

**FINAL**

**Municipal Service Review  
And Sphere of Influence Update**

**RECLAMATION DISTRICT NO. 1000  
(Natomas Basin)  
LAFC 14-08**

**February, 2010**



**Pumping Plants 1A and 1B**

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# **SACRAMENTO LOCAL AGENCY FORMATION COMMISSION**

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## EXECUTIVE SUMMARY

### RECOMMENDATIONS AND DETERMINATIONS

I recommend that the Sacramento Local Agency Formation Commission adopt the following findings and determinations for Reclamation District No. 1000:

1. The District provides efficient, comprehensive drainage and flood protection operation and maintenance to the residents, businesses and visitors of the Sacramento area and does so in a highly professional and cost-effective manner
2. The District collaborates with surrounding flood control agencies and local jurisdictions, ensuring coordination of programs and services. Communication between Reclamation District No. 1000 and American River Flood Control District, the Sacramento Area Flood Control Agency, the City of Sacramento, the County of Sacramento, and Federal and State Agencies provides a seamless delivery service system.
3. The District's involvement with local, state, and federal agencies to reduce the flood risk and prevent potential levee failures benefits the entire Sacramento region including areas not served by the District. The District has entered into a Memorandum of Understanding with the Army Corps of Engineers for flood fight assistance and the State Office of Emergency Services.
4. The District's Sphere of Influence is coterminous with its District boundary and should remain so. The District serves a defined geographic area known as the Natomas Basin.
5. Municipal Service Review Determinations:
  1. **Regarding growth, population and employment projections for the affected areas:**

Regarding population growth, employment, and development projections, the Commission determines the District is capable of providing services to meet the projected growth during the next five years. New development in Natomas will be limited during the next five years due to floodplain restrictions until the perimeter levee system is repaired. The District provides on-going operation and maintenance for interior drainage canals, storm water pumping stations and

portions of the Sacramento River Flood Control Project levee system surrounding the Natomas Basin perimeter.

**2. Regarding present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies:**

The Commission determines the District operates and maintains the existing flood control and drainage system within its jurisdiction in a highly professional and cost effective manner. The Commission also recognizes that the levee system protecting Natomas has deficiencies which need to be addressed in order to provide an appropriate level of flood protection for an urban area such as Natomas. The Sacramento Area Flood Control Agency as the regional flood control agency is working with the State Central Valley Flood Protection Board and the U.S. Army Corps of Engineers and is responsible for planning and constructing the required capital levee improvements protecting the Natomas Basin. SAFCA's goal is to provide 100 year flood protection as soon as possible with an ultimate goal of at least 200-year flood protection consistent with the provisions of SB 5 approved by the State Legislature in 2007.

LAFCo staff recommends that RD No. 1000 and the City of Sacramento collaborate to provide for the use of backup generators at some of the District's pumping facilities in case of power outages during the flood season. In addition, the District should work with the State and other local flood control agencies to implement the Army Corps of Engineers' final vegetation and encroachment policies when approved. These issues were outlined in the letter from the City of Sacramento Department of Utilities dated January 13, 2009.

**3. Regarding financial ability of agencies to provide services:**

The Commission determines that the District has no serious financing constraints for current levels of service. Funding is dependent primarily on property assessments levied by the District and collected through the County Tax Collector.

**4. Regarding status of, and opportunities for, shared facilities:**

The Commission determines that the District implements all reasonable cost avoidance opportunities. The District coordinates plans and designs drainage and flood protection measures, and shares resources with other local entities such as the City and County of Sacramento, Sutter County, SAFCA, Federal and State Agencies, and Natomas Mutual Water Company during a flood event or other emergency.

The Commission determines that the District shares facilities and resources with other agencies and continually reviews new opportunities to do so by joint

planning and cooperation with other local agencies to maintain and construct new drainage facilities within the Basin.

**5. Regarding accountability for community service needs, including governmental structure and operational efficiencies:**

The District operates with a high degree of efficiency and professional cooperation with outside agencies, neighborhood groups, community organizations and affected landowners. The District has open public Board meetings monthly and posts its agenda and Board minutes on the District website.

**6. Regarding any other matter related to effective or efficient service delivery, as required by Commission policy:**

The Commission determines that the District provides services to specific geographic areas and there is no overlap in service delivery with other Reclamation Districts or any other affected agencies that provide similar services.

As discussed above, the City of Sacramento Department of Utilities has provided the following two comments which have been included in the Determinations:

1. There are currently no permanent or temporary backup generators at the RD 1000 pumping facilities. This is a potentially critical deficiency given reliance of the North Natomas internal drainage system on the RD 1000 pumps. RD 1000 has arranged for rental of temporary backup generators for the upcoming wet season if needed, however, the City would like to see a plan developed to permanently remedy this situation in the near future. Provisions for a generator were included with the improvements to Sump 1B funded by the City as part of the North Natomas Drainage Improvements, but had to be abandoned because of cost overruns. The City is willing to coordinate with RD 1000 on implementation of these improvements as funding becomes available through RD 1000 and/or the City's North Natomas Assessment District, with Sump 1B being the top priority.
2. The Army Corps' draft vegetation and encroachment policy may threaten the ability of local levee maintaining agencies' abilities to receive adequate ratings on their maintenance activities. RD 1000, in collaboration with SAFCA, the City, American River Flood Control District, and the State of California is working with the Army Corps to find a workable solution that meets levee safety standards while maintaining the environmental values of the floodways.

**Local Agency Formation Commission Municipal Service Review  
And Sphere of Influence Factors**

**Introduction**

The Cortese-Knox-Hertzberg Local Government Reorganization (CKH) Act of 2000 requires that each Local Agency Formation Commission (LAFCo) prepare Municipal Service Reviews and update Spheres of Influence for all cities and independent special districts within its jurisdiction.

A Sphere of Influence is defined by Government Code 56425 as:

A plan for the probable physical boundary and service area of a local agency or municipality.

A Municipal Service Review is defined by Government Code Section 56430 as:

A means of identifying and evaluating public services.

A Municipal Service Review may be conducted prior to, or in conjunction with, the update of a Sphere of Influence.

**SPHERE OF INFLUENCE**

**Purpose**

In order to carry out its purposes and responsibilities for planning and shaping logical and orderly development as well as the coordination of local governmental agencies so as to most advantageously provide for the present and future needs of the County and its communities, the Sacramento Local Agency Formation Commission must develop and determine the Sphere of Influence of each local governmental agency under its jurisdiction within the County.

**Requirements**

When adopting, amending or updating a Sphere of Influence, the Commission shall, according to Government Code, do all of the following:

- (1) Require districts to file written statements specifying the functions or classes of services provided.
- (2) Establish the nature, location and extent of any functions or classes of services provided by the districts.

In determining the Sphere of Influence of each local agency, the Commission shall consider and prepare determinations with respect to each of the following:

- (1) The present and planned land uses in the area, including agricultural and open space lands.
- (2) The present and probable need for public facilities and services in the area.
- (3) The present capacity of public facilities and adequacy of public services that the agency provides, or is authorized to provide.
- (4) The existence of any social or economic communities of interest in the area if the Commission determines they are relevant.

### **MUNICIPAL SERVICE REVIEW**

#### **Requirements**

When adopting a Municipal Service Review, the Commission shall include a written statement of its determinations with respect to each of the following:

- (1) Growth and population projections for the affected area,
- (2) Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies,
- (3) Financial ability of agencies to provide services,
- (4) Status of, and opportunities for, shared facilities,
- (5) Accountability for community service needs, including governmental structure and operational efficiencies, and
- (6) Any other matter related to effective or efficient service delivery, as required by commission policy.

## **Sacramento Region Flood Control History and Overview**

### **Overview of the History and Purpose of Flood Control Districts**

Because of the importance of flood control and the potential liability, especially in the Central Valley, cities and counties throughout the State generally do not provide flood control services. The existing State structure, again, especially in the Central Valley, typically provides flood control by means of independent flood control districts and/or reclamation districts. These districts quite often do not conform to political boundaries (for instance, the City of West Sacramento is served by three reclamation districts and a maintenance area). Their boundaries are based on watershed and protection zones. The rationale for such special purpose districts is that they are able to provide a high degree of focus on public safety for areas that are subject to flooding; particularly areas behind levees which are at greater risk of catastrophic flooding and loss of life should a levee fail. General governments, whether cities or counties, typically include both lands subject to flooding and lands that are unlikely to be flooded. By focusing on lands subject to flooding, special districts are able to provide a more targeted public safety service and impose the costs of that service only on those benefited.

### **City of Sacramento Flood History**

Sacramento residents, officials and levee workers have long battled floodwaters from the Sacramento and the American Rivers. In the 1850's despite warnings, settlers opted to stay near the rivers for water supply, food source and transportation needs.

Major floods occurred in Sacramento in 1850 and 1862, resulting in an effort by the City officials to straighten the American River and in raising many of the western City streets by as much as ten feet. Devastating floods occurred again in 1907 and 1909, leading to the design of a comprehensive Sacramento River Flood Control System including levees on the lower American River. Again, in 1950, floodwaters from the American River covered the area now known as Campus Commons.

The first major upgrade to the original levee system occurred in the 1950's with the construction of Folsom Dam and the extension of the levees further upstream. These improvements provided protection during a major flood in 1955. At the time of their construction, the engineers thought they would provide protection against a flood so large it had just one chance in five hundred of occurring in any given year. However, since the construction of Folsom Dam, there have been five storms that are larger than any that had occurred in the prior period of record. The flood protection system was put to the test again in 1986 and led to renewed efforts to reduce the flood risk in Sacramento. After 1986, the flood control system was estimated to provide less than 100-year flood protection. Again in 1997, a flood equal to the 1986 event roared down the American River Canyon into Folsom Lake and through the American River levees protecting Sacramento. Folsom Dam and the downstream levees were able to handle the high water without flooding along the American River in Sacramento in part because the brunt of the storm passed to the north. A number of other locations in Northern California

experienced severe flooding as a result of levee breaks causing significant damage and some loss of life.

### **Sacramento River Flood Control Project**

The Sacramento River Flood Control Project is a Federal flood control project operated and maintained under the California State Department of Water Resources. It was authorized by Congress in 1917, and subsequent supplemental authorizations (e.g., Sacramento River Major and Minor Tributaries, American River Levees, etc.), have added components to the Sacramento River Flood Control Project over the years. The San Joaquin River Flood Control System consists of a number of separate federally authorized flood control projects, most of which have been built since the 1940's (e.g., Merced and Fresno County Steam Groups, Lower San Joaquin River, and federal projects and State designated floodways on virtually all the Sierra rivers draining into the San Joaquin Valley and the Tulare Lake Basin). The two major river flood control systems have combined totals of approximately 1,600 miles of federal project levees, 1,200 miles of designated floodways (148,000 acres), several thousand acres of project channels, and 55 other major flood control works (such as overflow weirs, flood relief structures, outfall gates, and the Sutter Bypass pumping plants).

The Federal government, acting through the U.S. Army Corps of Engineers, designed and constructed many of these federal levees and other flood control works; some then-existing levees were also incorporated into the Sacramento and San Joaquin flood control systems by federal statute. The State generally provides lands, easements, and rights-of-way when necessary for project construction. An exception to this process is the Lower San Joaquin River Flood Control Project which was designed and constructed to federal standards by the State (substituting physical works for acquisition of more costly flowage easements required for the authorized federal project).

Local public entities within both river systems have the responsibility, liability, and duty to maintain and operate the levees and other flood control works on a day-to-day basis in accordance with guidelines provided in the U.S. Army Corps of Engineers' Standard Operations and Maintenance Manual (and each applicable supplement for individual project units). The only flood control features on which operation and maintenance is not performed by local entities are those Sacramento River Flood Control Project works charged to the Department of Water Resources under Water Code Section 8361, and those Sacramento River Flood Control Project levees within maintenance areas that are maintained by the Department of Water Resources, with local beneficiaries paying the costs, under Water Code Section 12878.

