Environmental Compliance Tasks and Management Plan Preparation for the Marina Coast Water District

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Executive Summary

The Marina Coast Water District (the District) is a municipal water company that operates and maintains water and sanitary sewer systems within the City of Marina and the former Fort Ord military base. The District is responsible for the installation, operation, maintenance, and repair of water and sewer infrastructure in addition to assuring water availability and water quality for District ratepayers. The District aims to become the top public supplier of integrated water and sewer services in the Monterey Bay area through initiatives such as recycled water services, a regional desalination plant, and a variety of public outreach and water conservation efforts.

The experiential learning internship with the Marina Coast Water District involved various tasks associated with their Environmental Compliance and Permitting Program. The project involved organizing permitting information to ensure compliance and allow for easier access, display and tracking of required activities and documents. To fulfill these objectives, an electronic filing system was created for regulatory information while a Sanitary Sewer Management Plan was also prepared to ensure compliance with a Statewide Waste Discharge Requirement. Sanitary Sewer Management Plans are a key management component for many municipalities and water companies in California and completion of this document was a high priority for Marina Coast Water District. Therefore, focus was placed on writing this management plan while generating the environmental compliance system was secondary. Overall, this internship was very valuable as it helped focus my career pathway and provided knowledge and skills that directly apply to my future career goals.

Project Objectives

The internship at the Marina Coast Water District was initially designed to involve work with their Environmental Permitting and Compliance Program in addition to the District’s Asset Management Program. However, due to an urgent need for a revised Sanitary Sewer Management Plan as required by a Waste Discharge Requirement (WDR) issued by the State Water Resources Control Board (SWRCB), the Asset Management tasks were eliminated as part of the scope of work for this internship. Original project tasks that were eliminated include collection, organization, and analysis of asset location data using Trimble Global Positioning
System Geo-XH and ArcGIS. Asset management tasks will likely be performed for the District after completion of this internship.

The project to be completed within the experiential learning internship timeframe maintained tasks associated with the Environmental Compliance and Permitting Program and also included work with management of the District’s sanitary sewer system. The SWRCB issued a Statewide General WDR for Sanitary Sewer Systems (Order No.2006-0003) that required each Enrollee to develop and implement a Sanitary Sewer System Management Plan (SSMP). The SSMP is intended to specify procedures and activities utilized by the Enrollee to manage its wastewater collection system in order to limit liability, severity of damage, and to protect human health and the environment. Although the District drafted an SSMP in 2004, the current WDR includes new requirements which made it necessary for a new SSMP to be prepared for the District as soon as possible. Therefore, one portion of my project involved delivering an updated SSMP to the District while the other involved designing a system/method for documenting and tracking environmental compliance for the District’s Environmental Compliance and Permitting Program.

Goals of this project included providing high quality deliverables to the District in addition to enhancing knowledge and skills in areas of interest and in disciplines relevant to my career goals. Personal interests and goals include gaining experience in the science and policy associated with water resources, water quality, and water conservation. While knowledge was gained in these areas, goals shifted to understanding major environmental policies and enhancing writing skills due to the nature of the revised project. Through completion of project deliverables, my goals were met as I gained familiarity with water legislation, and experience in document preparation and management plan writing. Skills were enhanced in the organization and maintenance of environmental compliance data such as permits, invoices, payment slips and monitoring reports. Overall, the multifaceted project provided knowledge and understanding of water distribution systems, sanitary sewer collection, local and federal regulations, permitting procedures, engineering designs and standards, and operation/maintenance of infrastructure through preparation of a management plan and compilation of compliance data.

Acquired knowledge and experience from this internship pertains to my career goals, including the potential career pathway through the USDA. Career goals include working with water quality
issues and management/protection of water resources. I hope to work in these areas in relation to agriculture or storm water. Goals include providing knowledge that guides future management decisions and providing assistance to the public and stakeholders. A potential career track through the USDA involves protection of water resources and water quality through a scientific position with the Natural Resources Conservation Service (NRCS) or the Forest Service. Both the District and these USDA organizations are actively involved in ensuring water availability and water quality through development of sustainable water sources, conservation practices and utilizing appropriate technologies and best management practices. Career path options pertaining to my interests and goals include work as a Biologist, Ecologist or Hydrologist. Work as a Hydrologist is of particular interest as they play a key role in natural resources management and conservation in addition to ensuring high quality of surface and ground water. This career path is ideal as it involves engineering practices, technical writing and field and laboratory work.

**Project Approach and Methods**

Tasks and goals of the project were achieved through a variety of methods and a consistent approach throughout the internship. This approach was to thoroughly research applicable environmental requirements, assess compliance, and complete any necessary documents, plans or paperwork to ensure compliance. This approach allowed for my internship goals to be met through enhancing knowledge of environmental policies in addition to enhancing writing skills. This approach also allowed for timely completion of project tasks and required deliverables.

