All drains around Sump 33		7	1	10	4	1	10	5.5					5.5			
54		54	Drains	All drains around Sump 54		7	1	10	4	1	10	5.5					5.5			
203	YY19	68	Sump 203	Franklin Blvd South of Ehrhardt		7	1	10	7	1	5	5.2					5.2			
24		24	Drains	All drains around Sump 24		7	1	7	7	1	7	5.0					5.0			
31		31	Drains	All drains around Sump 31		7	1	7	4	1	10	5.0					5.0			
67		67	Drains	All drains around Sump 67		10	1	4	4	1	10	5.0					5.0			
96		96	Drains	All drains around Sump 96		8	1	7	7	1	6	5.0					5.0			
109	FF23	109	Sump 109	117 Beckenwood Way		10	1	4	4	1	10	5.0					5.0			
152		152	Drains	All drains around Sump 152		4	1	7	7	1	10	5.0					5.0			
160	X10	160	Sump 160	Shorebird & Killiwake Drive		10	1	4	4	1	10	5.0					5.0			
144		144	Drains	All drains around Sump 144		7	1	7	4	1	8	4.7					4.7			
60	AA14		Sump 60	N/A 7th SL @ UPRR Underpass		4	1	10	7	1	7	5.0	1	1	1	0.9	4.5			
65		G253	Drains	All drains around Sump 65		4	1	10	1	1	10	4.5					4.5			
66		66	Drains	All drains around Sump 66		4	1	7	4	1	10	4.5					4.5			
68		68	Drains	All drains around Sump 68		7	1	4	4	1	10	4.5					4.5			
69		69	Drains	All drains around Sump 69		7	1	4	4	1	10	4.5					4.5			
111	Y14	111	Sump 111	End of North 5th Street by RR Tracks		10	1	4	4	1	7	4.5					4.5			

Drainage Utilities Assessment

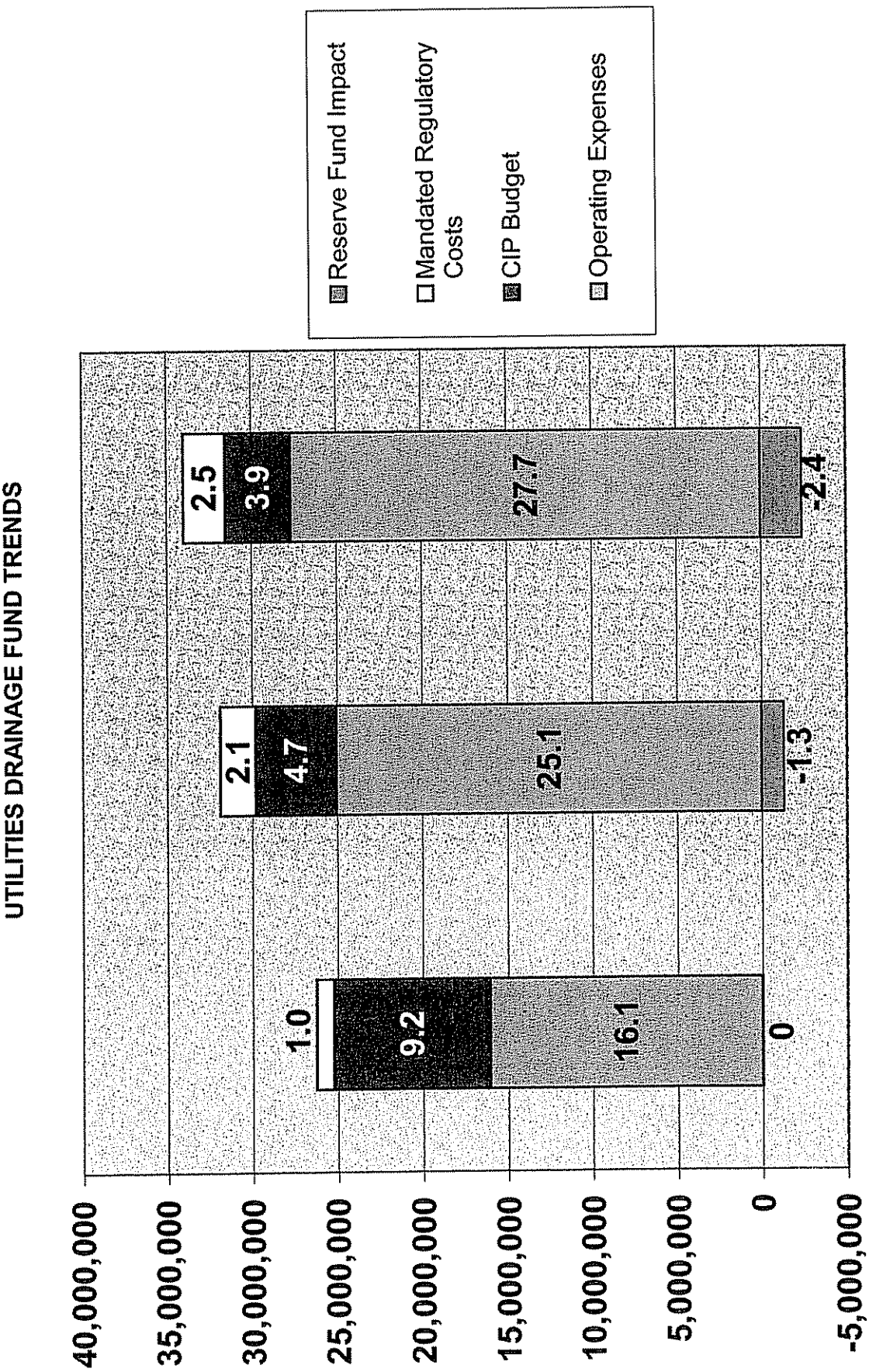
					Critical Infrastructure							Condition Assessment					FY 04/05 Budget		
					Reliable, High Quality Customer Service	Compliance With Regulations and Enviromental Impact	Health & Safety of Employees and Public	Economic Impact (Community and Utility)	Ability to Restore Asset to Design LOS	Location/Critical Facility Impact	CI Total Score				CA Total Score,	Total Combined Score	FY Proposed	Est. Amount	Notes
Sump ID	Map ID	Basin	Asset Type	Location	Weight	1	1	1	1	1	1		Pump	Motor	Electrical					
113	HH21	113	Sump 113	6800 Folsom Blvd		4	1	10	4	1	7	4.5					4.5			
149	AA15	149	Sump 149	1201 North A Street/12th Street Underpass		4	1	10	4	1	7	4.5					4.5			
151		151	Drains	All drains around Sump 151		7	1	4	4	1	10	4.5					4.5			
19		96	Drains	All drains around Sump 19		7	1	7	4	1	6	4.3					4.3			
22	QQ14	22	Sump 22	6796 Golf View Drive		7	1	4	7	1	6	4.3					4.3			
25	NN15	G254	Sump 25	5730 24th Street		10	1	4	4	1	6	4.3					4.3			
157		157	Drains	All drains around Sump 157		9	1	1	4	1	10	4.3					4.3			
