Management Study of the Graton Community Services District

GRATON, CALIFORNIA

matrix consulting group

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1. INTRODUCTION AND EXECUTIVE SUMMARY

This first chapter introduces the analysis – outlining principal objectives and how the study was conducted – and presents an executive summary.

.1. SCOPE AND OBJECTIVES OF THE MANAGEMENT STUDY

The Matrix Consulting Group was retained by the Graton Community Services District to conduct an organization and management study of the District to ensure that it meets the needs of the community, but also to provide assurance that it is effective in its oversight of the services delivered. Even small organizations need to be accountable to the public and this study was an opportunity to examine opportunities to

improve upon management issues in the District. In a separate effort, the District examined the revenue side (i.e., rates); this study examined the expenditure side of the District.

The analysis was fact-based, and included all aspects of service provision. The analysis focused on:

- Management systems and controls;
- Effectiveness of service levels including, but not be limited to, use of contractors, preventive maintenance, and cost-effectiveness of service levels and service delivery; and
- Comparisons of the District's service levels to benchmarks and other objective indicators of effectiveness.

The objective of this assessment was to identify opportunities for improvement in the plan of organization, the operational and economic efficiency of the District, and develop practicable opportunities for enhancing the organization of the District to address its long-term financial, wastewater collection and treatment requirements, and asset challenges.

2. PROJECT METHODOLOGIES

The Matrix Consulting Group utilized a fact-driven data collection and analytical process in conducting the study of the District. The methodologies are summarized below.

- The Matrix Consulting Group conducted preliminary data collection for the assessment to ensure a clear understanding of the scope of the project, and obtained an initial understanding of the District including business processes, operating budget, comprehensive annual financial report, service levels, and initial issues and opportunities for improvement.
- The Matrix Consulting Group conducted interviews of the chair and vice-chair of the Board, the General Manager, and the treatment plant operators. The purpose of these interviews was to develop an understanding of the District including how

services are delivered, managed, and the costs associated with the delivery of those services.

- The Matrix Consulting Group collected data regarding service delivery by the District including services, the structure and functions of the District, budgets, workload data, management systems, inventory of the District's infrastructure, etc.

- The Matrix Consulting Group compared the practices and programs of the District to the Government Finance Officers Association, the American Public Works Association *Public Works Management Practices Manual*; best practices promulgated by the Special District Leadership Foundation; benchmarking performance indicators for water and wastewater utilities developed by the American Water Works Association / Water Environment Federation; *Core Attributes of Effectively Managed Wastewater Collection Systems* developed by the National Association of Clean Water Agencies and the Water Environment Federation; Best Practices / Advisories of the Government Finance Officers Association; and the experience of the Matrix Consulting Group.

The following section provides examples of the strengths of the District.

3. THE GRATON COMMUNITY SERVICES DISTRICT EMPLOYS MANY BEST PRACTICES.

An organizational and management analysis, by its nature, focuses on opportunities for improvement. However, there are many strengths in the operations and management systems of the Graton Community Services District. Examples of these strengths are portrayed below.

- A comprehensive annual financial report is completed on an annual basis as required by the State.

- The District, based upon the 2014-15 audited financial statements, has a current ratio of 3.36. The ratio is mainly used to give an idea of the District's ability to pay back its short-term liabilities debt and payables with its short-term assets (cash, inventory, receivables). A ratio under 1 suggests that the District would be unable to pay off its obligations if they came due at that point.

- The District, at the end of FY 2014-15, had cash and investments (not restricted) amounting to $869.843 or 79% of annual operating expenses (excluding depreciation).

- Regular, ongoing financial reports are provided to the District Board.

- Financial operations policies and procedures within the District are in place.
- he District Board adopts an annual operating budget
- A condition assessment of the District's sewage collection system was conducted in 2014 based upon data originating from 2008, 2009, and 2011
- The treatment plant complies with the treatment and discharge requirements of the RWQCB.

These strengths provide a sound basis for the improvement of the District.

4. THE DISTRICT SHOULD MAKE A NUMBER OF ADJUSTMENTS IN ITS OPERATIONS.

While there are a number of strengths in the operations of the District, there are also a number of opportunities for improvement. These opportunities are summarized in the six themes presented below.

(1) **Increase cooperation with Forestville CSD to eliminate duplication in administrative service delivery**. The District is an extremely small local government. It cannot afford to maintain its own administrative staff and administrative contracts (e.g., payroll, accounting, annual financial audit, engineering, etc.), and should seek to jointly develop administrative contracts with the Forestville CSD and share administrative staff.

(2) **Strengthen the financial management of the District**. This includes developing a five-year capital improvement program budget, a five-year financial plan, and continuously monitoring actual annual operating expenditures and providing direction to the General Manager to take those actions necessary to balance the annual operating budget.

(3) **Strengthen the policy management and transparency of the District**. This includes developing 1) proposed overall roles and responsibilities for the Board of Directors, revise them as necessary, adopt them as a District policy and procedure, and publish these tenets to the District's web site; (2) a strategic plan; (3) goals, objectives, and performance measures; and (4) new and updated policies and procedures for the District.

(4) **Increasing the transparency of the District's operations to the residents and business served by the District**. The District should expand the material published to its web site to include the terms of office for the members of the Board; the District's strategic plan and mission statement; Board meeting schedule (the specific dates for the fiscal year); authorizing statute / enabling act for the District; the District's most recent independent financial audit; a map of the

District's service area; and the most recent LAFCO municipal service review. In addition, the District should update its list of employees and contractors on its web site.

(5) Strengthening the labor management practices of the District. This includes (1) develop a training program and plan for its employees based upon a training needs assessment of these employees; (2) developing, or updating as necessary, job descriptions for the General Manager and wastewater treatment plant operator classification series for the consideration and adoption by the Board of Directors; (3) conducting a salary survey of seven to nine other public agencies in Marin and Sonoma counties that compete with the District in the same marketplace for wastewater treatment plant operators and competing at the midpoint of the salary range of these other agencies (not the lowest, nor the highest); (4) and participating in CalPERS for its existing full-time employees: the three wastewater treatment plant operators with the 2% at 62 years of age plan beginning in FY 17-18.

(6) Addressing the capital improvement needs of the District's infrastructure. This includes (1) seeking grant funding from the State Water Resources Control Board / Clean Water State Revolving Fund for capital projects; and (2) resolving the deficiencies in the collection system as identified in the condition assessment of the sewage collection system of the Graton Community Services District.

The District should expect that implementation of these recommendations should require approximately three years.

5. SUMMARY OF RECOMMENDATIONS CONTAINED WITHIN THE MANAGEMENT STUDY

The table following this page summarizes the improvement opportunities identified by the Matrix Consulting Group in the management study of the District., including the suggested priority for implementation. The chapters within this report should be read for a detailed discussion and analysis of each recommendation.

Before the District begins implementing the recommendations within this assessment, we suggest that it take the following actions:

Recommendation #1: The Board should refer the report to the General Manager for review and input.

Recommendation #2: The General Manager should review the summary of recommendations contained in this report, develop a plan of implementation as appropriate, and submit the plan of implementation to the Board of Directors. This should include the responsibility and the timing for implementation of each recommendation.

Recommendation #3: After acceptance of the report and the implementation plan by the Board of Directors, the General Manager should commence implementation of the plan of implementation adopted by the Board of Directors. The General Manager should report results regarding progress in implementing the recommendations contained within this report to the Board of Directors on a semi-annual basis.

SUMMARY OF RECOMMENDATIONS

Rec #	Chapter	Priority
	Chapter 1 – Introduction and Executive Summary	
1	The Board should refer the report to the General Manager for review and input.	High
2	The General Manager should review the summary of recommendations contained in this report, develop a plan of implementation as appropriate, and submit the plan of implementation to the Board of Directors. This should include the responsibility and the timing for implementation of each recommendation.	High
3	After acceptance of the report and the implementation plan by the Board of Directors, the General Manager should commence implementation of the plan of implementation adopted by the Board of Directors. The General Manager should report results regarding progress in implementing the recommendations contained within this report to the Board of Directors on a semi-annual basis.	High
	Chapter 4 – Analysis of District Leadership and Management	
4	The Board of Directors should review the proposed overall roles and responsibilities for the Board of Directors, revise them as necessary, adopt them as a District policy and procedure, and publish these tenets to the District's web site.	High
5	The Board of Directors should complete the four modules of the Special District Leadership Academy series provided by the California Special District Association.	Medium
6	The District should expand the material published to its web site to include the terms of office for the members of the Board; the District's strategic plan and mission statement; Board meeting schedule (the specific dates for the fiscal year); authorizing statute / enabling act for the District; the District's most recent independent financial audit; a map of the District's service area; and the most recent LAFCO municipal service review. In addition, the District should update its list of employees and contractors on its web site.	High
7	The General Manager should develop a five-year capital improvement program budget for the consideration of the Board of Directors. This five-year capital improvement program budget should be developed based upon consultation with the District's wastewater treatment plant operators.	High
8	The General Manager should develop a five-year financial plan that evaluates the District's current and projected financial condition.	High
9	The General Manager should update the five-year financial plan on an annual basis.	High
10	The five-year financial plan should be prepared prior to annual budget deliberations by the Board of Directors.	High
11	The General Manager should present the five-year financial plan to the Board of Directors for its review and consideration on an annual basis.	High
12	The Board should develop a strategic plan to include goals, objectives, and metrics to measure the successful implementation of the strategic plan.	Medium
13	The General Manager should direct the development of goals, objectives, and performance measures.	Medium
14	The General Manager should direct the development of new and updated policies and procedures for the District.	High

Rec #	Chapter	Priority
15	The General Manager should develop a training program and plan for its employees based upon a training needs assessment.	Medium
16	The General Manager should develop a policy and procedure regarding professional development and training.	Medium
17	The General Manager should work with the Forestville Community Services District to jointly procure administrative support services. The District should begin, initially	High
18	The Board of Directors need to continuously monitor actual expenditures and provide direction to the General Manager to take the actions necessary to balance the operating budget.	High
19	The General Manager should develop, or update as necessary, job descriptions for the General Manager and wastewater treatment plant operator classification series for the consideration and adoption by the Board of Directors.	Medium
20	The job descriptions for the wastewater treatment plant operator classification series should be developed with the cooperation of the District's staff. This should include a Wastewater Treatment Plant Operator classification that requires a Grade 2 certificate and a Senior Wastewater Treatment Plant Operator classification that requires a Grade 3 certificate.	Medium
21	The job descriptions, upon development and adoption by the Board, should be published to the District's web site.	Medium
22	The District should conduct a salary survey of seven to nine other public agencies in Marin and Sonoma counties that compete with the District in the same marketplace for wastewater treatment plant operators. This should include Sonoma County, but also the City of Santa Rosa, and five to seven other agencies. These agencies should be selected in consultation with the District's staff	High
23	The District should seek to compete with these seven to nine other public agencies in Marin and Sonoma counties at the midpoint of the salary range of these other agencies: not the lowest, nor the highest.	High
24	The results of the salary survey should be presented to the Board by the General Manager along with recommendations for a formal salary plan with different salary ranges for Wastewater Treatment Plant Operator and Senior Wastewater Treatment Plant Operator.	High
25	The District should conduct a promotional examination, open to the three wastewater treatment plant operators, for the Senior Wastewater Treatment Plant Operator.	High
26	The questions for the promotional exam should be developed independently of any full or part-time employee of the District and the exam should be administered independently of any full or part-time employee of the District.	High
27	After the conclusion of the open promotional exam, the General Manager should appoint a Senior Wastewater Treatment Plant Operator.	High
28	The District should participate in CalPERS for its existing full-time employees: the three wastewater treatment plant operators. The District should select the 2% at 62 years of age plan.	High
29	The District should initiate CalPERS retirement for its three full-time employees beginning in fiscal year 2017-18.	High
30	There has been discussion of the District buying retroactive CalPERS retirement for employees to the date of hire. While subject to meet and confer, the District should use the same approach proposed for 2017-18: the employees should pay the employee share.	High

Rec #	Chapter	Priority
Chapter 4 – Analysis of Maintenance and Operations		
31	The District should seek grant funding from the State Water Resources Control Board / Clean Water State Revolving Fund for capital projects to enable the replacement and cured in place pipe for sewage collection mains identified as deficient in the condition assessment of the sewage collection system of the Graton Community Services District.	High
32	In implementing this project, the District should consider the recommendations of GHD including (1) Prioritize the rehabilitation of approximately 3,050 linear feet of 12-inch pipe from MH 03-02 to the wastewater treatment and storage facility; (2) prioritize rehabilitation of 79 linear feet of 4-inch pipe from MH 10-02 to the cleanout at the corner of Graton Rd and Oak Grove Avenue; (3) prioritize rehabilitation of 164 linear feet of 6-inch pipe from MH 10-05 to MH 10-06; and (4) perform a video monitoring of approximately 2,150 linear feet of 6-inch sewer line from MH 13-01 to MH 10-02 along Graton Road.	High
33	The Senior Wastewater Treatment Plant Operator should develop Excel-based maintenance logs to comprehensively reflect the requirements of the District's operations and maintenance manuals for the lift stations and the wastewater treatment plant. The wastewater treatments plant operators should be required to follow, utilize, and complete the maintenance log.	High
34	The Excel-based maintenance logs should be based upon simple checklists of work tasks to be performed in preventively maintaining the lift stations and the wastewater treatment plant.	High
35	The District should continue to evaluate the level of staffing necessary to operate the wastewater treatment plant. If one of the three wastewater treatment plant operator positions become vacant in the near term, the District should evaluate options beside automatically filling the position. Those options include the use of operators-in-training rather than a third wastewater treatment plant operator.	Medium
Chapter 5 – Analysis of the Wastewater Treatment Plant		
36	The General Manager, as part of the development of the five-year capital improvement program for 2018-19, should evaluate the potential application of an ultraviolet disinfection system and return to the Board with an analysis if the advantages and disadvantages of an ultraviolet disinfection system for the District including the impacts on operating and maintenance costs and the estimated capital costs.	Medium

2. PROFILE

This chapter presents background information regarding the Graton Community Services District. The chapter includes the following:

- The State Government Code provisions regarding the formation and operation of Community Services Districts;
- The organizational structure of the District;
- Revenue and expenditure trends for the District; and
- Service levels provided by the District.

The chapter opens with a description of the State Government Code provisions regarding the formation and operation of Community Services Districts.

1. THE CALIFORNIA GOVERNMENT CODE ENABLES THE FORMATION AND OPERATION OF COMMUNITY SERVICE DISTRICTS.

In unincorporated areas of a county, basic services like water, sewer, law enforcement and fire protection are usually provided by the county. Because counties often consist of large and diverse geographical areas, providing a consistent and adequate service level across all areas can be difficult. Consequently, the Community Services District Law (Government Code) was created to provide an alternate method of providing services in unincorporated areas.

A summary of the law, as it pertains to the operation of a Community Services District, is presented below.

- A legislative body of five members known as the board of directors shall govern each district.
- The board of directors shall establish policies for the operation of the district. The board of directors shall provide for the implementation of those policies that are the responsibility of the district's general manager.
- The county treasurer shall serve as the treasurer of the district, and shall be the

depositary and have the custody of all the district's money. If the board of directors designates an alternative depositary pursuant to Section 61053, the board of directors shall appoint a district treasurer who shall serve in place of the county treasurer.

- The board of directors may appoint the same person to be the general manager and the district treasurer.

- The board of directors shall set the compensation, if any, for the general manager and the district treasurer, if any.

