

MEETING MINUTES

June 19, 2007

Attendees:

Alex Christensen	Black & Veatch	christensenas@bv.com
Alex Park	Brown & Caldwell	apark@brwncald.com
Anne Prudhel	Carollo Engineers	aprudhel@carollo.com
Ba Than	Central San	
Cara Ingebrigtsen	Brown & Caldwell	cingebrigtsen@brwncald.com
Chris Lyne	P&F Distributors	chris@pfdistributors.com
Cindy Preuss	Harris & Associates	cpreuss@harris-assoc.com
Dirk Medema	City of Walnut Creek	medema@walnut_creek.org
Eric Evans	RMC	eevans@rmcwater.com
Gisa Ju	RMC	gju@rmcwater.com
Gus Amirzehni	City of Oakland	gamirzehi@oaklandnet.com
Jacky Wong	HDR	
Jennifer Glynn	RMC	jglynn@rmcwater.com
Jimmy Tan	City of Redwood City	itan@redwoodcity.org
John Bergen	RMC	jbergen@rmcwater.com
John Larson	Larson Consulting	jl Larson@larscon.com
Jonathan Lee	WVSD	jlee@westvalleysan.org
Jonathan Marshall	RBF Consulting	jmarshall@rbf.com
Joyce Carlson	City of Oakland	jcarlson@oaklandnet.com
Ken Cook	WCWD	kcook@wcwd.org
Marc Coats	MWH	marc.coats@mwhglobal.com
Mike Fisher	Kimley-Horn & Assoc	
Omar Mutwakil	City of Foster City	omsterathome@yahoo.com
Patrick Schroeder	CSD-1	pschroeder@saccounty.net
Paul Winnicki	WCWD	pwinnicki@wcwd.org
Richard Barge	Ameron Intl.	
Ron Ward	City of Oakland	rward@oaklandnet.com
Sasha Mestetsky	CCCSD	sasha@centralsan.dst.ca.org
Sergio Ramirez	City of Foster City	sramirez@fostercity.org
Stan Shogren	Kennedy/Jenks	standshogren@kennedyjenks.com
Zane Dobson	CSD-1	dobsonz@saccounty.net

Presentation: *Approaches to Preparing an SSMP and Maximizing its Benefits*, by Gisa Ju, Principal, of RMC Water and Environment, and John Larson of Larson Consulting.

Gisa's portion of the presentation explained what an SSMP is ("Best Practices Approach to Collection System Regulation," utilizing a continuous improvement analysis and implementation structure.) Gisa covered the SSMP deadlines assigned to each of its mandatory elements (depending upon population), and SSMP requirements. New to the list of SSMP requirements

is to develop a plan & schedule. Gisa also covered most of the following 11 mandatory elements:

1. Goals (Including overflow prevention & response, system reliability, costs, safety, etc.)
2. Organization (Identifying a “Legally Responsible Official” and organization chart, among other things.)
3. Legal Authority (ordinances & legally binding documents)
4. Operation & Maintenance Program (maps, employee training, rehabilitation/replacement plan)
5. Design & Performance Provisions (design, construction, inspection standards/protocol)
6. Overflow Emergency Response Plans (including notification and response procedures)
7. FOG Control Program
8. System Evaluation and Capacity Assurance Plan (capacity evaluation & design criteria)
9. Monitoring, Measurement, and Program Modifications (as part of continuous, “living” document, implement analysis and update program for your SSMP)
10. SSMP Program Audits (each two years)
11. Communication Program

John’s portion of the presentation discussed the operation/maintenance side of the SSMP requirements: In short, agency needs to identify its goal, examine its existing resources, identify what’s needed to accomplish its goal (manpower, equipment, etc.). Particularly, the agency should have extra equipment on hand to deal with emergencies.

Also covered are the two approaches to SSMPs: 1) Meeting the requirements, and 2) Embracing the opportunity to change/improve upon the existing program. Regardless of approach, training is a key component to a successful SSMP.