The California State Department of Water Resources, under the authority of Water Code Sections 8360, 8370 and 8371, inspects the maintenance of the Sacramento River Flood Control Project levees performed by the responsible agencies, and reports to the U.S. Army Corps of Engineers on a regular basis regarding the status of levee maintenance accomplished under the provisions of Title 33, Code of Federal Regulations, Section 208.10. While there are no specific water code provisions directing the Department of

Water Resources to inspect and report on maintenance of the San Joaquin River Flood Control System, the Department of Water Resources has performed inspections and provided reports for many years as a matter of practice.<sup>1</sup>

The inspections verify, for both river systems, that local agencies are performing their legal and statutory responsibilities pursuant to Water Code Sections 12642 and 12657, and are meeting their legal obligations under assurance agreements with the State, to operate and maintain their flood control projects “on any stream flowing into, or in, the Sacramento Valley or the San Joaquin Valley.” The State inspects and reports only on the status of maintenance practices and on observable levee conditions resulting from those practices; the state does not conduct field studies to assess the internal structural integrity of the levees or their foundations.

### **Levee History and Capacity**

#### **Sacramento River Levee**

The 33-mile long levee portion of the Sacramento River system, which protects the Sacramento County and City area (as well the southerly portion of Sutter County), extends from one mile south of Verona at the northwest corner of the Natomas Basin on the northern edge of Sacramento to the town of Freeport, along the southerly border of the City of Sacramento. This levee channel is designed to carry flood flows of about 110,000 cfs (a cubic foot is approximately the size of a basketball). A major contributor to the flows in this channel is the Natomas Cross Canal, which diverts the runoff from a large watershed in western Placer and southern Sutter Counties around the Natomas Basin and into the Sacramento River at Verona.

In the early 1900s, bypasses were built into the system to act as pressure release points in times of too much water. Low dams called “weirs,” located at strategic locations, spill excess flows when the river holds too much water. The spilled water is allowed to flood many miles of undeveloped farmland in the bypass system, taking pressure off the swollen river and conveying floodwaters safely past urban centers to the San Francisco Bay.

There are two weirs and two bypasses in Sacramento portion of the flood control system. The Fremont Weir is an ungated low dam located at the confluence of the Sacramento and Feather Rivers and the Sutter Bypass, just upstream from Verona. It serves to divert flood flows from these waterways into the Yolo Bypass, thus reducing the flood stages in the Sacramento River channel. The Yolo Bypass is a large levee channel extending from the Fremont Weir south to Cache Slough. During a flood, 80 percent of the water from the Sacramento River is conveyed through the Yolo Bypass.

The Sacramento Weir is a gated low dam along the west bank of the Sacramento River about three miles upstream from its confluence with the American River. When flood stages in the Sacramento River at the “I” Street Bridge reach 27.5 feet msl

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<sup>1</sup> Consistent with Title 33, Code of Federal Regulations.

(corresponding to a flow of 98,000 cfs), the weir gates are manually opened and flows are diverted into the Sacramento Bypass. The Sacramento Bypass is a levee channel extending from the west bank of the Sacramento River to the east bank of the Yolo Bypass just north of the City of West Sacramento. Its purpose is to convey the entire excess flow in the Sacramento River/ American River channel to the Yolo Bypass so as to maintain the flow in the Sacramento River, upstream and downstream of the mouth of the American River, at essentially the same level. In a large flood, about 15 percent of the American River flow actually moves up the Sacramento River and into the Sacramento Bypass.

### **Agencies Responsible for Levee Construction**

Major flood control projects including new levees are typically designed and constructed by the U.S. Army Corp of Engineers. The State Central Valley Flood Protection Board (formerly known as the Reclamation Board) is the local sponsor for these projects in the Central Valley and provides a cost share. The Sacramento Area Flood Control Agency (SAFCA) is a joint powers authority and is responsible for funding the local share for these major flood control improvements. As noted above, however, SAFCA undertook the modifications to the existing levee system and construction of new levees in the north area during the early and mid 1990's. Upon completion of these new levees, SAFCA contracted with the District to operate and maintain them.

**U.S. Army Corps of Engineers** is the Federal agency responsible for feasibility studies, design and construction of major flood control projects and emergency response. The Corps typically designs and constructs major flood control projects, which must be authorized by Congress. The Federal government provides between 50% and 75% of the project's costs. The Corps provides general oversight of the operation and maintenance of the completed projects and will provide emergency flood fight response during a declared disaster if requested by the State. The Corps also provides emergency repairs to damaged facilities under Public Law 84-99.

**The California Central Valley Flood Protection Board (CVFPB) (formerly State Reclamation Board)** oversees flood control activities in the Central Valley. It serves as the local sponsor to the Corps of Engineers on Federal flood control projects, cost shares in the projects, holds title or easements to the lands underlying the project and inspects the operation and maintenance of the facilities by the local flood control and reclamation districts. The CVFPB is the regulatory authority over any proposed activities which could affect the flood control system.

**The State Department of Water Resources** provides staff to the CVFPB, assists local flood control districts particularly during flood events, monitors river and reservoir levels and operates the State Flood Center. In addition, the Department is responsible for operation and maintenance of a number of levees in the Central Valley through State Maintenance Areas as well as a number of dams and reservoirs. The Department also has a significant role in water supply.

**The Sacramento Area Flood Control Agency (SAFCA)** is a joint powers authority representing the City and County of Sacramento, a portion of Sutter County, American River Flood Control District, and Reclamation District 1000. SAFCA's main function is as a planning and financing agency for regional flood control projects responsible for constructing major capital improvements. It provides the local legal assurances and the local cost share to the CVFPB on Federal flood control projects. However, due to the inability to get a regional flood control project authorized by Congress, SAFCA undertook the design and construction of significant levee improvements during the early and mid-1990's and is seeking reimbursement from the Federal and State governments. SAFCA is similarly undertaking the Natomas Levee Improvement Project described later in this report to address levee deficiencies in the perimeter levee system around Natomas and "recertify" the system under the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program.

The boundaries of the Agency are coterminous with those of its member agencies excepting: (1) the portion of Sacramento County lying within the boundaries of the incorporated cities of Folsom, Galt and Isleton; and (2) the portion of Sutter County lying to the north of the Natomas Cross Canal and King's Slough.

The Sacramento Area Flood Control Agency Board of Directors consists of thirteen members, appointed by each represented member agency. The Sacramento Area Flood Control Agency's long term goal is to provide the Sacramento region with as much flood control protection as appropriate for a populated metropolitan area with a stated goal of at least 200-year flood protection.

The powers of the Sacramento Area Flood Control Agency have been augmented by the California State Legislature through adoption of the Sacramento Area Flood Control Agency Act that enables SAFCA to coordinate a regional effort to finance, construct and maintain facilities to ensure a reasonable and prudent level of flood protection, as determined by the Agency, in developed and urbanizing areas which are designated for residential, commercial, or industrial use, and to provide local assurances for participation in cost sharing for federal flood control projects.

**Agencies Responsible for Levee Operation and Maintenance  
Within Sacramento County**

There are five local agencies in Sacramento County that operate and maintain levees along both the American and Sacramento Rivers. Levee maintenance and service is currently provided by the American River Flood Control District, Reclamation District #1000, District Maintenance Area No. 9, the City of Sacramento and the County of Sacramento. These levees are maintained in accordance with federal and state standards

**American River Flood Control District, Reclamation District 1000, and State Maintenance Area No. 9** are the agencies that provide for the operation and maintenance of the flood control system in Sacramento. These entities perform the ongoing maintenance on the levees, patrol during floods and provide the initial flood fight efforts

should a problem arise. The American River Flood Control District was formed in 1927 under special legislation. The special legislation that created the American River Flood Control District (Stats. 1927, Chapter 808, as amended) applies only to American River Flood Control District.<sup>2</sup> For this reason, it is not found in the general sections of the California Water Code, which contain laws of general applicability to water districts. Instead, the legislation that governs the District's operations can be found in the appendix to the Water Code, which contains uncodified laws.

State Maintenance Area No. 9 is under the direction of the State Department of Water Resources and maintains the Sacramento River levee south of downtown Sacramento. . State Maintenance Areas are formed by the California State Department of Water Resources for the purpose of providing maintenance on levees for flood control when local agencies fail in their responsibilities. Maintenance districts are formed under the provisions of Section 12878 of the California Water Code. Maintenance work is provided by the State Department of Water Resources. The boundaries of a maintenance area are determined by study of level of benefit. Properties are assessed and landowners are billed for levee maintenance by the California State Department of Water Resources. The assessment for each property is determined by the benefit to properties based upon the amount of protection needed rather than on assessed valuation (or ad valorem).

Maintenance Areas are exempt, or beyond the purview, of Local Agency Formation Commissions. If landowners wish to reactivate a reclamation district that has been placed within a Maintenance Area by the State Department of Water Resources, and they are willing to assume financial and other obligations of levee maintenance, the State will consider their request.

However, if landowners wish to assume financial control and other obligations for levee maintenance and wish to form a reclamation district, flood control district, or reorganize one or more of these districts, the district formation/ reorganization is a matter of LAFCo purview and the district formation/ reorganization is a LAFCo process.

The City of Sacramento, the County of Sacramento, and the County of Sutter primarily operate and maintain the local drainage systems comprised of storm drains, culverts, pumping stations and channels with levees. These jurisdictions pump water into the levee systems. In addition, the City and County operate and maintain local levees as well as portions of the Sacramento and American River levee systems that are located outside the boundaries of the American River Flood Control District.

### **Levee Problems**

Levees can fail for a number of reasons, including: (1) seepage through the surface of the levee; (2) seepage below the levee surface, leading to landside boils;<sup>3</sup> (3) erosion caused

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<sup>2</sup> American River Flood Control District Act, Act 320. (1927)

<sup>3</sup> A landside boil is caused by water seeping under a levee and forcing its way to the surface on the landside of the levee. The water bubbles or “boils” on the surface, hence the name. The water may begin to carry levee material (dirt and sand) with it eventually leading to a levee failure if not addressed.

by swift moving flood water along the river side, and (4) overtopping the levee when its capacity is exceeded.

**Reclamation District No. 1000 Summary Data Sheet**

District Offices: Reclamation District No. 1000 (Natomas Basin)  
1633 Garden Highway  
Sacramento, California 95815  
(916) 922-1449

Administration: Paul Devereux, General Manager  
Staff of nine plus temporary winter help during flood  
Events.

Date of Formation: April 8, 1911

Enabling Act: Water Code Section 50000 et seq.

Governing Body: Seven Member Board of Trustees; Land owner/voter  
district. Elected to 4-year staggered terms.

Sphere of Influence: Coterminous with present District boundaries.

Area: 55,130 Acres / Sacramento and Sutter Counties

Primary Land Use: Agriculture/ Urban (Residential, Commercial and  
Industrial)/Sacramento International Airport/Conservation

Population: 70,000 (approximately)

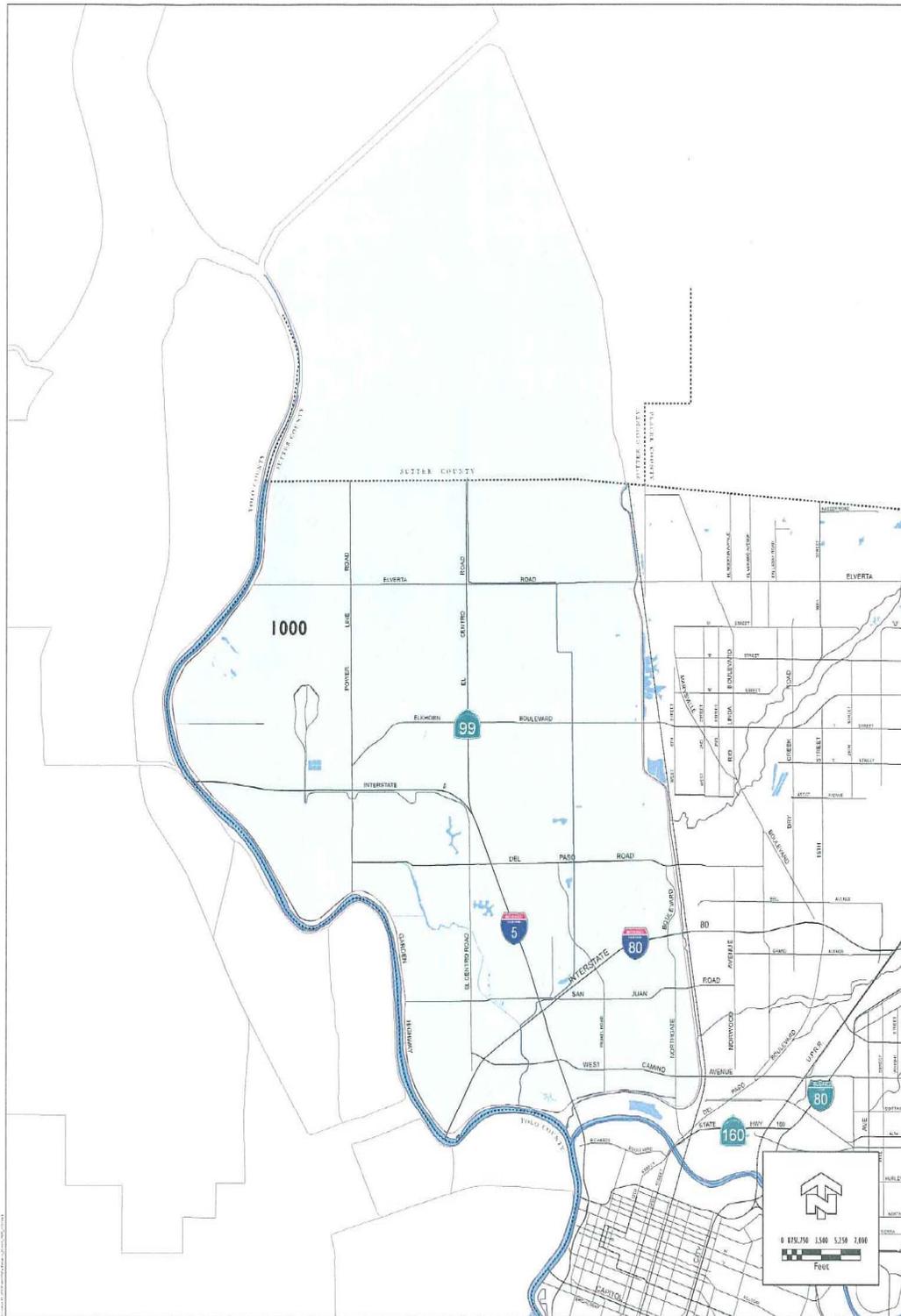
District Services: Drainage, flood control, levee maintenance

