City of Biggs

Agenda Item Staff Report
For Regular City Council Meeting:
May 14, 2013 6:30PM

To: Honorable Mayor
and Members of the City Council

Date: May 9, 2013

From: Steve Speights, PE – City Engineer

Re: WWTP Operating Permit Reports – Work Plan for Method of Compliance
- Pollution Prevention Plan
Bennett Amendment

Summary:
The City operates the wastewater treatment plant (WWTP) under a permit issued by the State Water Quality Control Board. The current permit issued in October 2012 contains several reporting requirements relative to the City's efforts toward compliance with the permit requirements. A schedule of the reporting requirements is attached.

Requested Action:
Approve the Bennett Amendments for $8,380 for the Work Plan for Method of Compliance and $13,444 for the Pollution Prevention Plan, by voice vote.

Background:
The WWTP cannot meet the treatment levels specified in the permit for ammonia. In conjunction with the permit the Board adopted a Time Schedule Order (TSO) specifying milestones on the way to being in compliance within five years. A copy of the TSO is attached. The two reports are the first two milestones under the TSO. The milestones are basically progress reports to the Board documenting that the City is working toward compliance with the permit requirements.

Attachments:

Bennett Amendments, Exhibit A, Scope of Services, and Exhibit B, Fee Estimates, for Work Plan for Method of Compliance and for Pollution Prevention Plan.

Time Schedule Order R5-2012-0084

EXHIBIT A: Scope of Services

To **Task Order No. ___**

Client:	City of Biggs
Consultant:	Bennett Engineering Services Inc
Project:	Work Plan for Method of Compliance
Date:	May 3, 2013

BEN|EN
TRUSTED ENGINEERING ADVISORS
Bennett Engineering Services
1082 Sunrise Avenue, Suite 100
Roseville, California 95661
T 916.783.4100
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www.ben-en.com

As part of the City's NPDES permit with the Regional Water Quality Control Board (RWQCB) for the WWTP, the City is required to submit, by April 13, 2013, a Work Plan for Method of Compliance to the RWQCB. The Work Plan for Method of Compliance will be prepared that will describe how the City is complying with the requirement of the permit.

The Work Plan for Method of Compliance will include:

- A description of the phasing plan to meet the requirements of the RWQCB permit.
- The City's short term approach to meeting the requirements during the Phase 1 portion of the project.
- The City's long term approach to meeting the requirements during the Phase 2 portion of the project.

EXHIBIT B: Fee Estimate

ToTask Order **NO. ___**

Client: City of Biggs

Consultant: Bennett Engineering Services, Inc.

Project: Work Plan for Method of Compliance

Date: May 3, 2013

Fee Estimate	Principal Engineer Bennett, O. 170 $/hr		Project Manager III Ainsworth, S. 160 $/hr		Engineer IV Speights, S. 148 $/hr		Engineer II Bennett, S. 132 $/hr		Engineering Tech II Michel, B. 98 $/hr		Administrative Staff 56 $/hr		BES Subtotal		MISC. EXPENSES	TOTAL
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost		
Task:																
1 Prepare and Submit Work Plan for Method of Compliance	2 hrs	$340	2 hrs	$320	6 hrs	$888	36 hrs	$4,752	8 hrs	$784	16 hrs	$896	70 hrs	$7,980	$400	$8,380
PROJECT TOTAL	2 hrs	$340	2 hrs	$320	6 hrs	$888	36 hrs	$4,752	8 hrs	$784	16 hrs	$896	70 hrs	$7,980	$400	$8,380

* Rates shown adhere to our current rate schedule. Rates are subject to change with 30-day notice.
* Budgeted fees beyond the current year may be amended by an increase relative to annual rate increases.

EXHIBIT A: Scope of Services

To **Task Order No. ___**

Client:	City of Biggs
Consultant:	Bennett Engineering Services Inc
Project:	Pollution Prevention Plan
Date:	May 3, 2013

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As part of the City's NPDES permit with the Regional Water Quality Control Board (RWQCB) for the WWTP, the City is required to submit, by April 13, 2013, a Pollution Prevention Plan to the RWQCB. Section 13263.3(d)(1) of the California Water Code requires that the City prepare and implement a Pollution Prevention Plan. The Pollution Prevention Plan will be prepared in accordance with the requirements of Section 13263.3 of the California Water Code.