90	BBB14	NA	Sump 90	8685 Freeport Blvd/Down Drive to Back Lot		1	1	1	4	1	1	1.5	2	2	2	2.8	4.2			P#5 Repl Scrn Clnr
108	SS14	108	Sump 108	2075 63rd Avenue		10	1	4	4	1	5	4.2					4.2			
37		37	Drains	All drains around Sump 37		7	1	1	4	1	10	4.0					4.0			
56	MM11	56	Sump 56	980 Seamas Avenue		1	1	1	1	1	5	1.7	2	2	2	2.4	4.0			
70		70	Drains	All drains around Sump 70		7	1	4	1	1	10	4.0					4.0			
97		97	Drains	All drains around Sump 97		7	1	4	1	1	10	4.0					4.0			
101		10	Drains	All drains around Sump 101		7	1	1	4	1	10	4.0					4.0			
103		103	Drains	All drains around Sump 103		7	1	1	4	1	10	4.0					4.0			
114		114	Drains	All drains around Sump 114		4	1	4	4	1	10	4.0					4.0			
129		129	Drains	All drains around Sump 129		7	1	1	4	1	10	4.0					4.0			
132		132	Drains	All drains around Sump 132		7	1	1	4	1	10	4.0					4.0			
140	N17	140	Sump 140	181 Pinedale Avenue		10	1	1	3	1	8	4.0					4.0			
154		154	Drains	All drains around Sump 154		7	1	1	4	1	10	4.0					4.0			
35	UU13	35	Sump 35	South End of Myrtle Vista		10	1	4	4	1	5	4.2	1	1	1	0.9	3.6			
95		95	Drains	All drains around Sump 95		7	1	1	4	1	8	3.7					3.7			
102	V16	102	Sump 102	300 Bowman Avenue		10	1	1	4	1	5	3.7					3.7			
115	UU18	115	Sump 115	4100 Brookfield Drive		10	1	1	4	1	5	3.7					3.7			
130		130	Drains	All drains around Sump 130		7	1	1	4	1	8	3.7					3.7			
139	XX16	139	Sump 139	8054 Torrente Drive		10	1	1	4	1	5	3.7					3.7			
140		140	Drains	All drains around Sump 140		7	1	1	4	1	8	3.7					3.7			
141		141	Drains	All drains around Sump 141		7	1	1	4	1	8	3.7					3.7			
24	QQ13	24	Sump 24	Freeport Blvd/Bing Maloney Golf Course		7	1	4	4	1	4	3.5					3.5			
39		39	Drains	All drains around Sump 39		4	1	1	4	1	10	3.5					3.5			
43		43	Drains	All drains around Sump 43		7	1	1	4	1	7	3.5					3.5			
46		46	Drains	All drains around Sump 46		4	1	4	1	1	10	3.5					3.5			
98		98	Drains	All drains around Sump 98		4	1	4	1	1	10	3.5					3.5			
104		104	Drains	All drains around Sump 104		4	1	1	4	1	10	3.5					3.5			
109		109	Drains	All drains around Sump 109		4	1	4	1	1	10	3.5					3.5			
201	YY20	69	Sump 201	Consumnes River College		7	1	1	4	1	7	3.5					3.5			
128		128	Drains	All drains around Sump 128		7	1	1	4	1	6	3.3					3.3			
5		96	Drains	All drains around Sump 5		7	1	1	4	1	5	3.2					3.2			