Latent Powers: District performs authorized services; no latent powers.

Total Budget: \$3,228,677

Primary Revenue Source: Property Assessment

Fiscal Health: Adequate



Sacramento County Reclamation District 1000



*Natomas East Main Drain Canal (NEMDC) (also known as Steelhead Creek)*



*Vegetation between the Sacramento River and Garden Highway Levee*



*Drainage Canal along Riego Road Sutter County*

### **Overview of Reclamation District No. 1000**

#### **Purpose, Powers and Responsibilities**

Reclamation District No. 1000 was created April 8, 1911 by a Special Act of the California Legislature to provide drainage, flood control, and levee maintenance to an area of approximately 55,000 acres in the northwest portion of Sacramento County (38,000 acres) and southwestern portion (17,000 acres) of Sutter County, known as the Natomas Basin.

#### **District Location**

The District is bounded on the west by the Sacramento River, on the east by the Natomas East Main Drainage Canal (NEMDC) and Pleasant Grove Creek Canal (PGCC), on the north by the Natomas Cross Canal (NCC), and on the south by the American River.

The District area is known as the Natomas Basin and is 17 miles long in the north-south direction and 5-6 miles wide in the east-west direction. The basin is relatively flat, with an elevation range of approximately 10 feet to 40 feet above mean sea level.

The District serves property located in the City of Sacramento, County of Sacramento and the County of Sutter.

### **District Services**

Reclamation District No. 1000 provides drainage and levee operation and maintenance services to the territory within the District boundary. Drainage is provided by collecting storm water and agricultural runoff into a system of ditches and canals and pumping the excess water from the interior of the District into the adjacent rivers, creeks, and canals.

Levee operation and maintenance service consists of maintaining the portion of the Federal Sacramento River Flood Control Project levee system which includes on the west, 18.6 miles of the east levee of the Sacramento River from the confluence of the American River to Verona; on the south, 2.3 miles of the north levee of the American River from its confluence with the Sacramento River to the NEMDC; on the east, 17.3 miles of the NEMDC/PGCC from the American River to the NCC; and on the north, 4.4 miles of the NCC. These approximately 43 miles of levees all are considered Project Levees since they are part of the Federal Project. In addition, the District maintains approximately 10 miles of non-project levees in the Pleasant Grove area which lies east of the basin.

The District's operation and maintenance services include the day to day activities such as inspections, mowing, vegetation control, rodent control, erosion repairs, access road maintenance and small capital projects. During flood events, the District personnel monitor the levee system through 24-hour patrols for boils, seepage or other signs of levee distress. The District is the first responder in case of a flood emergency with labor, equipment and materials. The District retains the services of local contractors to provide the resources during a flood emergency. The State and Army Corps of Engineer's provide technical assistance and would assume responsibility for the flood fight if the District's resources are exhausted.

The District also operates and maintains an interior drainage system of 30 miles of drainage canals, about 150 miles of drainage ditches and seven pumping stations. The drainage system collects storm water and agricultural run off and delivers it to the pumping plants for discharge into the adjacent rivers, creeks and canals. A portion of the canal system in North Natomas also includes small levees certified by the Federal Emergency Management Agency (FEMA) on either side of the canal which provide protection to North Natomas from interior flooding resulting from rainfall within the Natomas basin.

The District's operation and maintenance services for the drainage system includes the day to day activities such as mowing, vegetation control, rodent control, sediment removal, erosion protection, and other capital projects. The pumping plants are inspected and tested annually prior to flood season. Repairs are made as necessary to maintain their functionality and capacity. During rain events, District personnel monitor the pump stations and levels in the canals on a 24 hour basis. Debris and other trash collected at

the entrance to the sump are collected using automated trash racks and removed from the site by equipment on a regular basis.

The District is not responsible for the rivers, creeks and canals surrounding Natomas. The State Department of Water Resources is responsible for maintaining the capacity of these floodways including vegetation and/or sediment removal as necessary.

### **Description of Delivery System**

Generally, levees operated or maintained by Reclamation District No. 1000 are on easements of record, except for the Cross Canal and its south levee and some sections of the NEMDC and its west levee, which are on parcels owned in fee by the District. The main interior canals and the pumping stations are also on land owned in fee. The smaller drainage canals and ditches are generally on easements providing full rights for the District to undertake its operation and maintenance responsibilities.

The original perimeter levee system was constructed by the District between approximately 1913 and 1915. The typical levee was constructed using materials dredged from the Sacramento River or from excavated material which created the adjacent canal system. Since their construction there have been some minor modifications such as raising and strengthening through the years. However, as described later in this report, the most significant modification to the levee system since its construction is being proposed by SAFCA and is expected to be done over the next five years.

When originally designed, the interior canal system brought all agricultural drainage water to the pumping plant at Second Bannon along the Garden Highway at the southern end of the District. In 1920 a second plant was added at Pritchard Lake in the northern half of the basin as both an irrigation facility and drainage facility connected to the Sacramento River. A third pumping facility was added in 1939 and the interior drainage system remained in that configuration for many years. Eventually four more pumping plants were added at various locations to reduce the pressure on the original facilities.

In addition, as urbanization has occurred in the basin, the District has entered into agreements with the appropriate land use agencies (County of Sacramento, County of Sutter and City of Sacramento) to mitigate for the increased runoff due to urban development. In general, the land use agencies have agreed to pay for the increased capacity, construct the increased capacity or condition new development to compensate the District for adding capacity to handle the increase in runoff from urbanizing areas. For large blocks of development, the land use agency has constructed on-site detention basins to further limit runoff from the urbanized areas.

The system today consists of approximately 30 miles of main canals that Reclamation District No. 1000 owns in fee. These parcels are delineated on the subdivision plat maps, including acreage. Reclamation District No. 1000 also operates and maintains

approximately 150 miles of drainage ditches, which are on recorded "ditch and roadway" rights-of-way. They drain specific parcels and connect to the main canals.

At present Reclamation District No. 1000 operates seven pumping plants that pump agricultural irrigation tailwater and urban storm water into the Sacramento River, Natomas Cross Canal, and NEMDC). Plant 2 at the Prichard Lake was removed from operation in 2006 due to serious boils which threatened to fail the adjacent levee. A flood fight was conducted to stabilize the levee which necessitated removing the pump station. It is scheduled to be reconstructed in 2010 as part of the SAFCA Natomas Levee Improvement Project. Reclamation District No. 1000 drainage channels and Natomas Mutual irrigation channels overlap in some instances, with a combined total of approximately 247 miles of channels occupying an estimated 1,769 acres of the Natomas Basin.

The District will continue to coordinate drainage operations on a joint basis with the City of Sacramento, Sacramento County and Sutter County to ensure that the District has the ability to handle urban runoff related to new growth areas within the Basin.

#### **Drainage and Water Conveyance for Agricultural Purposes**

In addition to providing drainage, the District's canals and channels are used for the conveyance of water by the Natomas Central Mutual Company (NCMWC) for agricultural purposes. The NCMWC uses District facilities through an agreement between the respective entities to deliver water to shareholders. The agreement has expired, but is currently being renegotiated between NCMWC and the District. This arrangement allows for the re-use of both agricultural and urban runoff and represents a significant conservation measure in the agricultural operations of the Natomas Basin.

The District is responsible for the drainage related to agricultural properties. The City of Sacramento is responsible for drainage within urbanized areas. The City of Sacramento pumps and drains water into Reclamation District No. 1000 canals. In turn, Reclamation District No. 1000 pumps water when necessary into the Sacramento River or other adjacent canals and creeks. During growing season, water is also pumped from the Sacramento River into the District's canal system for agricultural uses. Since the District's drainage canals serve multiple functions, the District, Natomas Mutual Water and the City of Sacramento must work together in terms of irrigation, drainage and flood protection.

## **Municipal Service Review Requirements**

### **I. Growth, Population, and Land Use Projections**

#### **Land Uses in the Natomas Basin**

##### **Agricultural**

Currently, agriculture is the primary land use in the Natomas Basin; approximately 42,800 acres of agricultural production in 1997.<sup>4</sup> Primary crops grown in the Natomas Basin include rice, safflower, wheat, barley, alfalfa, corn, tomatoes, fruit, and pasture land. According to Sacramento County's Land Use Map, approximately 9,200 acres are under Williamson Act contracts.

##### **Sacramento International Airport**

Sacramento International Airport currently occupies approximately 2,800 acres within the District for runways, terminals, hangars and extensive north-south flyover buffers. The District is currently working with County Airport Staff on the current airport expansion project to insure the additional runoff generated is fully mitigated and does not adversely affect the District's drainage facilities.

##### **Natomas Basin Conservancy**

The Natomas Basin Conservancy has acquired approximately 4150 acres as of December 31, 2007. The NBC operates and maintains this land under a conservation easement and under the requirements of the Natomas Basin Habitat Conservation Plan. The purpose of the HCP is to provide mitigation for threatened and endangered species as a result of urbanization in the Natomas Basin.

##### **Metro Air Park**

Metro Air Park is a proposed development consisting of approximately 1,892 acres adjacent to Sacramento International Airport. The proposed project is sited in the unincorporated area of Sacramento County and would allow airport related uses, i.e., light manufacturing, high tech research and development, and professional office space.

The District is working with Sutter County on drainage improvement projects similar to those in the North Natomas areas within the City of Sacramento to mitigate for the additional urban runoff generated by the proposed Measure M development.

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<sup>4</sup> City of Sacramento, Sutter County, Natomas Basin Conservancy in association with Reclamation District No. 1000, and Natomas Central Mutual Water Company, Draft Natomas Basin Habitat Conservation Plan, July, 2002, prepared for the U.S. Fish and Wildlife Service, California Department of Fish and Game.

## **City of Sacramento North Natomas Community Plan**

### **Land Use Summary**

The Natomas Basin contains both agricultural uses and urban development within its boundary. The Sacramento International Airport is also located in the west central portion of the Basin. Both the City of Sacramento and Sutter County envision this area to becoming a major growth area within the next twenty to thirty years.

Over the last fifteen years, land uses within the District have changed dramatically. Reclamation District No. 1000 serves both agricultural and urban development. The change from largely agricultural territory to urban development, as well as the increasing pressure on the area for future development, has invoked changing service priorities and a more comprehensive review of the existing infrastructure. Prior to development, agricultural areas could flood without significant impact to people, but a flood would impact agricultural production on a short term basis.

Originally, levees were constructed to allow agricultural uses for farming and ranching activities. Now, however, these levees protect homes, offices and industrial development. Therefore, it is critical that a higher level of flood protection be provided than at the time of original District formation.

