



CITY OF MORRO BAY PUBLIC WORKS ADVISORY BOARD MEETING AGENDA

The City of Morro Bay is dedicated to the preservation and enhancement of the quality of life. The City shall be committed to this purpose and will provide a level of municipal service and safety consistent with and responsive to the needs of the public.

**Wednesday, June 15, 2016
Veterans Memorial Building - 5:30 P.M.
209 Surf Street, Morro Bay, CA**

Steven Shively, Vice-Chair
Janith Goldman

Marlys McPherson, Chair
David Sozinho

Christopher Parker
Stewart Skiff

ESTABLISH QUORUM AND CALL TO ORDER
MOMENT OF SILENCE/PLEDGE OF ALLEGIANCE
ANNOUNCEMENTS
PRESENTATIONS – None

PUBLIC COMMENT PERIOD

Members of the audience wishing to address the Board on City business matters other than scheduled items may do so at this time. To increase the effectiveness of the Public Comment Period, the following rules shall be followed:

- When recognized by the Chair, please come forward to the podium and state your name and address for the record. Board meetings are audio and video recorded and this information is voluntary and desired for the preparation of minutes.
- Comments are to be limited to three minutes.
- All remarks shall be addressed to the Board, as a whole, and not to any individual member thereof.
- The Board respectfully requests that you refrain from making slanderous, profane or personal remarks against any elected official, commission and/or staff.
- Please refrain from public displays or outbursts such as unsolicited applause, comments or cheering.
- Any disruptive activities that substantially interfere with the ability of the Board to carry out its meeting will not be permitted and offenders will be requested to leave the meeting.
- Your participation in Board meetings is welcome and your courtesy will be appreciated.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Public Works Department at (805) 772-6262. Notification 24 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

A. CONSENT CALENDAR

- A-1 **Approval of Minutes of May 18, 2016 Meeting**
Recommendation: Approve minutes.

B. BUSINESS ITEMS

- B-1 **Directors Report – Informational summary of current Public Works Activities**
Recommendation: Information item, no action needed.

B-2 2016 Streets Summit, Part 1: A Progress Review and Recommendations for the FY 2016-2017 work plan

Recommendation: Staff recommends Public Works Advisory Board hear public testimony and provide input on the draft FY2016-2017 work plan, future funding alternatives and repair strategies for street improvements in preparation for a Part 2 of the Streets summit that will be a Joint Street Summit with City Council in the fall.

B-3 Biennial Audit of the 2014 Sewer System Management Plan (SSMP)

Recommendation: Staff recommends that this staff report be received and filed

C. FUTURE AGENDA ITEMS

- Memorial Bench, Tree, and Bike Rack Program
- Adopt a Street/Park
- Facility Tour
- Streets Summit, Part 2

D. ADJOURNMENT

Adjourn to the Public Works Advisory Board meeting at the Veteran's Memorial Building, 209 Surf Street, on Wednesday, July 20, 2016 at 5:30 p.m.

This agenda is subject to amendment up to 72 hours prior to the date and time set for the meeting. Please refer to the agenda posted at the Public Works Department, 955 Shasta Avenue, for any revisions or call the department at 772-6262 for further information.

Materials related to an item on this Agenda are available for public inspection during normal business hours in the Public Works Department at 955 Shasta, City Hall at 595 Harbor, Mill's/ASAP at 495 Morro Bay Boulevard, or the Morro Bay Library at 695 Harbor, Morro Bay, CA 93442.

This agenda may be found on the Internet at: www.morrobayca.gov/pwab or you can subscribe to Notify Me for email notification when the Agenda is posted on the City's website. To subscribe, go to www.morrobayca.gov/notifyme and follow the instructions.

Materials related to an item on this agenda submitted to the Board after publication of the agenda packet are available for inspection at the Public Works Department during normal business hours or at the scheduled meeting.

MINUTES - PUBLIC WORKS ADVISORY BOARD (PWAB)
REGULAR MEETING – MAY 18, 2016
VETERAN’S MEMORIAL HALL – 5:30P.M.

| | | |
|----------|------------------|-------------------------------------|
| PRESENT: | Marlys McPherson | Chair |
| | Steve Shively | Vice-Chair |
| | Chris Parker | Board Member |
| | Janith Goldman | Board Member |
| | Stu Skiff | Board Member |
| | David Sozinho | Board Member |
| STAFF: | Rob Livick | Public Works Director |
| | Kay Merrill | Administrative Utilities Technician |
| | Damaris Hanson | Engineering Technician IV |

ESTABLISH QUORUM, CALL TO ORDER AND MOMENT OF SILENCE

The meeting was called to order at 5:31p.m., a quorum was present and there was a moment of silence.

ANNOUNCEMENTS

<https://youtu.be/BtVbaniSgXQ?t=1m15s>

David Sozinho stated 97.3, The Rock radio station completed their fund drive and exceeded their fund goal so the station will remain on the air for another year.

Marlys McPherson thanked City staff for their efforts in making the Amgen a success and announced the League of Women’s Voters is sponsoring a “Meet the Mayor” at the Libertine Pub on Saturday May 21, at 12:00pm. It is free and open to the public. Marlys asked staff if any applications have been received for the PWAB vacancy and Rob Livick stated he believes there is one application and interviews will be scheduled in the near future.

PRESENTATIONS-None

PUBLIC COMMENT

<https://youtu.be/BtVbaniSgXQ?t=3m47s>

The public comment period was opened.

Ric Decsler stated at the last meeting he commented about the lack of education the garbage company was providing for the use of the recycle bins and suggested providing stickers stating the requirements for using the recycle bins and he would like to see that happen for the citizens of Morro Bay.

Rob Livick announced the San Luis Master Chorale will be performing at the Performing Arts Center on Saturday at 7:30pm. Tickets are available at pacslo.org

The public comment period was closed.

A. CONSENT AGENDA

<https://youtu.be/BtVbaniSgXQ?t=8m2s>

A-1 Approval of Minutes from the PWAB Meeting of April 20, 2016

MOTION:

Steve Shively moved to approve Item A-1. The motion was seconded by Stu Skiff and carried unanimously, 6-0.

B. BUSINESS ITEMS

B-1 Directors Report – Informational summary of current Public Works Activities

<https://youtu.be/BtVbaniSgXQ?t=8m20s>

The Committee asked questions of staff and commented on the current Public Works Activities Directors Report.

B-2 Review of Draft 2015 Urban Water Management Plan Update

<https://youtu.be/BtVbaniSgXQ?t=13m30s>

Julia Aranda with MNS Engineers presented a power point presentation.

The Committee made comments and asked questions of staff and Julia on the Review of Draft 2015 Urban Water Management Plan Update.

The public comment period was opened, seeing none, the public comment period was closed.

MOTION:

Steve Shively recommended approval of the Urban Water Management Plan for 2016 with the additions and comments made tonight. The motion was seconded by Chris Parker and carried unanimously, 6-0.

C. Future Agenda Items

<https://youtu.be/BtVbaniSgXQ?t=57m28s>

- Annual “Streets Summit” - Tentatively June
- Biennial Sewer System Management Plan Audit – Tentatively June

ADJOURNMENT

The meeting adjourned at 6:30p.m. to a regular PWAB meeting to be held on Wednesday, June 15, 2016 at 5:30 p.m. at the Veteran’s Memorial Hall, 209 Surf Street, Morro Bay, California.



AGENDA NO: B-1

MEETING DATE: June 15, 2016

Staff Report

TO: Public Works Advisory Board **DATE: June 9, 2016**
FROM: Rob Livick, PE/PLS – Public Works Director/City Engineer
SUBJECT: Director’s Report / Information Items

Please contact the individual staff members prior to the meeting, if possible, for more detailed information.

Notify Me: Sign up for Notify Me on the City’s Website www.morrobayca.gov/notifyme for notification of Council, Board’s and Commission’s agendas and minutes.

Service Requests: The City has a feature to the City’s website, Service Requests www.morrobayca.gov/905/Service-Requests, or the mobileApp “My Morro Bay” (Available on both Android and IOS operating systems) where citizens can report a concern to the City for predetermined issues without the need to phone the City during business hours (for example: reporting a pothole).

Staff can also add Service Requests for someone over the phone or in the office if they do not have access to a computer. Each category in Service Requests is assigned to the appropriate staff member to handle so citizens don't have to figure out what department to contact for an issue they need to report on.

BICYCLE/ALTERNATIVE TRANSPORTATION

Staff Contact: Rob Livick

Staff is working with State Parks Maintenance Staff for the installation of “Share the Road” signs on Lower State Parks Road.

Staff is revising our Active Transportation Program (ATP) grant proposal to build the final phase of the Morro Creek Multi-use Trail which will connect the bike and pedestrian path from the bridge north to Morro Bay High School.

COLLECTION SYSTEM CAPITAL PROJECTS – Collection System

Staff Contact: Bruce Keogh
Rick Sauerwein
Jarrod Whelan

- Lift Station #1 Wood Privacy/Security Fence is scheduled to be constructed in the coming month.

CONSOLIDATED MAINTENANCE

Staff Contact: Mike Wilcox

The Rock rinse stations are alive again. Staff worked alongside Harbor Department this month installing coin operators, plumbing, and wiring to resurrect the rinse stations as a pay only amenity. The upgrades went into use about a week after the project began and the public is very pleased to have them available once again. Staff also took the opportunity during this brief downtime to thoroughly clean and repaint the inside of both the Men's and Women's restrooms at the Rock giving it the first major facelift since construction in 2005. Staff has continued on to the North T-pier restrooms to apply a fresh coat of paint inside the Men's and Women's restrooms.

Staff has begun crack sealing streets in the Northeast section of the City. Staff will initially focus on streets East of Hwy 1 and North of San Jacinto then moving on to seal the edges of pothole repairs made over the past two years throughout the City. Work will continue thru the 10th. Pothole repairs will start up again following this project.

The California Energy Commission energy efficiency projects are well underway. The bids for the photovoltaic portion of the two phase project have just been received and an award of contract is expected to be approved at the June 14th City Council meeting. The successful bidder will begin installations following the HVAC upgrades, probably near the end of August.

Street signs have been replaced on Beachcomber and Sandalwood from Azure to Yerba Buena. Staff will begin replacing additional residential street signs beginning in the new fiscal year, July 1st. This is a public safety project that doubles as a beautification project. Therefore, signs with the most wear and least reflectivity will be replaced first. Legibility and reflectivity are essential for residents, tourist, and emergency vehicles.

If you have maintenance requests please call 772-6261 or use the City's Service Requests online system on our website www.morrobayca.gov/905/Service-Requests. Upon receipt, the electronic requests will be reviewed and assigned to the appropriate staff for action. In the future, the City will be upgrading to a fully integrated maintenance work order system that will allow you to view the progress of your requests.