8		8	Drains	All drains around Sump 8		7	1	1	4	1	5	3.2					3.2			
91		91	Drains	All drains around Sump 91		7	1	1	4	1	5	3.2					3.2			
92		92	Drains	All drains around Sump 92		7	1	1	4	1	5	3.2					3.2			
159		159	Drains	All drains around Sump 159		7	1	1	4	1	5	3.2					3.2			
100	PP12	100	Sump 100	1144 Silver Lake Drive on Drainage Canal		1	1	1	1	1	1	1.0	2	3	4	3.1	3.1			
34		34	Drains	All drains around Sump 34		4	1	1	1	1	10	3.0					3.0			
50		50	Drains	All drains around Sump 50		4	1	1	1	1	10	3.0					3.0			

Drainage Utilities Assessment

					Critical Infrastructure							Condition Assessment					FY 04/05 Budget		
					Reliable, High Quality Customer Service	Compliance With Regulations and Enviromental Impact	Health & Safety of Employees and Public	Economic Impact (Community and Utility)	Ability to Restore Asset to Design LOS	Location/Critical Facility Impact	CI Total Score				CA Total Score	Total Combined Score	FY Proposed	Est. Amount	Notes
												Pump	Motor	Electrical					
Sump ID	Map ID	Basin	Asset Type	Location	Weight	1	1	1	1	1	1								
51		51	Drains	All drains around Sump 51		4	1	1	4	1	7	3.0					3.0			
63		63	Drains	All drains around Sump 63		4	1	1	1	1	10	3.0					3.0			
99		99	Drains	All drains around Sump 99		4	1	1	1	1	10	3.0					3.0			
108		108	Drains	All drains around Sump 108		4	1	1	1	1	10	3.0					3.0			
155		155	Drains	All drains around Sump 155		7	1	1	4	1	4	3.0					3.0			
158		158	Drains	All drains around Sump 158		4	1	1	1	1	10	3.0					3.0			
160		160	Drains	All drains around Sump 160		4	1	1	1	1	10	3.0					3.0			
44		44	Drains	All drains around Sump 44		4	1	4	1	1	6	2.8					2.8			
22		22	Drains	All drains around Sump 22		4	1	1	4	1	5	2.7					2.7			
27		27	Drains	All drains around Sump 27		4	1	1	4	1	5	2.7					2.7			
30		30	Drains	All drains around Sump 30		4	1	1	4	1	5	2.7					2.7			
47		47	Drains	All drains around Sump 47		4	1	1	4	1	5	2.7					2.7			
71		71	Drains	All drains around Sump 71		4	1	4	1	1	5	2.7					2.7			
102		102	Drains	All drains around Sump 102		4	1	1	4	1	5	2.7					2.7			
202	VV19	67	Sump 202	4605 Tangerine Avenue		7	1	1	1	1	5	2.7					2.7			
23	OO15	G254	Sump 23	SW Cor Corp Yard/by Airplane Taxi St		4	1	1	4	1	4	2.5					2.5			
73		52	Drains	All drains around Sump 73		1	1	1	1	1	10	2.5					2.5			
111		111	Drains	All drains around Sump 111		4	1	1	1	1	7	2.5					2.5			