As the Natomas basin continues to develop, the role and responsibility for flood protection for the City of Sacramento, County of Sacramento, Sutter County, and Reclamation District No. 1000 will increase in scope and intensity. The District territory lies approximately one-third within the City of Sacramento, one-third within the unincorporated County of Sacramento, and one-third within the County of Sutter.

The City of Sacramento is responsible for providing drainage of urban run off for City residents. The City of Sacramento operates pump stations, detention ponds and related facilities. However, the City of Sacramento must rely on Reclamation District No. 1000 to pump the excess water back into the adjacent river system, to maintain the drainage canals and to maintain the levee structure.

### **City of Sacramento – South Natomas Community Plan**

The South Natomas Community Plan Area within the City of Sacramento is located north of the downtown Sacramento across the American River. The Community Plan Area encompasses about 7.7 square miles or 5,041 acres. It is bounded on the south by the American River, on the west by the Sacramento River, and on the east by the East Main Drain Canal.

South Natomas developed predominately as residential subdivisions between 1950 and 1980. The South Natomas Community Plan as adopted in 1978, envisioned a high density, transit oriented development, and a residential community with a small portion

of office space serving only local needs. By 1982, expectations changed and plan amendments added 2.4 million square feet of office park on both sides of Interstate 5.

The South Natomas Community consists of approximately 47,000 residents. There are approximately 18,000 dwelling units within the community plan area.

### **City of Sacramento – Proposed Urbanization of the Natomas Joint Vision Area**

The Natomas Joint Vision Area within the District is an unincorporated portion of Sacramento County consisting of about 18,424 acres. It is located north and west of the City of Sacramento. The area is bounded on the north by Sutter County and on the east by the Rio Linda Community and the Sacramento River on the west.

The County Board of Supervisors and the Sacramento City Council adopted a Memorandum of Understanding on December 10, 2002, that established a vision for land use and revenue sharing for this area in contemplation of future development.

Prior to development, the City of Sacramento will have to amend its Sphere of Influence and annex this territory into the City limits. Studies are underway analyzing a number of constraints and development issues. In addition, the City of Sacramento would have to get approval from federal and state regulatory agencies for a Habitat Conservation Plan and Incidental Take Permit.

### **Sutter County – Measure M Proposed Urbanization of Sutter Pointe**

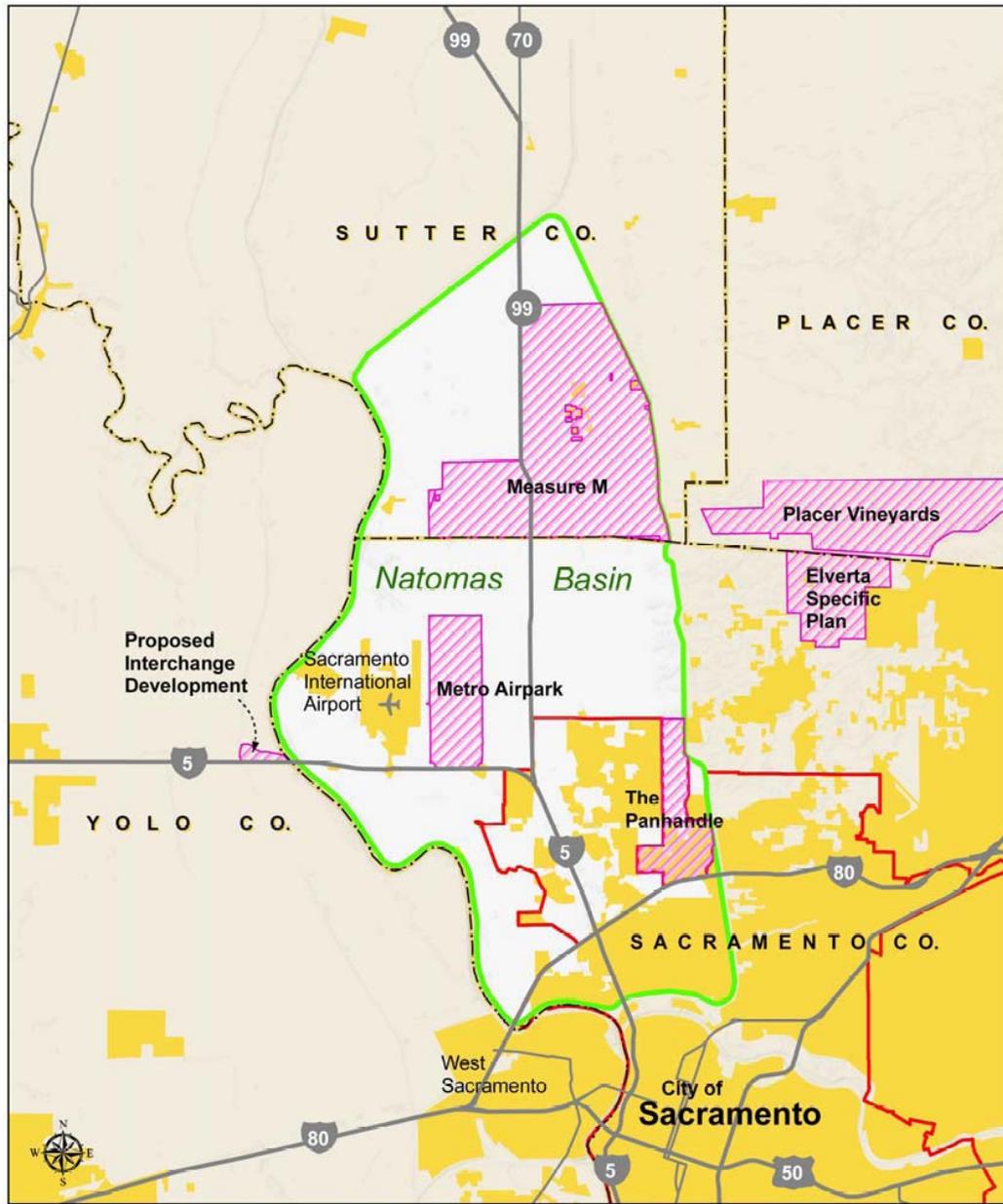
Urban development is proposed to occur within Sutter County. Sutter Pointe Specific Plan is currently under environmental review. It proposes to develop approximately 7,500 acres containing approximately 17,500 dwelling units and 40 million square feet of industrial and commercial uses at build out. Build out is estimated to occur during a 30 year time frame. The current land uses are agricultural and open space. The District is working with Sutter County to mitigate drainage impacts of the proposed development.

### **Summary of Population and Growth Projections**

Significant growth has occurred within the Natomas Basin. Additional growth is projected to occur during the next 30 years. The following table summarizes the estimated number of residents and dwelling units within the Natomas Basin. This area is considered the primary new growth area for the City of Sacramento. In addition, significant growth is projected within the Natomas Basin located in Sutter County. This area is known as Measure M.

**Population and Growth Projections**

<b>Area/Project</b>	<b>Acres</b>	<b>Estimated Population</b>	<b>Estimated Dwelling Units</b>	<b>Estimated Build Out</b>
<b>South Natomas</b>	5,000	47,000	18,000	2000
<b>North Natomas</b>	7,500	66,500	33,260	2016
<b>Greenbriar</b>	600	8,900	3,500	TBD
<b>Panhandle</b>	600	7,700	3,000	TBD
<b>Camino Norte</b>	300	TBD	TBD	TBD
<b>Sutter Pointe</b>	7,500	17,500	45,500	TBD
<b>Natomas Joint Vision</b>	6,000 TBD	TBD	TBD	TBD
<b>Sacramento Unincorporated</b>	Unknown	Unknown	Unknown	Unknown
<b>Estimated Total</b>	27,500	147,600	100,260	30-40 Years



*(Note: Greenbriar Annexation is not shown)*



*General View of Natomas Basin within the Natomas Joint Vision Area*

## **II. Reclamation District 1000 Infrastructure Needs, Requirements, and/or Deficiencies**

In general, Reclamation District No. 1000 is not responsible for the construction of or major modifications to levees. Major flood control projects are funded by Federal, state and regional flood control agencies (SAFCA). The District is responsible for daily maintenance, small capital improvements, normal levee repair, emergency flood response and emergency levee repair.

Following the 1986 flood on the Sacramento River, the Natomas levees were determined to be deficient in providing protection against the 100-year flood event (1% risk of occurrence in any given year), and the area was mapped into a special flood hazard area on the FEMA maps. Work done in the 1990's by the Corps of Engineers and SAFCA resulted in recertification of the levees as providing at least 100-year flood protection and in 1998 revised FEMA maps were promulgated removing Natomas from the special flood hazard area.

The 1997 floods in the Central Valley raised concerns in the flood control engineering community about the potential impacts of “under seepage” on the levee system. It was learned that under seepage, overtime, could potentially cause levee problems worse than

previously anticipated and potentially cause a levee failure. This resulted in new levee safety criteria being adopted by the Corps of Engineers for evaluating levee under seepage. In addition, new hydrology and hydraulic studies were done following the near record floods of 1986 and 1997 which have resulted in higher projected water surface elevations than previously anticipated. When these new criteria were applied to the perimeter levee system around Natomas, it was determined that the levees could no longer be certified as providing protection against the 100-year flood event though the levees had just been recertified by the Corps only 10 years prior. New FEMA maps were promulgated in 2008 which again mapped Natomas into a special flood hazard area.

In response to these findings, SAFCA initiated the Natomas Levee Improvement Program. The goal of the program is to restore 100-year flood protection to the Natomas Basin as quickly as possible and eventually provide at least 200-year flood protection to the area. In 2006, the voters passed the Consolidated Capital Assessment District (CCAD) which included funding for the Natomas Levee Improvement Program. The CCAD including additional funding for the operation and maintenance of the proposed levee improvements for RD 1000.

Construction of the Natomas Levee Improvement Project (NLIP) began in 2007. SAFCA anticipates adequate progress on levee improvements can be made such that the Natomas basin will be redesignated by FEMA as an "A99" flood zone by the end of 2010 or early 2011. The goal of 200-year flood protection is anticipated by 2013 provided funding is available.

In addition to SAFCA's CCAD funds, the State of California is providing significant funds for the project. In 2006, the voters of California approved proposition 1E which provides \$4.1 billion in funding for flood control infrastructure. The State is using funds approved under Prop 1E towards the Natomas levee improvements. Both the State and SAFCA anticipate the constructed improvements will be authorized by Congress and incorporated into the federal flood control project including traditional federal cost sharing either as reimbursements or credits against other SAFCA flood control projects in the Sacramento area.

Actual 100-year certified flood protection will require additional work and likely require the Army Corps of Engineers to complete a portion of the design and construction of the levee improvements. Completion of the project will be done through the Corps of Engineers and federal process. It is anticipated the Corp will assume responsibility for the design and construction of the project in 2012. It is currently estimated the final goal of 200-year flood protection will be achieved by approximately 2014.

The improved facilities as well as the necessary rights of way and/or easements will be turned over to the District for continued operation and maintenance. The District is coordinating with SAFCA on the design and construction of the levee modifications to insure their functionality and they meet the District's criteria for operation and maintenance.

### **Emergency Flood Response and Repairs**

It appears the District does have a reasonable plan and a reserve fund to respond to a flood emergency. During the early stages of a flood, the District would need additional staff to support 24-hour levee patrols. They are currently party to a Mutual Aid Agreement which includes the County and City of Sacramento that allows the District to access the additional levee patrol staff. In addition, the District uses staff from the Natomas Central Mutual Water District who is familiar with the District and its facilities because of their proximity to the water district's facilities. District staff undergoes annual flood fight training through the State Department of Water Resources.

In addition, throughout a flood, the District maintains regular communication with both the State Flood Center and the City/County Emergency Operations Center. Through the State Flood Center (and information on the Department of Water Resources website), the District provides updates on the conditions of the levees and receives information as to the reservoir levels and anticipated releases. The District can also seek technical assistance on handling levee problems. The State Flood Center also has representatives from the National Weather Service, U.S. Bureau of Reclamation and U.S. Army Corps of Engineers available to provide information and assistance. The City/County Emergency Operations Center coordinates the local emergency response. The District provides regular updates on the conditions of the levees and observed river levels. The District can also ask for assistance such as traffic or crowd control or other emergency response from the police, sheriff or fire departments. The local Emergency Operation Center (EOC) would also be where decisions on evacuations are made based on information provided by the District and others.