- The general manager shall be responsible for all the following:

  – The implementation of the policies established by the board of directors for the operation of the district;
  – The appointment, supervision, discipline, and dismissal of the district's employees, consistent with the employee relations system established by the board of directors;
  – The supervision of the district's facilities and services; and
  – The supervision of the district's finances.

- All claims against a district shall be audited, allowed, and paid by the board of directors by warrants drawn on the county treasurer.

- A district shall have and may exercise all rights and powers, expressed and implied, necessary to carry out the purposes and intent of this division, including, but not limited to:

  – To adopt ordinances;
  – To adopt, by ordinance, and enforce rules and regulations for the administration, operation, and use and maintenance of the facilities and services;
  – To sue and be sued in its own name;
  – To acquire any real or personal property within or outside the district, by contract or otherwise, to hold, manage, occupy, dispose of, convey and encumber the property, and to create a leasehold interest in the property for the benefit of the district;
  – To appoint employees, to define their qualifications and duties, and to provide a schedule of compensation for performance of their duties;
  – To engage counsel and other professional services;
  – To enter into and perform all contracts;
  – To enter joint powers agreements pursuant to the Joint Exercise of Powers Act;
  – To provide training that will assist the members of the board of directors in the governance of the district; and

– To construct any works along, under, or across any street, road, or highway, subject to the consent of the governing body in charge, and along, under, or across any other property devoted to a public use.

There are approximately 3,300 special districts in the State. Special districts, which include community service districts, county service areas, cemetery districts, fire protection districts, etc., have most of the same basic powers as counties and cities. Special districts can sign contracts, employ workers, and acquire real property through purchase or eminent domain. Following constitutional limits, they can also issue bonds, impose special taxes, levy benefit assessments, and charge service fees. Like other governments, special districts can sue and be sued.

The Graton Community Services District is a single-function special district; it only provides sewage collection and treatment services. The Graton Community Services District is only an enterprise fund (sewage collection and treatment services). The Graton Community Services District is an independent district with its own governing board.

2. THE GRATON COMMUNITY SERVICES DISTRICT WAS FORMED IN 2004.

The Graton Sanitation Zone was formed in 1976. The sewage collection and treatment system in the Graton Community Services District was originally constructed in 1979 by the County of Sonoma. The responsibility for the management and operation of these facilities was transferred from the County to the Sonoma County Water Agency in 1994. Subsequently, on July 1, 2004, the management and operation of these facilities was transferred from the Sonoma County Water Agency to local control: the Graton Community Services District.

The District presently provides wastewater collection and treatment services only. However, the Board of Directors of the District are authorized by State law to provide a myriad of other services including, but not limited to, the following:

- Supply inhabitants of the district with water for domestic, irrigation, sanitation, industrial, fire protection, and recreation use;
- Collection, treatment, or disposal of storm water;
- Collection or disposal of garbage or refuse matter;
- Public recreation and parks, playgrounds, golf courses, etc.; and
- Street lighting.

The table below summarizes facility aspects of the Graton Community Services District based upon Order No. R1-2012-0016 issued by the North Coast Regional Water Quality Control Board on March 15, 2012 (updated to reflect the change in General Manager).[1]

Discharger	Graton Community Services District
Name of Facility	Graton Community Services District Wastewater Treatment, Reclamation and Disposal Facility
Facility Address	250 Ross Lane, Sebastopol, CA 95472
Facility Contact and Title	Jose Ortiz, General Manager,
Mailing Address	P.O. Box 534, Graton, CA 95444
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	0.14 million gallons per day (mgd), average daily dry-weather flow;
	0.397 mgd average daily wet-weather flow (based on design of tertiary filters)
	0.85 mgd, peak wet-weather flow

The original existing secondary wastewater treatment facilities (WWTF) constructed in 1979. The effluent pump station was constructed in 1997.[2]

[1] North Coast Regional Water Quality Control Board, Order No. R1-2012-0016, March 2012
[2] Lescure Engineers Inc., Engineering Report for the Graton Community Services District Wastewater Treatment Facility, January 2008

The District provides sewage collection and treatment services to a population of approximately 1,045, a total service area of approximately 300 acres and 467 parcels. The types parcels by type of user is presented in the table below.[3]

Category	Total Equivalent Standard Dwelling	% of Total	Total Parcels	% of Total
Single Family Equivalent Standard Dwelling	371.52	58%	411	88%
Multi-Family Equivalent Standard Dwelling	39.6	6%	22	5%
Other Equivalent Standard Dwelling	226.0	35%	34	7%
TOTAL	**637.12**	**100%**	**467**	**100%**

As the table indicates, the preponderance of users of the system consist of single family residences, although "other" users present a demand on the system that far exceeds the number of "other" parcels.

The collection system consists of approximately 5.5 miles of 6, 8, and 12-inch asbestos cement pipelines and two lift stations. The allocation of sewage collection mains by size is presented in the table below.[4]

Pipe Diameter	1.5"	6"	8"	12"	Total
Length – Feet	125	21,557.3	1,653	5,767.9	29,103.2

2. THE GRATON COMMUNITY SERVICES DISTRICT PROVIDES TERTIARY SEWAGE TREATMENT SERVICES AS REQUIRED BY THEIR RWQCB PERMIT.

The District operates a sewage treatment facility with treatment aspects noted below.

- Headworks (solids removal and flow meter);

[3] Lescure Engineers Inc., Engineering Report for the Graton Community Services District Wastewater Treatment Facility, January 2008
[4] Lescure Engineers Inc., Collection System Maintenance, Operations, and Management, October 2006

- Two aerated ponds provide primary and secondary treatment of wastewater, with each pond providing a capacity of 1.25 million gallons each;
- A settling pond, providing flow equalization and storage, and settling of suspended solids;
- Two effluent storage ponds. Disinfected secondary effluent is stored in two effluent storage ponds, which have a combined capacity of 23 million gallons and up to 162 days of detention time.[5]

The District has recently upgraded its sewage treatment plant to provide advanced wastewater treatment. This upgrade was required to comply with the Basin Plan requirement of the North Coast Regional Water Quality Control Board that discharges of municipal waste to the Russian River and its tributaries meet advanced treated wastewater standards. The upgrade also met the disinfected tertiary standards contained in Chapter 3, Division 4, title 22 of the California Code of Regulations. The upgrade included:

-
- Installation of a suspended air flotation process for solids removal;
- Installation of a Fuzzy Filter compressible media deep bed filtration system for tertiary filtration;
- Replacement of chlorine disinfection with a cogeneration / pasteurization disinfection system;
- Pasteurization disinfection system; and
- Biosolids composting.

The tertiary upgrade project was designed to treat up to an average daily flow of 0.397 mgd and peak daily flow of 0.58 mgd in order to handle anticipated wet-weather flows.[6]

During the wet season (October 1 - May 14), treated effluent is discharged to

[5] North Coast Regional Water Quality Control Board, Order No. R1-2012-0016, March 2012
[6] North Coast Regional Water Quality Control Board, Order No. R1-2012-0016, March 2012

Atascadero Creek. Because Atascadero Creek is tributary to the Russian River via Green Valley Creek, the Basin Plan requires that discharges are of advanced treated wastewater and must meet a median coliform level of 2.2 Most Probable Number (MPN) per 100 milliliters (mL).

During the dry season (May 15 - September 30) and other periods as allowed by the District's permit, effluent from the effluent storage ponds is reclaimed for agricultural irrigation, including frost control on vineyards. The District currently provides recycled water to 6 users, irrigates a 20.5-acre parcel on-site.[7]

Sludge that collects in the aeration and settling ponds is periodically removed and disposed of at sites (i.e., landfills, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements.[8]

3. IN RECENT YEARS, THE GRATON COMMUNITY SERVICES DISTRICT HAS ONLY BEEN ABLE TO BALANCE ITS BUDGET THROUGH ONE-TIME INTERGOVERNMENTAL REVENUES; THE DISTRICT HAS A NEGATIVE OPERATING RATIO.

The fiscal year 2014-15 audited financial statements and 2013-14 of the Graton Community Services District are presented in the table below.[9]

Change in Net Position	Fiscal Year 2013-14	Fiscal Year 2014-15	% Incr. / (Decr.)
Revenues			
Operating	$1,022,144	$1,023,415	0.1%
Non-Operating	$23,383	$35,628	52.4%
Total	**$1,045,527**	**$1,059,043**	**1.3%**
Expenses			
Operating	$1,263,587	$1,307,185	3.5%
Non-Operating	$-	$1,833	N. A.
Total	**$1,263,587**	**$1,309,018**	**3.6%**

[7] North Coast Regional Water Quality Control Board, Order No. R1-2012-0016, March 2012
[8] North Coast Regional Water Quality Control Board, Order No. R1-2012-0016, March 2012
[9] Pisenti and Brinkner, Certified Public Accountants and Advisors, March 2016

Change in Net Position	Fiscal Year 2013-14	Fiscal Year 2014-15	% Incr. / (Decr.)
Loss Before Contributions	$(218,060)	$(249,975)	14.6%
Contributions			
State Disaster Relief	$93,378	$81,016	-(13.2%)
Federal Disaster Relief	$280,137	$223,551	-(20.2%)
Connection Fees-Capital	$18,629	$58,861	216.0%
Intergovernmental	$321,537	$-	-(100.0%)
Total	**$713,681**	**$363,428**	**-49.1%**
Increase in Net Position	**$495,621**	**$113,453**	**-77.1%**

Important points to note regarding the table are presented below.

- Over the two fiscal years, revenue increased by only 1.3%.
- Over the two years, expenditures increased by 3.6%.
- The District incurred a loss, before contributions, in both fiscal years in the amount of $218,060 in fiscal year 2013-14 and $249,975 in 2014-15. Overall, the loss amounted to 20.8% in 2013-14 and 23.6% in 2014-15. In other words, expenses, before one-time contributions, exceeded revenues by 20.8% in 2013-14 and 23.6% in 2014-15.
- The one-time revenues amounted to $695,052 in 2013-14 (excluding connection fees) and $304,567 in 2014-15. These one-time revenues consisted of disaster relief and intergovernmental state and federal funds (substantially relating to the District's capital improvement projects provided by other governments).

Overall, without intergovernmental revenues, the District would have incurred losses exceeding 20% in fiscal years 2013-14 and 2014-15.

This is an indication of the financial problems faced by the District. It has a negative **Operating Ratio**. The operating ratio measures the amount of operating revenue versus the total amount of operating expenses for a utility system. The minimum standard for an operating ratio for a utility system is 1.0; meaning there is enough operating revenue to cover operating expenses. A financially healthy utility system needs to maintain an ongoing operating ratio greater than 1; a ratio of less than

1 indicates there is insufficient revenue to meet current expenses. The District had an operating ratio of 0.8 in fiscal year 2014-15, this means that its operating revenue is 80% of expenses, or in other words, the District could only cover 80% of its expenses without one-time intergovernmental contributions for disaster relief.

However, the current ratio of the District is favorable. The District, based upon the 2014-15 audited financial statements, has a current ratio of 3.36. Its current assets were $882,202, and its current liabilities were $262,044. The ***Current Ratio*** compares current assets expected to be available as cash within the year with current liabilities (those that will become due within the next 12 months). The ratio is mainly used to give an idea of the District's ability to pay back its short-term liabilities debt and payables with its short-term assets (cash, inventory, receivables). The higher the current ratio, the more capable the company is of paying its obligations. A ratio under 1 suggests that the District would be unable to pay off its obligations if they came due at that point.

4. ALMOST 20% OF THE OPERATING REVENUE COLLECTED BY THE DISTRICT MUST BE USED FOR DEBT PAYMENTS.

At the end of the fiscal year 2014-15, the District had a total of $8,499,442 in outstanding current and noncurrent long-term debt. The District's long-term debt consists of general obligation bonds issued in 1976, a construction loan restructured in 2013, and a loan from the State Water Resources Control Board. The principal of $6,000,000 was forgiven by the California State Water Resources Control Board in October 2015 due to project completion (and not reflected in the table below). Long-term debt obligations are summarized below.

	2013-14	2014-15
General Obligation Bonds	$50,000	$34,000

Advances from other Governments	$5,401,030	$6,000,000
Construction Loan	$2,549,693	$2,465,442
Total	**$8,000,723**	**$8.499,442**

Important points to note regarding the District's debt are presented below.

- The District issued general obligation bonds in prior years to provide funds for the acquisition and construction of major capital facilities. The original amount of general obligation bonds issued in 1976 was $350,000. These bond payments concluded in September 2016.

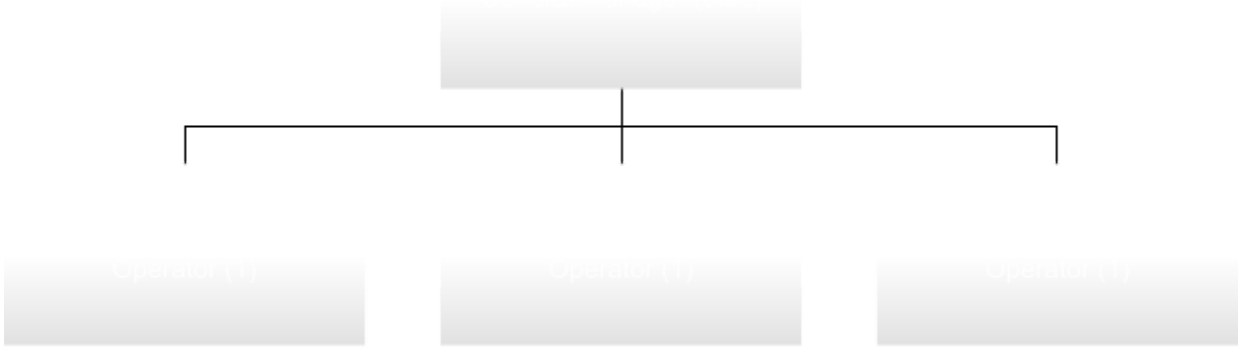
- As of the fiscal year ended June 30, 2015, the District recorded $6,000,000 in advances from other governments which helped finance the treatment plant improvement project. The funding was provided by the California State Water Resources Control Board (WRCB) as pass through funding from the U.S. Environmental Protection Agency Office of Water. The WRCB agreed to forgive the principal of the loan upon completion of the project and related contingencies. The project was completed and the principal was forgiven in October 2015.

- On December 30, 2005, the District entered into an agreement with Municipal Finance Corporation for the purpose of refinancing the District's share in the outstanding Sonoma County Water & Wastewater Financing Authority Revenue Bonds of 1995, and the financing of wastewater system improvement projects. This loan was refinanced on April 5, 2013 with a new funding component for construction of additional improvements. The financing agreement bears an annual interest rate of 4.85% and matures on April 5, 2033. In fiscal year ending June 30, 2017, the annual payment for this debt amounted to $206,900.

Overall, the District has incurred a significant amount of debt relative to other utilities, even small utilities. Other small utilities have not typically incurred debt that require payments equal to 20% of operating revenue. The Napa Sanitation District, for example, incurred debt that require payments equal to 12% of operating revenue.

5. THE DISTRICT'S STAFFING PLAN INCLUDES A PART-TIME GENERAL MANAGER AND THREE FULL-TIME TREATMENT PLANT OPERATORS.

The District has authorized three full-time personnel and a part-time General Manager, with this staff allocated as presented in the organization chart below.



The exhibit, which follows, provides a summary of the staffing and key elements of how staff are scheduled and deployed.