142		142	Drains	All drains around Sump 142		4	1	1	1	1	7	2.5					2.5			
147		147	Drains	All drains around Sump 147		4	1	1	1	1	7	2.5					2.5			
200		69	Drains	All drains around Sump 200		1	1	1	1	1	10	2.5					2.5			
20	T13	20	Sump 20	SE of Truxel/North of I-80 /Behind Home Depot		4	1	1	1	1	5	2.2					2.2			
41		104	Drains	All drains around Sump 41		4	1	1	1	1	5	2.2					2.2			
56		56	Drains	All drains around Sump 56		4	1	1	1	1	5	2.2					2.2			
94		94	Drains	All drains around Sump 94		4	1	1	1	1	5	2.2					2.2			
112		112	Drains	All drains around Sump 112		4	1	1	1	1	5	2.2					2.2			
115		115	Drains	All drains around Sump 115		4	1	1	1	1	5	2.2					2.2			
117		117	Drains	All drains around Sump 117		4	1	1	1	1	5	2.2					2.2			
138		138	Drains	All drains around Sump 138		4	1	1	1	1	5	2.2					2.2			
139		139	Drains	All drains around Sump 139		4	1	1	1	1	5	2.2					2.2			
153		153	Drains	All drains around Sump 153		1	1	1	1	1	7	2.0					2.0			
20		20	Drains	All drains around Sump 20		4	1	1	1	1	4	2.0					2.0			
58		129	Drains	All drains around Sump 58		1	1	1	1	1	7	2.0					2.0			
60			Drains	All drains around Sump 60		1	1	1	1	1	7	2.0					2.0			
61		61	Drains	All drains around Sump 61		4	1	1	1	1	4	2.0					2.0			
89		89	Drains	All drains around Sump 89		1	1	1	1	1	1	1.0	2	2	2	2.0	2.0			
89	YY16	89	Sump 89	Levee Road off Beach Lake Road		1	1	1	1	1	7	2.0					2.0			
116		116	Drains	All drains around Sump 116		4	1	1	1	1	4	2.0					2.0			
148		148	Drains	All drains around Sump 148		1	1	1	1	1	7	2.0					2.0			
149		149	Drains	All drains around Sump 149		1	1	1	1	1	7	2.0					2.0			
201		69	Drains	All drains around Sump 201		1	1	1	1	1	7	2.0	1	1	1	0.9	1.8			
61	P13	61	Sump 61	Goldenland		1	1	1	1	1	5	1.7					1.7			
11		11	Drains	All drains around Sump 11		1	1	1	1	1	5	1.7					1.7			
11	N13	11	Sump 11	East Side of Natomas Blvd & North Park Drive		1	1	1	1	1	5	1.7					1.7			
12		12	Drains	All drains around Sump 12		1	1	1	1	1	5	1.7					1.7			

Drainage Utilities Assessment

					Critical Infrastructure							Condition Assessment					FY 04/05 Budget		
					Reliable, High Quality Customer Service	Compliance With Regulations and Enviromental Impact	Health & Safety of Employees and Public	Economic Impact (Community and Utility)	Ability to Restore Asset to Design LOS	Location/Critical Facility Impact	CI Total Score				CA Total Score	Total Combined Score	FY Proposed	Est. Amount	Notes