Should a problem be identified on the levees, the District would use resources from the City or County to monitor specific locations as necessary. If the problem requires action such as reinforcing the levee by placing dirt, sandbagging a boil or armoring a levee slope with rock and visquine the District has a list of several flood emergency response contractors in the area which it has used during past flood events.. These contractors provide an immediate response 24-hours a day, seven days a week. The companies currently used by the District all have extensive experience in providing similar emergency flood services in the past. Determinations on the appropriate action would be made by the District Engineer with input from local levee experts, the State Flood Fight Specialist and engineers from the U.S. Army Corps of Engineers. Full time monitoring and record keeping would be done by City or County staff.

In anticipation of such a flood emergency, the District has recently established a Flood Fight reserve fund. Currently the fund has in excess of \$200,000 and will be increased annually (unless there is a flood emergency). In addition, the District has other available reserves to provide at least \$1 million towards a flood emergency which the District staff estimates is sufficient for a two to three day flood fight. Should the emergency extend beyond this time, a request would be made to the U.S. Army Corps of Engineers, through the State Flood Center, for assistance. The request for assistance would simultaneously be made through the local Operational Area to the State Office of Emergency Services as

required by the State Emergency Management System (SEMS). Based on experience during previous major floods, it is unlikely that significant resources other than staff or technical assistance would be provided to the District by the City, County or State. During the flood fights throughout northern California in 1997 and the flood fight on the Sacramento River in 1986 the local District conducted the initial response and eventually had the Corps of Engineers assume responsibility for the flood fight. The District's agreements with the local contractors anticipate this potential and allows for a seamless transition in a flood emergency.

In summary, the District has presented a reasonable, credible and coordinated plan based on past experience to deal with a flood emergency. In addition, the District has real time experience in conducting a flood emergency response. Both in 1986 and again in 2006, the District responded to a flood emergency along the Sacramento River levees and in both cases conducted a successful flood fight which prevented catastrophic levee failure. Communications with both the State and local emergency coordinators is maintained to allow for a coordinated response. Under these circumstances, consolidation with the City would not result in any real cost savings.

### **III. Financial Ability and Fiscal Information**

Revenue for Reclamation District 1000 is provided by assessments against the owners of land within the District. The assessments are levied per 100 acres per the California Water Code, and are based upon the projected financial needs of the District for one year. The assessments are determined annually by the Board of Trustees. However, the District has not raised its assessment since 1997-1998. New development in the District has led to an increase in the annual assessment as land use designations were changed from agriculture to urban.

In addition, the District receives a share of SAFCA's Consolidated Capital Assessment District for the Natomas Levee Improvement Project through an agreement with SAFCA. Any increase in the assessment amount for existing land use would require a Proposition 218 election. The current assessment on the landowners in the District is \$54.68 per hundred acres, with a \$25.00 per parcel minimum. The typical single family residential home in the District pays approximately \$25 per year. The estimated District revenue in fiscal year 2008-09 was \$3,228,677 for the adopted budget. The District has no bonded indebtedness.

### **IV. Status of, and Opportunities for Shared Facilities**

The District coordinates plans and designs drainage and flood protection measures, and resources with other local entities such as the City and County of Sacramento, Sutter County, SAFCA, Federal and State Agencies, and Natomas Mutual Water Company during a flood event or other emergency.

V. *Accountability for Community Service Needs, Including Governmental Structure and Operational Efficiencies*

*District Equipment*

The District has assets in the amount of \$40 million per its draft 2008-2009 Audit. However, the majority of these assets are in its current infrastructure such as levees, canals and pumping stations which cannot be sold and are necessary to provide the flood control and drainage services to its constituents. The District assets also include a number of pick-up trucks and a fleet of equipment including dump trucks, backhoes, grader, excavator, mowers, chipper, tractors, spray rig as well as miscellaneous tools, equipment and office supplies.

*District Staffing*

The District has 10 full-time positions and additional temporary help during a flood event. The District's full-time positions include a General Manager/District Engineer, a District Secretary, clerical staff, one Superintendent, one Foreman, and five maintenance staff. The District anticipates adding additional staff with the increased workload from the proposed Natomas Levee Improvement Project and continued urbanization of the Natomas basin.

*District Governance Structure*

The District is governed by a 7-member Board of Trustees. The terms of office are 4 years and staggered in accordance with the Water Code. Four of the seats are Land Assessment seats and three seats are Parcel seats. The difference is in how the elections are conducted and the relative voting weights for each parcel. The District's Board meets monthly on the second Friday of the month at 8:00 am at the District's office and is noticed in accordance with the Brown Act. The agenda is posted on the District website as well as the minutes from past Board meetings. Additional Special Board meetings are held as necessary when circumstances warrant.

*Operations and Maintenance*

The District primarily operates and maintains levees per requirements set forth by the State Department of Water Resources (DWR). DWR sets the levels of service and standards that Reclamation Districts should meet on an annual basis.

*Principal County*

Reclamation District No. 1000 contains an assessed valuation of \$54.68 per 100 acres for the properties which lie within Sacramento County. Because Sacramento County has the greater portion of the District's assessed value, it is considered, for LAFCo purposes, as the principal county of the bi-county District. Therefore, LAFCo matters concerning

Reclamation District 1000 are the responsibility of the Sacramento Local Agency Formation Commission, unless jurisdiction is waived by the Commission.

### **Level of Service and Standards**

The State of California, Department of Water Resources, Division of Flood Management issues an annual Inspection Report on the status of maintenance of flood control levees, channels, and other major public works operated under cooperative arrangements between federal, state, and local public entities.

The state inspects flood control facilities constructed by the U.S. Army Corps of Engineers to ensure that local flood protection is continuously maintained in such a manner and operated at such times and for such periods in order to obtain maximum benefits, as stated in the Code of Federal Regulations.

### **Service Adequacy**

According to the State Department of Water Resources, Reclamation District No. 1000 is presently providing an adequate level of service to the area. The cost of these services, however, is rising and it can be expected that the assessment charges will need to be increased over time to maintain the same level of service. Assessment increases, other than those due to land use changes must be approved by the voters of the District through a Proposition 218 election.

Although the District's interior facilities are presently adequate, facilities are not adequate for accommodating drainage from the future urban development proposed in the Natomas area of Sacramento County. The City and County, through the Joint Vision Process described previously are working through issues for future urban development in the Natomas Basin. The County General Plan recommends that new zones of the Sacramento County Water Agency be created to provide trunk drainage facilities to areas developing to urban use within the Natomas area of Reclamation District No. 1000. If a new zone is not formed, a separate zone of benefit, assessment district, or urban drainage district must be established to fund urban storm drainage improvements and maintenance for these developing areas. In the past, the appropriate land use agency has entered into agreements with the District to provide the required facilities. The reclamation services of levee maintenance, irrigation and agricultural drainage should continue to be provided by the District.

### **State Levee Maintenance Rating Criteria**

The process of rating the condition of levee maintenance on any given levee represents a subjective assessment by California Department of Water Resources, Flood Project, Inspection Section, personnel based on field evaluations. The level of maintenance observed at the time of inspection is relative to federally prescribed maintenance guidelines and state guidelines for vegetation on oversized levees. Maintenance levels are determined according to the criteria of the following rating scale.

Acceptable (A)  
Marginally Acceptable (MA)  
Unacceptable (U)

A rating of “Unacceptable” does not necessarily imply that the structural integrity of the flood control facility is in jeopardy. Similarly, an “Acceptable” rating is not intended to provide certification that the facility is free from structural defect.

When applying the ratings described above, a number of factors pertaining to maintenance are considered. The following criteria are extracted from Title 33, Code of Federal Regulations, except for the reference within item 4 to the State Reclamation Board’s “Vegetation Guide.” The California Department of Water Resources rates each of the following categories separately as well as rates a district for its overall maintenance program.

**A. Readiness for Flood Emergency**

Each maintaining district shall have an organized plan to combat a flood situation effectively. This should include the appointment of one individual to supervise and execute the plan, stockpiling of standard flood-fighting equipment and materials, and access to portable radios and/or cellular phones for communication during patrolling or a flood emergency.

**B. Adequate Levee Section and Grade**

Each maintaining district shall perform the work necessary to maintain levee-side slopes, grade, and crown width to meet the standards for its particular levee system.<sup>5</sup> Levee design standards are determined according to crown width, land slope, water slope, freeboard and patrol road width.

**C. Presence of Encroachments**

Each maintaining district must prevent and attempt to remove any structures on, additions to, or alterations of the levee unless authorized by permit from The State Reclamation Board. Failure of the local agency to control unauthorized encroachments may threaten the integrity of the levee.

**D. Control of Wild Vegetative Growth**

Each maintaining district shall have a program to selectively control vegetation on the levee slopes and in rock revetments. This is needed to provide visibility for

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<sup>5</sup> Crown widths for federal project levees within the Sacramento-San Joaquin Valley Flood Control system are described as (1) less than 20 feet; (2) 20 to 30 feet; (3) 30 feet or more. State Department of Water Resources, Division of Flood Management, 1999 Inspection Report, Flood Control Project Maintenance Repair, June 2000.

inspection and patrolling and to prevent interference with flood-fighting activities. Some vegetation on “oversized” levees is permitted in accordance with The Reclamation Board’s Interim Guide for Vegetation on Flood Control Levees. An “oversized” levee is a levee with a cross section having a crown width exceeding 20 feet or with side slopes flatter than 2 feet to 1 foot on the landward slope and 3 feet to 1 foot on the water ward slope.

***E. Rodent Control***

Each maintaining district shall have a rodent control program. Diligent efforts to eradicate burrowing animals are a necessity, even though eliminating them from an infested levee is difficult. Control of these animals must be pursued frequently and persistently to assure safety of the levee during flood periods. Rodent dens and runways should be opened up and thoroughly compacted as they are backfilled.

***F. Repair Cracks, Erosion, and Caving***

Each maintaining district shall repair cracks, current or wave-wash erosion, caving or other structural problems. Repair of these problems becomes critical because, unless repaired, these problems can rapidly become worse and could threaten the levee’s integrity. Failure to repair a problem of this type could lead to levee failure.

***G. Repair of Access Gates***

All gates shall be maintained and repaired to provide easy access for authorized people when necessary and to control unauthorized access.

***H. Condition of Rock Revetment***

Each maintaining district shall make all repairs to scour, wash, settlement, or failure of any portion of rock revetments. Rock revetments have been installed at locations where stream-flow conditions or wave wash exposure indicate the need for such protection. Early detection and prompt repair will result in a minimum of effort and cost to restore the revetment.

***I. Condition of Levee Crown***

Each maintaining district must keep crown roadways shaped and graded to provide proper drainage. Each district must also repair ruts and add gravel where necessary ensure a serviceable road under flood fight conditions.

***J. Control of Livestock Grazing***

Each maintaining district shall control stock grazing on levee slopes in such a manner as to permit normal maintenance activities and to minimize damage. Any levee slope damage must be repaired in a timely manner. Controlled livestock grazing may be used as a vegetation management tool.

***K. Condition of Pipes and Appurtenances***

Each maintaining district must examine all structures situated through, in, or on the levee for stability and structural soundness at least once a year. All component parts must be examined for effectiveness of operation and reliability before the start of each flood season. New structures should be installed or older structures repaired only in accordance with adopted Reclamation Board standards and under the supervision of qualified Reclamation Board personnel. Defective structures must be repaired, replaced, or removed immediately.

***Reclamation District No. 1000 Levee Maintenance Rating***

Reclamation District No. 1000 received a rating of “Acceptable” for all its units on the most recent levee maintenance inspection completed in fall 2008 on the criteria cited above. There are some encroachments on the levee that may require remediation in the future.

***Other Service Providers***

There are a number of special districts and agencies within the City and County of Sacramento that provide municipal services within the boundaries of Reclamation District No. 1000. No other agency provides the service (levee maintenance and drainage) provided by Reclamation District No. 1000 its district boundaries.

***Water Providers***

Natomas Central Mutual Water Company was incorporated in 1921. It is a private, non-profit water company with a service area of approximately 47,000 acres within the Natomas Basin. Natomas Mutual is managed for the mutual benefit of its shareholders who own the land within the service area.

About 30,000 acres of land within the Natomas Mutual service area are irrigated each year. Natomas Mutual has rights to approximately 130,000 acre feet of water from the Sacramento River. Natomas Mutual maintains a "closed water delivery system" which holds all agricultural water within the service area from April 1st through October 15th.

