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TECHNICAL MEMORANDUM

130668-002

September 18, 2006

TO: ART O'BRIEN, CITY OF ROSEVILLE

FROM: PATRICK HASSEY, BROWN AND CALDWELL
CHRIS PETERS, BROWN AND CALDWELL

SUBJECT: SEWER SYSTEM MANAGEMENT PLAN (SSMP) PREPAREDNESS
AUDIT – SYSTEM EVALUATION AND CAPACITY ASSURANCE
PLAN (ELEMENT VIII)

The California State Water Resources Control Board Order No. 2006-0003 outlines the requirements for the Statewide General Waste Discharge Requirement (WDR) for Wastewater Collection Agencies. Item VIII of the WDR states that “the Enrollee (City of Roseville) shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event.” The plan must include the following four elements: Evaluation; Design Criteria; Capacity Enhancement Measures; and a Schedule.

This Technical Memorandum summarizes the results of an evaluation to determine if elements of the City’s current sewer system management program are in compliance with Element VIII of the Statewide WDR.

Data Collection and Review

Brown and Caldwell (BC) reviewed the following documents provided by the City to determine if they meet the requirements of Element VIII of the WDR.

- City of Roseville “Sanitary Sewer Model Development Project – Draft Report” RMC Water and Environment, July 2006.
- South Placer Wastewater Authority “Wet Weather Flow Projection for the Ultimate SPWA Service Area (Including Urban Growth Areas) – Draft (TM No. 2c)” RMC Water and Environment and Brown and Caldwell, January 17, 2006.
- South Placer Wastewater Authority “Trunk Sewer Hydraulic Analysis – Final (TM No. 3b)” RMC Water and Environment and Brown and Caldwell, April 13, 2006.

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Evaluation

Each document provided by the City was reviewed to determine if the City is in compliance with the WDR. Program enhancements are identified if shortfalls were identified in the evaluation.

Part (a) Evaluation. Hydraulic models developed for the City (Roseville Model Project and SPWA Wastewater Systems Evaluation Project) were used to identify peak flows in each collection system component (pipe and pump station). The City of Roseville model includes each pipes and pump station in the Roseville collection system. The SPWA model primarily includes trunk sewers 15 inches and greater in diameter. The Roseville Model Project consisted of developing and calibrating a model for the City's use in evaluating the system. The SPWA Wastewater Systems Evaluation Project included a model and a hydraulic capacity evaluation. The hydraulic capacity evaluation identified hydraulic deficiencies and recommended improvements. *These two hydraulic model projects meet the intent of Part (a) of Element VIII in that the parts of the system known to potentially experience a hydraulic deficiency were adequately evaluated.*

Part (b) Design Criteria. Appropriate design criteria for the evaluation of existing collection system components and sizing new collection system components was established and utilized for the Roseville Model Project and the SPWA Wastewater Systems Evaluation Project. This included the development of wastewater flow generation factors based on water use records and flow monitoring data in the City of Roseville. *The City's efforts to develop appropriate design criteria meet the intent of Part (b) of Element VIII.*

Part (c) Capacity Enhancement Measures. The SPWA Wastewater Systems Evaluation included the identification of short- and long-term CIP projects to meet current and future build-out flow projections. The Roseville Model Project did not include the identification of capacity improvement projects. This step will be performed by the City at a later date.

The two capacity deficiencies in the Roseville trunk sewer system that were identified in the SPWA project are currently being addressed. One project (diversion structure at Area D) is already in place and the second potential project (deficient sewer at Area E) is going to be monitored again (prior to implementation of proposed remediation) because it is suspected that a manhole cover was allowing excessive inflow into the collection system and a sewer relief project is not warranted.

The City's efforts to identify capacity enhancement measures meet the intent of Part (c) of Element VIII. However, if flow monitoring indicates that the second relief project (Area E) is necessary, the City will need to develop a plan to mitigate the deficiency. The plan may include an increase in pipe size or an I/I reduction program. The CIP should include an implementation schedule and identify sources of funding for this project.

Part (d) Schedule. The City does not believe there is a capacity problem in Area E and are currently re-evaluating Area E by monitoring to assess that there is not a capacity issue in Area E. If the City determines that there is not a capacity issue in Area E they have complied with all portions of the capital improvement program developed in Parts (a)-(c) above. *And will have met the intent of Part (d) of Element VIII.*