SIDEWALK REPAIR AND INSTALLATION

Staff Contact: Rick Sauerwein

2016 CDBG ADA Accessibility project: The new 2016 grant application has been approved by the County Board of Supervisors and staff will attend a kick-off meeting Monday June 13. We are still awaiting a final decision on reallocation of prior year funding to provide up to \$230,000 in additional funding to fill gaps in our existing sidewalk network to improve ADA Accessibility.

In association with the sidewalk gap closure project, the Council provided an additional \$60,000 to address repairs of existing sidewalk. The City's contractor will be addressing these areas in the next two weeks.

STREET TREES – Urban Forest Management Plan

Staff Contact: Damaris Hanson

The City is currently in the locally defined nesting season; which extends from from February 1st to July 1st. During nesting season, no City right-of-way trees shall be trimmed or removed unless in the case of an emergency during nesting season.

The City works hard to ensure that local trees are protected and recognizes a policy to not generally disturb public trees during bird nesting from February 1 to June 30. Only in emergency

circumstances that could jeopardize public safety or damage property will the Public Works director approve removal or trimming of trees.

The three Eucalyptus trees proposed to be removed during nesting season, due to being an arborist report determining them hazardous, have been put on hold. The City hired a biologist to conduct a bird nesting survey prior to the removal of these trees. The survey revealed an active Red-Shouldered Hawk nest. Therefore, the trees are not currently being removed. The City will conduct another survey in the coming weeks to see if the nest is still active.

STORM WATER

Staff Contact: Damaris Hanson

Year three of the stormwater permit is nearing an end. Staff will begin gathering the necessary data together for the online annual report.

TRANSIT

Staff Contact: Janeen Burlingame

The FY 2013-2015 Triennial Performance Audit for Morro Bay Transit and Trolley has been completed and submitted to the San Luis Obispo Council of Governments. The City fully complied with the eight applicable requirements and was above the required 10% farebox ratio in each of the audit years: 12.59% in FY 12/13, 12.01% in FY 13/14 and 12.84% in FY 14.15.

WATER – Chorro Stream Gauge

Staff Contact: Rick Sauerwein
Pamela Newman

Staff met with State Water Resources Control Board staff to discuss progress on the project as it relates to perfection of the City's Appropriated Right to withdraw water from the underflow of Chorro Creek. Mitigated Negative Declaration has been completed but County Permitting cannot proceed further until we can respond to National Marine Fisheries Service concerns regarding fish passage and obtain property owner permission to install gage on San Luis Coastal Resource Conservation District property. This requires the approval from the USDA/NRCS who hold a conservation easement.

WATER – Nutmeg Tank Replacement

Staff Contact: Rick Sauerwein
Jarrod Whelan

No change in status: Mitigated Negative Declaration has been revised and County Permitting is in progress.

WATER – Operations

Staff Contact: Rob Livick
Jamie James
Damaris Hanson

Staff completed the 2015 Consumer Confidence Report (CCR) and it is available at www.morrobayca.gov/CCR2015. The CCR is an annual water quality report prepared by the City Water Division. The CCR includes information on the source water, levels of detected contaminants and compliance with drinking water standards.

The Urban Water Management plan is going to City Council on June 14, 2016, and will be submitted to Department of Water Resources prior to the July 1st due date.

WATER – Water Conservation

Staff Contact: Damaris Hanson

Water conservation rebates available; Cash for grass, rain barrel, irrigation retrofit, SMART irrigation controller, toilet retrofit and Energy star washing machine. State rebates now available for removing grass (up to \$2 per sq. ft.) and replacing a toilet that flushed more than 1.6 gallons per flush (\$100). Go to www.saveourwaterrebates.com. Revisions to the State mandated Water Conservation regulations have been updated by the State Water Board. The City is required by June 22nd to submit the City's projected water supply and demand according to the new regulations and determine what our new conservation standard will be for the years to come.

WASTEWATER – Collections

Staff Contact: Bruce Keogh
Dave Zevely
Jarrod Whelan

The City's five-person field crew in wastewater collections section performed 15,915 feet of sewer main cleaning, collected flowmeter data, conducted five (5) facility inspections, and assisted WWTP and Consolidated Maintenance. For the month of May, no sanitary sewer overflows were reported in City main lines and the Collection's crew responded to two private sewer lateral backups.

Lift Station 1 controller was upgraded to OPTO 22. This controller equipment matches controllers at all the other lift stations in the City.

WASTEWATER – Major Maintenance Repair Program (MMRP)

Staff Contact: Bruce Keogh
Dave Zevely
Jarrod Whelan

At the January 26, 2016 Meeting the City Council accepted staff's recommendation to transition from the MMRP to conducting plant maintenance from the operating budget at a level that will keep the plant running efficiently until the WRF is operational. Based on the Council's decision in January, this will be the last MMRP update, however staff will continue to provide regular updates regarding operations and maintenance in the Directors Report.

O&M Strategy for Next Five Years

City and District staff will continue to develop and implement a proactive O&M program over the next five years with the goal of balancing for O&M at the existing plant and maximizing capital for the new WRF.

Current MMRP Projects

Metering Vault Removal and Blending Valve Replacement Project

City and District staff, in coordination with Michael Nunley & Associates (MKN), finalized and publicly noticed an Invitation to Bid for the replacement of four valves on September 20 and 27, 2015; bids were due by October 6, 2015. Pacific Coast Excavators (PCE), Inc. was the lowest responsive bidder at \$90,238 and was given the Notice to Proceed on April 18, 2016. The Project was completed on April 29, 2016, and Notice of Substantial Completion was delivered to PCE on May 26, 2016. Pacific Coast Excavation completed the project for a total of \$89,808, including three Contract Change Orders. The May 31, 2016 City Council agenda contains an agenda item for the City Council to authorize staff to file the Notice of Completion of the MMRP: Blending Valves Replacement Project.

City staff decided not to complete the fourth phase of the contract (the replacement of the 24-inch blending valve), eliminating this phase of the work in its entirety in accordance to the Public Contract Code, due to concerns about the ability of the contractor to complete that project in the allotted four-hour time window. Plant and Engineering staff are currently developing strategies for replacement of the blending valve in September or October, following peak summer flows. Staff will recommend \$10,000 of the project budget be rolled over into the FY16/17 WWTP budget to cover contractor costs for excavation, removal, and installation of a new 24" blending valve.

During all phases of this project, WWTP staff had to stop flow to and drain the pipelines feeding the various valves being replaced. This involved complex operational strategies to hold flow either in tanks that had been drained prior to starting the job or stacking water in the thirty inch trunk line that feeds the WWTP. Staff was able to provide four-hour windows where flow could be stopped and managed while the first three phases of the project were completed.

Rehabilitation of the Secondary Clarifier #2

Plant staff has continued with the repair process for the catwalk as time allows. They anticipate completing the repairs and having a painting contractor on-site to complete the coating of the catwalk by the end of June. The anticipated repairs include chipping away corroded areas and repairing and coating these areas to prevent or minimize corrosion. Ultimately, this project could include repairs to the catwalk, repairs to the metal framework on the flights and skimmer cage assembly, repair and replacement of piping and valving, and other associated work. Staff will rely on their recent experience performing similar repairs on the primary clarifiers to refine the work schedule and process.

Purchase and Installation of New Distributor Arms and Biofilter Improvement Project

Staff will continue to work with City Public Works Engineering staff and MKN for the purchase and installation of new distributor arms on biofilter #2. City engineering staff The bid package for replacement of the Trickling Filter Distributor Arms is nearing completion. There will be a long lead time of sixteen to twenty weeks for receipt of the equipment once a purchase order is issued, so the funding for this project will be rolled over and included in the draft FY16/17 budget. City staff anticipate the work will be performed during late September or early October, following peak summer flows.

Flood Control Measures at the Biofilters and Interstage Pumping Station

Flood control measures have been substantially completed at the plant. Staff will continue to work with Public Works Engineering staff and MKN to identify any remaining cost effective flood control measures in accordance with the requirements of the existing and anticipated NPDES permits.

WASTEWATER – NEW WRF

Staff Contact: Rob Livick

Additional information on the WRF project is available on the City's website (www.morrobay.ca.us/newwrf).

Upcoming WRF Meetings

City Council Meeting on June 14, 2015 at 6: 00 p.m. in the in the Vets Hall, for site preference selection and restart of the facilities master planning process and environmental review.
Next WRFCAC Meeting on July 5, 2016 at 3:00 p.m. in the in the Vets Hall.

Schedule

Still on track for 2021 delivery



AGENDA NO: B-2

MEETING DATE: June 15, 2016

Staff Report

TO: Public Works Advisory Board

DATE: June 9, 2016

**FROM: Rob Livick, PE/PLS – Public Services Director/City Engineer
Rick Sauerwein, PE/PLS – Engineering Division/Capital Projects Manager**

SUBJECT: 2016 Streets Summit, Part 1: A Progress Review and Recommendations for the FY 2016-2017 work plan

RECOMMENDATION

Staff recommends Public Works Advisory Board (PWAB) hear public testimony and provide input on the draft FY2016-2017 work plan, future funding alternatives and repair strategies for street improvements in preparation for a Part 2 of the Streets summit that will be a Joint Street Summit with City Council in the fall.

FISCAL IMPACT

No direct fiscal impact at this time as staff time only is being expended. The recommendations made by the Public Works Advisory Board (PWAB), if adopted by City Council, may require additional appropriations for street rehabilitation and maintenance activities.

SUMMARY

The City’s Streets Program proceeds commensurate with the availability of maintenance and repair funding which continues to be insufficient to keep pace with the rapid rate of road deterioration.

- The City has 53 centerline miles of roads, and three bridges that we maintain.
- The pavement condition has declined to 54 (a solid D-) and we have a backlog \$26M in deferred maintenance.
- The strategy of adopting a biennial program for a better economy of scale was adopted last year.

Attachment 2 outlines the proposed 2016/2017 work plan (\$950,000 biennial paving program) based on current funding availability. If additional funding becomes available through other financing options under consideration in the FY 2016/17 budget, high priority roads slated for FY2017/18 could be accelerated.

BACKGROUND

Since 2011 the City has invested \$4.1M in our Street Rehabilitation Program. In the past four years, the program has rehabilitated 81 street segments, which represents 17.0 miles of pavement, almost 32% of

Prepared By: RS

Dept Review: RL

City Manager Review: _____

City Attorney Review: _____

the City's total transportation network. These expenditures have provided much needed extension of the pavement life and improved rideability on a third of our City streets. Unfortunately, lack of sufficient funding has resulted in long-term investment through reconstruction of only four failed road segments. Consequently, the number of road segments that have exceeded the useful pavement life has grown significantly to 71 segments or 21% of our road system. In the past three years, maintenance activities have been closely coordinated between the Street Crew and Engineering staff. This coordination continues to improve as a result of the organizational restructuring of Public Works which consolidated all facility, park and street maintenance activities under a single supervisor. This restructuring has allowed crews to routinely place 4 tons of hot-mix asphalt per week to repair badly damaged pavement. While this stop-gap measure will not improve overall PCI, it has an immediate impact on drivability, bikability and walkability of our streets.