The Pollution Prevention Plan will include:

- Identification of the potential sources of each contaminant and the potential for each contaminant to enter the WWTP.
- Pollution prevention activities that have been implemented or are underway for the constituents of concern.
- Implementation plan goals, monitoring plan, and a brief discussion of potential environmental impacts.
- For ammonia, an implementation schedule and estimated cost is also included.

The NPDES permit states:

> *"The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions VI.C. of this Order. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in the Special Provision at section VI.C.7 of this Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date and/or in compliance with SMR reporting requirements described in subsection X.B.5 above."*

EXHIBIT B: Fee Estimate

ToTask Order NO. ___

Client: City of Biggs

Consultant: Bennett Engineering Services, Inc.

Project: Pollution Prevention Plan

Date: May 3, 2013

Project: Pollution Prevention Plan	Principal Engineer Bennett, O. 170 $/hr		Project Manager III Ainsworth, S. 160 $/hr		Engineer IV Speights, S. 148 $/hr		Engineer II Bennett, S. 132 $/hr		Engineering Tech II Michel, B. 98 $/hr		Administrative Staff 56 $/hr		BES Subtotal		MISC. EXPENSES	TOTAL
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost		
Task:																
1 Prepare and Submit Pollution Prevention Plan	6 hrs	$1,020	8 hrs	$1,280	10 hrs	$1,480	48 hrs	$6,336	16 hrs	$1,568	20 hrs	$1,120	108 hrs	$12,804	$640	$13,444
PROJECT TOTAL	6 hrs	$1,020	8 hrs	$1,280	10 hrs	$1,480	48 hrs	$6,336	16 hrs	$1,568	20 hrs	$1,120	108 hrs	$12,804	$640	$13,444

* Rates shown adhere to our current rate schedule. Rates are subject to change with 30-day notice.
* Budgeted fees beyond the current year may be amended by an increase relative to annual rate increases.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2012-0084

REQUIRING CITY OF BIGGS
BIGGS WASTEWATER TREATMENT PLANT
BUTTE COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R5-2012-0083
(NPDES PERMIT NO. CA0078930)

The California Regional Water Quality Control Board, Central Valley Region, (hereinafter Central Valley Water Board) finds that:

1. On 4 October 2012 the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2012-0083, NPDES Permit No. CA0078930, prescribing WDRs for the City of Biggs (hereinafter Discharger) at the Biggs Wastewater Treatment Plant (hereafter Facility), Butte County.

2. WDR Order No. R5-2012-0083 contains Final Effluent Limitations IV.A.1.a., which reads, in part, as follows:

Table 6. Final Effluent Limitations

Parameter	***Units***	***Effluent Limitations***			
		Average Monthly	***Maximum Daily***	***Instantaneous Minimum***	***Instantaneous Maximum***
Ammonia	*mg/L*	*1.23*	*2.15*	--	--

3. The effluent limitations specified in Order No. R5-2012-0083 for ammonia is based on implementation of the National Recommended Ambient Water Quality Criteria (NAWQC) for protection of freshwater aquatic life.

4. California Water Code (CWC) section 13300 states: "*Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.*"

5. Federal regulations, 40 CFR 122.44 (d)(1)(i), require that NPDES permit effluent limitations must control all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above any State water quality standard, including any narrative criteria for water quality. Beneficial uses, together with their corresponding water quality objectives or promulgated water quality criteria, can be defined per federal regulations as water quality standards.

6. In accordance with CWC section 13385(j)(3), the Central Valley Water Board finds that, based upon results of effluent monitoring, the Discharger is not able to consistently comply with the new effluent limitations for ammonia at Discharge Point No. EFF-001. These limitations are based on new requirements that become applicable to the Order after the effective date of the waste discharge requirements, and after 1 July 2000, for which new or modified control measures are necessary in order to comply with the limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

7. Immediate compliance with the final effluent limitations contained in Order No. R5-2012-0083 for ammonia at Discharge Point No. EFF-001 is not possible or practicable. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance. The Discharger is proposing to conduct upgrades to the plant to come into compliance with the applicable effluent limitations. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance. The following table summarizes the effluent monitoring data obtained from July 2007 to January 2012 for ammonia:

Parameter	Units	MEC	Mean	Standard Deviation	# of Samples
Ammonia	mg/L	18.0	9.6	3.2	52

8. On **25 January 2012,** the Discharger submitted justification for a compliance schedule for ammonia. For compliance with the final effluent limitations for ammonia, the Discharger anticipates that additional time is necessary to secure funding to pay for upgrades to the treatment plant.