Natomas Mutual also maintains an extensive system of water delivery facilities that recaptures water from fields in order to reuse it. There are five main pumping stations

along the Sacramento that divert water into main canals and ditches throughout the service area.

The City of Sacramento and the Sacramento County Water Agency provide potable water to urbanized areas lying within the RD 1000 boundary. In addition, individual wells provide water to rural residential development and for agricultural uses.

### **Fire Protection**

Fire Protection within RD 1000 is provided by the City of Sacramento for city residents. The unincorporated area is served by the Natomas Fire Protection District. The Natomas Fire Protection District is a dependent district of the County of Sacramento. This District contracts with the City of Sacramento to provide fire and emergency medical service to residents living in the unincorporated area.

County Airports provides it own fire and emergency services to Sacramento International Airport. It has mutual aid agreements with the City of Sacramento.

### **Drainage and Storm Water Runoff**

The City of Sacramento regulates development and construction within its jurisdictional boundaries located in the Natomas Basin. The City has a number of ordinances that regulate Grading, erosion and Sediment Control. The City also regulates Storm water Management and Discharge Control.

The City's Grading Ordinance sets forth rules and regulations to control land disturbances, landfill, soil grading, pollution and erosion resulting from construction. Provisions contained therein are intended to avoid pollution of watercourses with nutrients, sediments, or other materials generated or caused by surface water runoff. The City is in compliance with its NPDES Permit.

In addition, the City of Sacramento provides and sets forth storm drainage requirements that include design runoff, conveyance facilities, detention ponds, pump stations and regional water quality control. Basically, the city is responsible for collecting the water in a local drainage system and then it is pumped into canals operated by Reclamation District 1000. RD 1000 then is responsible for draining the water through its canal system and pumping the water into the Sacramento and American Rivers.

The County of Sacramento and the County of Sutter also are responsible for drainage and storm water runoff in their respective jurisdictions similar to the City of Sacramento.

### **Park and Recreation**

The City of Sacramento provides park and recreation service to residents living within the City of Sacramento. A portion of the Natomas Basin is served by the Rio Linda Elverta Recreation and Park District. A portion of the Natomas Basin is not served by

any park district. As part of the Natomas Levee Improvement Project, SAFCA is studying the feasibility of including a bike trail on top of the proposed adjacent levee to be constructed along the Sacramento River. RD 1000 would not be responsible for the operation and maintenance of the trail; it would need to be done by the City of Sacramento and/or the County of Sacramento. The City and County are working with SAFCA to identify potential grants or other funding sources for construction of the trail as part of the levee improvements.

### **Solid Waste**

The City of Sacramento, the County of Sacramento and private waste haulers collect and dispose trash within the Natomas Basin. Each jurisdiction is responsible for its service territory.

### **Police**

The City of Sacramento, the Sacramento County Sheriff and Sutter County Sheriff provide patrol services within the Natomas Basin. Police protection includes response to calls, investigations, patrol, traffic and emergencies. The California Highway Patrol provides traffic enforcement within the unincorporated areas of the Natomas Basin.

### **Code Enforcement**

The City of Sacramento, the County of Sacramento and Sutter County provide code enforcement services within their respective jurisdictions. Code enforcement activities include enforcement of various state and local building codes relating to community and neighborhood nuisances, residential and commercial structures and business operations. Code enforcement activities in illegal dumping, abandoned vehicles graffiti, zoning violations, blight, dangerous buildings, substandard buildings, vacant buildings, pests, environmental health of the communities.

### **Roads and Transportation Services**

Local roads are operated and maintained by the respective jurisdictions within the Natomas Basin. In addition, federal highways and state roads and highways are operated by the respective agencies.

### **Library Services**

The Sacramento Public Library Authority, a joint powers agency of the County and City operates 26 branches and bookmobiles with the County of Sacramento.

### **Land Use Planning**

Land use within the Natomas Basin is provided by the City of Sacramento, County of Sacramento and Sutter County. Each agency has adopted a General Plan that guides development and designates agricultural uses.

### **Animal Control Services**

The respective local jurisdictions provide animal control services within the Natomas Basin. These services include, rescuing and transporting animals, impounding loose and stray animals, or relocating wild animals, investigating nuisance problems and educating pet owners on spaying and neutering programs.

### **Sanitary Sewer**

#### **Sacramento Regional County Sanitation District County Sanitation District No. 1 Private Septic Systems**

Urbanized areas are served by Sacramento Regional County Sanitation District and County Sanitation District No. 1, and the City of Sacramento utilities department. Sewage is collected, transported and then treated at the Sacramento Regional County Sanitation District Treatment Plant near Elk Grove. Sewage disposal in the undeveloped portions of the District has significant constraints regarding the treatment and disposing of effluent. Soils are predominately river deposit clays which have low permeability rates. These soils are generally unsuitable for typical seepage pit and leach field septic systems. In addition, the groundwater surface elevation is very high because of the nearby Sacramento River.

### **Mosquito Abatement**

The Sacramento-Yolo Mosquito and Vector Control District provides mosquito and vector abatement to this area.

### **Cemetery District**

The Sylvan Cemetery District serves the portion of the Natomas Basin lying within Sacramento County.

### **Soils and Agricultural Resources**

Most of the Natomas basin is considered to be prime agricultural land. This area also has a number of endangered species including the Swainson Hawk and giant Gardner Snake.

## Reclamation District No. 1000 various facilities

### FACILITIES

The Reclamation District 1000 levee system consists of 42.61 miles of project levees encircling the District which is located in Sacramento and Sutter counties and is approximately 55,000 acres in size. The levee heights range from an elevation of 39 to 44 feet (USGS datum). The standard 100-year flood plain is five to six feet lower than the crown of the levees. In addition to the project levees, the District maintains approximately ten miles of non-project levees. The levees are inspected, maintained and repaired by the District on a regular basis throughout the year and patrolled continuously during periods of high water to safeguard against failure.

The District's operates and maintains a drainage system consisting of 30 miles of main drainage canals, about 150-miles of drainage ditches and seven main pumping stations. The drainage system collects storm water and drainage and delivers them to the pumping plants for disposal in the Sacramento River.

**Pumping Plants 1A and 1B are located at the southern most end of the District. Plant 1B was recently redesigned and rebuilt to add pumping capacity for urban drainage. The 1B project was completed in the Spring of 2003.**



**Plant #3 is located on the Sacramento River and was constructed in 1939 and totally reconstructed in 2001.**

**Plant #5 - located on the Sacramento River.**



**Plant #6 is located on the Natomas East Main Drainage Canal and was constructed in 1974 with modifications added in 1997.**

**Plant #8 - Located on the Natomas East Main Drainage Canal.**

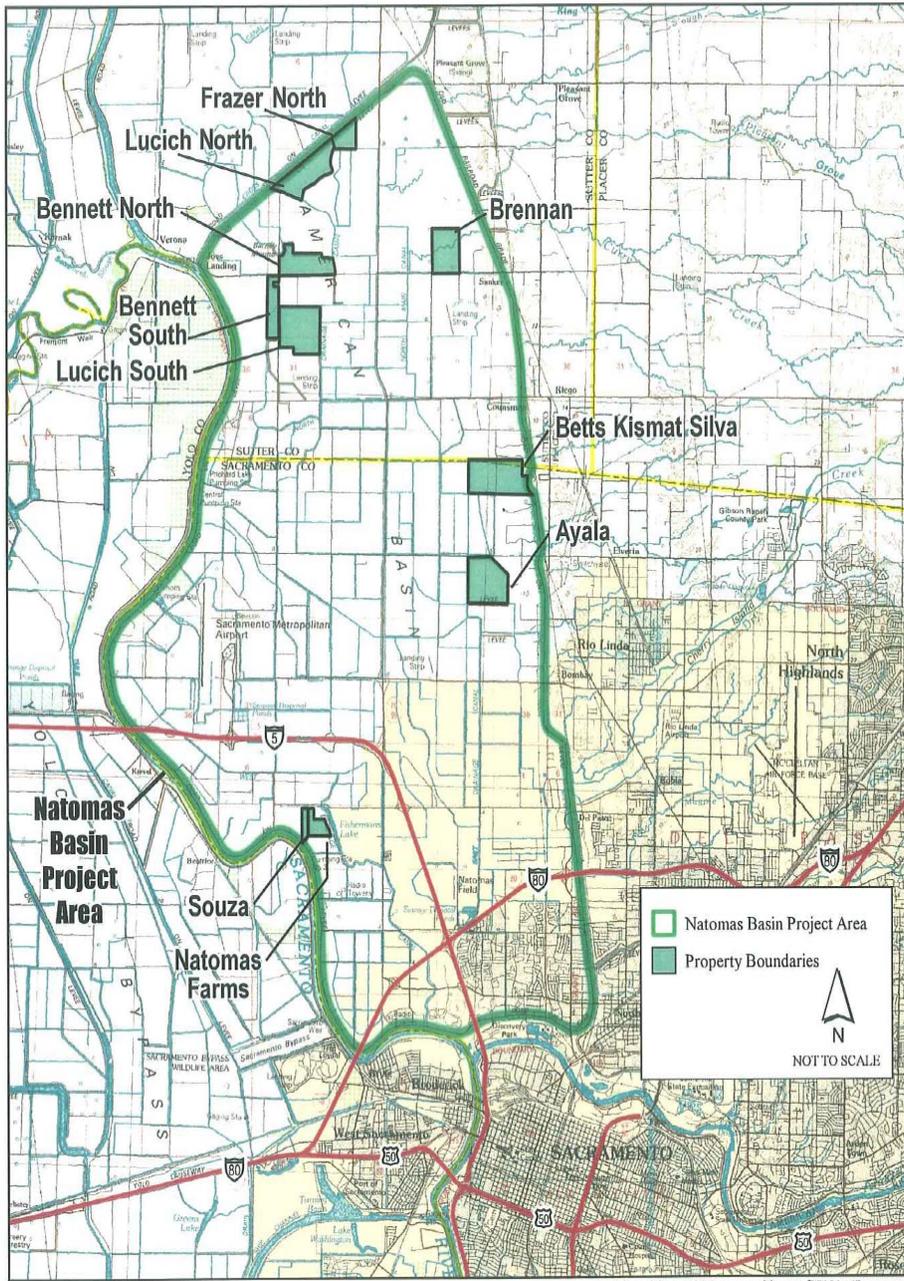
**Additional capacity and automated trash racks were added in 2001.**



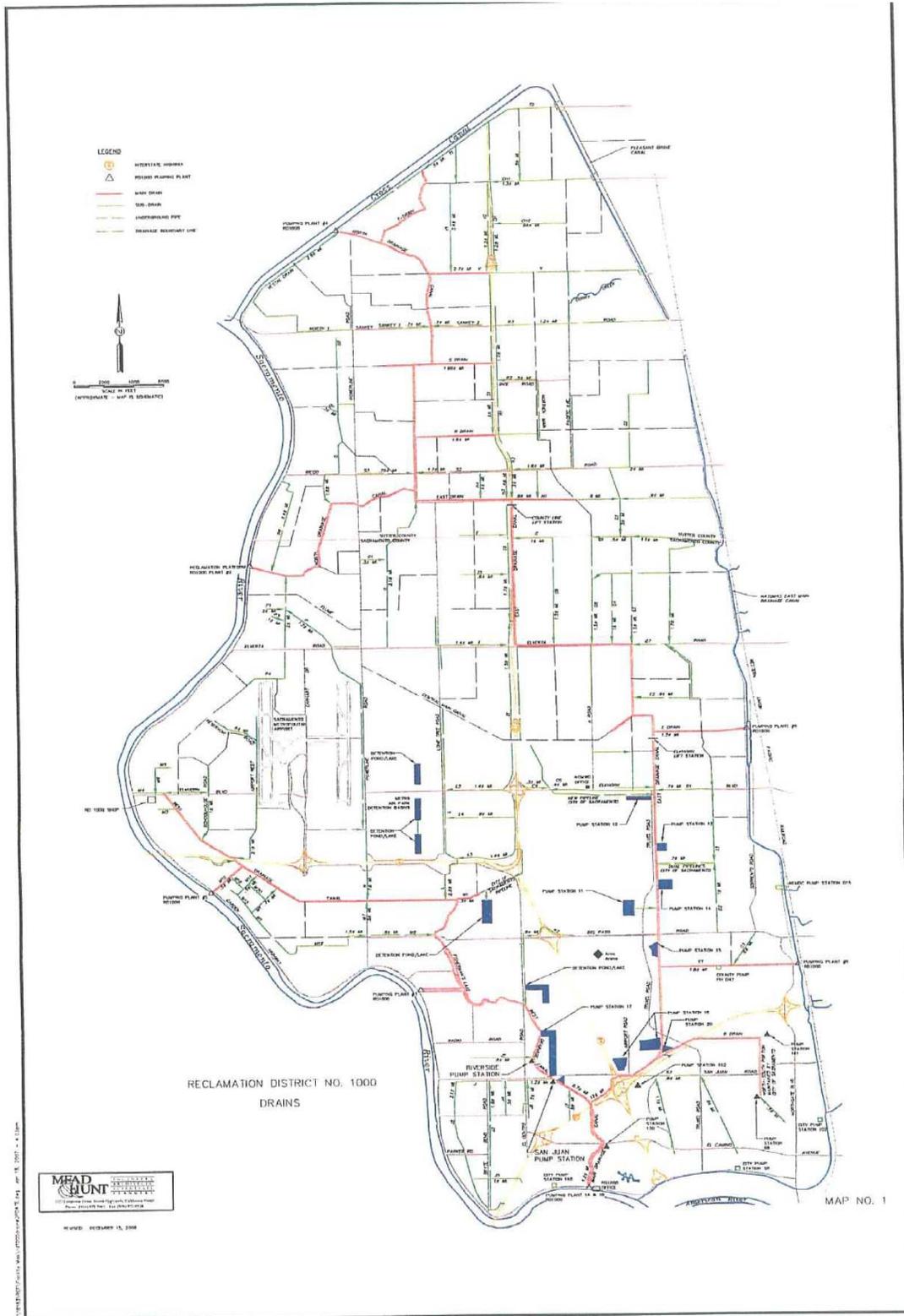
**Maintenance Yard - The District shop yard. Equipment is stored and maintained at this facility.**