Finally, the City has awarded to Williams Concrete and Engineering a multi-year, indefinite delivery, indefinite quantity contract to improve the ADA Accessibility for pedestrians by filling gaps in our existing sidewalk network. We currently have performed \$257,624 of sidewalk improvements through multiple CDBG grant awards. An FY/16/17 allocation of \$67,000 has been approved by the Board of Supervisors and an additional reallocation of up to \$230,000 is expected soon. This will help the City satisfy Federal Highway Administration requirements that mandate missing or substandard curb ramps on existing pedestrian routes be installed whenever new road resurfacing is planned. Measure Q continues to be our primary source of revenue to improve street conditions. Unfortunately, in spite of the City's recent increased investment in our street infrastructure, our backlog of street maintenance and repair continues grow. A list of completed pavement rehabilitation is provided in Attachment 1.

DISCUSSION

In 2009, the Engineering Division of the Public Services Department conducted its first formal pavement condition inventory to prioritize maintenance investments. This survey revealed that the City has an average Pavement Condition Index (PCI) of 63. The PCI is a nationally accepted best management practice that rates roadway conditions on several factors and assigns a quantitative rating from 0 to 100. The established goal for Morro Bay's PMP is to raise our average PCI to 70 by using a variety of road maintenance techniques including: Reconstruction, Overlay, Slurry Seal, Cape Seal and Triple Layer. Streets routinely deteriorate over time typically losing approximately 1 or 2 points a year for the first 15 years after which a much more rapid deterioration increases over time. So a sound PMP invests the majority of available funding into streets of fair condition to prevent this rapid deterioration cycle from starting.

The general emphasis of the PMP is pavement preservation, which is the most effective use of the City's limited funding. For example, cost to totally reconstruct one mile of typical residential street in North Morro Bay with the poor soil conditions is approximately \$1.5 million, while the cost to perform a chip or slurry seal on a street in fair condition to preserve that pavement ranges from \$120,000 to \$300,000 per mile. Our current schedule of planned street rehabilitations from the proposed FY16/17 budget and their estimated costs are included in Attachment 2.

The City has also transitioned to a new PMP software called StreetSaver which has greater utility and lower cost than the original MicoPaver software. We are still "working the bugs out" of this system and learning how the decision algorithms function. Since it has been 5 years since the first PMP staff has initiated a reinspection of streets that seem to have observed conditions that are significantly above or below the current PCI. Staff has completed 20% of the streets since July 2014 and plans to continue this

practice so that every street gets inspected on a five-year cycle. This work clearly demonstrates that our roads are failing faster than we can repair them with our present resources so staff will continue to pursue funding options and explore alternative renovation techniques throughout the summer. Staff expects to significantly update the 5-year Schedule of Pavement Management Plan in anticipation of another Joint Street Summit with City Council in the Fall.

In addition to the PMP, staff is also working with SLOCOG and Caltrans to evaluate options for improving congestion at the SR1/Main Street @ SR41 interchange. Caltrans has recently approved the Step 2 Intersection Control Evaluation study and authorized the preliminary engineering phase to proceed with development of the environmental document using a roundabout design as the preferred alternative. Staff plans to take this recommendation forward to PWAB at our July meeting. Staff is also pursuing a conceptual “Complete Street” design for Greenwood Avenue which could serve as a model for providing better pedestrian and bike facilities on several other Residential collector streets throughout the city. In closing, staff has submitted an Active Transportation Program (ATP) grant application to the California Transportation Commission to close the final gap in the North Embarcadero Pedestrian / Bike trail by connecting the Morro Creek Bridge to Morro Bay High School.

Financing Pavement Management

Pavement management is financed from a number of sources, including General Funds, Measure Q, Regional Transportation funds, and various grants as they become available. The total cost to repair or replace all city streets is currently estimated at \$26 million. Continuing to invest \$475,000 annually (our current budget) over the next twenty-year period is projected to only improve our PCI to 64. Federal and state gas tax revenues continue to be unreliable due to inadequate Congressional reauthorization of the Highway Trust Fund. The City of Morro Bay is not alone in this critical infrastructure funding issue. Caltrans is currently prototyping several alternative methods to fund road maintenance & improvements through a pilot demonstration program. Due to reductions in the Federal Highway Trust Fund and declining State Road Funding gas tax revenues. Governor Brown convened a special session of the State legislature June 19, 2015 to address these critical issues:

- The 2014 California Statewide Local Streets & Roads Needs Assessment Report found that counties and cities are facing a \$79.3 billion funding shortfall for the maintenance and preservation of just the local street and road system over the next decade.
- State highways have \$59 billion in deferred maintenance.
- The average pavement condition in the State is a 66 on a scale of zero to one hundred, or a solid letter grade D.
- It is important to invest in both local and state transportation systems. Drivers, transit, pedestrians and bicyclists do not care about ownership of the transportation system; they just want to get from Point A to Point B as efficiently and safely as possible.
- The longer we wait to fix our roads, the more it will cost taxpayers in the long run.

Last year alone, the SLOCOG lost over \$46M to support its Regional Transportation Improvement Program. Consequently, at their July 13 meeting, the SLOCOG Board of Directors will consider a Self-Help Transportation Investment Plan which would be funded through a voter approved sales tax measure adopt a measure which is expected to provide an additional \$600,000 to fund Morro Bay street improvements.

CONCLUSION

Streets and associated appurtenances are critical to the economic wellbeing of our community and are sorely in need of additional resources to maintain them in a condition that is acceptable to the citizens and visitors of our city. The condition of our streets & sidewalks makes an important first impression on tourists which is important to our continued economic revitalization. Continued allocation of dwindling State gas & vehicle tax revenues, grant funding, Measure Q sales taxes and future development impact fees are essential to keep our roads from deteriorating further. The City should implement a financing plan which would facilitate both preventative maintenance and reconstruction of streets which have exceeded their useful life.

ATTACHMENTS

- 1:** Schedule of Completed Street Rehabilitation, 2012-2015
- 2:** Schedule of Future Street Rehabilitation Projects

ATTACHMENT 1
Schedule of Completed Street Rehabilitation, 2012-2014

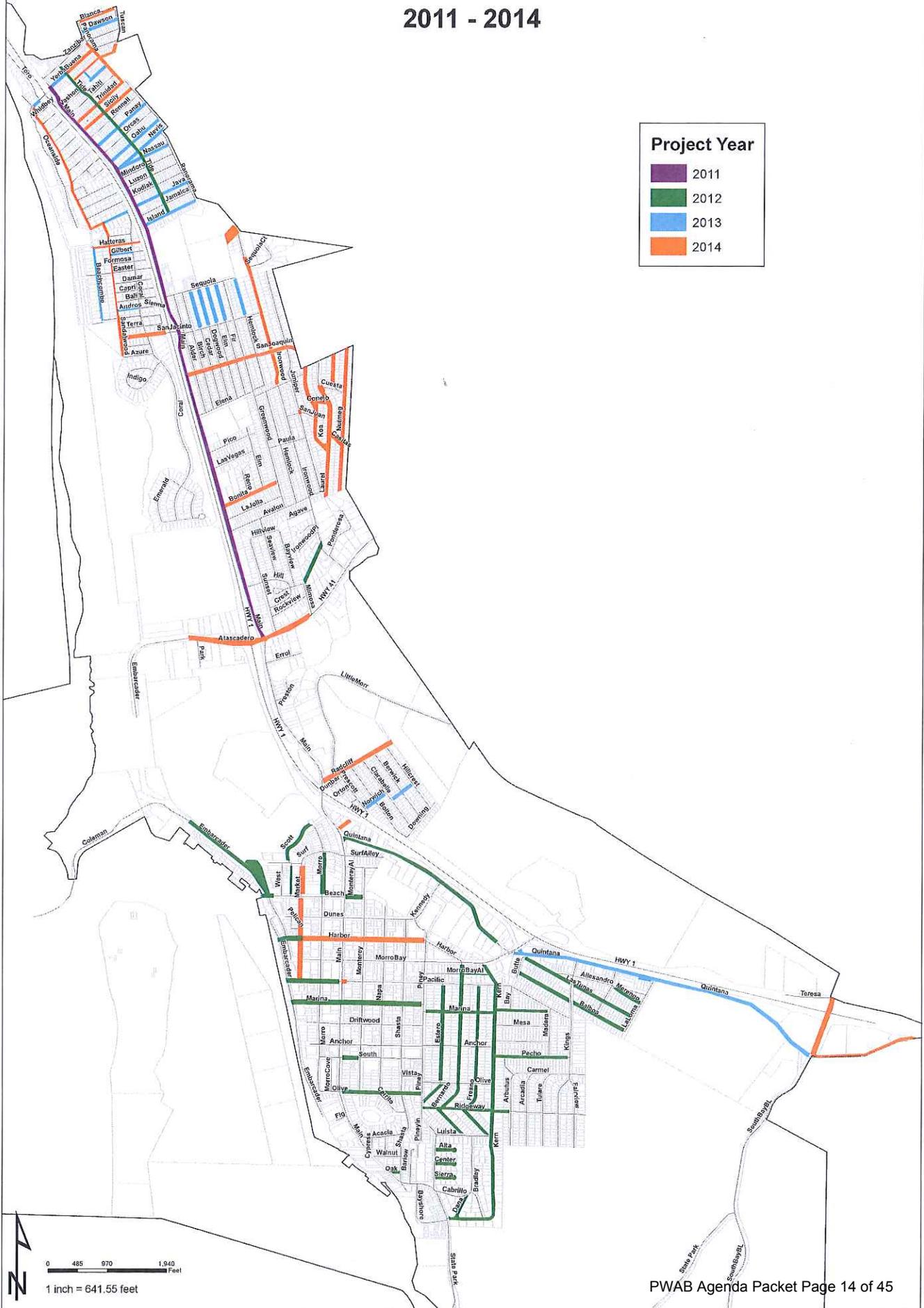
**CITY OF MORRO BAY
FIVE YEAR PAVEMENT MANAGEMENT PLAN
COMPLETED PROJECTS BY FISCAL YEAR**

| 2011/12 | 2012/13 | 2013/14 | 2014/15 |
|--------------------|----------------|--------------------|-----------------------------------------------|
| Bernardo1 | Kern1 | Alder Avenue | Atascadero Road |
| Main8 | Beach1 | Andros Street | Beachcomber |
| Kern1 | Marina1 | Beachcomber Avenue | Blanca |
| Oak1 | Pacific1 | Bonita Street | Bonita |
| Olive3 | Harbor1 | Cedar Avenue | Delmar Park Trail& Parking Lot ^{2 3} |
| Estero1 | Mimosa1 | Dawson Avenue | Harbor |
| Quintana3 | "PD Alley" | Dogwood Avenue | Hatteras |
| Pecho1 | | Elm Avenue | Java |
| Ridgeway1 | | Fir Avenue | Market |
| Center1 | | Gilbert Street | Panorama ³ |
| Marengo1 | | Greenwood Avenue | Quintana Place |
| Dana1 | | Hatteras Street | Quintana Road |
| Fresno1 | | Hemlock Avenue | Radcliffe |
| Marina2 | | Island Street | Sandalwood |
| Scott1 | | Java Street | San Jacinto |
| South2 | | Kings Street | San Joaquin |
| Alta1 | | Kodiak Street | Sicily |
| Tide1 ¹ | | Nassau Street | South Bay Blvd ³ |
| Embarcadero1 | | Nevis Street | Trinidad |
| Balboa1 | | Norwich Street | Whitbey |
| Las Tunas | | Oahu Street | Casitas* |
| Morro2 | | Panay Street | Conejo* |
| | | Quintana Road | Juniper* |
| | | Sequoia Street | Koa* |
| | | Whidbey Way | Laurel* |
| | | Yerba Buena Street | Maple* |
| | | | Nutmeg* |
| | | | Pacific ² |