The agency also should adopt industry best practice standards. For hydro jetting, the standard is a 2-man crew with a production rate of 16 segments per day. In Los Angeles, a successful cleaning operation in 95% of the pipe diameter after cleaning.

Funding: For cities and county agencies, SSMP funding is in competition with other programs such as police, parks, etc. In order to get the necessary funds, it is necessary and important to raise awareness by:

- Educating the public
- Public Notification
- Performance reporting

The presentation concluded with “Take Away Points.” The Q&A section was actively participated in with questions like the latest CCTV equipment, establishing rehabilitation priorities, etc.

A big thank you to Gisa and John for this presentation!

Announcement(s):

The WESTT Conference is coming up October 1-3 in Reno, NV. The conference coordinator was able to lock in a great rate at the conference hotel for this 1-1/2 day event. Individuals located in the western states are invited to present their papers accepted at the National No-Dig Conference held last April. PUG always has a showing at the annual WESTT conference, which we intend to repeat again this year. Stay tuned on opportunities extended to PUG members for attending this conference.

General:

Recap of "Controlling Contractor Liability" Course: The course was well attended and PUG extended free attendance to all interested PUG members beyond the original 25 free pass allotment. Although the course covered many areas of liability, highlights were discussed and attendees were given binders with material to reference when needed in the future.

A huge thank you to outgoing PUG Executive Committee Members: We said our farewells to two strong PUG committee members during this meeting – outgoing Treasurer Allen Law and At-Large Representative Joyce Carlson, both from the City of Oakland. Their participation and coordination for the last two years is greatly appreciated and they will be missed!

Welcome to the incoming PUG Executive Committee Members: A warm welcome was extended to Sasha Mestetsky of CCCSD as the new Treasurer and to Stan Shogren of Kennedy/Jenks as At-Large Representative. Both were present at the meeting and will assume office as of July 1, 2007.

Logo Contest Winner Announcement: Numerous entries were received for the PUG New and Creative Logo Contest, which made the decision extremely tough to decide which would be the best one to represent our non profit organization. After much deliberation, the winner of Black and Veatch was announced, as well as the runner up Phil Wade – both were presented with certificates and all logos were circulated to attendees of this meeting to see the breadth of submissions received. A huge thank you goes out to all entrants, and we're excited to show our new logo from here on out!

2007 Speaker & Course Line-Up: Our 2007 schedule is packed with topics ranging from Liners and Cathodic Protection to an 8-hour course on water main rehabilitation do's. We also have many stand-by presentations in case they're needed, which will be scheduled for 2008 if not this year.

Current Financial Report: Allen Law was unable to make it to this meeting, although our current financial standing is to the tune of \$50,000. This money will be given back to the members through free admittance to members for special courses, giveaways, and sponsorship to relevant events. More details to come once our new Executive Committee brainstorms.

Website Plans & Postings: We know our website is underwhelming, and we're looking to change that. A proposal has been given for revamping our current host provider and website, and you can expect to see some changes over the next few months. Feedback is welcome for those that access the website and want to share their input on what they'd like to see on the new website.

Membership Forms: That's right, it's membership renewal time! Applications were distributed in the meeting and more were mailed and emailed subsequent to the meeting. Get your renewal or new membership in today and start enjoying the benefits of being a PUG member!

Meeting Location: With attendance steadily growing, we're looking for a new home for our monthly meetings. We discussed holding our meetings at a different location each month to balance the commute time for attendees and to check out the digs of our member organization's places of business. However, with the group spreading throughout northern California where members come from Sacramento, Foster City, and possibly even as far south as Bakersfield, moving the meeting could add hours to a drive that already takes one or more hours. Additionally, the coordination effort to find a location each month is too time-consuming for those of us that are already donating a large part of our time to the group. Agreement was reached to keep the meeting as centrally located as possible, with Walnut Creek being the most central and some surrounding areas equally as desirable. Locations offered up for solicitation include the West County Wastewater Facility, Brown & Caldwell, Carollo Engineers, EBMUD, and the City of Walnut Creek. The PUG Secretary will investigate these options and alert the

Minutes by: Cindy Preuss, Harris & Associates
Secretary, Nor Cal PUG

members once a new meeting location has been chosen. In the meantime, RMC provides for an adequate (yet sometimes cozy) meeting room for our monthly presentations.