Exhibit 1 (1)

Roles and Responsibilities of Graton Community Services District Staff

Staffing by Classification	No. of Staff	Key Elements of Staffing and Scheduling
General Manager	0.25	• Manage the District service delivery and staff. These services include: – Interface with community members, conduct surveys, and assimilate relevant information; receive complaints and forward to the Board. – As directed by the Board, coordinate bid proposals and contracts for regular operations work to be performed. – Ensure adherence to all local and state laws and advise Board on compliance issues. – Submit regulatory reports to local and state agencies as required. • Provide administrative support, for the District including: – Gather backup information for ongoing Board discussions of the annual budget process. – Ensure adherence to District financial policies and procedures. – Develop policies and procedures for the District; maintain historical and reference documents. • Manage the operation, maintenance, and repair of the treatment plant and collection system including: – Manage, through the chief operator, sewer collection and treatment plant operations and maintenance, insure performance standards are being met; oversee annual review of performance contract. – Ensure the development and use of a work order system. – Coordinate all new sewer hook-ups and insure they are all inspected and meet District standards per ordinances and specifications. – Manage the maintenance of maps of all sewer components and new hook-ups and annexations. – Manage, through the chief operator, the sewer collection and treatment plant maintenance schedule, ensuring the schedule is adhered to and always effective. – Oversee all capital improvement projects as directed by the Board.

Exhibit 1 (2)

Staffing by Classification	No. of Staff	Key Elements of Staffing and Scheduling
Wastewater Treatment Plant Operator	3	• Maintain and operate the District's treatment plant. • Two plant operators work a 4 / 10 schedule from 7:30 am to 5:30 pm Monday through Thursday, while a third plant operator works a 4 / 10 schedule from 7:30 am to 5:30 pm Tuesday through Friday, and is "on call" for emergencies. • Inspect, operate, monitor, maintain and repair treatment plant facilities, equipment, and systems. • Operates a variety of facilities, systems, equipment, pumps, and valves. • Maintain and repair a variety of equipment including inspect, remove, clean, lubricate, repair, maintain, and reinstall equipment related to the treatment plant. • Maintain the settling ponds including the removal of weeds; draining the ponds and removing sludge, mixing the sludge with wood chips, composting to Title 14 standards, and spreading the mix of sludge and wood chips on fields located at the treatment plant. • Monitor plant operations through visual observation and through the SCADA system. • Perform a variety of process control duties, collecting samples from various plant processes for chemical / biological analysis. Conduct daily laboratory tests for process control (e.g., DO and pH) including the discharge of effluent into the creek. • Investigate and acknowledge plant alarms throughout the plant. • Monitor and respond to lift station alarms. Read the meters at the lift station generator; check the oil levels for the generator. Test the generator monthly. Clean the impellers for the submersible pumps. Administer the annual cleaning of the wet well by contract. • Regulate and control flows of wastewater effluent through the plant and discharge. • Perform a variety of record keeping duties. Take readings throughout the plant (e.g., electrical power consumption). • Check the irrigation fields and the settling ponds daily. • Maintain the tertiary treatment system (e.g., use chemicals to remove scale from the pasteurization system).

3. DIAGNOSTIC APPRAISAL

This chapter summarizes the District's performance against a series of best management practices. These best management practices were developed and compiled by the Matrix Consulting Group from the American Public Works Association *Public Works Management Practices Manual*; best practices promulgated by the Special District Leadership Foundation; benchmarking performance indicators for water and wastewater utilities developed by the American Water Works Association / Water Environment Federation; Core Attributes of Effectively Managed Wastewater Collection Systems developed by the National Association of Clean Water Agencies and the Water Environment Federation; and the experience of the Matrix Consulting Group.

The diagnostic appraisal is presented in the exhibit on the following page.

Exhibit 2 (1)

Diagnostic Appraisal of the Graton Community Services District

1. DISTRICT LEADERSHIP AND MANAGEMENT

#	Best Practice	Strength	Opportunity for Improvement
1	The District has developed written and accessible policies and procedures.		• The District has not developed written policies and procedures • The policies are not published to the District's web site.
2	The District maintains and publishes a clearly written, multi-year (five years at a minimum) strategic plan to provide vision and direction for the District's effort. The plan clearly delineates the District's goals and objectives and strategies for achieving them.		The District has not developed a strategic plan.
3	Goals, objectives, and performance measures have been developed to provide a guide for decision-making, link District actions to the broad goals of the Board, and define what resources ought to be allocated to what services.	.	The district has not developed goals, objectives, and performance measures
4	The performance measures are aligned with the District's business perspectives (customer service, financial stability, asset preservation, etc.).		Performance measures have not been developed.
5	The District generates goals, objectives, and performance measures monitoring reports on a semi-annual basis to convey the District's performance to the community.		The District does not generate monitoring reports on a semi-annual basis.
6	A long-term information technology plan has been prepared for the District (e.g., Supervisory Control and Data Acquisition).		The District has not developed a long-term information technology master plan.

Exhibit 2 (2)

#	Best Practice	Strength	Opportunity for Improvement
7	Budgets include ongoing commitments to expenditures that will ensure that the District can consistently deliver services that meet the required quality standards and minimize risk.		Budgets do not include ongoing commitments, in some instances, such as closed-circuit television (CCTV) inspection of wastewater collection systems, cleaning of the collection system, etc.
8	A long-term financial plan for the District has been prepared and adopted by the Board.		A long-term financial plan for the District has not been prepared and adopted by the Board
9	A comprehensive annual financial report is completed on an annual basis as required by the State.	A comprehensive annual financial report is completed on an annual basis as required by the State.	
10	The financial trends indicate positive financial management.	• The District, based upon the 2014-15 audited financial statements, has a current ratio of 3.36. The ratio is mainly used to give an idea of the District's ability to pay back its short-term liabilities debt and payables with its short-term assets (cash, inventory, receivables). A ratio under 1 suggests that the District would be unable to pay off its obligations if they came due at that point. • The District, at the end of FY 2014-15, had cash and investments (not restricted) amounting to $869.843 or 79% of annual operating expenses (excluding depreciation).	• The District, based upon the 2014-15 audited financial statements, had an operating ratio of 0.8. The minimum standard for an operating ratio for a utility system is 1.0; meaning there is not enough operating revenue to cover operating expenses.
11	The District regularly assesses revenues and expenditures in terms of anticipated service demand levels and future costs.	.	The District does not regularly assess revenues and expenditures that include anticipated service demand levels and future costs.
12	Regular, ongoing financial reports are provided to the District Board.	Regular, ongoing financial reports are provided to the District Board.	

Exhibit 2 (2)

#	Best Practice	Strength	Opportunity for Improvement
13	Financial operations policies and procedures within the District are in place to provide proper internal controls and oversight in the handling of cash and other transactions.	Financial operations policies and procedures within the District are in place.	
14	The District Board adopts an annual operating budget (as required by the State).	The District Board adopts an annual operating budget	
15	The District has developed, and the Board has adopted, a five-year capital improvement program budget.		The District has not developed, and the Board has not adopted, a five-year capital improvement program budget.
16	The District has developed a Business Continuity Management Plan that includes strategies, plans and actions to: (1) evaluate and rank the potential impact of sustained interruption of services or business processes, and (2) provide plans for alternative modes of operation and resumption of normal operation and services.		The District has not developed a Business Continuity Management Plan.
17	The District's web site is citizen centric and information is easy to find, and has the top aspects of a government web-site, including: • Meets all laws, requirements, policies, and other directives for public websites; • Documentation of governance structure, including roles and responsibilities; • Documentation of a strategic plan; • Focus on top tasks • Create and manage content effectively and efficiently; • Following usability best practices; and • Easily able to locate web content.	The District has developed a web site. This web site includes information such as: • About the District (e.g., what services the District provides, the annual rates, etc.; • A description of the District's sewage collection and treatment facilities; • The District's proposed and adopted FY 2014-15 and FY 2015-16 annual operating budget; • The Board agenda, meeting packets, and minutes.; • The names of the District's Board, General Manager, and staff; • The District's SSMP; and • The date of the next Board meeting.	The District's web site does not contain: • The terms of office for the members of the Board; • Board meeting schedule (the dates); • Authorizing statute / enabling act for the District; • Most recent LAFCO municipal service review; • The District's strategic plan; • The District's mission statement; • The District's most recent independent financial audit; and • A map of the District's service area.

Exhibit 2 (3)

#	Best Practice	Strength	Opportunity for Improvement
18	The District effectively utilizes outreach activities to keep residents and businesses informed regarding District activities and services.	The District conducts a public hearing presenting the annual budget.	The District does not publish a newsletter (printed and / or electronic) that keeps the residents and businesses in the District up-to-date on district activities (at least twice annually)
19	Members of the Board have completed the California Special Districts Association (CSDA) Special District Leadership Academy.		Members of the Board have not completed the California Special Districts Association (CSDA) Special District Leadership Academy.
20	The District has been awarded a *District of Distinction* by the CSDA		The District has not been awarded a *District of Distinction* by the CSDA
21	Members of the Board have completed the CSDA Governance Training		Members of the Board have not completed the CSDA Governance Training
22	Members of the Board have completed ethics training as required by the State Governance Training	Members of the Board have completed ethics training	
23	Members of the Board have completed the CSDA harassment prevention training		Members of the Board have not completed the CSDA harassment prevention training
24	The Members of the Board comply with the Brown Act	The Members of the Board comply with the Brown Act	
25	The Board has adopted a formal written policy regarding handling Public Records Act requests.		The Board has not adopted a formal written policy regarding handling Public Records Act requests.
26	The Board has adopted a formal written policy regarding reimbursement of actual and necessary expenses.		The Board has not adopted a formal written policy regarding reimbursement of actual and necessary expenses.
27	The Board has adopted a formal written policy regarding conflict of interest		The Board has not adopted a formal written policy regarding conflict of interest
28	The District utilizes shared service delivery to reduce its costs (e.g., shared service contracts for maintenance of its treatment plant, maintenance of its wastewater collection system, sliplining of its collection system, etc.)		The District does not utilize shared service delivery to reduce its costs.

#	Best Practice	Strength	Opportunity for Improvement
29	The extent and proportion of management of the District is like comparably sized wastewater special districts.	The extent and proportion of management of the District is like comparably sized wastewater special districts.	
30	The responsibility for District management and financial management are segregated for purposes of internal control.	The responsibility for District management and financial management are segregated.	The responsibility for District management and financial management are not segregated.

2. DISTRICT MAINTENANCE AND OPERATIONS

#	Best Practice	Strength	Opportunity for Improvement
31	An effective asset management system has been installed that includes (1) an inventory of the assets (in an electronic inventory) to be maintained with details (e.g., size) about components to be maintained and (2) where the components are located, (3) condition assessments, (4) maintenance and rehabilitation strategies, and (5) sustainable funding levels for maintenance and rehabilitation for the assets.	• Written records are available in various documents that detail the inventory of the District's assets. • A condition assessment of the District's sewage collection system was conducted in 2014 based upon data originating from 2008, 2009, and 2011	• A comprehensive inventory of the assets to be maintained, in a single document (in an electronic inventory) has not been developed; • Maintenance and rehabilitation strategies have not been proposed to and adopted by the Board; • Funding for preventive maintenance and rehabilitation have not been provided in recent budgets. • Condition assessments of the sewer mains have been conducted in the past several years.
32	The sanitary sewer collection system maps are maintained, including asset information (installation date, material, size, and updated in an ongoing basis).	A comprehensive sanitary sewer collection system map has been developed	The sanitary sewer collection system map does not include asset information (installation date, material, and updated in an ongoing basis).
33	A GIS map has been developed for the sanitary sewer collection system that provides both mapping data on the location of the collection system including asset information (installation date, material, size, condition, etc.).		A GIS has not been developed for the sanitary sewer collection system.

Exhibit 2 (5)

#	Best Practice	Strength	Opportunity for Improvement
34	A standard protocol has been established in writing and communicated for reacting to an emergency situation.	The Sewer System Management Plan (SSMP) includes a chain of communication of sanitary sewer overflows (SSO's), and an overflow emergency response plan.	
35	The chain of communication for reporting sanitary sewer overflows (SSO's) and emergency situations has been designated in writing.	The SSMP includes a chain of communication of SSO's.	
36	The District has completed its self-audit of its Sewer System Management Plan (SSMP).		The District has not completed its self-audit of its Sewer System Management Plan (SSMP).
37	The wastewater lift station has a generator back up to ensure continuous operation.	The primary lift station includes a generator as backup	The secondary wastewater lift station does not have a generator back-up.
38	The District has developed preventive and predictive testing and inspection program (e.g., vibration, motor performance data, thermography, pump efficiency, oil analysis, etc.) to address critical and high-risk assets as identified.		The District has not developed a predictive testing and inspection program
39	An average of 1% to 2% of sewer mains are sliplined annually. A formal sewer main rehabilitation and sliplining program is in place for maintaining the reliability of its system. This formal program is linked directly to a long-term capital and financial planning program to assure adequate funding.		An average of 1% to 2% of sewer mains are not sliplined annually.
40	Sewer manholes are inspected and assessed once every three years, and grouted to address I / I.		Sewer manholes are not inspected and assessed once every three years, and grouted to address I / I.

Exhibit 2 (6)

#	Best Practice	Strength	Opportunity for Improvement
41	A CCTV program is utilized on an ongoing basis to document structural deficiencies. 7% to 8% of the system is as closed-circuit televised (CCTV'd) annually.	• The District closed-circuit televised (CCTV'd) the sewage collection system in originating from 2008, 2009, and 2011	• A CCTV program has not been utilized since 20011 – five years - to document structural deficiencies. • The results of the CCTV inspections have not been formally shared with the Board in a written staff report.
42	The results of the CCTV are utilized for repair of defects that can cause SSO's.		The results of the CCTV are not utilized for repair of defects that can cause SSO's.
43	Wastewater mains are hydraulically cleaned with a jet vactor on a three-year cycle.		Wastewater mains are not cleaned on a three-year cycle.
44	The treatment plant complies with the treatment and discharge requirements of the Regional Water Quality Control Board (RWQCB).	The treatment plant complies with the treatment and discharge requirements of the Regional Water Quality Control Board (RWQCB).	
45	A maintenance log has been developed for the lift station to document the maintenance by the contract plant operator of the lift station in accordance with the District's operations and maintenance manual.		The maintenance log has not been developed and does not document appropriate maintenance practices (e.g., pumping and cleaning out the wet well, inspection of the pump impeller, inspection of check valves, cleaning of float valves, etc.).
58	A maintenance log has been developed for the treatment plant to document the maintenance by the contract plant operator of the lift station in accordance with the District's operations and maintenance manual.		A log has not been developed, and does not reflect the comprehensive maintenance procedures required for the preventive maintenance of the treatment plant. For example, for a comminutor or sewage grinder, it should require: • Weekly cleaning and inspection, clearing of plastics, checking the oil level, and ensuring that there are no unusual noises; • Quarterly changing the oil; and • Frequency for checking the blades, sharpening the blades, and greasing.

4. ANALYSIS OF DISTRICT LEADERSHIP AND MANAGEMENT

This chapter presents recommendations to improve the leadership and management of the District. The District has an active Board of Directors. These are strengths.

The opportunities for improvement seek to clarify roles and responsibilities, enhance the transparency of governance, enhance the Board's know-how regarding governance of community service districts.

1. THE BOARD OF DIRECTORS SHOULD DEVELOP TENETS FOR ITS OWN EFFECTIVE WORKING RELATIONSHIP IN A WRITTEN POLICY AND PROCEDURE.