NOTES:

- ¹ Work done without charge as compensation for contractor delays; value of work = \$61k
- ² Storm Drain Repair
- ³ Pavement Replacement
- * Trench Repair

City of Morro Bay Street Rehabilitation 2011 - 2014



ATTACHMENT 2
Schedule of Future Street Rehabilitation Projects

**CITY OF MORRO BAY
SCHEDULE OF FIVE-YEAR PAVEMENT MANAGEMENT PLAN**

Five Year Plan @ \$974,000 in 2016/17 & \$950,000 biennially through 2020

| 2015-16 | | 2016-17 | | 2017-18 | | 2018-19 | | 2019-20 | |
|------------------------------------------------------------------|---------|-------------|-----------|------------------------------------------------------------------|-----------|------------------|----------|--------------|-----------|
| Street | Cost | Street | Cost | Street | Cost | Street | Cost | Street | Cost |
| Acacia1 | 9,065 | Clarabelle1 | \$ 31,724 | Avalon1 | \$ 33,150 | Bay1 | \$ 3,242 | Beachcomber3 | \$ 29,700 |
| Bayshore1 | 9,716 | Driftwood1 | 9,485 | Avalon2 | 6,630 | Bradley1 | 10,345 | Bolton | 81,000 |
| BellaVist1 | 8,166 | Napa1 | 123,285 | Barlow1 | 10,680 | Carmel1 | 12,963 | Coral | 220,000 |
| Driftwood2 | 18,700 | Pacific1 | 50,125 | Beach1 | 22,724 | Embarcadr3 | 54,910 | Panorama1 | 2,250 |
| Dunes1 | 20,997 | Piney 1&2 | 305,970 | Butte1 | \$ 14,050 | Formosa1 | 7,200 | Surf 1-3 | 202,650 |
| Dunes2 | 24,468 | Prescott | 43,200 | Capri1 | 7,805 | Kennedy | 87,890 | | |
| Harbor | 59,220 | Shasta1 | 72,770 | Downing1 | 12,900 | Kings (Pac-Quin | 27,500 | | |
| Hill | 84,000 | Sienna | 21,419 | Fairview1 | 13,171 | Little Morro Crk | 183,535 | | |
| Monterey1 | 9,600 | SurfAlley1 | 4,556 | Luzon1&2 | 135,000 | Main8 | 110,000 | | |
| Monterey2 | 10,893 | Tuscan | 13,631 | Luista1 | 6,915 | Main9 | 12,465 | | |
| Monterey3 | 14,950 | Zanzibar | 17,525 | Madera1 | 11,420 | Main12 | 7,000 | | |
| Monterey4 | 10,530 | | | Main10 | 31,078 | Main13 | 30,449 | | |
| Scott2 | 3,840 | | | Morro1 | 6,045 | Olive2 | 9,255 | | |
| Vista1 | 3,882 | | | Morro5 | 25,850 | Palm1 | 2,345 | | |
| Walnut1 | 4,320 | | | PineyLn1 | 3,240 | Toro1 | 7,525 | | |
| | | | | Seaview | 33,000 | | | | |
| Subtotal | 292,347 | | 693,690 | | 373,658 | | 566,624 | | 535,600 |
| FY16 work plan will be executed with a combined contract in FY17 | | | | FY18 work plan will be executed with a combined contract in FY19 | | | | | |
| Total | \$ - | \$ 986,037 | | \$ - | | \$ 940,282 | | \$ - | |

This budget is based on current funding availability. Approval of new funding sources would significantly expedite reconstruction

Greenwood (CS) \$1,772,000 Ironwood (ATP) \$635,250 Juniper(CS) \$319,200
Complete Streets (CS) or Active Transportation Program (ATP) projects are dependent on the award of separate grant funding \$1,772,000

PMP Street priorities are reevaluated annually during project design to utilize the most appropriate repair method considering current pavement condition & fund availability

| 2015/17 | Needs |
|---------------|--------------|
| High Priority | = \$ 750,099 |
| Med Priority | = \$ 90,624 |
| Recur Maint | = \$ 145,314 |
| Total | = \$ 986,037 |
| Measure Q | \$ Available |
| 2015/16 | = \$ 399,000 |
| 2016/17 | ~ \$ 575,000 |
| Total | 974,000 |



AGENDA NO: B-3

MEETING DATE: June 15, 2016

Staff Report

TO: Public Works Advisory Board

DATE: June 8, 2016

**FROM: Bruce Keogh, Wastewater Division Manager
Dave Zevely, Collections System Supervisor
Damaris Hanson, Engineering Tech IV**

SUBJECT: Biennial Audit of the 2014 Sewer System Management Plan (SSMP)

RECOMMENDATION

Staff recommends that this staff report be received and filed

FISCAL IMPACT

No fiscal impact at this time as a result of this report. Fiscal impact is addressed through the budget process.

BACKGROUND:

In 2006 the State Water Resources Control Board (SWRCB) adopted Order No. 2006-003-DWQ Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR). In May 2013, the SWRCB approved Order No WQ 2013-0058-EXEC amending the Monitoring and Reporting Program (MRP) for the WDR. The amended MRP is an effort to more accurately and completely capture information pertaining to Sanitary Sewer Overflows (SSO) and included revisions to SSO categories and their associated reporting requirements.

The WDR created a centralized statewide mechanism to manage all publicly owned wastewater collection agencies. A principal element of the WDR is the requirement that the Collection Agencies adopt and maintain a management plan for the system referred to as an SSMP. The WDR requires that the owners of a wastewater collection system with more than a mile of pipeline have in place an SSMP to reduce the number and severity of sanitary sewer overflows.

The SSMP includes eleven (11) mandatory elements ranging in complexity from preparing goals and a mission statement, to performing a complete collection system capacity assessment. The SSMP must include provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems while taking into consideration risk management and cost benefit analysis. Additionally, an SSMP must contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions. The purpose of the SSMP is to implement a set of Best Management Practices into the operations of all the collection systems in the State. The SSMP acts as the overall guidance document for the Collections Division, and as such contains broad guidelines for management and operation, but does not include Standard Operating Procedures, etc.

Prepared By: ___BK, DZ, DH___

Dept Review: ___RL___

The WDR requires that the SSMP must be updated every five (5) years, capture any significant program changes, and be re-certified by the City Council. The City Council approved the first SSMP in June 2009 and an updated SSMP in June 2014. Both the 2009 and 2014 SSMP adoption procedures followed the requirements of the SWRCB that the SSMP must be approved by the enrollee's governing board at a public meeting. A copy of the 2014 SSMP is available on the City website at: <http://www.morrobayca.gov/ssmp2014>.

The WDR further requires that the City conduct periodic internal audits at a minimum of every two years. The audit process requires an internal staff review of the SSMP, but does not require City Council approval. The audit evaluates the effectiveness of the SSMP and the City's compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and corrective steps. Audits of the 2009 SSMP were conducted and completed by staff from the City's Collection and Engineering Divisions in June 2011 and June 2013. This is the first audit of the 2014 SSMP. Overall the audits performed in 2011 and 2013 indicated the City's SSMP met the WDR and SWRCB requirements. In addition, the audit demonstrated the 11 elements of the SSMP assisted the City and Collections Division in efficient management of the collection system. Based on the 2011 and 2013 audits, minor modifications were made to the SSMP to reflect current operations and maintenance practices or to correct any noted deficiencies. When the audit has been completed it will be posted to the City web site and an electronic copy will be forwarded to the appropriate contact person at the Regional Water Quality Control Board. Copies of the previously completed audits are also posted on the City website: <http://morrobayca.gov/334/Collection-Documents>.

DISCUSSION

As part of the SSMP audit process, staff is bringing the June 2016 audit of the SSMP to PWAB as an informational item for review and discussion. Any recommendations provided by PWAB, will be reviewed by Collections and Engineering staff and incorporated into field practices or the SSMP as appropriate.

Summary of the 2016 Audit of the 2014 SSMP

As noted above, The WDR requires the agency to perform an internal audit of its SSMP every two years. This is the first audit since the City of Morro Bay recertified the SSMP in June 2014. This audit meets the biennial WDR audit schedule. The findings of this audit will assist the Collections Division in its management and O&M related activities until the next scheduled 2018 SSMP audit and next re-certification of the City's SSMP in 2019.

The SSMP has proven to be a valuable reference document for the Collections staff. Prior to 2009, the City and its collection crews performed the majority of the requirements contained within the individual elements of the SSMP; However, this document frames collection system operations and management in a single document, approved by the City Council. The goal of the SSMP is to reduce SSOs, mitigate the impact of SSOs within the City collection system.

Audit process

The audit is designed to provide the collection division a timely review of their various programs and practices required to efficiently and effectively run a collection system. The audit has demonstrated the overall success of the existing programs and practices as well as being helpful in enhancing and refining various programs within the Division. In addition, the audit provides recommendations to enhance the various elements of the SSMP as well as management and operations of the system.

This biennial audit of the City of Morro Bay's SSMP consisted of reviewing each of its eleven elements and applying a compliance ranking to each element. The compliance rankings are based on whether the City meets the WDR requirements for each element of the SSMP. All 11 sections of the SSMP were found to be in *compliance*. The audit process included a review of the 2014 SSMP, the previous 2009 audit, and the State Water Resource Control Board guidance document, *Guide for Developing and Updating of Sewer System Management Plans (SSMPs)* dated September 2015.

Overall, the audit demonstrates the SSMP has been used effectively as a proactive management and planning guide since its adoption in 2009 and the SSMP continues to improve with each audit and recertification. The eleven elements of the 2014 SSMP were found to be in compliance and recommendations were made to improve elements within the SSMP. The audit found field operations were in-line with the elements of the SSMP. The SSMP process required by the SWRCB has resulted in the overall refinement of the SSMP and Collections programs and practices as this is the third audit of a document adopted and recertified in a seven-year period.