General: Interest in publishing rehabilitation specifications along the lines of a, "Northern California Greenbook" was discussed. Such a specifications book existed long ago and was distributed within PUG for our member's use. Currently we offer "generic" rehab specifications on our website for use by our members. Publishing "standards" could expose PUG to unwanted liability should something go awry in implementing one of the specifications. However, compiling up-to-date rehab specs is an excellent idea and puts to use the expertise and experience of our members for everyone to benefit from.

Subcommittees: In order to pursue such an effort as compiling rehab specs or standards would require volunteer participation from our members. If anyone is interested in participating in a task group to execute such a project (or another idea or project as well), please let Cindy Preuss, PUG Secretary, know and she'll solicit participation from other group members.

Next Meeting:

Our next general meeting will be held **TUESDAY, JULY 17, 2007** at the offices of **RMC Water & Environment** located at **2001 N. Main St., Suite 400, Walnut Creek, CA 94596**. The topic will be "**Trenchless Toolbox**", given by Don Wible of the Pacific Liners. Please call (925) 827-4900 or e-mail Cindy Preuss (cpreuss@harris-assoc.com) to RSVP.

Approaches to Preparing an SSMP and Maximizing its Benefits

Presentation to the Pipe Users Group
June 19, 2007

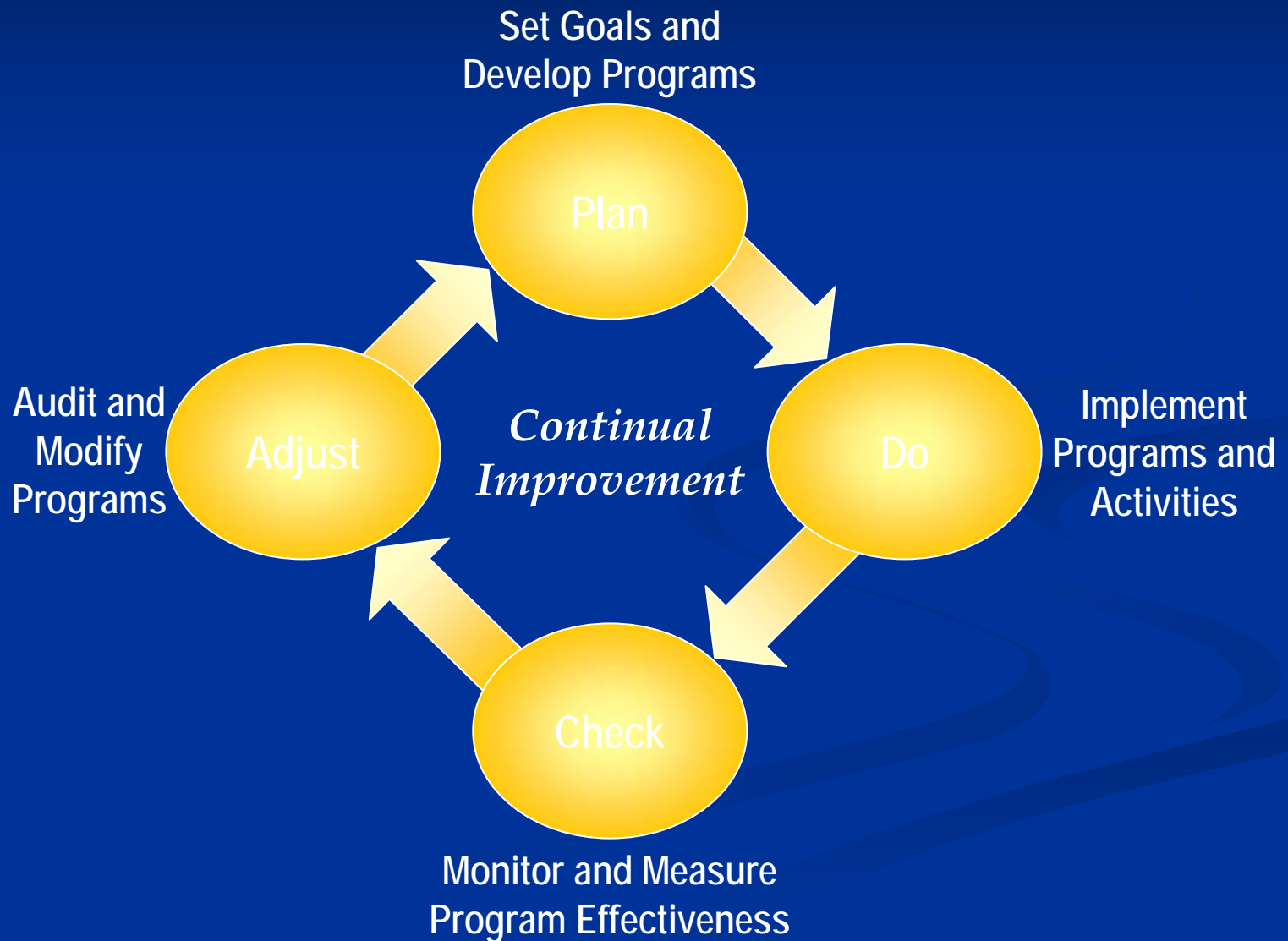
Gisa Ju, RMC Water and Environment
John Larson, Larson Consulting