The Board of Directors should clarify its own overall roles and responsibilities. The tenets provided below were developed by the *North Carolina League of Municipalities*, and were designed to clarify expectations for effective city councils.

- The Board of Directors sets direction for the Community Services District by:
  - Determining the District's mission and purpose;
  - Setting future direction and policy — the General Manager is responsible for administrative functions and district operation;
  - Regularly engaging in strategy development; and
  - Approving plans for the efficient and effective administration of District affairs

- The Board of Directors acts as a body by:
  - Focusing its discussion using clear and consistent rules of procedure, following a planned agenda and spending time on important topics;
  - Understanding its own and the District's legal responsibilities;
  - Making sure all Board members have the same information with which to make decisions;
  - Working to master small-group decision making techniques; and
  - Respecting each other and abiding by the decisions of the Board.

- The Board of Directors serves its community well by;
  - Enhancing the District's public image;

- Providing residents with opportunities to respectfully comment on public issues;
- Ensuring the success and viability of the community by convening and facilitating citizen engagement;
- Making sure that District resources are adequate to serve the community and that resources are used for their intended purposes.

- The Board of Directors respects the role of the general manager as chief administrator for the district by

  - Channeling communications appropriately to the General Manager;
  - Depending upon the General Manager to respond to community concerns and complaints as fully and as expeditiously as practical;
  - Expecting the General Manager to make independent and objective recommendations;
  - Expecting the General Manager to support and advocate for adopted Board policy;
  - Respecting the General Manager and following appropriate protocols for interacting with the General Manager; and
  - Refraining from publicly criticizing the General Manager. Criticism is differentiated from questioning facts or the opinion of staff

- The Board of Directors is responsible for its own member's behavior by:

  - Abstaining from seeking political support from staff;
  - Submitting questions about District agenda items ahead of the meeting;
  - Providing each Board member an opportunity to influence and respectfully dissent in Board meetings
  - Focusing on issues, not personalities;
  - Having the Board of Directors take responsibility for addressing inappropriate behavior among members of the Board themselves, and not delegating this responsibility to the General Manager; and
  - Working as a team and holding themselves accountable to a common code of conduct.

- The Board of Directors gives the General Manager a chance to prove himself or herself by:

  - Recruiting, selecting and hiring the General Manager;
  - Promoting and encouraging a positive relationship between the Board and the General Manager;
  - Treating and respecting the General Manager as a professional; and
  - Recognizing the role of General Manager is to serve the Board of Directors as a whole.

- The Board of Directors freely gives and seeks feedback

- Supporting the General Manager by providing clear direction and annually reviewing her or his performance;
- Annually setting expectations for itself and assessing its own performance;
- Inviting constructive feedback to improve its own performance; and
- Regularly reviewing and monitoring the city's finances, programs and services.

- The Board of Directors works with the General Manager to be a high performing governing body by:

  - Looking to the General Manager to assist them in:

    - Clearly defining roles and relationships;
    - Thinking to the future and acting strategically on key issues;
    - Operating in a culture of values and ethics;
    - Regularly evaluating policy implementation by the General Manager;
    - Developing and following protocols for Board behavior and Board-General Manager relations;
    - Allocating time and energy appropriately;
    - Setting clear rules and procedures for Board meetings;
    - Getting regular assessments of community concerns and Board performance;
    - Recognizing the District's position in intergovernmental systems and in building productive partnerships (e.g., Forestville CSD); and
    - Focusing on personal learning and developing as community leaders.

  - Having the Chair of the Board of Directors and General Manager orient new members to the Board of Directors, providing expectations about how to be successful; and
  - Working to behave in a manner that encourages community confidence in the District.

The Board of Directors should review this proposed overall roles and responsibilities of the Board, revise them as necessary, and adopt them as a District policy and procedure, and publish these tenets to the District's web site.

Recommendation #4: The Board of Directors should review the proposed overall roles and responsibilities for the Board of Directors, revise them as necessary, adopt them as a District policy and procedure, and publish these tenets to the District's web site.

2. THE BOARD OF DIRECTORS SHOULD COMPLETE SELECTED CALIFORNIA SPECIAL DISTRICT ASSOCIATION TRAINING.

The Board of Directors of the District should complete the four modules of the Special District Leadership Academy series provided by the California Special District Association.

The curriculum for the academy recognizes the necessity for the Board to work closely together with each other and the community. The Academy provides the knowledge base to perform essential governance responsibilities. Those wishing to complete the Special District Leadership Academy have the option of participating in one-day workshops in Sacramento during the course of the year or participating in the Special District Leadership Academy Conference. Attendees at this conference will complete all four modules of the Academy during the course of two and one-half days. Descriptions of some of the suggested training is presented below.

- Introduction to Good Governance Principles - the Introduction to Good Governance training has been designed specifically for special district board members and board chairs/presidents in order to provide the tools, background and overall knowledge necessary to help navigate the first year of governing a special district and be an effective leader.

- Governance Foundations - Governance Foundations, the first of four modules and the core of the Special District Leadership Academy series, provides the basic information needed by board members, general managers and staff to build an effective and functional governance team. This course teaches the foundational knowledge and skills that identify and define the essential building blocks of a successful board. Directors will learn to develop a unity of purpose; understand the board's role in the district; build a strong, positive, functional board culture; and organize the formal structure of the board.

The California Special District Association also offers webinars including best practices in agenda preparation and minutes.

The Board of Directors should complete the four modules of the Special District Leadership Academy series provided by the California Special District Association. This training can be completed in Sacramento. The cost of each module is $225 for members of the California Special District Association.

Recommendation #5: The Board of Directors should complete the four modules of the Special District Leadership Academy series provided by the California Special District Association.

3. THE DISTRICT SHOULD EXPAND THE MATERIAL PUBLISHED TO ITS WEB SITE.

The *Special District Leadership Foundation* is an independent, non-profit organization formed to promote good governance and best practices among California's special districts through certification, accreditation and other recognition programs. The California Special Districts Association and the Special District Risk Management Authority support the Special District Leadership Foundation.

The *Special District Leadership Foundation* has promulgated a number of best practice regarding web sites for special districts.

Based upon those best practices and best practices developed by the Matrix Consulting Group, the District should expand the amount of material available on its web site including the following:

- The terms of office for the members of the Board;
- The District's strategic plan and mission statement;
- Board meeting schedule (the specific dates for the fiscal year);
- The District's most recent independent financial audit;
- Authorizing statute / enabling act for the District;
- A map of the District's service area; and the

- Most recent LAFCO municipal service review.

In addition, the District's list of employees and contractors is dated (e.g., the previous General Manager), and this list should be updated.

Recommendation #6: The District should expand the material published to its web site to include the terms of office for the members of the Board; the District's strategic plan and mission statement; Board meeting schedule (the specific dates for the fiscal year); authorizing statute / enabling act for the District; the District's most recent independent financial audit; a map of the District's service area; and the most recent LAFCO municipal service review. In addition, the District should update its list of employees and contractors on its web site.

4. THE DISTRICT SHOULD DEVELOP AND ADOPT A FIVE-YEAR CAPITAL IMPROVEMENT PROGRAM FOR THE WATER UTILITY.

The District has spent little over the past five years on capital improvements to replace, rehabilitate, or renew the District's wastewater collection and treatment plant assets (versus new construction of the tertiary treatment plant). There are not any capital projects budgeted in the FY 2016-17 budget, for example, to replace, rehabilitate, or renew the District's wastewater collection and treatment plant assets.

The District should develop a five-year capital improvement program. The five-year capital improvement program should include replacement and rehabilitation requirements. Each capital project should include the location of the project, project descriptions, the estimated project cost by type of cost (i.e., design, construction, construction management, contingency, etc.), the source of funding, and the proposed timing for the capital project.

A possible form that could be utilized to document these capital improvement projects is presented in the exhibit on the following page.

Exhibit 3

Sample Capital Improvement Program
Budget Request Form

Project Title:

District Responsibility:
Description:
Justification:

Planning						
Design						
Land						
Construction						
Equipment						
Other						
TOTAL	$-	0	0	0	0	0

FUNDING SOURCE	TOTAL	2017-18	2018-19	2019-20	2020-21	2021-22
Current Rev.						
Federal / State Aid						
Other						
TOTAL	$-	0	0	0	0	0

The General Manager should develop a five-year capital improvement program for the District. This should be developed based upon consultation with the District's wastewater treatment plant operators.

Recommendation #7: The General Manager should develop a five-year capital improvement program budget for the consideration of the Board of Directors. This five-year capital improvement program budget should be developed based upon consultation with the District's wastewater treatment plant operators.

5. THE DISTRICT SHOULD PREPARE A FIVE-YEAR FINANCIAL PLAN.

The District has not formalized its financial planning to develop any significant documents such as a long-term financial plan. The *Government Finance Officers Association* indicates that long-term financial planning is a best practice.

The District should develop a five-year financial plan as a tool to evaluate the District's fiscal health; ensure the District's fiscal strength and stability in the near-term; and, evaluate various alternatives for sewer service charges. This financial plan should address at least the following issues:

- Financial trend analysis;
- Five-year financial plan of revenues and expenditures;
- Analysis and projection of major revenue accounts;
- Fund balance scenarios;
- Capital improvement project and debt service analysis; and
- Scenarios for setting sewer service charges for maintenance, operations, and debt service.

These are some examples of the components of a five-year financial plan.

Recommendation #8: The General Manager should develop a five-year financial plan that evaluates the District's current and projected financial condition.

Recommendation #9: The General Manager should update the five-year financial

plan on an annual basis.

Recommendation #10: The five-year financial plan should be prepared prior to annual budget deliberations by the Board of Directors.

Recommendation #11: The General Manager should present the five-year financial plan to the Board of Directors for its review and consideration on an annual basis.

6. The District should prepare a strategic plan.

The *American Public Works Association's Public Works Management Practices Manual* is a tool that sanitary districts can use to develop or improve existing practices, enhance performance, increase productivity. Management Practice 1.6 states "the agency has developed and implemented a strategic plan." The strategic plan should include levels of service, planning goals and objectives, plan monitoring, plan documentation, goals and objectives, etc.[10]

The best practices regarding development of a strategic plan that should be utilized by the District are presented in the table below.

The District has a multi-year strategic plan with annual goals and measurable objectives based on identified needs, projected workload, and expenditures and revenues.
e District maintains and publishes a clearly written, multi-year (five years at a minimum) strategic plan to provide vision and direction for the District.
In developing the strategic plan, the District: • Identifies and formally adopts a limited number (5 to 10) of District priorities to guide its strategies and major financial and program decisions; • Considers the impacts of the District's financial condition, five-year capital program, current expenditures by the District, and opportunities to reallocate staff and other resources to enhance performance; and • Instructs District management and supervisors on how these priorities should be considered in making program and budget decisions.
The strategic plan clearly delineates the District goals, and objectives and strategies for achieving them. In developing these strategies, District alternative service delivery systems such as outsourcing.

[10] American Public Works Association, Management Practices Manual, 2004.

The District has a multi-year strategic plan with annual goals and measurable objectives based on identified needs, projected workload, and expenditures and revenues.
The plan also delineates the prioritizes the District's strategic plan in developing its goals, objectives, and strategies.
The objectives in the strategic plan are measurable, and the District has set annual objectives for each goal for at least five years into the future.
The District goals, objectives, and performance measures are based on past performance, identified needs, projected workload, and expenditures and revenues.
The plan delineates the managers and supervisors responsible for implementing the strategies in the plan and the time frames for implementation.
The General Manager for District annually assesses and reports the progress the District has made toward achieving the goals and objectives in the plan.

In updating the strategic plan for the division, District should identify its:

- Strengths;
- Weaknesses;
- Threats; and
- Opportunities.

The District should develop the strategies that it will utilize to achieve the goals and objectives. The District should develop metrics to assess its success in accomplishing the strategic plan. And then should define the responsibilities for accomplishing those goals, objectives and strategies.

Recommendation #12: The Board should develop a strategic plan to include goals, objectives, and metrics to measure the successful implementation of the strategic plan.

7. THE DISTRICT SHOULD DEVELOP GOALS, OBJECTIVES, AND PERFORMANCE MEASURES.

The District should develop goals, objectives, and performance measures. These objectives and metrics should be updated annually, and previous years' performance be reported, as part of District's budget proposal each year.

Goals and objectives should be developed for each functional area (treatment, collection, administration). Performance measures should then be developed to assess the accomplishment of these objectives.

The development of goals, objectives and performance measures for each functional area should consider the guidelines presented below.

- **Goals should be developed for each functional area**. These goals should give specific direction on how each function will contribute to the mission and goals of District. These goals should not be quantifiable. These goals should span multiple years.

- **Objectives should be developed for each functional area**. Objectives are outcome-based statements of what specifically will be achieved within the fiscal year. Each functional area should have 3 to 5 objectives. The objectives should clearly demonstrate progress toward the goals of the functional area. These objectives should be developed to allow for measurement of progress and be quantifiable.

- **Performance measures should be developed for each objective**. Performance measures should convey the extent to which an objective has been met. These measures should include a range of indicators including input, efficiency, service quality, and outcome. For example, an input measure would be the value of the resources used to produce output. An efficiency measure is the inputs used per unit of output. A service quality measure is how cost effectively and timely a service is provided; such as the variance between planned budget and actual spend. An outcome measure is the qualitative consequences associated with a program or service—the ultimate benefit to a customer.

- **The District should communicate and use performance measurement data for decision-making and accountability reporting**. The General Manager for should involve the staff in the development of goals, objectives, and performance measures. The General Manager should communicate the results of these goals, objectives, and performance measures internally to staff and to customers on not less than a quarterly basis.

Recommendation #13: The General Manager should direct the development of goals, objectives, and performance measures.

8. THE DISTRICT SHOULD DEVELOP WRITTEN POLICIES AND PROCEDURES.

The *American Public Works Association's Public Works Management Practices Manual* is a tool that sanitary districts can use to develop or improve existing practices, enhance performance, increase productivity. Management Practice 1.4 states, "the organizations policies, practices, and procedures are periodically reviewed and / or updated to reflect actual practices."[11]

The District has very limited written policies and procedures, if at all.

The General Manager should develop a comprehensive policies and procedures manual to guide staff and assure uniformity in the critical processes of the District. In developing policies and procedures for the District, the following approach should be utilized.

- Minimize. The policies and procedures should be kept to a minimum.
- Best Methods. Make certain the procedure represents the "best method". This means the procedure has undergone detailed analysis and is continually challenged.
- Review and Revise. All policies and procedures should be reviewed annually.
- Keep Current. The problem with many policies and procedures is that they have long ago outlived their usefulness. No one remembers why the policies and procedures were created in the first place. Sometimes they contradict each other and create even more confusion. Responsibility for updating these policies and procedures should be clear.
- Short is better than long. It is not the quantity, but the quality of information that is the essential problem of the information age.
- The policies should be available on the District's intranet site. This should facilitate easy updating.

[11] American Public Works Association, Management Practices Manual, 2004.

This effort should include working with staff of the District to determine the priorities for the updating of the policies and procedures, and what policies and procedures are relevant.

Recommendation #14: The General Manager should direct the development of new and updated policies and procedures for the District.