**District Office - The District office is located on Garden Highway at the southern most end of the District.**





Adapted from USGS topographic map F38121c (Sacramento)



Reclamation District No. 1000 facilities and boundary.



## 2008/2009 Adopted Budget

Prior Year Budget to Adopted  
Budget comparison (includes three  
year average)

<b>Operation &amp; Maintenance Income</b>	<b>Income 2007/2008</b>	<b>Budget 2007/2008</b>	<b>Variance (Unfavorable)</b>	<b>Adopted 2008/2009</b>
Property Assessments	2,145,313	2,150,886	(5,573)	2,215,736
Rents	22,380	22,380	-	22,380
Service Fees	146	1,000	(854)	250
Interest Income	45,637	40,200	5,437	32,500
Finance Charges/Penalty	18	1,000	(982)	500
SAFCA - O/M Assessment	600,000	600,000	-	800,000
Miscellaneous	61,698	2,500	59,198	5,000
<b>Total</b>	<b>2,875,192</b>	<b>2,817,966</b>	<b>57,226</b>	<b>3,076,366</b>

<b>Capital Income</b>	<b>Income 2007/2008</b>	<b>Budget 2007/2008</b>	<b>Variance (Unfavorable)</b>	<b>Adopted 2008/2009</b>
Easements/ Rights of Way/Drainage Fee	1,300	-	1,300	
Interest Income	15,878	28,000	(12,122)	20,000
Capital Contributions	493,051	-	493,051	
Miscellaneous (sale of vehicles)	-	-	-	
<b>Total</b>	<b>510,229</b>	<b>28,000</b>	<b>482,229</b>	<b>20,000</b>

<b>Internal Service Fund</b>	<b>Income 2007/2008</b>	<b>Budget 2007/2008</b>	<b>Variance (Unfavorable)</b>	<b>Adopted 2008/2009</b>
Annual Required Contribution	82,311	82,311		82,311
Interest	-	-		10,000
<b>Total</b>	<b>82,311</b>	<b>82,311</b>		<b>92,311</b>

<b>Restricted Fund</b>	<b>Income 2007/2008</b>	<b>Budget 2007/2008</b>	<b>Variance (Unfavorable)</b>	<b>Adopted 2008/2009</b>
Metro Airpark Groundwater Pumping				40,000
<b>Total</b>				<b>40,000</b>

<b>Total Combined Income</b>	<b>3,467,732</b>	<b>2,845,966</b>	<b>539,455</b>	<b>3,228,677</b>
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<b>Operations and Maintenance - Expense Administration</b>	<b>2007/2008 Expense</b>	<b>2007/2008 Budget</b>	<b>Variance (Unfavorable)</b>	<b>Adopted 2008/2009</b>
Trustees Fees	25,300	23,625	(1,675)	31,500
County Fees	2,627	2,500	(127)	3,100
Legal	38,433	95,000	56,567	95,000
Public Relations	39,214	75,000	35,786	45,000

Engineering	6,917	45,000	38,083	35,000	
Memberships	23,683	18,900	(4,783)	24,000	
Group Insurance (80/20)	98,487	111,825	13,338	91,776	
Dental /Vision	12,499	13,500	1,001	13,894	
State Comp. Insurance	20,447	28,999	8,551	28,165	
Liab./Auto Ins.	136,785	145,000	8,215	143,624	
Payroll Taxes	47,672	47,672	(0)	47,214	
Pension (3 of 7%)	77,224	80,620	3,395	101,010	
OPEB	82,311	82,311		82,311	
Office Supplies	5,160	4,550	(610)	6,000	
Assessment Costs	34,742	37,000	2,258	44,000	
Computer Costs	7,546	10,654	3,108	3,000	
Uninsured Losses	822	5,000	4,178	5,000	
Accounting	8,820	9,000	180	12,500	
Office Equipment	342	1,500	1,158	9,500	
Admin. Services	20,627	17,660	(2,967)	20,000	
Utilities (Phone/Water/Sewer)				11,500	
Admin. Lease/Maint.	4,304	5,250	946	5,500	
Payroll Expenses	1,614	-	(1,614)	2,500	
Election Cost	1,534	50,000	48,466	-	
Mit. Land Taxes	2,153	3,000	847	3,000	
Urban Committee	-	5,000	5,000	5,000	
***Other	10,455	7,500	(2,955)	9,500	
SAFCA (CAD)	2,462	-	(2,462)	2,500	
<b>Sub Total</b>	<b>712,180</b>	<b>926,065</b>	<b>213,885</b>	<b>881,095</b>	-

	2007/2008 Expense	2007/2008 Budget	Variance (Unfavorable)	Adopted 2008/2009	
<b>Operations</b>					
Supplies/Materials	10,556	22,200	11,644	25,000	
Herbicide	46,128	61,000	14,872	60,000	
Fuel	62,584	50,000	(12,584)	70,000	
Field Services	27,779	70,000	42,221	60,000	
Eq. Rental	1,123	5,000	3,877	5,000	
Refuse Collection	3,821	6,000	2,179	6,000	
Eq. Repair/Service	10,885	15,500	4,615	16,000	
Eq. Parts/Supplies	47,495	35,000	(12,495)	50,000	
Facility Repairs	108,388	153,000	44,612	130,000	
Off Duty Patrol	20,087	25,000	4,914	25,000	
<b>Sub Total</b>	<b>318,760</b>	<b>442,700</b>	<b>103,854</b>	<b>447,000</b>	-

Power	375,748	550,000	174,252	550,000
Wages (based on survey)	646,968	639,070	(7,897)	677,637
Contingency Fund	-	77,005	77,005	50,000
Vehicle Replacement Fund				15,000
Pumping Plant - Capital Fund				60,000
Equipment Replacement Fund				100,000
Flood Fight Fund				173,551
<b>Subtotal</b>	<b>1,022,715</b>	<b>1,266,075</b>	<b>243,360</b>	<b>1,626,188</b>

<b>Total O/M Expenses</b>	<b>2,053,655</b>	<b>2,634,840</b>	<b>561,099</b>	<b>2,954,283</b>
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	2007/2008	2007/2008	Variance	Adopted
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<b>Capital Expenses</b>	<b>Expense</b>	<b>Budget</b>	<b>(Unfavorable)</b>	<b>2008/2009</b>
New Service Truck	29,710	30,000.00	290	-
End Dump	39,927	42,000.00	2,073	-
Used KW Truck/Tractor	56,022	60,000.00	3,978	-
Cross Canal - Pipe Repair /erosion control	21,802	25,000.00	3,198	-
Boat	5,000	-	(5,000)	-
RM 75.1	493,051	-	(493,051)	-
Plant 8 - Pump 1	32,288	-	(32,288)	-
Used DewEze Mower	15,354	-	(15,354)	-
Plant 8 - Trash Racks	20,000	-	(20,000)	-
Aeration System (Main Drain)				25,000
2 Used KW Trucks (Water/Dump)				60,000
Plant 4 Automated Racks				45,000
Plant 8 - Pumps 3 & 4				90,000
<b>Total Capital</b>	<b>713,154</b>	<b>157,000</b>	<b>(556,154)</b>	<b>220,000</b>

	<b>2007/2008 Expense</b>	<b>2007/2008 Budget</b>	<b>Variance (Unfavorable)</b>	<b>Adopted 2008/2009</b>
<b>Internal Service Fund</b>				
Annuitant Current Year Benefit (80/20)	57,150	54,125	(3,025)	54,394
<b>Total Internal Service Fund</b>	<b>57,150</b>	<b>54,125</b>	<b>(3,025)</b>	<b>54,394</b>

<b>Total ALL Costs</b>	<b>2,823,960</b>	<b>2,845,965</b>	<b>1,919</b>	<b>3,228,677</b>
<b>Net Surplus (Loss)</b>	<b>643,772</b>	<b>0</b>	<b>537,536</b>	<b>(0)</b>

**Fall 2008 Levee Maintenance Deficiency Summary Report**

Overall LMA Rating, including Boat Survey Erosion

**Reclamation District No. 1000**

RD1000	Overall LMA Rating	Total LMA Miles				
Reclamation District No. 1000	A	42.6				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
Vegetation	1.30		1.30	3.05%		
Encroachments					11.12	1.56
Boat Survey Erosion	0.13		0.13	0.31%		
<b>LMA Totals:</b>	<b>1.43</b>	<b>0.00</b>	<b>1.43</b>	<b>3.36%</b>	<b>11.12</b>	<b>1.56</b>
Unit No. 01 Sacramento River	Overall Unit Rating	Total Unit Miles				
	A	18.6				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
Vegetation	1.30		1.30	6.99%		
Encroachments					8.52	1.56
Boat Survey Erosion	0.13		0.13	0.70%		
<b>Unit Totals:</b>	<b>1.43</b>	<b>0.00</b>	<b>1.43</b>	<b>7.69%</b>	<b>8.52</b>	<b>1.56</b>
Unit No. 02 American River	Overall Unit Rating	Total Unit Miles				
	A	2.3				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
Encroachments					2.43	
<b>Unit Totals:</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00%</b>	<b>2.43</b>	<b>0.00</b>
Unit No. 03 Natoma East Canal	Overall Unit Rating	Total Unit Miles				
	A	17.3				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
Encroachments					0.17	
<b>Unit Totals:</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.17</b>	<b>0.00</b>
Unit No. 04 Natoma Cross Canal	Overall Unit Rating	Total Unit Miles				
	A	4.4				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
No Items						
<b>Unit Totals:</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00</b>

Staff

## Board of Trustees

David Christophel - President  
John Shiels - Vice President  
Tom Barandas  
Thomas Gilbert  
Frederick Harris  
Jeff Smith  
Jim Miller

## Office Staff

Paul Devereux- General Manager: [pdevereux@rd1000.org](mailto:pdevereux@rd1000.org)  
Terrie Figueroa – District/Board Secretary: [TFiguroa@rd1000.org](mailto:TFiguroa@rd1000.org)

## Field Staff

Michael Blickle –  
Superintendent:  
[mblickle@rd1000.org](mailto:mblickle@rd1000.org)  
Donald Caldwell – Foreman:  
[dcaldwell@rd1000.org](mailto:dcaldwell@rd1000.org)



## Crew

A. DelCastillo  
U. Gutierrez  
J. Hendricks  
R. Peterson  
J. Ramirez

[RD 1000 field crew](#)

### What We Do

Operating and maintaining the levees and drainage facilities is a year-round commitment. Should a levee fail, Natomas would be under 20 feet of water causing billions of dollars in damage and a potential for people to lose not only their property but their lives. Given this critical public safety risk, our District believes it is imperative this community have a single-focused agency such as ours whose only responsibility and mission is flood protection 24 hours a day, 365 days a year.