9. This Order provides a time schedule for the Discharger to develop, submit and implement methods of compliance, and/or construct the necessary treatment plant upgrades to meet the final effluent limitations.

10. California Water Code (CWC) section 13300 states:

> Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.

11. CWC subsections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j)(3) provides protection from mandatory minimum penalties for violations of an effluent limitation when:

... the waste discharge is in compliance with either a cease and desist order issued pursuant to section 13301 or a time schedule order issued pursuant to section 13300 or 13308, if all of the following requirements are met:

(A) The cease and desist order or time schedule is issued on or after July 1, 2000, and specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i).

(B) The regional board finds that, for one of the following reasons, the discharger is not able to consistently comply with one or more of the effluent limitations established in the waste discharge requirements applicable to the waste discharge:

(i) The effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

(C) The regional board establishes a time schedule for bringing the waste discharge into compliance with the effluent limitation that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the effluent limitation. For the purposes of this subdivision, the time schedule may not exceed five years in length.... If the time schedule exceeds one year from the effective date of the order, the schedule shall include interim requirements and the dates for their achievement. The interim requirements shall include both of the following:

(i) Effluent limitations for the pollutant or pollutants of concern.

(ii) Actions and milestones leading to compliance with the effluent limitation.

(D) The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan pursuant to section 13263.3.

12. The time schedule order satisfies provisions of CWC section 13385(j)(3) as follows:

13385(j)(3)(A): This time schedule order is being issued after July 1, 2000, and specifies actions that the Discharger must take to correct the violations that would be subject to enforcement actions (see Compliance Time Schedule Table on Page 6).

13385(j)(3)(B)(i): This time schedule order includes new effluent limits that become effective after the July 1, 2000 date, and may require new or modified control measures in order to comply with the final effluent limits. Additionally, the Discharger has provided a feasibility study indicating it would take approximately **5** years to secure funding to conduct upgrades to the treatment plant to meet the new final effluent limitations. Therefore the new

modifications cannot be designed, installed, or put into operation within 30 calendar days.

13385(j)(3)(C): The Discharger has provided a feasibility study that indicates it will take approximately **5** years to meet the new final effluent limitations. To meet the new final limitations, the Discharger will have to conduct upgrades to the treatment plant. This timeframe is as short as possible, considering the major upgrades the plant will have to complete to meet the final effluent limitations.

13385(j)(3)(C)(i): This time schedule order contains effluent limits for the constituents of concern which are ammonia.

13385(j)(3)(C)(ii): This time schedule order contains milestones and actions which lead to compliance with the final effluent limitations (See the Compliance Time Schedule Table on Page 6).

13385(j)(3)(D): This time schedule order contains a requirement that the Discharger must submit and implement a pollution prevention plan within 6 months after adoption of the time schedule order.

13. CWC section 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j) exempts certain violations from the mandatory minimum penalties. CWC section 13385(j)(3) exempts the discharge from mandatory minimum penalties "*where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300, if all the [specified] requirements are met.*"

14. Compliance with this Order exempts the Discharger from mandatory penalties for violations of the final effluent limitations for ammonia, in accordance with CWC section 13385(j)(3). CWC section 13385(j)(3) requires the Discharger to update and implement a pollution prevention plan pursuant to section 13263.3 of the California Water Code. Therefore, a pollution prevention plan will be necessary for ammonia in order to effectively reduce the effluent concentrations by source control measures.

15. Since the time schedules for completion of actions necessary to bring the waste discharge into compliance exceeds 1 year, this Order includes interim requirements and dates for achievement. The time schedules do not exceed 5 years.

16. The compliance time schedule in this Order includes interim performance-based effluent limitations for ammonia. Interim effluent limitations consist of a maximum daily effluent concentration derived using sample data provided by the Discharger demonstrating actual treatment plant performance.

    a. **10 or more data points**. In developing the interim limitations, when there are 10 sampling data points or more, sampling and laboratory variability is

accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row, 3rd Edition, January 1986). Where actual sampling shows an exceedance of the proposed 3.3 standard deviation limit, the maximum effluent concentration (MEC) has been established as the interim limitation.

b. **Less than 10 data points.** When there are less than 10 sampling data points available, the *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001) (TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of 10 data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Thus, when there are less than 10 sampling points for a constituent, interim limitations are based on 3.11 times the MEC to obtain the daily interim limitation (TSD, Table 5-2) and 2.13 times the MEC to obtain the average monthly interim limitation (assuming one sample per month). If the statistically projected interim limitation is less than the MEC, the interim limitation is established as the MEC.