9. The district Should Develop A Training Plan For Its Employees Including A Needs Assessment.

The *American Public Works Association's Public Works Management Practices Manual* is a tool that sanitary districts can use to develop or improve existing practices, enhance performance, increase productivity. Management Practice 2.12 states that "training goals should be consistent with the agency's mission, vision, and value statements. These goals provide the basis for developing all training programs, choosing training methods, and evaluating performance." Management Practice 2.13 states "a training program is established which includes a description of the training functions and list of training activities." Management Practice 2.16 states that "an individualized training report identifies training programs and classes and documents dates, programs, and classes that are attended by each employee in the agency."

The extent of training for District employees is minimal.

The District should develop a formal written training program and plan to most effectively leverage training funds.

The General Manager should develop a formal written training program and plan. This should include the development of a District policy and procedure regarding professional development and training. This policy should clarify responsibility for ensuring that employees receive training and development, the responsibility for

requesting funding for training and development, and the responsibility for the preparation of a formal, written professional development and training program that identifies the appropriate levels of training for each classification, including mandatory new employee training; mandatory safety training; and other training to enhance employees' skills and improve performance in their current position.

Recommendation #15: The General Manager should develop a training program and plan for its employees based upon a training needs assessment.

Recommendation #16: The General Manager should develop a policy and procedure regarding professional development and training.

10. THE DISTRICT SHOULD USE A SHARED SERVICE APPROACH FOR ADMINISTRATIVE SERVICES WHEREVER POSSIBLE, AND SHOULD BEGIN WITH ACCOUNTING SERVICES

The Graton Community Services District has all of 3.25 full-time equivalent employees. The District cannot afford the level of specialization and administrative support as the County of Sonoma (4,112 employees). As an example, the District is paying the County $52,500 annually for accounting services or 5% of District revenues. This cost far exceeds what the Matrix Consulting Group would expect.

The District should adopt an approach of shared services in which the District works with the Forestville Community Services District to jointly procure administrative support services. The experience of other public and private sector agencies is that a shared services service delivery enables not less than 20% cost savings. There are other reasons besides cost savings to utilize a shared service approach with the Forestville Community Services District including standardizing service delivery, and grouping similar tasks and expertise for a critical mass.

There are numerous possibilities including finance and accounting, information technology (e.g., web site maintenance and SCADA), legal services, engineering

services, etc. The District should begin, initially, with accounting services and with annual independent auditing services.

Recommendation #17: The General Manager should work with the Forestville Community Services District to jointly procure administrative support services. The District should begin, initially, with accounting services and with annual independent auditing services.

11. THE BOARD OF DIRECTORS SHOULD TAKE THE REQUISITE ACTIONS TO BALANCE THE DISTRICT'S OPERATING BUDGET.

As noted earlier in this report, the District incurred a loss, before contributions, in the two fiscal years - 2013-14 and 2014-15 - in the amount of $218,060 in fiscal year 2013-14 and $249,975 in 2014-15. Overall, the loss amounted to 20.8% in 2013-14 and 23.6% in 2014-15. In other words, expenses, before one-time contributions, exceeded revenues by 20.8% in 2013-14 and 23.6% in 2014-15.

The one-time revenues amounted to $695,052 in 2013-14 (excluding connection fees) and $304,567 in 2014-15. These one-time revenues consisted of disaster relief and intergovernmental state and federal funds (substantially relating to the District's capital improvement projects provided by other governments).

Overall, without intergovernmental revenues, the District would have incurred losses exceeding 20% in fiscal years 2013-14 and 2014-15.

The District needs to take the requisite actions to balance its operating budget each year.

The District and its staff have taken a number of actions to reduce operating expenditures are balance the budget. It has reduced the number of staff by a wastewater treatment operator position and a bookkeeper position and reduced the

number of hours required for clerical support for the Board. The wastewater treatment operators have also taken a number of actions to reduce operating costs.

This has not been enough. The District continues to operate at a deficit, excluding one-time revenues.

The Board of Directors need to continuously monitor actual expenditures and provide direction to the General Manager to take the actions necessary to balance the operating budget. This includes such actions as reducing the District's dependence on legal services (excluding litigation) for routine administrative matters (e.g., drafting and / or approving resolutions), avoiding consulting expenses, etc.

The latest projection of expenditures by the Sonoma County Auditor Controller estimated that the District will incur a deficit of $61,700 in fiscal year 2016-17. While an improvement over previous fiscal years, it is still a deficit.

The District needs to balance its operating budget.

Recommendation #18: The Board of Directors need to continuously monitor actual expenditures and provide direction to the General Manager to take the actions necessary to balance the operating budget.

12. THE DISTRICT SHOULD DEVELOP JOB DESCRIPTIONS FOR THE WASTEWATER TREATMENT PLANT OPERATORS.

Job descriptions serve as the foundation of almost all human resource management practices from recruitment and selection to training to discipline.

For each employee, a job description helps the employee understand their duties and responsibilities.

For the District, the job description helps find the right candidate for a vacant position, helps identify the interview questions and hiring criteria, identifies the minimum

training and education requirements and the necessary skills and knowledge required, etc.

The District lacks comprehensive and updated formal written job descriptions for the General Manager and wastewater treatment plant operator classification series. This should include a Wastewater Treatment Plant Operator classification that requires a Grade 2 certificate, a Senior Wastewater Treatment Plant Operator classification that requires a Grade 3 certificate, and the General Manager.

The General Manager should develop, or update as necessary, job descriptions for the General Manager and wastewater treatment plant operator classification series for the consideration and adoption by the Board of Directors. The job descriptions for the wastewater treatment plant operator classification series should be developed with the cooperation of the District's staff. The job descriptions, upon development and adoption by the Board, should be published to the District's web site.

Recommendation #19: The General Manager should develop, or update as necessary, job descriptions for the General Manager and wastewater treatment plant operator classification series for the consideration and adoption by the Board of Directors.

Recommendation #20: The job descriptions for the wastewater treatment plant operator classification series should be developed with the cooperation of the District's staff. This should include a Wastewater Treatment Plant Operator classification that requires a Grade 2 certificate and a Senior Wastewater Treatment Plant Operator classification that requires a Grade 3 certificate.

Recommendation #21: The job descriptions, upon development and adoption by the Board, should be published to the District's web site.

13. THE DISTRICT SHOULD DEVELOP AND ADOPT A FORMAL SALARY SCHEDULE BASED UPON A SALARY SURVEY OF ITS PEERS.

The District does not have a formal salary plan with a salary range that has been adopted by the Board.

The District should develop and the Board should adopt a formal salary plan with a salary range for the wastewater treatment plant operator series.

At the present time, each of the Wastewater Treatment Plant Operators are paid at the same hourly rate. That hourly rate is close to the top end of the salary range for Wastewater Operator II for the City of Santa Rosa (which requires a Grade II certificate), but below the start of the salary range for Water Agency Plant Operator for the County of Sonoma (which requires a Grade 2 wastewater certificate, a Grade 2 water certificate within two years of employment, and a Grade 3 water certificate within four years of employment).

Depending on which agency the District uses for comparison, its salary plan may or may not be competitive.

Rather than pick or choose a specific agency for comparison, the District should conduct a salary survey of seven to nine other public agencies in Marin and Sonoma counties that compete with the District in the same marketplace for wastewater treatment plant operators. This should include Sonoma County, but also the City of Santa Rosa, and five to seven other agencies. These agencies should be selected in consultation with the District's staff.

The District should seek to compete at the midpoint of the salary range of these other agencies: not the lowest, nor the highest.

The results should be presented to the Board by the General Manager along with recommendations for a formal salary plan with different salary ranges for Wastewater Treatment Plant Operator and Senior Wastewater Treatment Plant Operator.

Recommendation #22: The District should conduct a salary survey of seven to nine other public agencies in Marin and Sonoma counties that compete with the

District in the same marketplace for wastewater treatment plant operators. This should include Sonoma County, but also the City of Santa Rosa, and five to seven other agencies. These agencies should be selected in consultation with the District's staff.

Recommendation #23: The District should seek to compete with these seven to nine other public agencies in Marin and Sonoma counties at the midpoint of the salary range of these other agencies: not the lowest, nor the highest.

Recommendation #24: The results of the salary survey should be presented to the Board by the General Manager along with recommendations for a formal salary plan with different salary ranges for Wastewater Treatment Plant Operator and Senior Wastewater Treatment Plant Operator.

14. THE DISTRICT SHOULD FILL THE VACANT SENIOR PLANT OPERATOR POSITION THROUGH AN INTERNAL PROMOTIONAL EXAMINATION.

At the present time, each of the Wastewater Treatment Plant Operators are paid at the same hourly rate. All the three staff are equal.

A lead plant operator is necessary, particularly since the General Manager only works the equivalent of 40 hours a month.

The District should conduct a promotional examination, open to all of the three wastewater treatment plant operators, for the Senior Wastewater Treatment Plant Operator.

The questions for the promotional exam should be developed independently of any full or part-time employee of the District and the exam should be administered independently of any full or part-time employee of the District.

After the conclusion of the open promotional exam, the General Manager should appoint a Senior Wastewater Treatment Plant Operator.

Recommendation #25: The District should conduct a promotional examination, open to the three wastewater treatment plant operators, for the Senior Wastewater Treatment Plant Operator.

Recommendation #26: The questions for the promotional exam should be developed independently of any full or part-time employee of the District and the exam should be administered independently of any full or part-time employee of the District.

Recommendation #27: After the conclusion of the open promotional exam, the General Manager should appoint a Senior Wastewater Treatment Plant Operator.

15. THE DISTRICT SHOULD ADJUST ITS EMPLOYEE BENEFITS PROGRAM FOR ITS THREE CURRENT FULL-TIME WASTEWATER TREATMENT OPERATORS TO INCLUDE CALPERS RETIREMENT.

The District offers a competitive compensation system, in some respects. The salary for its wastewater treatment plant operators is competitive with the City of Santa Rosa. It offers a competitive medical plan.

In terms of retirement, however, the District is not competitive; it only offers Social Security. That is abnormal for the public sector. Almost all local governments in the State of California provide retirement through CalPERS.

The District sought and obtained a statement from CalPERS regarding the annual cost to the District of participating in the CalPERS retirement system, assuming employees paid the employee share of CalPERS retirement. That cost to the District is not unreasonable: approximately $27,000 annually. The District should initiate CalPERS retirement for its three full-time employees beginning in fiscal year 2017-18.

The District should participate in CalPERS for its existing full-time employees: the three wastewater treatment plant operators. The District should select the 2% at 62 years of age plan.

The employees would continue to participate in Social Security. And for that reason, the employees should continue to pay the employee share of CalPERS.

There has been discussion of the District buying retroactive CalPERS retirement for employees to the date of hire. While subject to meet and confer, the District should

use the same approach proposed for 2017-18: the employees should pay the employee share.

Recommendation #28: The District should participate in CalPERS for its existing full-time employees: the three wastewater treatment plant operators. The District should select the 2% at 62 years of age plan.

Recommendation #29: The District should initiate CalPERS retirement for its three full-time employees beginning in fiscal year 2017-18.

Recommendation #30: There has been discussion of the District buying retroactive CalPERS retirement for employees to the date of hire. While subject to meet and confer, the District should use the same approach proposed for 2017-18: the employees should pay the employee share.

5. ANALYSIS OF MAINTENANCE AND OPERATIONS

One of the tenets of effective utility management, as defined by six utility professional associations (e.g., Water Environment Federation, National Association of Water Companies, American Public Works Association, etc.) was that the Board of Directors (1) understands the condition of and costs associated with critical infrastructure assets; (2) maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable risk consistent with customer, community, and regulator-supported service levels, and consistent with anticipated growth and system reliability goals; and (3) assures asset repair, rehabilitation, and replacement efforts are coordinated within the community to minimize disruptions and other negative consequences.[12]

1. THE DISTRICT SHOULD SEEK GRANTS TO ENABLE IMPLEMENTATION OF THE RECOMMENDATIONS WITHIN THE DEMONSTRATION PROJECT FOR THE GRATON COMMUNITY SERVICES DISTRICT.

In December 2014, GHD Consultants submitted a condition assessment of most, but not all, of the sewage collection system of the Graton Community Services District. The assessment found several defects and hydraulic deficiencies in the sewage collection system.[13]

The results of CCTV inspections of the sewage collection system identified structural defects (i.e., holes in the pipe, broken pipes, offset joints, and multiple cracks). The most severe operating and maintenance defect was root intrusion that were primarily due to the pipe material.

[12] Effective Utility Management: A Primer for Water and Wastewater Utilities, Effective Utility Management Collaborating Organizations, 2008
[13] GHD Consultants, Demonstration Project for Graton Community Services District, December 2014

The evaluation made a number of recommendations to address system failures as noted in the exhibit following this page. As the exhibit indicates, the total cost of these projects amounted to $2.78 million in 2014 dollars.

The District should fix these problems through capital projects. It should not ignore these problems. However, the District should not take on more debt. It should seek a grant for these projects from the State Water Resources Control Board / Clean Water State Revolving Fund for the full cost of these projects.

The Clean Water State Revolving Fund program is a loan / grant program operated by the State Water Resources Control Board. Disadvantaged communities with a MHI less than 80% of the statewide MHI, a population less than 20,000, and wastewater rates greater than 1.5% of the community MHI, which the District meets, are typically eligible for significant amount of principal forgiveness. Principal forgiveness is similar to a grant where by a community does not pay out of pocket costs for the portion of the projected covered by the principal forgiveness. The amount of funds available in principal forgiveness is laid out each year in the State Water Resources Control Board's Intended Use Plan. In fiscal year 2014, the Graton Community Services District could have obtained up to 100% principal forgiveness for planning / design financing and up to 75% principal forgiveness not to exceed $6,000,000 for the entire project.

In implementing this project, the District should consider the recommendations of GHD as noted below.

- Prioritize the rehabilitation of approximately 3,050 linear feet of 12-inch pipe from MH 03-02 to the wastewater treatment and storage facility. The District had the section slip lined from MH 02-04 to 02-05, but the rest of that entire line is likely in extremely poor condition. The District considers this project as the most important project since it carries all of wastewater flow from the entire system. Also, MH 03-02 itself is in critically poor condition.