**Clearing vegetation from levees for inspection and visibility**

Activities routinely done by our field crew include mowing levee slopes, trimming vegetation, weed control, rodent abatement, erosion repairs, access roads maintenance, fixing gates and equipment maintenance. Prior to flood season, we “ready” the system for the winter rains. Trees, shrubs, and other vegetation along the levee slopes and adjacent areas must be trimmed so our crew can monitor the levee for problems. Equipment is repaired and flood fight materials are stockpiled for quick deployment to an emergency site. Early detection of a problem and a quick response are essential to saving a levee during a flood emergency.

In addition to the levees, we mow and clean along our interior canals, repair erosion spots, removed sediment deposited by the previous winter rains and insure the pipes and culverts are able to get the runoff from urban areas as well as agricultural fields into our system. Operating and maintaining the seven pump stations around the Natomas basin are critical to keeping us dry. In advance of the flood season we inspect, repair and test all of these facilities to insure they are ready when the winter storms hit.

During a flood, our crews monitor the levee and drainage system on a 24-hour basis looking for seepage, boils or other problems. When a problem is found, we respond with equipment and materials to stabilize the levee as necessary and will generally bring outside contractors to assist with a flood emergency response so our crews can continue to monitor the rest of the system.



**Repairs to District canal**

## Who We Are

Reclamation District No. 1000 has been providing flood protection and public safety to residents, businesses, schools and agriculture since 1911. We are a special district formed by the California State legislature. Our job is to protect the lives and property in the Natomas basin from flooding. We do this by maintaining over 40 miles of levees surrounding the perimeter of the basin to keep floodwaters from the Sacramento River, American River, Natomas East Main Drain Canal, Pleasant Grove Creek Canal and Natomas Cross Canal out of the basin. In addition we operate and maintain hundreds of miles of canals and seven pump stations in the interior to collect and safely discharge the rain that falls within the Natoma basin back into the river.



**District Plant 1A and 1B**

## **How we are governed**



**RD 1000 field crew**

The District is governed by a seven member Board of Trustees elected by the property owners within the Natomas basin. Regular Board meetings are held once a month on the second Friday of the month starting at 8:00 am at the District Office (1633 Garden Highway). All meetings are open to the public.

The District has a General Manager/District Engineer who reports directly to the Board and is responsible for the day to day activities in the District and carrying out the policy set by the Board of Trustees. In addition, we have a District Secretary who serves as the Clerk of the Board and is responsible for posting the Board meeting agenda and taking the minutes from the Board meeting. The field

work is done under the supervision of the District Superintendent assisted by the District Foreman.

## **How we are funded**

Revenues to operate and maintain the District are raised through a special benefit assessment on properties in Natomas who benefit from the flood protection provided by our efforts. The assessment appears on the annual Sacramento County property tax bill as a direct levy and is designated "RD 1000". The amount of the assessment is determined by the property's use, size and location in the Natomas basin. A "typical" single family residential lot pays approximately \$25 per year for the services we provide.

What to do in a flood

[What to do in a flood](#)

## What if I see a problem?

If you see a problem during a flood, you should immediately contact the District office at 916-922-1449. (Alternatively, you may also contact the State-Federal Flood Center at 1-800-952-5530). Typical problems you might report are:

- water “boiling” near the toe of the levee or in your back yard if you live next to the levee;
- water seeping or pouring out of the side of the levee;
- a portion of landside levee slope has slipped away;
- a portion of the levee top has washed out or has settled creating a depression in the top.
- the waterside berm or levee slope is being eroded by the river and failing

Problems with plugged storm drain inlets, flooded streets or operations at detention basins should **not** be reported to the District. These problems should be reported to the City of Sacramento (916-264-5371) or the County of Sacramento (916-875-RAIN)(7246) depending on where you live.

## Levee Patrols



[Boil in North Drain near Sacramento River levee](#)

When the river or creeks reach a pre-determined level, the District will begin 24-hour levee patrols. The District's trucks, equipped with large spot lights, will be on top of the levee looking for boils, seepage or other signs of levee distress described above. Please respect these vehicles and do not block their access. Since much of the District's levees also serve as public roads, we ask that you be careful when passing one of our vehicles and understand we may be stopping in the roadway and getting out of our vehicles if we see a potential problem. It is important that you not drive a private vehicle on levees that are not public roads at anytime, but especially during a flood. If the water levels continue to rise, the District has agreements with the City, County, and others to provide additional staff to assist with levee patrols.

## Emergency Flood Response

If a levee problem is spotted, the District is prepared to respond with materials and equipment. The District has a stockpile of sandbags and rock to initiate a flood fight. Should the need be greater than the available resources, the District will call upon local contractors who are ready to respond 24 hours a day, seven days a week to an emergency with major equipment, flood fight materials and labor as necessary. It is very important for residents to stay away from a flood fight operation for their own safety.

During a flood fight, the District staff and our contractors must have to access the areas adjacent to the levee. This is why the District highly discourages adjacent property owners from encroaching on or immediately adjacent to the levee with fences, walks, structures or vegetation. If necessary, the District will remove those encroachments which interfere with the flood fight operations. However, any delays due to these issues could be critical in preventing the levee from degrading.

## CURRENT PROJECTS

1

### Natomas Levee Improvement Project

Wednesday, 04 November 2009 00:00

**Location:**

Entire perimeter levee system including the Sacramento River, American River, Natomas Cross Canal, Pleasant Grove Creek Canal and Natomas East Main Drain Canal

**Description:**

The Natomas Levee Improvement Project is currently under construction by the Sacramento Area Flood Control Agency (SAFCA). The most current information on this project is available at their website [www.safca.org](http://www.safca.org). This \$600 million project which began in 2007 will provide Natomas with 200 year flood protection upon completion. The project primarily addresses the significant underseepage risk which threatens the stability of the levee during high river stages. The project will include improvements to the entire perimeter levee system surrounding Natomas and include a new "adjacent levee" for the full length of the Sacramento River along the Garden Highway. Other project features include slurry walls, landside berms and relief wells. The project also includes environmental enhancements such as woodland corridors, wetlands, and canals to offset the impacts of the project.

**Schedule:**

Construction began in 2007 and will continue until at least 2014. For more specific information on projects under construction during the current year, visit the SAFCA website at [www.safca.org](http://www.safca.org)

**Contact:**

Questions about the planning, design and engineering aspects should be directed to SAFCA's project manager John Bassett at 916-874-7606 or [bassetj@saccounty.net](mailto:bassetj@saccounty.net)

Issues during construction should be directed to SAFCA's designated ombudsman Jay Davis at 916-350-0600 or [jdavis@gualco.com](mailto:jdavis@gualco.com)

Last Updated on Thursday, 05 November 2009 15:54

Sacramento River Bank Protection Project RM 73.5L

Tuesday, 03 November 2009 00:00

**Location:**

Along the Sacramento River about a half mile south of Elverta Road

**Description:**

This project is being done by the Army Corps of Engineers and involves the placement of large rock along the river's edge to stop the continued erosion of the bank which is now threatening to erode the adjacent levee. The rock will be delivered to the site by large trucks traveling along the Garden Highway to the site. Plants and other woody vegetation will be interspersed in the rocks to provide habitat

**Schedule:**

Construction began October 12 and is anticipated to last until early December

**Contact:**

Questions or concerns should be directed to the Army Corps of Engineers Project Manager Allison Stucky at [Allison.Stucky@usace.army.mil](mailto:Allison.Stucky@usace.army.mil)

Last Updated on Thursday, 05 November 2009 15:54

S:

Sacramento River site R1

Monday, 02 November 2009 00:00

**Location:**

Garden Highway between Gateway Oaks and Orchard Lane in front of the District Office at 1633 Garden Highway

**Description:**

The project is being constructed by the Army Corps of Engineers and involves placement of a slurry wall approximately 70 feet deep in front of the District's office. Upon completion, the slurry wall will prevent underseepage in this vicinity and stabilize the existing levee. Construction will require complete closure of Garden Highway for several days and the partial closure (one lane traffic) for up to six weeks.

**Schedule:**

Construction began October 12 and is anticipated to be completed in early December

**Contact:**

Questions or concerns should be directed to the Army Corp of Engineers Project Manager John Hoge at [John.Hoge@usace.army.mil](mailto:John.Hoge@usace.army.mil)

Last Updated on Thursday, 05 November 2009 15:54

## Frequently Asked Questions

### **1. Why am I paying an assessment to Reclamation District No. 1000?**

If you have an assessment on your tax bill labeled "RD 1000" your property is in our District and may flood should one of the levees fail or be overtopped. Therefore, your property is receiving a special benefit by our levee and drainage operations and maintenance and is being assessed in proportion to the benefit received.

### **2. How is my assessment calculated?**

The District is divided into several geographic zones of benefit based on the potential depth of flooding should the perimeter levee system fail as well as interior drainage provided by the District. The District's annual operations and maintenance costs are spread proportionally among the properties in Natomas. The assessment for each property is determined by the zone, the size of the parcel, and its land use (i.e. residential, commercial, industrial or agriculture) and the relative benefit assigned to that land use. The District has not raised its assessment rate since 1997.

### **3. Who is SAFCA?**

The **Sacramento Area Flood Control Agency** or SAFCA is the regional flood control agency. They are a joint powers authority formed by the City of Sacramento, Sacramento County, Sutter County, the American River Flood Control District and Reclamation District 1000. SAFCA has a 13 member Board of Directors comprised of elected officials from each of the joint power agencies. Their purpose is to be the local partner with the Army Corps of Engineers and State of California on the planning and construction of major flood control improvements. However, given the significant flood risk facing Natomas and the need to urgently proceed with levee repairs, SAFCA has undertaken the design and construction of the Natomas Levee Improvement Project, which upon completion, will provide Natomas with a 200-year level of flood protection.

### **4. Why do I pay a flood control assessment to both SAFCA and RD 1000?**

The assessment paid to SAFCA funds their planning effort plus the capital costs of the major flood control projects including the Natomas Levee Improvement Project (NLIP). The State of California is also providing significant funding for the NLIP and it is anticipated the Federal government will also provide its traditional cost share in the future. Assuming the normal State and Federal government funding the local share for these projects is about 10% to 20% of the total project costs Reclamation District No. 1000 assessments, on the other hand, are used to fund the day to day maintenance of the levees/canals/pump stations, small capital projects and the first response during a flood emergency.

### **5. How do I find out if I am in a floodplain and subject to flood insurance?**

Under the National Flood Insurance Program administered by the **Federal Emergency Management Agency** or FEMA, if you are in the FEMA floodplain where there is greater than a 1% chance of flooding in any year (typically referred to as the 100 year floodplain) you must have flood insurance for any federally backed home loan. To find out if you are in the FEMA floodplain you should call 916-264-5061 if you live in the City of Sacramento or 916-874-7517 if you live in the County of Sacramento. Currently all of the Natomas basin is in the FEMA 100-year floodplain. The Natomas Levee Improvement Project being constructed by SAFCA will address the problems on the exterior levee system and allow the levees to be "recertified" and the floodplain designation for most of Natomas to be removed. **However, it is critical for residents and businesses alike to understand there is always a flood risk if you live behind a levee and it is prudent to carry flood insurance even if the levees are certified.**

### **6. What should I do if I see a problem on the levee?**

If you see a problem on the levee, immediately contact our District office at (916) 922-1449 and

explain what you have seen. Whether during a flood or not, it is important that any leaks or boils be reported as soon as possible so our crews can assess the situation and take appropriate action to prevent degradation of the levee.

**7. What is a levee “boil”?**



A levee boil is caused by water seeping under the levee and pushing its way up to the surface on the landside of the levee. Since the water level is much higher in the river during a flood, the water being pushed under the levee is under pressure and when it reaches the surface it bubbles up like a small geyser, hence the term "boil". If the pressure is high, the water being forced under the levee may begin to push soil materials from within or under the levee. This can be a very dangerous situation because if enough material is eroded from underneath the levee, the levee could collapse allowing water to pour over the top and eventually fail the entire levee. The typical remedy for a boil is to ring it with sand bags high enough to equalize the pressure and stop the flow of water — or least reduce the pressure so no soil is being

carried and the water flow is clear.

**PB:**  
(Reclamation District No. 1000 MSR)