The interim limitation, using the above procedures is calculated at 20.2 mg/L. However, the previous interim limitation for ammonia was 27.0 mg/L, which was based on the MEC from the previous 5 years of effluent sample results (January 2001 – May 2006). This interim effluent is utilizing all of the effluent data (January 2001 – January 2012) to set the interim effluent limitation. The MEC for the entire data set was 27 mg/L. The following table summarizes the calculation of the interim effluent limitation for ammonia:

Parameter	Units	MEC	Mean	Standard Deviation	Number of Samples with Detections	Calculated Interim Limitation	Interim Limitation (Average Monthly)	Interim Limitation (Maximum Daily)
Ammonia	mg/L	18.0	9.6	3.2	52	20.2[1]	27[2]	27[2]

[1] Based on 3.3 x Std Dev + Mean
[2] Based on previous Order No. R5-2007-0032 and the MEC of 27 mg/L

17. The Central Valley Water Board finds that the Discharger can maintain compliance with the interim limitations included in this Order. Interim limitations are established when compliance with the final effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitations can be achieved.

18. On 4 October 2012, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Time Schedule Order under CWC section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.

19. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) ("CEQA"), under Water Code Section 13389, since any adoption or modification of a NPDES Permit for an existing source is exempt and this order only serves to implement such a NPDES permit. This Order is also exempt from CEQA in accordance with Section 15321(a)(2), Title 14, California Code of Regulations. This Order is not subject to the limitations of Government Code section 65962.5(c)(3) [Cortese List] on use of categorical exemptions because it does not involve the discharge of "hazardous" materials as used in that statute, but rather involves the discharge of water treatment backwash water. In addition, adoption of this Order is not subject to CEQA because this Order does not have the potential to cause a significant impact on the environment (Title 14 CCR section 15061(b)(3)) as it is intended to enforce preexisting requirements to improve the quality of ongoing discharges that are part of the CEQA "baseline". Any plant upgrades or replacement are the result of WDRs Order No. R5-2012-0083 and not this Order.

20. In the event the selected alternative requires additional review under CEQA, the Discharger shall conduct required review and obtain appropriate approval prior to initiating construction.

IT IS HEREBY ORDERED THAT:

1. The Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations for ammonia contained in WDR Order No. R5-2012-0083 as described in the above Findings:

AMMONIA COMPLIANCE TIME SCHEDULE TABLE

Task	Compliance Date
Submit and implement a Pollution Prevention Plan (PPP)[1] pursuant to CWC section 13263.3 for ammonia	6 Months after effective Date of this Order
Submit Initial Workplan for Method of Compliance	6 Months after effective Date of this Order
Submit Results of Proposed Method of Compliance Study	18 Months after effective date of this Order
Submit record of Method of Compliance Decision and Project Work Plan with Time Schedule	2 Years after effective date of this Order
Complete 25% project Work Plan and submit progress report[2]	3 Years after effective date of this Order
Complete 50% project Work Plan and submit progress report[2]	4 Years after effective date of this Order
Complete 100% project Work Plan and submit project completion report[2]	5 Years after effective date of this Order
Achieve compliance with applicable final effluent limits	5 years after effective date of this Order

[1] The Discharger shall implement a new Pollution Prevention Plan (PPP) for ammonia and shall meet the requirements specified in California Water Code Section 13263.

[2] Completion includes necessary project components such as studies, financing, environmental review, permitting, design, bidding, construction, testing, etc., relative to project work plan submitted. The progress reports for ammonia shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance with the final effluent limitations.

The following interim average monthly and maximum daily effluent limitations shall be effective immediately in lieu of the final effluent limitations for ammonia contained in Order No. R5-2012-0083. The final effluent limitations at Discharge Point No. EFF-001 for ammonia contained in Order No. R5-2012-0083 shall become effective 5 years after the adoption of this Order, or when the Discharger is able to come into compliance, whichever is sooner.

Parameter	Units	Interim Average Monthly Effluent Limitation	Interim Maximum Daily Effluent Limitation
Ammonia	mg/L	27	27

2. For the compliance schedule required by this Order, the Discharger shall submit to the Central Valley Water Board on or before the compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, **PAMELA C. CREEDON**, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 4 October 2012.

Original signed by

PAMELA C. CREEDON, Executive Officer