Exhibit 4 (1)

Recommended capital projects for the Sewage Collection System

Project ID	Sewer System Designation	Pipe Size (inches)	Existing Condition	Proposed Improvement	Total Project Cost
1	From MH 03-02 to the WWTP	12	Significant structural defects and moderate capacity issues	Replace existing pipe with 3,050 linear feet of new 15” diameter PVC	$937,000
2	From CO 08-03 to MH 06-09	6	Significant capacity deficiency	Replace existing pipes with 1,311 linear feet of new 8” diameter PVC	$357,000
3	From MH 05-04 to MH 05-07; MH 10-05 to MH 10-06; MH 07-09 to 07-10; MH 13-04 to MH 12-07; and CO to MH 10-02	6 and 4	Moderate structural defects, infiltration, root intrusion, and grease accumulation	• Replace existing pipe with 1,239 linear feet of new 6” diameter PVC • Replace 79 linear feet of existing pipe with 79 linear feet of new 4” diameter PVC	$232,000
4	From MH 05-11 to Lift Station #1	12	Infiltration and root intrusion	CIPP lining of 340 linear feet pf existing 12” diameter	$68.000
5	- From MH 05-12 to MH 05-01; MH 05-02 to MH 05-03; CO-05-02 to MH 05-05; MH 10-01 to MH 10-07; MH 07-12 to MH 06-07; MH 07-10 to MH 06-06; MH 06-08 to MH 06-03; MH 07-05 to MH 07-07; CO 07-02 to MH 06-01; MH 06-09 to MH 05-07; MH 12-06 to MH 12-05	12 and 6	Moderate structural defects, moderate infiltration, root intrusion and grease accumulation	• Replace 191 linear feet of existing pipes with new 12” diameter PVC • Replace 2,935 linear feet of existing pipes with new 6” diameter PVC	$569,000

Exhibit 4 (2)

Project ID	Sewer System Designation	Pipe Size (inches)	Existing Condition	Proposed Improvement	Total Project Cost
6	From MH 05-06 to MH 05-05; CO 08-02 to MH 08-02; MH 08-03 to MH 08-01; MH 07-02 to MH 07-03; CO 07-10 to MH 07-06; MH 07-07 to MH 07-08; MH 07-08 to MH 06-04; MH 05-04 to MH 05-07; CO 08-04 to MH 08-03	6	Minor structural defects, infiltration, root intrusion, and grease accumulation	Replace 2,154 linear feet of existing pipes with new 6-inch diameter PVC	$375,000
7	From MH 05-01 to MH 05-02; MH 04-09 to MH 05-06; CO 03-01 to MH 03-03; MH 04-08 to MH 04-03; MH 10-07 to MH 10-06; MH 08-05 to MH 08-04; MH 08-04 to MH 08-02; MH 09-03 to MH 09-02; CO 06-01 to MH 06-07; MH 07-14 to MH 07-04; MH 07-04 to MH 07-05; CO 07-01 to MH 07-05	6	Minor structural defects	CIPP lining of 2,900 linear feet of existing	$242,000
Total					**$2,780,000**

- Prioritize rehabilitation of 79 linear feet of 4-inch pipe from MH 10-02 to the cleanout at the corner of Graton Rd and Oak Grove Avenue. It has been a problem section in the past, and about 10 feet of that line has been replaced already.

- Prioritize rehabilitation of 164 linear feet of 6-inch pipe from MH 10-05 to MH 10-06. This section has sagged over time -where it passes over the creek - and caused a blockage in December of 2008.

- Perform a video monitoring of approximately 2,150 linear feet of 6-inch sewer line from MH 13-01 to MH 10-02 along Graton Road. The downstream of the line where it approaches Oak Grove Avenue is rather steep in gradient and flattens out at Oak Grove Avenue. This has been a problem historically as a few laterals feed in to that section. An emergency repair to replace a section of the main line was done at Graton Road about one year ago.

Recommendation #31: The District should seek grant funding from the State Water Resources Control Board / Clean Water State Revolving Fund for capital projects to enable the replacement and cured in place pipe for sewage collection mains identified as deficient in the condition assessment of the sewage collection system of the Graton Community Services District.

Recommendation #32: In implementing this project, the District should consider the recommendations of GHD including (1) Prioritize the rehabilitation of approximately 3,050 linear feet of 12-inch pipe from MH 03-02 to the wastewater treatment and storage facility; (2) prioritize rehabilitation of 79 linear feet of 4-inch pipe from MH 10-02 to the cleanout at the corner of Graton Rd and Oak Grove Avenue; (3) prioritize rehabilitation of 164 linear feet of 6-inch pipe from MH 10-05 to MH 10-06; and (4) perform a video monitoring of approximately 2,150 linear feet of 6-inch sewer line from MH 13-01 to MH 10-02 along Graton Road.

2. THE WASTEWATER TREATMENT PLANT OPERATORS SHOULD DEVELOP AN EXCEL-BASED MAINTENANCE LOG FOR THE WASTEWATER TREATMENT PLANT THAT INCLUDES MAINTENANCE PRACTICES INCLUDED IN THE DISTRICT'S OPERATIONS AND MAINTENANCE MANUAL.

The District should develop an Excel-based maintenance log for the lift stations and the wastewater treatment plant. The Excel-based maintenance log should document the maintenance by the plant operators of these assets in accordance with the District's operations and maintenance manual.

These should be simple checklists that the wastewater treatment plant operator completes every time preventive maintenance is performed. A sample checklist for a lift station follows this page.

Recommendation #33: The Senior Wastewater Treatment Plant Operator should develop Excel-based maintenance logs to comprehensively reflect the requirements of the District's operations and maintenance manuals for the lift stations and the wastewater treatment plant. The wastewater treatments plant operators should be required to follow, utilize, and complete the maintenance log.

Recommendation #34: The Excel-based maintenance logs should be based upon simple checklists of work tasks to be performed in preventively maintaining the lift stations and the wastewater treatment plant.

3. WHEN A WASTEWATER TREATMENT PLANT OPERATOR POSITION BECOMES VACANT, THE DISTRICT SHOULD EVALUATE WHETHER TWO PLANT OPERATORS ARE SUFFICIENT (WITH CONTRACTUAL BACKUP AS NECESSARY).

Salaries and benefits comprise approximately 45% of the operating budget of the District. The District has been unable to balance its operating budget for the past several years without one-time funding (disaster relief). In addition, the District will likely need additional and currently unbudgeted funding for necessary capital projects for the sewage collection system, the wastewater treatment plant, and the lift stations; and for increased salaries and CalPERS retirement contributions for its wastewater treatment plant operators. Unless these conditions change – being able to balance the operating expenditures and revenues - the District will eventually drain its operating fund balance.

Exhibit 5 (1)

Sample Lift Station Monthly
Preventive Maintenance Checklist

1) Check that exhaust fan is running and make sure all safety guards are in place.

2) Run test air compressor:
- Check oil level.
- Check belts for cracks.
- Manually drain air tank.
- Make sure all safety guards are in place.

3) Push and release the lever to test the diesel day tank.

4) Push in the black TEST button to test the diesel alarm. Hold for 5 seconds, then release. Push the red RESET button to reset the alarm system.

5) Check condition of fire extinguishers.

6) Check condition and availability of personal safety equipment. Wear proper gloves and safety glasses when working on any equipment. Do not proceed if any piece of equipment is missing or in questionable condition. Wear hearing protection. Exposure to high decibel levels for a long period of time may cause hearing damage.

7) Follow the District's hazardous energy control program lockout / tagout procedure to isolate pump #1 from the system and set the HAND/OFF/AUTO switch to the OFF position.

8) Exercise the isolation valves on the large dry well pump, the small sump pump and the force main. One at a time, close each valve all the way to form a tight seal. Open the valve all the way again and back it off 1/4 turn.

9) Inspect the pump:
- Close the suction valve by turning it clockwise all the way to form a tight seal.
- Close the discharge valve in the same way.
- Loosen inspection plate on the elbow without removing it and drain off water.
- Remove both inspection plates completely.
- Inspect for rags and other debris inside the impeller and the pump volute. If debris is found, carefully try to dislodge it. Beware of sharp objects.
- Check the impeller clearance to be sure that the impeller is not grinding against the housing at any point.
- If an object is too large to remove through the inspection plate opening, derag the pump by disconnecting the driveline from the pump. Raise the pump head to remove the object. After the object is removed, lower the pump head and reconnect the driveline.

Exhibit 5 (2)

- After inspection and/or deragging are complete, replace the inspection plates.

10) Inspect the check valves for rags, debris or any other objects that would hinder smooth operation of the valve.

11) Turn the suction valve slightly counterclockwise to open it and vent air from the pump through the bleeder valve. Open the discharge valve all the way and back it off 1/4 turn. After all the air is out of the pump, open the suction valve completely. Make sure both valves are open (back off 1/4 turn).

12) One at a time, run test each pump by setting the HAND/OFF/AUTO switch to the OFF position. Then switch from the VFD setting to constant speed and let the pump run at full speed for 20 seconds. Observe the wet well level dropping to verify that the pump is working and return the VFD switch to the AUTO setting.

13) If everything is okay, set the HAND/OFF/AUTO switch to the AUTO position.

14) Reverse the lockout / tagout procedure to bring the pump back on line.

Isolate each pump in turn to inspect and derag each one.

15) After all of the pumps have been deragged, return the station to normal operation

While the District has taken, and is taking, steps to redress this fiscal challenge, the District should continue to evaluate the level of staffing necessary to operate the wastewater treatment plant. If one of the three wastewater treatment plant operator positions become vacant in the near term, the District should evaluate options beside automatically filling the position. Those options include the use of operators-in-training rather than a third wastewater treatment plant operator.

The Forestville Community Services District is operating a water distribution system, a sewage collection system, and a sewage treatment plant with only two system operators and the General Manager. Given that comparison, it would seem that the Graton Community Services District should be able to operate its wastewater treatment plant with two wastewater treatment plant operators assisted by operators-in-training and, if necessary, contractual assistance during vacations and extended sick leave.

Recommendation #35: The District should continue to evaluate the level of staffing necessary to operate the wastewater treatment plant. If one of the three wastewater treatment plant operator positions become vacant in the near term, the District should evaluate options beside automatically filling the position. Those options include the use of operators-in-training rather than a third wastewater treatment plant operator.

6. ANALYSIS OF THE WASTEWATER TREATMENT PLANT

The Graton Community Services District has made several large (for the District) capital improvements to comply with the orders of the Regional Water Quality Control Board. This chapter presents background to those efforts and the continued efforts being made by the District to keep the operations of the plant in compliance with the orders of the Board.

1. THE REGIONAL WATER QUALITY CONTROL BOARD ADOPTED A *WATER QUALITY CONTROL PLAN FOR THE NORTH COAST REGION* IN 2012.

The District had long treated its wastewater at secondary treatment levels.

In May 2011, however, the Regional Water Board adopted a *Water Quality Control Plan for the North Coast Region* that designated beneficial uses, established water quality objectives, and contained implementation programs and policies to achieve those objectives for all waters addressed through the plan. This plan included new and more rigorous requirements. For the Russian River and its tributaries, no point source waste discharges were allowed from May 15 through September 30, and during all other periods when the waste discharge flow is greater than 1% of the receiving stream's flow. For municipal waste discharged from October 1 through May 14, the discharge must be of advanced treated wastewater (tertiary), and must meet a median coliform level of 2.2 Most Probable Number (MPN) per 100 milliliters (mL).

The Board issued a new order to the District to comply with those requirements in March 2012: NPDES Permit Order R1-2012-0016. That order is summarized in the exhibit following this page.

Exhibit 6 (1)

Summary of the NPDES Permit Order R1-2012-0016

<table>
<tr><th>Topic</th><th>Pertinent Information</th></tr>
<tr><td>Issue Date</td><td>March 15, 2012</td></tr>
<tr><td>Effective Date</td><td>May 1, 2012</td></tr>
<tr><td>Other Documents</td><td>This permit supersedes Order no. R1-2004-0038, which basically required only secondary treatment. This permit was issued in conjunction with Cease and Desist Order No. R1-2012-0015.</td></tr>
<tr><td>Facility Information (page 5 Of the permit)</td><td>
<table>
<tr><td>Discharger</td><td>Graton Community Services District</td></tr>
<tr><td>Name of Facility</td><td>Graton Community Services District Wastewater Treatment, Reclamation and Disposal Facility</td></tr>
<tr><td rowspan="3">Facility Address</td><td>250 Ross Lane</td></tr>
<tr><td>Sebastopol, CA 95472</td></tr>
<tr><td>Sonoma County</td></tr>
<tr><td>Facility Contact, title, and Phone</td><td>Jose Ortiz, General Manager, (707) 823 -1542</td></tr>
<tr><td>Mailing Address</td><td>P.O. Box 534, Graton, CA 95444</td></tr>
<tr><td>Type of Facility</td><td>Publicly Owned Treatment Works</td></tr>
<tr><td>Facility Design Flow</td><td>0.14 million gallons per day (mgd), average daily dry-weather flow; 0.397 mgd average daily wet-weather flow (based on design of tertiary filters); 0.85 mgd, peak wet-weather flow</td></tr>
</table>
</td></tr>
<tr><td>Discharge Points</td><td>During the wet season (October 1 - May 14), treated effluent is discharged to Atascadero Creek, at a rate not to exceed 1 percent of the creek flow. Because Atascadero Creek is tributary to the Russian River via Green Valley Creek, the Basin Plan requires that discharges are of advanced treated wastewater and must meet a median coliform level of 2.2 Most Probable Number (MPN) per 100 milliliters (mL).

During the dry season (May 15 - September 30) and other periods as allowed by the permit, effluent from the effluent storage ponds is reclaimed for agricultural irrigation, including frost control on vineyards. The Facility currently provides recycled water to 6 users and irrigates a 20.5-acre parcel on-site. Discharge to Atascadero Creek is prohibited during this period.

A designated transfer pipeline exists between the Facility and the Forestville Water District Wastewater Treatment, Reclamation, and Disposal Facility, and has been used to transfer treated effluent between the two facilities, for operational flexibility. Transfer of secondary treated effluent from the Facility to Forestville for advanced wastewater treatment and disposal may occur when treatment capacity is available at Forestville. If the transfer pipeline is used to convey secondary effluent, tertiary treated effluent transferred from Forestville to Graton would only be considered tertiary after one full pipe volume of tertiary water passes through the pipeline. With the completion of Graton’s tertiary upgrade project, the transfer pipeline is only used to transfer tertiary effluent.</td></tr>
</table>

Exhibit 6 (2)

<table>
<tr><th>Topic</th><th>Pertinent Information</th></tr>
<tr><td>Effluent limitations for discharge to the storage ponds</td><td>
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Units</th><th colspan="3">Effluent Limitations</th></tr>
<tr><th>Average Monthly</th><th>Average Weekly*</th><th>Maximum Daily</th></tr>
<tr><td>Biochemical Oxygen Demand 5- day @ 20°C (BOD5)</td><td>mg/L</td><td>10</td><td>15</td><td></td></tr>
</table>
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Units</th><th colspan="3">Effluent Limitations</th></tr>
<tr><th>Average Monthly</th><th>Average Weekly*</th><th>Maximum Daily</th></tr>
<tr><td rowspan="2">Total Suspended Solids (TSS)</td><td>lbs./day</td><td>33</td><td>50</td><td></td></tr>
<tr><td>mg/L</td><td>10</td><td>15</td><td></td></tr>
<tr><td>lbs./day</td><td>33</td><td>50</td><td></td></tr>
</table>
Percent Removal. The average monthly percent removal of BOD5 and TSS shall not be less than 85 percent. Percent removal shall be determined from the monthly average value of influent wastewater concentration in comparison to the monthly average value of effluent concentration for the same constituent over the same time period.
Total Coliform Bacteria. Disinfected effluent discharged at Discharge Point 001 shall not contain coliform bacteria in excess of the following concentrations:
(1) The median concentration shall not exceed an MPN of 2.2 per 100 mL, using the bacteriological results of the last 7 days for which analysis have been completed; and
(2) The number of coliform bacteria shall not exceed an MPN of 23 per 100 mL in more than one sample in any 30-day period.
(3) No single sample shall exceed an MPN of 240 total coliform bacteria per 100 mL.
Settleable Solids. The discharge shall not contain any measurable settleable solids.
</td></tr>
</table>

* The longer the averaging period, the lower the limit is. In other words, the RWQCB permit allows somewhat higher numbers over a short period of time.