Audit Findings:

- The 2014 SSMP appears to meet the requirements and the intent of the WDR. It contains the required elements and programs required by the WDR and it contains programs and best management practices that have been field tested and refined through work practices in the field.
- The SSMP has been effective in controlling and mitigating the effects of the number of SSOs over the past two years. There have been 3 SSOs from June 2014 to June 2016. It is important to note that while the actual number of SSOs may and will vary from year to year, the SSMP has continued to enhance and refine the procedures for responding to, containing, and cleaning up the SSO. Over the last two year period of this audit, there were three SSOs but none of the SSOs reached the waters of the USA (bay, or beaches) due to the Collections staff prompt and skilled response to the SSO.
- Collections staff have made improvements to recording details associated with Private Lateral Sewer Discharges (PLSD) (spills from commercial or residential laterals that are the responsibility of the private homeowner or commercial owner). While not required by the WDR MRP, staff does track PLSDs and generate a field report and summary for their records.
- The Audit demonstrates increased FOG inspections over the past two years, with inspections being performed on a more routine schedule.
- The Audit demonstrates O&M programs have been continually being revised based on work practices, requirements, and training.
- The Audit highlights the requirements for on-going training on all programs and procedures.
- Most importantly the Audit demonstrates the Collections Division has a competent, well trained, and professional staff.

Audit Recommendations

The SSMP is a living document, designed to be reviewed and revised based on changing regulations, recommendations from biennial audits, equipment enhancements or improvements and modifications to SOPs based on review of work practices. The following is a list of the major recommendations derived from the June 2016 audit of the 2014 SSMP. The recommendations cover all eleven elements of the SSMP but are presented here grouped by category. Other recommendations will be incorporated into the SSMP and field work practices as required and/or when the appropriate budget is available for implementation.

Public Outreach

- Ensure this audit and SSMP related documents are available on the City of Morro Bay website.
- Ensure PWAB is involved in future SSMP re-certification processes to further enhance public awareness, review, and input.

SSO

- Complete an SSO Technical Report and response package

O&M

- Implement the new asset management software system, Cityworks.
- Purchase CCTV pipeline inspection crawler and appropriate inspection/analysis/reporting software to assist and compliment the O&M program.
- Begin QA/QC program for line cleaning-CCTV before/after and use this for training tool.
- Develop and establish criteria and program for removing main lines off enhanced maintenance (CCTV QA/QC).

Engineering Capacity Specifications

- Update and revise the City sewer standards/construction drawings to stay up to date with current construction trends.
- Coordinate sewer CIP repairs with the Asphalt Management Program

Future

The WDR recognizes the SSMP may need to be modified or refined more frequently than every five years. For this reason it requires that all changes made to the SSMP since its last certification be logged, indicating when a subsection(s) was changed and/or updated and who authorized the change or update. The WDR requires that these records be attached to the SSMP. This provision allows City staff to make minor revisions to the SSMP as needed to ensure the information within the document is current and valid. Any major changes require Council approval. Examples of minor revisions would include updating organizational charts, or minor modifications to O&M procedures to reflect actual practice.

CONCLUSION:

In conclusion, the June 2016 Audit found the 2014 SSMP to be in compliance with the requirements of the WDR. The audit demonstrates the overall success of the existing programs and practices as well as enhancing and refining various programs within the Division. Collections Division staff continue to proactively incorporate any recommendations to enhance management and operations and revise the SSMP where appropriate. Staff recommends this report be received and filed.



City of Morro Bay Sewer System Management Plan

AUDIT REPORT 2016

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Summary

The California State Water Resources Control Board's (SWRCB) Waste Discharge Requirements (WDRs) adopted on May 2, 2006, require owners of a wastewater collection system with more than a mile of pipeline have a Sewer System Management Program (SSMP) in order to reduce the number and severity of Sanitary Sewer Overflows (SSO). In 2013, the SWRCB modified the WDRs with Order Number WQ 2013-0058: Amending Monitoring and Reporting Program for Statewide General Discharge Requirements for Sanitary Sewer Systems. Together these documents constitute the Statewide General WDR for Sanitary Sewer Systems.

The WDR requires the agency to perform an internal audit of the SSMP every two years. This is the third audit since the City of Morro Bay adopted the SSMP in June 2009. The first audit occurred in June 2011 and the second in June 2013. This is the first audit of the SSMP re-certified by the City Council in 2014 (2014 SSMP). This audit meets the biennial WDR audit schedule.

This biennial audit of the City of Morro Bay's SSMP consisted of applying compliance rankings to all 11 sections of the SSMP requirements. The compliance rankings are based on whether the City meets the WDR requirements for each element of the SSMP. Morro Bay City Staff reviewed all 11 sections of the SSMP and all 11 sections were found to be in *compliance*. The findings of this audit will lead the performance of the Wastewater Collections Division until the next scheduled audit in June 2018 and the next re-certification of the City's SSMP in 2019.

Introduction

The California State Water Resources Control Board (“SWRCB”) put into effect a waste discharge requirement (“WDR”) permit on May 2, 2006 to regulate sanitary sewer systems. This permit is known as SWRCB Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. On July 30, 2013, Attachment A to the WDR was put into effect on September 9, 2013 and is known as Attachment A, SWRCB Order No. WQ 2013-0058-EXEC, amending the Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (together these documents constitute the “WDR”).

The WDR, among other things, requires local public sewer collection system agencies, referred to as “Enrollees,” to develop a Sewer System Management Plan (“SSMP”). SSMPs must be self-audited at least every two (2) years and updated and recertified every five (5) years from the original adoption date by the Enrollee’s governing board. The SSMP must be approved by the governing board of the Enrollee at a public meeting.

The five-year SSMP update must also be approved and certified as do all significant updates to the SSMP. The SSMP, all references in the document, and the adoption documents by the governing board must be available on the agency website or submitted to the SWRCB upon adoption or recertification. Enrollees do not send their SSMP to the State or Regional Water Boards for review or approval, but must make it publicly available, and upload an electronic copy to the California Integrated Water Quality System SSO database or provide a link to the Enrollees’ website where the SSMP is posted.

A principal element of the WDR is the requirement that collection agencies adopt and maintain a management plan for the system, referred to as a Sewer System Management Plan (SSMP).

The City of Morro Bay Waste Water Collections Division, after conducting a public hearing, adopted the City of Morro Bay SSMP on June 8, 2009, in accordance with the WDR. On May 27, 2014 at a public hearing, the Morro Bay City Council approved and re-certified the updated Sewer System Management Plan. This is the first audit of the re-certified 2014 SSMP. The next SSMP must be re-certified and approved on or before June 8, 2019.

The WDR establishes the following goals:

- The SSMP documents the organization’s legal authority to achieve the goals of the SSMP as demonstrated through the City of Morro Bay’s ordinances, agreements and other legally binding instruments.
- The SSMP identifies the City of Morro Bay’s organization and staff responsible for implementing and maintaining the SSMP.
- The SSMP provides a plan and schedule to properly manage, operate, and maintain the City of Morro Bay’s wastewater conveyance system.

Additionally, the WDR requires the City of Morro Bay staff to perform periodic internal audits of the SSMP focusing on evaluating the effectiveness of the SSMP and staff compliance with its requirements, as shown in Section D-13 of the WDR. The internal audit must be performed at least every two (2) years, with the audit report posted on the City of Morro Bay website and kept

on file at the Public Works Department.

The City has a separate Wastewater Collections Division (Division), within the Public Works Department, to oversee the operations and maintenance of the collection system. The Division operates under the general supervision of the Wastewater Division Manager. The Division includes a Collections System Supervisor and two levels of Wastewater Collection System Operators. Division staff respond to sewage spills and other calls 24 hours a day, 7 days a week, 365 days a year. To expedite cleaning and emergency response, the City owns and operates a combination cleaner (Hydro-Vac), a trailer-mounted jetter, three emergency generators, a diesel powered hydraulic pump, a portable trash pump, stocks an inventory of spare pumps and parts, confined space entry and safety equipment, and other tools and equipment. The Division does have a scheduled preventive maintenance and enhanced maintenance program to maintain the system. The City contracts out Closed Circuit Television (CCTV) inspection and links these data with GIS sewer maps. Staff uses the inspection videos to prioritize maintenance activities. These programs satisfy the WDR.

Several agencies discharge to the City wastewater collection system that the City considers satellite agencies. They are:

- Morro Bay High School (San Luis Coastal Unified School District)
- Morro Bay State Park (2 sources California State Parks)
- Bayshore Village Home Owners Association

These systems are owned and operated by other agencies, and may have more than a mile of sewer lines. The City does not maintain those systems, but does have the right to regulate the discharger's flows and influent quality into the City sewer system.

The Cayucos Sanitary District (CSD) also discharges to the Wastewater Treatment Plant through both a separate main trunk line and a shared main trunk line. A Joint Powers Agreement (JPA) specifies that their discharge must be such that it does not cause harm to the treatment process, however, since the CSD has an ownership interest in the WWTP and maintains their own SSMP, the City of Morro Bay does not consider them a satellite agency. The JPA agreement specifies the ownership and operational terms that define legal standing and relationship.

The first two audits of the 2009 SSMP were completed in 2011 and June 2013. This is the first internal audit of the re-certified SSMP adopted on May 27, 2014. After auditing the 2014 SSMP, staff will develop steps to correct deficiencies discovered during the audit, add any corrective steps to the SSMP, record these changes in the SSMP change log, and continue working to achieve or exceed the goals of the Wastewater Collections Division.

As required by the WDR, this internal audit evaluates the SSMPs effectiveness on each of the following eleven categories.

Audit of the SSMP

As specified in the WDR, the SSMP is comprised of eleven (11) sections or subsets of Section D. 13, as follows:

The Eleven Elements of the SSMP:

1. Goals- The stated goals for the SSMP
2. Agency Organizational Structure and SSO reporting chain of communications
3. Document Legal Authority
4. Operation and Maintenance
 - a. Collection System Mapping
 - b. Preventative Operations and Maintenance Program
 - c. Rehabilitation and Replacement Program
 - d. Staff training
 - e. Contingency, Equipment, and Parts Inventory
5. Design and Performance
 - a. Design Standards
 - b. Inspection and Testing Standards
6. Overflow Emergency Response Plan
7. Fats, Oils and Grease (FOG) Control Program
 - a. Fog Ordinance
 - b. A program to reduce or eliminate FOG SSO
8. System Evaluation and Capacity Assurance Plan
9. Monitoring, Measurements and Program Modifications
10. SSMP Audits
11. Communication Program
 - a. Communications with the public
 - b. Communications with satellite agencies

The format for audit reporting is as follows:

- WDR Section/Subsection
- Findings
- Reference Information
- Sufficiency Ranking
 - Complies
 - Substantial Compliance
 - Partial Compliance
 - Marginal Compliance
 - Not in Compliance
- Recommendation, when appropriate.