The specific approach for completion of the Sanitary Sewer System Management Plan (SSMP) involved following the requirements and outline of the WDR in addition to utilizing published documents, guidelines, and examples. The WDR requires that eleven elements form the framework of the SSMP, while each of these components contains individual requirements that must be described in the document. These eleven elements are highlighted below along with the specific methods utilized to obtain required information and to write these sections of the SSMP. Overall, methods to complete the SSMP included reading through the WDR, exploring unfamiliar terms and concepts, researching District activities, infrastructure and history, and obtaining information required by the current WDR.
SSMP Elements and Methods

I. Goal: Researched general goals and purpose of writing an SSMP and the specific benefits to the District

II. Organization: Gathered contact information and spoke with co-workers regarding job descriptions and lines of communication between District staff members

III. Legal Authority: Read through the District Water Code and other applicable publications to identify specific sections establishing legal authority

IV. Operations and Maintenance Program: Consulted with the District GIS technician regarding collection system maps and the Operations and Maintenance Superintendent to gain knowledge of operations and maintenance activities. Read applicable documents such as draft SSMPs, Master Plans and Capital Improvement Project details to acquire additional information

V. Design and Performance Provisions: Researched engineering design and construction standards and specifications, and researched related published documents and provisions

VI. Overflow Emergency Response Plan: Updated, edited and revised the existing Overflow Emergency Response Plan according to new regulatory requirements and definitions. Researched reporting requirements and contact information for a variety of regulatory organizations

VII. Fats, Oils and Grease Control Program: Read through the new District Ordinance and new device and testing requirements for fats, oils and grease. Examined District initiatives and partnerships through online research and legal agreements

VIII. System Evaluation and Capacity Management Assurance Plan: Analyzed District Master Plan studies including hydraulic analyses in addition to Capital Improvement Plans and budgets. Consulted with District engineers for descriptions of recently completed and future projects

IX. Monitoring, Measurement and Program Modifications: Reviewed and summarized information from a previous draft SSMP and updated information with help from the Operations and Maintenance Superintendent. Utilized data from example SSMPs to design a new monitoring approach

X. SSMP Audits: Determined materials used for audits and described in detail how the District will comply with the WDR auditing requirements

XI. Communication Program: Determined through online research, contact with co-workers and publications how the District communicates with the public and other related facilities
The specific approach for the Environmental Compliance and Permitting Program tasks involved establishing applicable requirements/permits, and organizing and maintaining this information within an electronic document. In general, methods to complete this task included acquiring, organizing, assessing, and presenting environmental compliance and permitting information. The District currently maintains a State and County Operational Permits handbook which includes the status of various permits in addition to copies of these permits, invoices, payment slips etc. This information was used along with other acquired data to compile an Excel document to provide easier access and display of compliance information. This allows for more accurate tracking of permits and deadlines in addition to highlighting steps needed to ensure compliance. The following methods were performed to create this electronic compliance system:

- Explored the permit handbook and online resources to understand the requirements of each regulatory agency
- Created an Excel document with a separate tab for each regulatory agency and columns for the following categories:
  - Location/facility
  - Application date
  - Date permit issued
  - Active period
  - Provisions/requirements
  - Invoice received
  - Payment due date
  - Renewed or fees paid
  - Permit expiration date
  - P-Drive documents
  - Notes
- Organized information into the Excel document acquired from the permit book, finance staff members, engineers and the Water Quality Supervisor
- Assessed the information, highlighted areas lacking data or clarity and notified the District Engineer/Deputy General Manager of any requirements that needed to be addressed
- Organized existing electronic documents and scanned applicable hard copy documents into the computer for online documentation and access

**Project Outcomes**
This multi-faceted project did not involve a straight-forward problem statement with associated research and results. Instead this project involved delving into a specific program (Environmental Compliance and Permitting) and performing associated research, assessments, and necessary tasks to ensure completion of requirements and to optimize overall functionality of the program. Therefore, the outcomes of this project include completion of a management plan that is intended to minimize impacts from sewer spills to water quality and public health/safety. This plan will demonstrate compliance with the current WDR for sanitary sewer systems and be implemented by the District for the next five years. The SSMP will be published on the District website (http://www.mcwd.org/) following submission to the SWRCB and acceptance by the District’s Board of Directors. Another project outcome was creation of an environmental compliance system that the District can utilize to demonstrate environmental compliance to regulatory agencies. This system can also be used internally for efficient tracking of requirements, permits and deadlines. These results and deliverables can serve as a basis for future management documents and to further develop the District’s Environmental Compliance and Permitting Program.

Project outcomes were also achieved on a personnel level with knowledge gained in a variety of areas directly applicable to my career goals. Personnel products of this project include acquiring understanding and experience in the following subjects:

- SWRCB policies and requirements
- Terminology and legal authority of a water company
- Engineering design criteria and construction standards
- Mapping of sewer/water infrastructure
- Hydraulic modeling
- Discharge prohibitions, monitoring and remediation
- Role of regulatory agencies and local stakeholders in public outreach, emergency response and remediation of spills
- Construction, operation, maintenance and repair of facilities/equipment related to hydrology
- Auditing, funding and budgets

Conclusion
This internship project involved working with the Environmental Compliance and Permitting Program for Marina Coast Water District. Additional research and work with this program at the District would involve further organization and update of the electronic environmental compliance system. Due to time constraints, the requirements of certain regulatory agencies and programs were not covered as well as others and could be expanded upon. Requirements of the California Department of Public Health and the EPA should be enhanced as the majority of information on these agencies and associated permits is maintained with the Water Quality Supervisor. In addition, regulatory requirements associated with the District’s water conservation program should be included in the environmental compliance system.

The project tasks of writing a Sanitary Sewer Management Plan and creating an environmental compliance system has furthered my career goals in a variety of ways. First, this internship has enhanced knowledge in areas of interest in addition to helping focus my career goals. Writing a management plan for the District accentuated the importance and prominence of writing within a science career. This helped me recognize that I may enjoy a career with emphasis on writing, ranging from writing management plans to reporting scientific findings. This internship also highlighted the role of policy in water management and the importance of understanding the agencies and requirements involved. Interests have shifted from a mainly scientific perspective towards focus on water policy as well as engineering. Out of the potential career pathways with the USDA, I have chosen the Hydrologist position which has been prompted by this experiential learning internship. Overall, this internship opportunity has helped me narrow my career focus and has highlighted important subject areas for the future in order to help me accomplish my career goals.