Exhibit 6 (3)

<table>
<tr><th>Topic</th><th>Pertinent Information</th></tr>
<tr><td>Effluent Limitations for discharge to Atascadero Creek</td><td>The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-002 as described in the attached MRP:
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Units</th><th colspan="4">Effluent</th></tr>
<tr><th>Average Monthly</th><th>Maximum Daily*</th><th>Instantaneous Minimum</th><th>Instantaneous Maximum</th></tr>
<tr><td>pH</td><td>standard units</td><td>--</td><td>--</td><td>6.5</td><td>8.5</td></tr>
<tr><td>Total Residual Chlorine</td><td>mg/L</td><td>0.01</td><td>0.02</td><td>---</td><td>---</td></tr>
<tr><td>Cyanide</td><td>µg/L</td><td>4.0</td><td>9.2</td><td>---</td><td>---</td></tr>
<tr><td>Dichlorobro-momethane</td><td>µg/L</td><td>0.56</td><td>1.2</td><td>---</td><td>---</td></tr>
<tr><td>Total Ammonia (November through March)</td><td>mg/L</td><td>4.0</td><td>11</td><td>---</td><td>---</td></tr>
<tr><td>Total Ammonia (October, April, and May)</td><td>mg/L</td><td>2.6</td><td>9.6</td><td>---</td><td>---</td></tr>
</table>
Acute Toxicity. There shall be no acute toxicity in treated wastewater discharged to Atascadero Creek. The Discharger will be considered compliant with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted effluent complies with the following:

(1) Minimum for any one bioassay: 70 percent survival; and

(2) Median for any three or more consecutive bioassays: at least 90 percent survival.</td></tr>
</table>

* The longer the averaging period, the lower the limit is. In other words, the RWQCB permit allows somewhat higher numbers over a short period of time.

Exhibit 6 (4)

Topic	Pertinent Information
Effluent Limitations for Dis-charge To Reclamation Sites and Forestville	The Discharger shall comply with applicable state and local requirements regarding the production and use of reclaimed wastewater, including requirements of Water Code sections 13500 – 13577 (Water Reclamation) and California Department of Public Health (CDPH) regulations at title 22, sections 60301 – 60357 of the California Code of Regulations (Water Recycling Criteria). The Discharger shall submit to CDPH and the Regional Water Board a Recycled Water Engineering Report prepared in accordance with title 22. The Discharger shall receive approval of its title 22 engineering report from CDPH and operate its reclamation system in accordance with all CDPH requirements. The Discharger shall comply with the requirements contained in Reclamation Requirements and Provisions – Attachment G of this Order.
Pasteurization Disinfection Requirements	**Pasteurization Disinfection Requirements.** Requirements for the pasteurization disinfection system are applicable once the system is installed and operational, upon approval by the CDPH and the Regional Water Board. The chlorination disinfection system shall be the primary disinfection method until such time that the Discharger receives complete and final approval of the pasteurization disinfection system by CDPH and the Regional Water Board Executive Officer. In addition to the following requirements, the Discharger shall comply with any additional requirements specified by CDPH based on CDPH review of the Title 22 engineering report and results of performance testing of the completed pasteurization disinfection system. Temperature. Pasteurization temperatures must be at or above a minimum of 180° F, with that temperature maintained continuously for a minimum contact time of ten seconds at all times. ***Note. The required temperature was later reduced to 160 degrees.***
Monitoring and Reporting Program (MRP) Requirements	The Discharger shall comply with the MRP included as Attachment E to this Order, and future revisions thereto.
Storage Pond Technical Report	**Storage Pond Technical Report.** The Discharger shall prepare and submit for approval by the Regional Water Board Executive Officer a Storage Pond Technical Report **within four years of the effective date of this Order**. The Technical Report shall utilize existing information to provide a description of each recycled water storage pond used by the Discharger in order for the Regional Water Board staff to assess whether the storage ponds are adequately designed to minimize the potential for recycled water to cause adverse impacts to areal groundwater and beneficial uses thereof. The Technical Report shall include, but not be limited to construction date (or estimate if actual date is not known), construction details (thickness of any clay liner, impermeability, construction details, etc.), and operation and maintenance procedures that are used (e.g., berm and liner inspections, etc.).

Exhibit 6 (4)

Topic	Pertinent Information
O&M Manual	The Discharger shall maintain an updated Operation and Maintenance (O&M) Manual for the Facility. The Discharger shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel onsite and for review by State or federal inspectors.

2. THE REGIONAL WATER QUALITY CONTROL BOARD ISSUED A CEASE AND DESIST ORDER TO THE GRATON COMMUNITY SERVICES DISTRICT IN 2012.

Upon the adoption of the *Water Quality Control Plan for the North Coast Region* by the Regional Water Board, the Board issued a cease and desist order in March 2012 to the District regarding its reliance on secondary treatment. A summary of the cease and desist order is presented in the exhibit on the following page.

The cease and desist order included a compliance schedule for completion of the capital improvement project and compliance with final effluent limitations for BOD and TSS as noted in the table below.

Task	Task Description	Compliance Date
1	Submit written semi-annual progress reports detailing the status of the capital improvement project and compliance with Basin Plan AWT standards. The progress reports shall also report on the status of obtaining financing for the CIP and report the details of at least one public education/outreach activity conducted during the reporting period.	June 1 and December 1 of each year through June 1, 2014
2	Complete construction of the capital improvement project	February 1, 2014
3	Complete assessment of capital improvement project and demonstrate compliance with final effluent limitations for BOD5 and TSS.	May 1, 2014
4	Submit an engineering analysis to the Regional Water Board Executive Officer describing changes in operation and/or equipment. The report shall include an assessment of dry- and wet-weather treatment flow capacities. The report shall demonstrate full compliance with Basin Plan AWT standards and all Permit requirements contained in Order No. R1-2012-0016.	October 1, 2014

Exhibit 7 (1)

Summary of the Cease and Desist Order R1-2012-0016

<table>
<tr><th>Topic</th><th>Pertinent Information</th></tr>
<tr><td>Issue Date</td><td>March 15, 2012</td></tr>
<tr><td>Effective Date</td><td>May 1, 2012</td></tr>
<tr><td>Previous CDO</td><td>This order (CDO) modifies Order No. $1-2008-0109.</td></tr>
<tr><td>Relationship to New Permit</td><td>This CDO is expected to be issued at or near the same time as the new NPDES Permit (R1-2012-0016) and the CDO and the Permit complement each other.</td></tr>
<tr><td>Discharge Prohibitions</td><td>After October 6, 2007, the discharge to surface waters of effluent that has not been treated to the requirements of disinfected tertiary recycled water and filtered wastewater specified in Title 22, § 60301.230 and 60301.320(b) respectively, is prohibited. AWT requirements for discharges to surface waters are defined in Finding 6 of this Order.</td></tr>
<tr><td>Effluent Limitations</td><td>On or after October 6, 2007, advanced treated wastewater discharged to Atascadero Creek shall be adequately oxidized, filtered, and disinfected and shall not contain constituents in excess of the following limitations, as measured at Discharge Serial No. 001
<table>
<tr><th>Constituent</th><th>Units</th><th>Monthly Average</th><th>Weekly Average</th></tr>
<tr><td rowspan="3">BOD5 (20º, 5-day)</td><td>mg/l</td><td>10</td><td>15</td></tr>
<tr><td>lb./day (dry-weather) [4, 5]</td><td>12</td><td>18</td></tr>
<tr><td>lb./day (maximum wet- weather)</td><td>71</td><td>106</td></tr>
<tr><td rowspan="3">Suspended Solids</td><td>mg/l</td><td>10</td><td>15</td></tr>
<tr><td>lb./day (dry-weather) [4, 5]</td><td>12</td><td>18</td></tr>
<tr><td>lb./day (maximum wet- weather)</td><td>71</td><td>106</td></tr>
</table></td></tr>
</table>

Exhibit 7 (2)

<table>
<tr><th>Topic</th><th>Pertinent Information</th></tr>
<tr><td>General Provisions</td><td>Schedule for Compliance with Basin Plan Advanced Treatment Requirements (Note: Discharger is in violation of the last two tasks in the compliance schedule – in bold type below)

The Discharger shall comply with the following time schedule to ensure compliance with the Basin Plan advanced treatment requirement and Effluent Limitation B.2 of this Order by October 6, 2007.

<table>
<tr><th>Task</th><th>Date</th><th>Compliance?</th></tr>
<tr><td>Submit a written capital improvement plan describing specific tasks and a time schedule to achieve compliance with all Basin Plan AWT standards</td><td>March 15, 2005</td><td>Y</td></tr>
<tr><td>Submit written semi-annual progress report detailing the status of the capital improvement project and compliance with Basin Plan AWT standards</td><td>April 1 and October 1 of each year through October 2007</td><td>Y</td></tr>
<tr><td>Complete studies and environmental review for compliance with Basin Plan AWT standards</td><td>April 1, 2006</td><td>Y</td></tr>
<tr><td>Submit capital improvement project plans and specifications</td><td>October 1, 2006</td><td>Y</td></tr>
<tr><td>Complete construction of capital improvement project</td><td>August 1, 2007</td><td>N</td></tr>
<tr><td>Demonstrate compliance with Basin Plan AWT standards</td><td>October 6, 2007</td><td>N</td></tr>
</table>
</td></tr>
<tr><td>Infeasibility Report</td><td>On November 17, 2011, the Discharger submitted an Infeasibility Report that includes a request for interim effluent limitations and compliance schedules for completing its capital improvement project, and for complying with final effluent limitations for BOD5, TSS, chlorine residual, and ammonia. The Discharger has requested an additional 20 months to complete its capital improvement project.

The compliance schedules for compliance with final effluent limitations for BOD5, TSS, and chlorine residual are included in this CDO because they are directly related to completion of the Discharger's capital improvement project. The compliance schedule for ammonia is included in Order No. R1-2012-0016.</td></tr>
</table>

Exhibit 7 (3)

<table>
<tr><th>Topic</th><th>Pertinent Information</th></tr>
<tr><td>Effluent limitations for discharge to the storage ponds</td><td>Beginning May 1, 2012, the Discharger will be violating or threatening to violate the following terms in Order No. R1-2012-0016:

The discharge of advanced treated wastewater, as defined by the Facility's treatment design and the numerical limitations below, shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP (Attachment E). The advanced treated wastewater shall be adequately oxidized, filtered and disinfected as defined in Title 22, Division 4, Chapter 3, California Code of Regulations (CCR).

<table>
<tr><th>Constituent</th><th>Units</th><th>Monthly Average</th><th>Weekly Average</th></tr>
<tr><td rowspan="2">Biochemical Oxygen Demand 5-day @ 20°C (BOD5)</td><td>mg/l</td><td>10</td><td>15</td></tr>
<tr><td>lb./day (dry-weather) 6, 7</td><td>33</td><td>50</td></tr>
<tr><td rowspan="2">Total Suspended Solids (TSS)</td><td>mg/l</td><td>10</td><td>15</td></tr>
<tr><td>lb./day (dry-weather) 6, 7</td><td>33</td><td>50</td></tr>
</table>
</td></tr>
<tr><td>Effluent limitations for discharge to Atascadero Creek)</td><td>Beginning May 1, 2012, the Discharger will be violating or threatening to violate the following terms in Order No. R1-2012-0016

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-002 as described in the attached MRP:

<table>
<tr><th rowspan="2">Total Residual Chlorine</th><th rowspan="2">mg/L</th><th colspan="4">Effluent</th></tr>
<tr><th>Average Monthly</th><th>Maximum Daily</th><th>Instantaneous Minimum</th><th>Instantaneous Maximum</th></tr>
<tr><td>Total Residual Chlorine</td><td>mg/L</td><td>0.01</td><td>0.02</td><td>---</td><td>---</td></tr>
</table>
</td></tr>
<tr><td>No Mandatory Minimum Fines</td><td>The CDO protects the District from Mandatory Minimum Fines (MMFs).</td></tr>
<tr><td>CEQA Exemption</td><td>The CDO is exempt from CEQA.</td></tr>
</table>

Exhibit 7 (4)

<table>
<tr><th>Topic</th><th>Pertinent Information</th></tr>
<tr><td>Interim effluent limitations</td><td>The Discharger shall comply with the following interim effluent limitations: disinfected secondary effluent discharged to the effluent storage ponds shall not contain constituents in excess of the following limitations as measured at Discharge Point 001, Monitoring Location EFF-001:
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Units</th><th colspan="2">Effluent Limitations</th></tr>
<tr><th>Average Monthly</th><th>Average Weekly</th></tr>
<tr><td rowspan="3">Biochemical Oxygen Demand 5- day @ 20°C (BOD5)</td><td>mg/L</td><td>30</td><td>45</td></tr>
<tr><td>lbs./day (dry-weather)</td><td>35</td><td>53</td></tr>
<tr><td>lbs./day (wet-weather)</td><td>50</td><td>90</td></tr>
<tr><td rowspan="3">Total Suspended Solids (TSS)</td><td>mg/L</td><td>30</td><td>45</td></tr>
<tr><td>lbs./day (dry-weather)</td><td>35</td><td>53</td></tr>
<tr><td>lbs./day (wet-weather)</td><td>45</td><td>60</td></tr>
</table>
Treated disinfected wastewater discharged to Atascadero Creek shall not contain detectable levels of total chlorine using an analytical method or chlorine analyzer with a minimum detection level of 0.1 mg/L, measured at Discharge Point 002 (Monitoring Location EFF-002)</td></tr>
<tr><td>Compliance Schedule for Completion of Capital Improvement</td><td>Compliance Schedule for Completion of the Capital Improvement Project and Compliance with Final Effluent Limitations for BOD and TSS
<table>
<tr><th>Task</th><th>Task Description</th><th>Compliance Date</th></tr>
<tr><td>1</td><td>Submit written semi-annual progress reports detailing the status of the capital improvement project and compliance with Basin Plan AWT standards. The progress reports shall also report on the status of obtaining financing for the CIP and report the details of at least one public education/outreach activity conducted during the reporting period.</td><td>June 1 and December 1 of each year through June 1, 2014</td></tr>
<tr><td>2</td><td>Complete construction of the capital improvement project</td><td>February 1, 2014</td></tr>
<tr><td>3</td><td>Complete assessment of capital improvement project and demonstrate compliance with final effluent limitations for BOD5 and TSS.</td><td>May 1, 2014</td></tr>
<tr><td>4</td><td>Submit an engineering analysis to the Regional Water Board Executive Officer describing changes in operation and/or equipment. The report shall include an assessment of dry- and wet-weather treatment flow capacities. The report shall demonstrate full compliance with Basin Plan AWT standards and all Permit requirements contained in Order No. R1-2012-0016.</td><td>October 1, 2014</td></tr>
</table></td></tr>
</table>

Exhibit 7 (5)

<table>
<tr><th>Topic</th><th>Pertinent Information</th></tr>
<tr><td>Compliance Schedule for Chlorine Residual</td><td>Compliance Schedule for Compliance with Final Effluent Limitations for Chlorine Residual:

<table>
<tr><th>Task</th><th>Task Description</th><th>Compliance Date</th></tr>
<tr><td>1</td><td>Submit written report documenting that additional safeguards, as described in the November 17, 2011 Graton CSD Infeasibility Report, have been implemented to ensure the prevention of the discharge of effluent with any chlorine residual.</td><td>October 1, 2012</td></tr>
<tr><td>2</td><td>Submit a written report identifying progress toward compliance with final chlorine residual effluent limitations.</td><td>June 1, 2013</td></tr>
<tr><td>3</td><td>Submit a written report that describes the Discharger’s plans to comply with the requirement to demonstrate removal of chlorine residual to concentrations at or below 0.01 mg/L, if construction of the pasteurization disinfection system is delayed beyond December 1, 2013, the Discharger shall.</td><td>December 1, 2013</td></tr>
<tr><td>4</td><td>Comply with final effluent limitations for chlorine residual.</td><td>June 1, 2014</td></tr>
</table></td></tr>
<tr><td>Limit on New Connections</td><td>Until in compliance, new connections to the system shall be limited to the equivalent of 8 single family dwelling units per year.
22.5. Some exceptions to the new connections limit.</td></tr>
<tr><td>CDO No Longer in Force</td><td>Letter of May 12, 2015 from Matthias St. John, Executive Officer of the North Coast Regional Water Quality Control Board stating that the District has satisfied all obligations under the CDO and the CDO is no longer in force.</td></tr>
</table>

The cease and desist order also included a compliance schedule for compliance with final effluent limitations for chlorine residual, as noted in the table below.