Section 1. Audit of Goals - WDR D.13.i

Review the SSMP to determine if it complies with the WDR by having a goal to provide a plan to manage, operate, and maintain all parts of the City of Morro Bay Collection System. This will help reduce and prevent SSO's, as well as mitigate any SSOs that do occur.

Findings:

The City of Morro Bay has established a list of goals in its SSMP that complies with the goals established in the WDR.

The City of Morro Bay's Goals for the SSMP together with progress to date are as follows:

Goal 1: Manage, maintain and improve the City's collection system infrastructure within the City in a manner consistent with the adopted SSMP and 2006 Sewer Collections System Master Plan now and into the future.

Compliance: Ongoing. The City of Morro Bay's staff manage numerous programs including CCTV inspections, line cleaning, manhole assessments, root control programs, and source control programs. Collections and Engineering staff gather information from these programs to develop a CIP schedule and minimize SSO's per SSMP objectives.

Improvements: The following projects were completed during this audit cycle:

- Rehabilitated Lift Station 1 with epoxy lined wetwell, new high-efficiency pumps and pre-rotation bases, above ground standby pump fixtures, motor control center pedestal, new discharge piping, valving, and valve vault.
- Replaced approximately 50 conventional manhole ring and lids in drainage channels with Pamrex sealing manhole rings and lids. This is part of the City's ongoing I/I reduction measures.
- Epoxy lined approximately 10 manholes.
- Ongoing flow metering per 2006 Sewer System Masterplan.
- Point repairs on Sicily, Ironwood Ave., Beachcomber, Norwich.
- Establish an in-house main line point repair program.
- Developed an electronic manhole assessment program.
- Continue Manhole Rehabilitation Program as part of the CIP.

Future projects:

- Sewer line repair/replacement, manhole rehabilitation, and continued manhole ring and cover replacement with sealing manhole rings and covers.
- North Main Street repair and rehabilitation.
- Embarcadero repair and rehabilitation.
- New Water Reclamation Facility development and collection system realignment.

- The Laurel Easement sewer line within Section 4.
- Various rehabilitation projects identified through the CIP process.
- City has a goal to implement a City-wide asset management software program, Cityworks, that will assist the Collection Division with overall management and record keeping of the sewer system.
- Implement a SCADA system for the three Lift Stations within the Collection System.

Goal 2: Reduce the number and impact of sanitary sewer overflows (SSO) that may occur throughout the City of Morro Bay.

Compliance: Ongoing. City staff's proactive maintenance effort, as outlined in the SSMP, attempts to minimize the number and impacts of SSOs. Collections staff maintains an SSO and Private Lateral Sewer Discharge (PLSD) log as part of the SSMP and City of Morro Bay's reporting requirements.

- From June 2014 to June 2015, there were 2 SSOs reported.
- From June 2015 to June 2016 there was 1 SSO reported.
- Increased tracking of PLSDs.

Future Activities:

- Sewer line and manhole rehabilitations on an as needed basis.
- Maintain a proactive source control program.
- See Goals 1 and 3 for projects that help achieve this goal.

Goal 3: Cost-effectively minimize inflow/infiltration (I/I) and provide adequate sewer capacity to accommodate design peak wet weather flow.

Compliance: Ongoing. There has been no wet weather related SSOs during this audit cycle, June 2014 to June 2016. Staff will continue to install Pamrex sealing manhole rings, covers, rain dishes, smoke test, lateral rehabilitation, flow metering, and main line spot repairs in order to reduce rain dependent inflow.

Improvements:

- Replaced approximately 50 conventional manhole ring and lids in drainage channels with Pamrex sealing manhole rings and lids.
- Epoxy lined approximately 10 manholes.
- Ongoing flow metering per 2006 Sewer System Masterplan.

Future Activities:

- Continue manhole rehabilitation program.
- Evaluate sewer mains using new and conventional technology.
- Continue system wide flow monitoring per guidance from the 2006 Sewer System Master Plan.
- Continue to work with the Engineering Division to analyze flow data

and to develop and prioritize the Collection System CIP program.

Goal 4: Controlling source discharges from entering and affecting the collection system and the Wastewater Treatment Plant in accordance with Local, State and Federal regulations.

Compliance: Ongoing. Annual communications and source control inspections at local business and commercial establishments regarding acceptable Best Management Practices (BMPs) for discharges to the sewer collection system.

Future Actions:

- Provide training to new and existing employees.
- Educate business owners on source control of discharges.
- Provide/continue public outreach to both residential and commercial business owners on proper source control discharges.
- Distribute education material as part of the public outreach program, such as newsletters, City website, personal interactions and handouts.

Goal 5: Continue to monitor the State and Federal mandates, rules, and regulations as necessary.

Compliance: Ongoing. The City of Morro Bay's Collection staff performs CCTV inspections, system evaluations, and prepares reports necessary to ensure continued compliance with regulatory requirements. Collections Staff developed an annual calendar of reoccurring events so reporting and document review are conducted in a timely manner. As necessary, staff continue applying new regulations and requirements to programs and procedures.

Future Activities:

- Collection Staff training through California Water Environment Association (CWEA), California Joint Powers Insurance Authority (CJPIA), local training companies, California Rural Water Association (CRWA), Cal State Sacramento Office of Water Programs, and learning new and upcoming regulations through conversations with state agency personnel.

Goal 6: Proactively train Collections staff on emerging technologies, new equipment technologies and industrial systems required by State and Federal mandates, rules and regulations.

Compliance: Ongoing. Staff attends required training and supplemental training classes and workshops. Topics include SSO volume estimating, Lock Out Tag Out training, California Water Environment Annual Conference workshops, Confined Space Training, Trench Safety Competent Person training, LA City Ride Along, collection system maintenance specialty training, traffic control training, USA dig alert training and more. Additionally,

journey-level staff train new staff on equipment and safe work practices. Field staff maintain at least 12 hours of contact hours required for retaining CWEA collection system maintenance certification.

Future Activities:

- Continue training on safety programs and improve staff knowledge, skills and abilities to better serve customers and operate the collection system.
- Provide training to retain collection system maintenance certification for employees.

Reference: City of Morro Bay SSMP

Sufficiency: Complies. The City of Morro Bay's SSMP Element I complies with the *Goals* requirement of the WDR.

Recommendation:

- Continue to develop and revise programs to effectively manage and operate the City's collection system. In addition, improve staff knowledge, skills, and abilities through training.

2. Audit of Organization - WDR D.13.ii

Review the SSMP to determine if it complies with the WDR by having the names of authorized representatives published and updated in the SSMP.

Findings:

The City of Morro Bay staff updates its organization chart with the annual budget. Collection Staff review and update the SSO reporting chain of communication chart as needed and the SSO notification checklist annually. These Charts identify authorized representatives, management, administration, and maintenance personnel.

The City of Morro Bay has posted on its website the Organization Chart.

Reference: City of Morro Bay Organizational Chart, City of Morro Bay SSMP, Element II

City of Morro Bay Chain of Communication for Reporting SSO, City of Morro Bay SSMP, Element II

City of Morro Bay Sanitary Sewer Overflow Notification Checklist, Appendix B

Sufficiency: **Complies.** The City of Morro Bay's SSMP Element II complies with the *Organization* requirements of the WDR.

Recommendation:

- Update the City of Morro Bay's Organization and Chain of Communication as needed. The chart is updated annually in the Agency's annual budget. Continued out-reach to surrounding agencies (upstream) by sharing our Morro Bay SSO notification checklist which will help make sure that Morro Bay and select local businesses are added to their SSO Reporting Chain of Communications.
- Publish the 2014 SSMP Audit on the City of Morro Bay website.

3. Audit of Legal Authority - WDR D.13.iii

Review the SSMP to determine if it complies with the WDR by having ordinances and agreements in place and updated to prevent illicit discharges, provide for proper design of upstream facilities, provide right of way and access to the Sewer Systems, and enforce the City of Morro Bay regulations.

Findings:

The City of Morro Bay, Chapter 13.12 of the Municipal Code and Title 8 of the Standard Specifications, which provides the legal authority and design standards for the City's sewer system and prevention of illicit discharges and protecting public health and safety.

Additionally, the City of Morro Bay maintains files that document the City of Morro Bay's right to access easements.

Reference: Chapter 13.12 of the Municipal Code, City of Morro Bay SSMP, Appendix A, Attachment A

Title 8 of the Standard Specifications, City of Morro Bay SSMP, Appendix A, Attachment B

City of Morro Bay Standard Drawings: Sewer Section, Appendix A, Attachment C

Sufficiency: **Complies.** The City of Morro Bay's legal structure complies with the *Legal Authority* requirements of the WDR.

Recommendation:

- Update and revise the City sewer standards/construction drawings to stay up to date with current construction trends.
- Review City Municipal Code, recommend, if any, changes, and/or updates to stay current with the changing definitions in State law (i.e. definition of a private lateral and private lateral spill.)

4. Audit of Operation and Maintenance Program - WDR D.13.iv

Review the SSMP and activities of staff, consultants and contractors to determine compliance with the WDR by having (a) an up to date map of the sewer systems that shows all pipe reaches, manholes, siphons, diversion structures, and pump stations, if any, (b) a routine preventative maintenance and operations program, (c) rehabilitation and replacement program, (d) operations and maintenance training program, and (e) part inventory program including identification of critical replacement parts.

Findings:

- (a) *An up to date map of the sewer system that shows all pipe reaches, manholes, siphons, diversion structures, and pump stations, if any*
 - The City of Morro Bay maintains and updates GIS mapping and data tables for collection system assets. This information is accessed through the City of Morro Bay's server and asset maps are updated and published as needed.

- (b) *A routine preventative maintenance and operations program*
 - Engineering and Collections system staff respond to field Underground Service Alerts (USA) and customer inquiries, and staff responses for these activities are recorded.
 - The City of Morro Bay's Collection staff perform CCTV inspection of the collection system.
 - O&M staff completed routine sewer main cleaning and lift station maintenance, including enhanced line cleaning for problematic sewer mains. The main line cleaning is recorded in the Simms program.
 - The City continues a chemical root control program. A contractor chemically treats mains with known root problems and newly discovered mains with roots.
 - Transitioning to new asset management software system, Cityworks.

- (c) *Rehabilitation and replacement program*
 - Collections system staff relays pipeline condition and other asset information to the engineering department. With this information Capital Improvement Projects (CIPs) are developed. The Engineering and Collections staff attend regular meetings to develop and update near and long-term improvement projects to provide continuing support for the three lift stations and the collection system.
 - All three of the City's lift stations have been replaced or rehabilitated: Replacement of lift-station 2 in 2012, replacement of Lift Station 3 in 2013 and rehabilitation of Lift Station 1 in 2016. Lift Station 1 rehabilitation was part of previous audits recommendations.
 - In addition, the City conducted sewer line rehabilitation, point-repair projects, and manhole rehabilitation throughout the collection system.