Sump ID	Map ID	Basin	Asset Type	Location	Weight	1	1	1	1	1	5	1.7	Pump	Motor	Electrical		1.7			
12	JJ13	12	Sump 12	SW Cor Elkhorn Blvd & Natomas Blvd		1	1	1	1	1	5	1.7					1.7			
13		13	Drains	All drains around Sump 13		1	1	1	1	1	5	1.7					1.7			
13	L13	13	Sump 13	East of E. Drainage Canal (needs update)		1	1	1	1	1	5	1.7					1.7			
14		14	Drains	All drains around Sump 14		1	1	1	1	1	5	1.7					1.7			
14	M13	14	Sump 14	East of E. Drainage Canal/Next to Basin		1	1	1	1	1	5	1.7					1.7			
15		15	Drains	All drains around Sump 15		1	1	1	1	1	5	1.7					1.7			
15	P13	15	Sump 15	Arco Arena Blvd NE of Tuscaro Apartments		1	1	1	1	1	5	1.7					1.7			
16		16	Drains	All drains around Sump 16		1	1	1	1	1	5	1.7					1.7			
16	T13	16	Sump 16	3330 Airport Road		1	1	1	1	1	5	1.7					1.7			
17		17A	Drains	All drains around Sump 17		1	1	1	1	1	5	1.7					1.7			
17	T10	17A	Sump 17	San Juan Road & Witter Way		1	1	1	1	1	5	1.7					1.7			
23		G254	Drains	All drains around Sump 23		1	1	1	1	1	5	1.7					1.7			
25		G254	Drains	All drains around Sump 25		1	1	1	1	1	5	1.7					1.7			
35		35	Drains	All drains around Sump 35		1	1	1	1	1	5	1.7					1.7			
38		38	Drains	All drains around Sump 38		1	1	1	1	1	5	1.7					1.7			
202		67	Drains	All drains around Sump 202		1	1	1	1	1	5	1.7					1.7			
203		68	Drains	All drains around Sump 203		1	1	1	1	1	5	1.7					1.7			
83		153	Drains	All drains around Sump 83		1	1	1	1	1	4	1.5					1.5			
90		NA	Drains	All drains around Sump 90		1	1	1	4	1	1	1.5					1.5			
4		4	Drains	All Drains around Sump 4		1	1	1	1	1	1	1.0					1.0			
7		151	Drains	All drains around Sump 7		1	1	1	1	1	1	1.0					1.0			
28		28	Drains	All drains around Sump 28		1	1	1	1	1	1	1.0					1.0			
100		100	Drains	All drains around Sump 100		1	1	1	1	1	1	1.0					1.0			
110		110	Drains	All drains around Sump 110		1	1	1	1	1	1	1.0					1.0			
110	PP11	110	Sump 110	#2 Sail Court		1	1	1	1	1	1	1.0					1.0			
113		113	Drains	All drains around Sump 113		1	1	1	1	1	1	1.0					1.0			


UTILITIES DRAINAGE FUND TRENDS
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
-5,000,000
1999
2003
2007
1.0
9.2
16.1
0
2.1
4.7
25.1
-1.3
2.5
3.9
27.7
-2.4
Reserve Fund Impact
Mandated Regulatory Costs
CIP Budget
Operating Expenses