Task	Task Description	Compliance Date
1	Submit written report documenting that additional safeguards, as described in the November 17, 2011 Graton CSD Infeasibility Report, have been implemented to ensure the prevention of the discharge of effluent with any chlorine residual.	October 1, 2012
2	Submit a written report identifying progress toward compliance with final chlorine residual effluent limitations.	June 1, 2013
3	Submit a written report that describes the Discharger's plans to comply with the requirement to demonstrate removal of chlorine residual to concentrations at or below 0.01 mg/L, if construction of the pasteurization disinfection system is delayed beyond December 1, 2013, the Discharger shall.	December 1, 2013
4	Comply with final effluent limitations for chlorine residual.	June 1, 2014

3. IN MAY 2015, THE REGIONAL WATER QUALITY CONTROL BOARD INDICATED THAT THE DISTRICT HAD SATISFIED ALL REQUIREMENTS AND THE CEASE AND DESIST ORDER IS NO LONGER IN FORCE.

On May 12, 2015, the District received a response from the Regional Water Quality Control Board regarding whether the District had satisfied the requirements stated within the Cease and Desist Order. This response was received in response to a letter from the District.

The letter indicated that the District had satisfied the requirements of the Cease and Desist Order and that the Order was no longer in force. More specifically, the Regional Water Quality Control Board noted the following in its letter:

- On October 1,2014, Graton CSD submitted an engineering analysis to this office, as required by the CDO. A final engineering analysis was submitted on January 20, 2015, with modifications requested by Cathy Goodwin of my staff by e-mail dated November 18, 2014. The engineering analysis demonstrates that the AWT and pasteurization disinfection system upgrades satisfactorily meet the requirements of the CDO and that the upgrades. have been designed and installed to meet all permit requirements.

- Monitoring reports submitted by Graton CSD in the last year demonstrate that the 2014 average dry weather flow (ADWF) to the Facility was 60,000 gallons 'per

day (gpd), well below the design ADWF of 140,000 gpd. The monitoring reports also demonstrate that Graton CSD's compliance with effluent limitations in Order No. RI-2012-0016 has greatly improved. Minor exceedances of the effluent limitation for biochemical oxygen demand that were reported during start-up of the AWT system appear to have been resolved based on our review of monitoring data submitted in recent months. By e-mail, dated March 12, 2015, Cathy Goodwin noted some deficiencies regarding the reporting of turbidity data associated with the AWT filters and temperature data associated with the pasteurization disinfection system and requested submittal of turbidity data. and temperature data in the format required in Monitoring and Reporting Program (MRP) No. RI-Z012-0016.

- Cathy Goodwin inspected the Facility on April 15, 2015, and confirmed that all components of the tertiary and disinfection system upgrade have been completed and were operating in accordance with permit requirements on that date. During the inspection, you confirmed that your SCADA system will be reprogrammed by the end of the month in order to provide the capability to report turbidity and temperature data in the format required by the MRP.

The Regional Water Quality Control Board, however, indicated that Graton CSD must complete two tasks to achieve full compliance with requirements of Waste Discharge Requirements Order No. R1-2012-0016 as noted below.

- Submittal of turbidity and temperature monitoring data in the format required by the MRP for the period beginning with September 2014 through April 2015, following the reprogramming of the SCADA system; and;

- Confirmation of final approval of its Title 22 Recycled Water Engineering Report.

4. MUCH OF THE TREATMENT PLANT CONSISTS OF RELATIVELY LOW TECHNOLOGY, EASY TO OPERATE, LOW COST FACILITIES.

Findings on various elements of the treatment plant and its operation are presented below.

- **Headworks**. The headworks dates from prior to the updating of the plant to provide advanced wastewater treatment. It includes a manually raked bar screen with a bypass channel. The headworks also includes two grit chambers, an ultrasonic flow meter with a Parshall flume, and an upgraded concrete pad with an additional bypass channel for future deragging equipment. There is also an effluent pipe that connects Control Vault Structure #1 to the headworks for recirculating wastewater with microorganisms to mix with the influent and improve nitrification. The headworks performs satisfactorily.

- **Aerated Ponds and Settling Ponds**. The original treatment plant was an aerated pond system. There are two aerated ponds and one settling pond. Aerators are operated in the two aerated ponds as required to prevent odors. The main purpose of the aerators is to oxidize and nitrify the incoming wastewater. The incoming ammonia is converted to nitrite in Pond 1 and the longer aeration time in Pond 2 converts nitrite to nitrate. The settling pond allows for settling of solids and a lower dissolved oxygen content or anoxic zone for the nitrates to denitrify and release as nitrogen gas. This system continues to work satisfactorily and greatly reduces the biochemical oxygen demand (BOD or "organic strength") and the total suspended solids (TSS) of the wastewater. This, more or less, represents secondary treatment.

- **Clarification System**. The suspended solids in the effluent from the settling pond is removed by coagulating and flocculating the wastewater with a coagulant and a polymer in a chemical feed tank, then passing the flocculated water through a suspended air flotation clarifier. In this clarifier, air is emulsified in the flocculated wastewater. The tiny bubbles cling to the flocculated solids and float them to the surface, where they are skimmed off. There were some problems with the suspended air flotation (SAF) clarifier in late 2014, mostly associated with getting the coagulant and polymer dosages correct. These problems were worked out and the plant staff has now managed to reduce the chemical dosage to about half of what it was originally. The operators took it upon themselves to cut cost by testing the lowest chemical dose rate to apply while still achieving adequate water quality and meeting NPDES permit requirements. This saved the district about 50 percent on SAF chemical costs. Since that time, the clarification system has worked well.

- **Fuzzy Filter**. The fuzzy filter is a filter that uses fuzzy balls about the size of golf balls to filter the clarified wastewater. There were some problems with the fuzzy filter in mid-2014. These problems too were worked out by the plant staff, in part by replacing the fuzzy balls, and, also, in part by developing effective cleaning routines, and making programming changes to eliminate problems. The cleaning routine includes adding bleach to the filter and scouring the balls. The filter manufacturer claimed that the filter needed to be cleaned only every six months but it has been necessary to clean the filter every two weeks. When time is available, the cleaning cycle is run for two days. With the revised cleaning procedures, the fuzzy filter system has worked well.

- **Pasteurization Technology Group (PTG) System.** The PTG project was supposed to go into operation early in 2014 but there were numerous problems with the various unit processes. The turbine was inoperative from approximately April through August 2015. While the turbine was not in operation, pasteurization was accomplished by use of the duct burner. The plant was pretty much in operation from the autumn of 2015 onward. There were not any permit violations in 2016.

During much of the winter and/or when the PTG system is operated at a high flow rate, it is necessary to run the duct burner to obtain enough heat to pasteurize (disinfect) the treated wastewater. Except during rare utility power outages, the standby generator is only run for 10 minutes, once per week, thus it uses only a minimal amount of gas. Similarly, the amount of gas used for heating the Office Building is small.

The "acting" chief plant operator estimated that approximately 80% to 90% of the gas through the non-Capstone turbine gas meter is used for the duct burner. There is a single electric meter for the whole wastewater treatment plant other than the effluent pumps. The turbine in the PTG system has a meter that shows the amount of electricity it produces. The power that the PTG unit generates reduces the electricity coming into the plant from Pacific Gas & Electricity (PG&E). Virtually all of the electricity that is generated is used within the plant; little or none is sold back to PG&E.

Regatta Solutions has a nine year, $112,964.35 maintenance contract with the District but the contract only covers maintenance of the Capstone Turbine Corporation turbine. Maintenance of the rest of the PTG system is done by the District staff or other contractors.

The PTG system was originally supposed to produce a temperature of 180 degrees Fahrenheit. This limit was reduced to 162.4 degrees. The plant staff operates the system to produce 165 degrees to maintain a margin of safety.

The original specification called for the PTG unit to have a capacity of 400 GPM. The maximum flow that has been achieved is 350 GPM and that lasted only for one day. The typical throughput rate is 150 GPM.

Apparently the headlosses through the PTG system were underestimated and the pumps that were provided operate far to the left on their curves, i.e. at less than the expected flow. To maximize the flow, the variable frequency drives have been operated at 75 Hertz, which is 25 percent higher than the nominal 60 Hertz full power speed. Even at 75 Hertz, 400 GPM cannot be achieved. The District will be purchasing different pumps to handle the higher flows.

There were initial problems with mineral and biological scaling of the PTG heat exchanger unit. The initial procedures for dealing with the scaling were very expensive. The plant staff has now developed procedures of treating the mineral scaling with citric acid and the biological fouling with bleach. Typically, this is done weekly during startup or shutdown. The staff improvised some additional facilities to assist in the application of the citric acid and bleach. These facilities provided valving and a means of inserting the cleaning chemicals. These piping improvements greatly reduced the time required and the chemical costs of the cleaning cycle.

The plant staff have developed alternatives that enable the PTG to meet the requirements of the plant for advanced treatment, except during recent rainstorms (January 2017) when the plant staff were forced to use chlorine for disinfection.

- **Holding Ponds #1 And #2**. The treated wastewater is always sent to the holding ponds, which is very important during periods when disposal cannot be done or can only be done at a flow rate that is less than the incoming wastewater flow rate. When chlorine disinfection was being done, the holding ponds also allowed the chlorine to dissipate. The holding ponds also provide water for firefighting. There is a 100 HP fire pump rated at 1200 GPM at 100 PSI. There is a small jockey pump and a hydropneumatic tank that keep the fire suppression system pressurized when the demand on the system is small. The holding ponds have worked well.

- **Effluent pumps**. The effluent pump station is located near the headworks of the plant. It originally contained two 88 HP pump. A 75 HP pump was installed around 2007. It was proposed that the 75 HP pump be replaced with two 15 HP pumps at a cost of approximately $225,000. The plant staff noted that the 75 HP pump was only needed when the disposal fields were being irrigated and that a much smaller pump would suffice at other times. A 3 HP pump that was left over from the construction project was wired in and meets 95 percent of the winter needs when the plant is discharging to Atascadero Creek. It has a capacity of over 300 GPM. The 75 HP pump can also be used during periods of high flow. The operators have also worked to greatly increase the onsite irrigation capacity. These changes eliminated the need for the proposed pump station and saved the district almost $250,000 in capital costs. In any event, the proposed 15 HP pumps would have been too big for most winter discharges and too small for summer irrigation. The electrical meter for the effluent pump station is No. 1009947860. The “Bus. Act. Desc” line on the PG&E reports is filled in with “SEWER PMP2 PMPS”. The address is listed as 4780 Ross Road, Graton, CA 95444. This was an old address for the wastewater treatment plant. The correct address is 250 Ross Lane, Graton, CA 95444. The electrical bills show that the average monthly cost of electricity at the effluent pump station declined from $2,055 in 2013 to $743 in 2014 and $891 in 2015. Thus, the use of the 3 HP pump also significantly reduced the power cost. The effluent pumps, with the modifications made by the plant staff, have worked well.

- **Disposal**. Wastewater can be disposed of by spray irrigation on District owned land north of the holding ponds, by irrigation of agricultural lands, or by discharge to Atascadero Creek during the rainy season. The irrigation pump station can also supply irrigation water to various off-site agricultural parcels. When the irrigation water was provided free to the agricultural parcels, a little was used. When the District started charging for the irrigation water, most farmers stopped using it. The amount of water used for agricultural irrigation in recent years has

been negligible. Water can be discharged to Atascadero Creek from October 1 until May 14 at a rate not to exceed one percent of the flow in the creek. The disposal system has worked well.

- **Solids Disposal by Composting.** Solids from the suspended aeration flotation unit are sent to a covered composting facility at the plant. The "acting" chief plant operator estimated that ten dry tons of solids were composted in 2015. To achieve the required temperature in the compost, the piles must be covered with wood chips.

  Compost typically weighs between, 1,000 and 1,600 pounds per cubic yard, or 37 to 59 pounds per cubic foot. Water weighs 62.4 pounds per cubic foot. Wood chips weigh approximately 640 pounds per cubic yard, or 24 pounds per cubic foot. The "acting" chief plant operator estimated that between 10 and 15 loads of wood chips were used in 2015. The wood chips cost $350 per load, but some of the loads were delivered free by tree service companies and occasionally the plant staff has borrowed a chipper and has chipped brush that has been cut at the plant site. The expenses for wood chips probably approximates six loads per year, i.e. approximately $2,000.

  The plant has a permit from Sonoma County for the composting operation. The County inspects the compost facility four times per year. The fee for the County permit is $1,400 per year. If the composting operation maintains the required temperature of 165 degrees for three days, the compost will be classified as Class A compost. It can then be used for agricultural, horticultural, or agricultural purposes. None of the compost has been sold. The market for compost is difficult to judge. Some facilities sell compost but compost is given away free by some cities and landfills and manure is almost always given away free.

  The compost has been accumulating since the composting facility went into operation around the end of 2013. The operating staff has begun spreading some of the compost on the 20 acres of District owned irrigation land. There is plenty of compost disposal capacity at the District owned irrigation site. If the biosolids are composted, they can be surface applied to the irrigation site without disking them in. If the biosolids are merely dried, they would be only Class B biosolids and would have to be disked in. This would require a tractor and much more labor. There would also be a potential for odors and/or vector problems.

  The solids disposal process has worked well.

The processes discussed above are relatively low technology, easy to operate, low cost facilities except the clarifier system, the fuzzy filter, and the PTG disinfection system.

The plant is required to provide tertiary treatment. Tertiary treatment requires filtration. Filtration requires the clarifier system. Thus, clarifier and filter facilities are required no matter what form of disinfection is used. The existing clarifier and fuzzy filter systems are as simple, easy to operate, and economical as any others available on the market. No significant improvements in operations or reductions in cost appear to be feasible with these facilities.

The one place where significant simplification of operations and cost savings may be possible is in the PTG disinfection system. This challenge was reinforced with recent rainstorms (January 2017) when the plant staff were forced to use chlorine for disinfection. The Matrix Consulting Group believes that the District, as part of its five-year capital improvement program, should evaluate an ultraviolet disinfection system. This system is used by numerous other wastewater treatment plants. The Russian River County Sanitation District, for example, installed an ultraviolet disinfection system, albeit for peak wet-weather flows of up to 3.5 million gallons of treated wastewater per day. The City of Santa Rosa also uses an ultraviolet disinfection system for its treatment plant as does the City of Petaluma.

The General Manager, as part of the development of the five-year capital improvement program for 2018-19, should evaluate the potential application of an ultraviolet disinfection system and return to the Board with an analysis if the advantages and disadvantages of an ultraviolet disinfection system for the District including the impacts on operating and maintenance costs and the estimated capital costs.

Recommendation #36: The General Manager, as part of the development of the five-year capital improvement program for 2018-19, should evaluate the potential application of an ultraviolet disinfection system and return to the Board with an analysis if the advantages and disadvantages of an ultraviolet disinfection

system for the District including the impacts on operating and maintenance costs and the estimated capital costs.