- (d) *Operations and maintenance training program*
 - Collection staff maintained required trainings and certifications, per California Water Environment Association, CalOSHA and City job requirements.
 - Re-training, enhanced training, and modifications to confined space entry protocols following CalOSHA violation in 2015.
 - Introduced and incorporated Activity Hazard Analysis, Pre-Task Plans and Standard Operating Procedures into work activity planning.
- (e) *Part inventory program including identification of critical replacement parts*
 - Critical parts are in stock and inventoried. These parts are at the ready in the event of emergency and planned repairs at lift stations, on maintenance equipment and for the collection system. Staff operates and maintains a combination cleaner (Hydro-Vac), three emergency generators, a by-pass pump, four trucks, a trailer-mounted jetter, and other equipment.

Reference: City of Morro Bay SSMP, Element IV

Sufficiency: **Complies** The City of Morro Bay's Element IV complies with the *Operations and Maintenance* section of the WDR.

Recommendation:

- Continue proactive CIP development and implementation.
- Purchase CCTV pipeline inspection crawler to assist and compliment the O&M program.
- Purchase CCTV software to replace outdated Posm inspection/analysis/reporting software.
- Develop and establish criteria and program for removing main lines off enhanced maintenance (CCTV QA/QC).
- Continue public outreach for lateral rehabilitation.
- Begin QA/QC program for line cleaning-CCTV before and after line cleaning to assess effectiveness of cleaning strategy and use this information as a training tool.
- Continue collaboration between O&M and Engineering staff to ensure maps are updated when discrepancies or errors are noted.
- Implement the new asset management software system, Cityworks.
- Continue chemical root applications in problem lines.
- Continue proactive staff training.
- Coordinate sewer CIP repairs with the Asphalt Management Program

5. Audit of Design and Performance Provisions - WDR D.13.v

Review the SSMP to determine if it complies with the WDR by having design and construction standards and specifications for installation of new facilities including coverage for testing of new facilities prior to acceptance.

Findings:

5a. Standards for Installation, Rehabilitation and Repair

The SSMP references the City of Morro Bay's Standards and Specifications in addition to the City's Municipal Code. In addition, reference is made to other approved testing methods, such as ASTM (formerly known as American Society for Testing and Materials), to ensure infrastructure meets design and performance provisions. The Engineering Standards are being revised and in draft form.

5b. Preventive Operations and Maintenance

Before acceptance of a facility, Morro Bay receives O&M manuals, records and as-built drawings, permanent keys, final cleanup, final repairs, etc. The testing and startup is deemed complete when test results are approved and the reliability test has demonstrated that the system functions as designed.

Legal requirements for construction and major repair projects are documented in the specifications and are made a part of all construction contracts, however, the legal section of the specifications have not been made a part of the SSMP due to their project specific nature.

Reference: Standard for manholes, City of Morro Bay SSMP, Appendix A, Attachment C

Standard for connections, City of Morro Bay SSMP, Appendix A, Attachment C

Standard for bedding and backfill, City of Morro Bay SSMP, Appendix A, Attachment C

Sufficiency: **Complies** The City of Morro Bay's Element V complies with the *Design and Performance Provisions* of the WDR.

Recommendation:

- Complete revision and review of Engineering Standard Drawings
- Implement training as discussed in the recommendations under Element I Goals and train on new Engineering Standards when necessary.

6. Audit of Overflow Emergency Response Plan - WDR D.13.vi

Review the SSMP to determine if it complies with the WDR by having an overflow emergency response plan that includes (a) proper notification procedures, (b) a program that assures proper response to all overflows, (c) procedures that ensure prompt notification of regulatory agencies and other affected entities, (d) proper training for staff and contractors named in the response plan, (e) procedures to address traffic control and crowd control, and, (f) implementation of steps to prevent SSO from reaching waters of the United States.

Findings:

SSO's have been classified, logged, reported, and treated per the requirements outlined in the Overflow Emergency Response Plan contained in the SSMP.

From June 2014 to June 2016, there were three (3) SSO's within the City of Morro Bay service area.

Per the requirements in the WDR the City is not required to report PLSD's to CWIQS. The Collection Division does follow standard operating procedures and document when, where, and volume spilled (if applicable) of all PLSD's reported to the City. The Collections Division started tracking PLSDs as of September 2013. For this audit period June 2014 to 2016 there were approximately 35 PLSDs documented.

City staff's continuing proactive maintenance effort, as outlined in the SSMP, attempts to minimize the frequency and impacts of SSOs. Collections staff maintains a SSO log as part of the SSMP and the City of Morro Bay's reporting requirements.

The Collection Division satisfies the Overflow Emergency Response Plan (OERP) requirements by having an OERP that includes the following elements:

- a) *Proper notification procedures:* Collection division maintains a current notification checklist with both agency contact information as well notification time schedules. The checklist is updated annually. Notification will be made to the required agency(s) within the established time limit contained within the WDR.
- b) *A program that assures proper response to all overflows:* The Collection Division has a series of standard operating procedures, checklists, and forms outlining procedures to be followed during an SSO. Collection Staff debrief following SSO events.
- c) *Procedures that ensure prompt notification of regulatory agencies and other affected entities:* Collection division maintains a current notification checklist with both agency contact information as well notification time schedules. The checklist is updated annually. Notification will be made to the required agency(s) within the established time limit contained within the WDR.
- d) *Proper training for staff –on the response plan and procedures:* Staff train

on the OERP on an annual basis. Training also includes debriefing following a SSO event or cleanup, and training by various outside agencies such as CWEA and California Rural Water Association.

- e) *Procedures to address traffic control and crowd control:* Traffic and crowd control procedures include standard operating procedures for SSO's and site specific traffic control plans as needed, and use of the Morro Bay Police Department for additional traffic or crowd control if required. Collection Division staff receive traffic control training on an annual basis.

- f) *Implementation of steps to prevent SSO from reaching waters of the United States:* The Collection Division has a series of standard operating procedures, checklists, and forms to outline procedures to be followed during an SSO. The standard operating procedures outline and prioritize the containment of an SSO to limit or prevent SSO's from reaching waters of the United States.

Reference: *Overflow Emergency Response Plan*, City of Morro Bay SSMP, Appendix B

State Waste Discharge Requirements, City of Morro Bay SSMP, Appendix B, Attachment A

Notification Checklist, City of Morro Bay SSMP, Appendix B, Attachment B

SSO Field Report, City of Morro Bay SSMP, Appendix B, Attachment C

Collection Systems Stoppages are logged in Microsoft Excel format.

Sufficiency: Complies. The City of Morro Bay's Element VI complies with the *Overflow Emergency Response Plan* requirements of the WDR.

Recommendation:

- Continue training following responding to PLSD/SSO events. Post PLSD/SSO debriefing will emphasize protocols to ensure requirements are met per the WDR and SSMP.
- Continue training on SSO volume estimation calculations.
- Continue to educate the public on the benefit and need for private/residential sewer backflow preventers requiring them where appropriate.
- Continue to educate local plumbers to notify the Collection Division when "unclogging" drains/private sewer lateral. Un-captured deposits of debris into the sewer mains by plumbers when clearing laterals has the potential of causing downstream SSOs.
- Complete a SSO Technical Report and response package.
- Continue public education efforts regarding FOG and other household items that have the potential to be disposed via sewer laterals to minimize the potential of any SSO.

7. Audit of FOG (Fats, Oils and Grease) Control Plan- WDR D.13.vii

Review the SSMP to determine if it complies with the WDR by having a FOG Control plan with (a) a public education element, (b) FOG disposal facilities identified, (c) ordinances, rules and regulations to prevent FOG, (d) requirements to install FOG traps together with standard drawings for traps, owner maintenance requirements, owner record keeping requirements and owner reporting requirements, (e) inspection authority and staffing, (f) FOG mapping for pipe reaches impacted by FOG, and (g) a source control plan for reaches currently impacted by FOG.

Findings:

The Collection Division satisfies the FOG (Fats, Oils, and Grease) Control Plan requirements by having a FOG control program that includes the following elements:

- a) *a public education element*: The City conducts a proactive public outreach program utilizing newsletters, the City website, personal interactions and handouts to provide residents and business owners with information and BMPs on source control and FOG.
- b) *FOG disposal facilities identified*: The City staff maintain a list of FOG disposal companies and provide this list to businesses within the City.
- c) *ordinances, rules and regulations to prevent FOG*: The City of Morro Bay Municipal Code ordinance 13.12.120 prohibiting excessive FOG discharges to the sewer system.
- d) *requirements to install FOG traps together with standard drawings for traps, owner maintenance requirements, owner record keeping requirements and owner reporting requirements*: The City of Morro Bay Municipal Code ordinance 13.12.130 requiring food serving establishments to install grease interceptors. The City of Morro Bay Municipal Code ordinance 13.12.140 requiring the owner to maintain the interceptor in continuously efficient operation at their expense. During the inspection process, Collection staff provide a copy of the inspection form for the owners records. The California Plumbing Code regulates design and installation of grease/sand interceptors. Grease/sand interceptors on private property are permitted, reviewed, and approved through the City, and installed by plumbing contractors. Plumbing contractors must follow the California Plumbing Code.
- e) *inspection authority and staffing*: The City of Morro Bay Municipal Code provides the legal authority for City staff to enter and inspect interceptors. The Collection crew has staff assigned to perform inspections on a routine schedule. A work order program is used to track and schedule visits at the various establishments. A digital inspection form was developed for source and FOG control inspections which records the date, name of the business, owner/contact information, inspector, and condition of trap and purpose of visit. Collections staff has created a spreadsheet for FOG inspections similar to SSO reports.
- f) *FOG mapping for pipe reaches impacted by FOG*: The Collections Divisions maintains a list of pipeline sections that are on an enhanced maintenance program for areas prone to FOG build-up such as siphons and pipeline sections with minimal slope.
- g) *a source control plan for reaches currently impacted by FOG*: The Collections Divisions

maintains a list of pipeline sections that are on an enhanced maintenance program for areas prone to FOG build-up such as siphons and pipeline sections with minimal slope

Reference: City of Morro Bay SSMP, Appendix C, FOG Control Program

Chapter 13.12 of the Municipal Code, City of Morro Bay SSMP, Appendix A, Attachment A.

Title 8 of the Standard Specifications, City of Morro Bay SSMP, Appendix A, Attachment B.

Sufficiency: **Complies.** The City of Morro Bay's Element VII complies with the *FOG control plan* of the WDR.

Recommendation:

- Continue a partnering/educational relationship with the businesses/restaurants within the City. Maintain inspections and recommendations for grease interceptor and traps.
- Insert as Attachment E to the SSMP, "Guide to Grease Interceptors- Eliminating the Mystery," The Plumbing & Drainage Institute, Revised 2010, in Appendix C.
- Continue dialog between Collection Division and Engineering Division to ensure FOG deficiencies are addressed through the Development Review process and City Standard Drawings are regularly updated.
- Continue with newsletter on annual basis.
- Include copy of revised FOG inspection form in Appendix C.
- Incorporate FOG inspection records into the new Cityworks asset management software system.

8. Audit of the System Evaluation and Capacity Assurance Plan- WDR

D.13.viii

Review the SSMP to determine if it complies with the WDR by having a Capital Improvement Plan (CIP) that considers (a) Evaluation of those portions of the sewer systems that are experiencing SSO discharges due to hydraulic deficiency, (b) Design Criteria commensurate with the sewer systems, (c) Capacity Enhancement Measures and steps to address short term and long term CIP goals and an implementation schedule, and (d) Schedule for completion of the necessary things-to-do that were developed in items D.13.viii (a) - (c) above.

Findings:

The City of Morro Bay's staff complies with the requirements of the WDR by operating computer models for its System Evaluation and Capacity Assurance Plan. The primary component of the plan, as directed in the WDR is its Capital Improvement Program (CIP). The other major element of the plan is the Design Criteria addressed in Section 5 above (WDR D.13.v). During this audit cycle, 2014-2016, there were no SSO's reported or observed related to hydraulic deficiencies.

The City of Morro Bay's engineering department operates Arcview GIS. The model contains the collection system which includes approximately 60 miles of gravity sewer line, approximately 2.5 miles of force main, approximately 1100 manholes, lampholes and clean-outs, and three lift stations which are monitored regularly. The model has been data organized to the variety of pipe materials, lengths between manholes/clean-out, and direction of flow. Arcview GIS is up to date, has ongoing mapping capability and color-coded results presentation.

Engineering Division tracks projects, their financial costs, and the distribution of those costs throughout the duration of projects. Maintenance and repair projects are prioritized based on structural conditions and frequency of operating problems.

a) Evaluation of those portions of the sewer systems that are experiencing SSO discharges due to hydraulic deficiency:

- The city did not experience any SSO associated with hydraulic deficiency during the time period from June 2014 to June 2016.
- The 2006 Sewer System Master Plan identifies portions of the sewer system that may have hydraulic deficiencies. These lines are under review and prioritized in the City's CIP program.

b) Design Criteria commensurate with the sewer systems

- During this audit cycle, 2014-2016, there were no SSO's reported or observed related to hydraulic deficiencies.
- The 2006 Sewer System Master Plan analyzed the hydraulic capacity of the entire collection system utilizing a hydraulic model.
- The 2006 Sewer System Master Plan included a prioritized CIP program based on hydraulic capacity at both peak flows as well as build out scenarios.

- City maintains Engineering Standards for the repair, rehabilitation, and construction of sewer lines, laterals, cleanouts, and manholes.
 - City Municipal Code contains ordinances related to the design, operation, and maintenance of the sewer system.
- c) *Capacity Enhancement Measures and steps to address short term and long term CIP goals and an implementation schedule*
- The 2006 Sewer System Master Plan includes hydraulic modeling of the collection system during various flow scenarios.
 - The City has an on-going flow monitoring program in place that follows the flow monitoring recommendations contained in the 2006 Sewer System Master Plan.
 - The Collections Division has a program designed to reduce I/I into the system. The 2006 Sewer System Master Plan established I&I reduction goals throughout the system.
 - City adopted a new sewer fee schedule in May 2015 that includes annual increases to sewer fees over five-year period. The fee increase is to both cover development and construction of a new water reclamation facility as well as fund improvements to the sewer collection system identified in the 2006 Master Plan as possibly deficient.
 - The City has funds in the FY16/17 budget for an upgrade to the 2006 Sewer System Master Plan.
- d) *Schedule for completion of the necessary things-to-do that were developed in items a-c above*
- Collections and Engineering staff review and evaluate CIP projects during annual budget adoption process.
 - City has a sewer CIP plan for identified projects.
 - City adopted a new sewer fee schedule in May 2015 that includes annual increases to sewer fees over a five-year period. The sewer fee increase covers costs associated with development and construction of a new water reclamation facility and improvements to the sewer collection system.

Reference: City of Morro Bay, Arcview GIS.

Sufficiency: **Complies.** The City of Morro Bay's Element VIII complies with the *System Evaluation and Capacity Assurance Plan* requirements of the WDR.

Recommendation:

- Maintain open communications between the Collection and Engineering departments regarding assessment of the sewer system, regularly scheduled maintenance, any incidents involving potential SSO, and the development review process.
- Continue to investigate and develop a system-wide GIS-based model to enable running various flow scenarios.
- Continue Collection system flow study, use flow data for system modeling, and contract firm to update the Collection System Master Plan.

9. Audit of the Monitoring, Measurement, and Program Modification - WDR **D.13.ix.**

Review the SSMP to determine if it complies with the WDR by (a) maintaining relevant information that can be used to establish and prioritize appropriate SSMP activities, (b) monitoring the implementation and, where appropriate, measure the effectiveness of each element of the SSMP, (c) assessing the success of the preventative maintenance program, (d) updating program elements, as appropriate, based on monitoring or performance evaluations, and (e) identifying and illustrating SSO trends, including frequency, location and volume.

Findings:

The City of Morro Bay Collections staff maintain a spreadsheet that generates statistical data to determine the effectiveness of its SSMP by tracking SSO data such as:

- number of SSO
- response time
- volume of SSO
- cause of SSO (structural failure, FOG, roots, debris, etc.)

From June 2014 to June 2016, there were 3 mainline SSOs.

a) maintaining relevant information that can be used to establish and prioritize appropriate SSMP activities:

- Collections staff uses the SSMP as a guidance document and track SSO's and modify maintenance schedules or procedures in order to minimize SSO's and avoid repeating SSO's at/near the same location.
- The audit process assists staff by providing a review of their various programs and practices to ensure the requirements contained within the eleven elements of the SSMP are relevant and reflect field practices.

b) monitoring the implementation and, where appropriate, measure the effectiveness of each element of the SSMP:

- The collection staff follows the goals outlined in element 1.
- Staff increased FOG visits at food service establishments and industrial sources.
- The City, through the its sewer CIP program, reconstructed lift stations, updated lift station controllers with SCADA capable controllers, developed in-house spot repair for selected main lines, and continue evaluating CIP programs.
- No significant changes occurred to our Overflow Emergency Response Plan. It has proven to be effective for both responding to SSO events as well as reporting to appropriate regulatory in the prescribed time frame after an SSO event.

c) assessing the success of the preventative maintenance program:

- SSO frequency and volume over this audit period shows a well-balanced maintenance program
- Preventative line cleaning is on schedule to clean entire town in stated goal of two years

d) *updating program elements, as appropriate, based on monitoring or performance evaluations:*

- The audit contains recommendations to assist in refining the SSMP and its associated programs
- City Design Standards are being updated and in draft form at the time of this audit.
- Collection Division has budgeted for an update to the 2006 Sewer System Master Plan.

e) *identifying and illustrating SSO trends, including frequency, location and volume:*

- Staff maintains a multi-year SSO tracking spreadsheet and look for SSO trends
- Collections staff are more closely monitoring and acquiring data on PLSDs

Reference: City of Morro Bay SSMP

City of Morro Bay, Collection System Stoppages spreadsheet

SIMMS and CUPSS software tools.

Sufficiency: **Complies.** The City of Morro Bay's Element IX complies with the *Monitoring, Measurement, and Program Modification* requirements of the WDR.

Recommendation:

- Continue the process of acquiring and implementing electronic asset management and monthly task tracking software (Cityworks). These tools will help to ensure that past activities are captured in a format that enables easy review. Reviewing activities will enable the Division to determine trends and optimize efforts accordingly.
- Maintain regularly scheduled sewer main cleaning and rehabilitation improvements program generated from the CIP.
- Continue with regular planning sessions to discuss implementation of the SSMP and overall Division maintenance efforts.
- Continue to respond to and track PLSDs throughout the City.

10. Audit of the SSMP Program Audits - WDR D.13.x.

As a part of the SSMP, City of Morro Bay shall conduct periodic audits. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. These audits shall focus on the effectiveness of the SSMP, compliance with WDR requirements, identification of any deficiencies and steps to correct them.

Findings:

The City of Morro Bay has embarked on this audit of the SSMP which was originally approved in 2009 and re-certified in 2014 with timeliness to allow the auditor adequate time to investigate, gather evidence, analyze and then report sufficiency and findings, and finally, to make recommendations when appropriate. The audit is due June 2016. The next audit will be due in June of 2018 per direction from SWRCB staff. The SSMP must be re-certified by June 2019 after updating the SSMP with elements recommended by the 2016 and 2018 audits together and with any program changes implemented by City of Morro Bay.

Reference: This is the first audit of the City of Morro Bay 2104 SSMP. This audit will become a reference for the 2019 re-certification of the SSMP and 2018 audit.

Sufficiency: Complies. This document will be available on the City website and be on file at the Public Works Department and will comply with the *SSMP Program Audits* requirements of the WDR.

Recommendation:

- Include recommendations identified during the audit in the SSMP.
- Train Staff on revisions to the SSMP and associated program changes

11. Audit of the Communication Program - WDR D.13.xi.

Review the activities of staff to determine if they have complied with the WDR by (a) communicating the performance of the SSMP with the public and with City of Morro Bay member agencies, and (b) providing the public and the member agencies the opportunity to provide input.

Findings:

a) *communicating the performance of the SSMP with the public and with City of Morro Bay member agencies:*

- The process of developing, auditing, and re-certifying the SSMP involves a public process that allows staff to communicate to the public and member agencies how staff performs or complies with the required elements of the SSMP. The process also allows the opportunity for community input. Bringing the audit to the Public Works Advisory Board allows further opportunity to communicate about the performance of the SSMP. In addition, it allows for public input.

(b) *providing the public and the member agencies the opportunity to provide input:*

- With the completion of each audit, City of Morro Bay staff make the report available to the public by posting it on the City of Morro Bay website. As noted previously, the five-year recertification process requires the SSMP be approved by the City Council providing further opportunity for public input. The Council meetings are public meetings governed by the Brown Act and the City televises these meetings and streams them online to provide multiple channels of communication.

Reference: SSMP, City of Morro Bay Web Page

Sufficiency: Complies. The City of Morro Bay's Element XI complies with the *Communications Program* requirements of the WDR.

Recommendation:

- Following completion of the audit, the audit will be posted to the City of Morro Bay website for public access.
- Continue with proactive public outreach using utility newsletters, community outreach, the City's website and source control visits.
- Ensure PWAB is involved in future SSMP re-certification processes to further enhance public awareness, review, and input.