What is an SSMP?

- “Best practices” approach to collection system regulation
- SSMP includes plans, programs, and procedures for:
 - Management
 - Operation and Maintenance
 - Condition
 - Capacity



SSMP - Continuous Improvement



Statewide General Waste Discharge Requirements (GWDR)

- Electronic SSO Reporting
- Sewer System Management Plan (SSMP)

Applies to all public entities with
> 1 mile of sanitary sewers



SSMP Mandatory Elements

- 1) Goals
- 2) Organization (including responsibilities)
- 3) Legal Authority
- 4) Operation and Maintenance Program
- 5) Design and Performance Provisions
- 6) Overflow Emergency Response Plan
- 7) Fats, Oils, and Grease (FOG) Control
- 8) System Evaluation and Capacity Assurance
- 9) Monitoring, Measurement, and Program Modifications
- 10) SSMP Program Audits
- 11) Communication Program



SSMP Deadlines

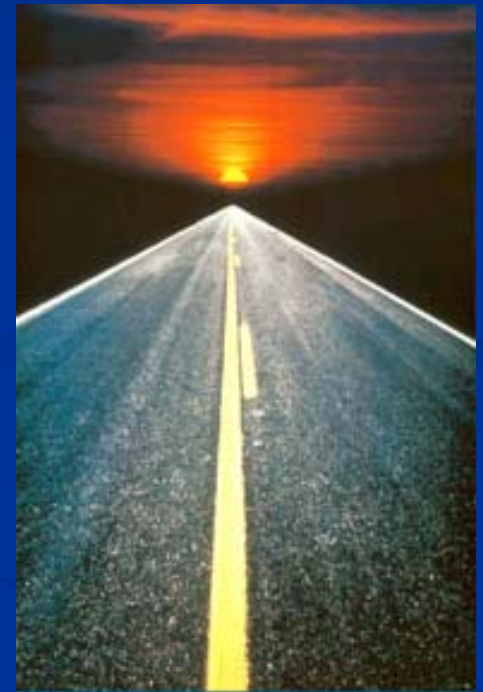
SSMP Section	Region 2	State
Development Plan and Schedule	--	8/2/07 - 5/2/08
Goals/ Organization	8/31/06	11/2/07 - 5/2/08
Overflow Emergency Response Plan		11/2/08 - 2/2/10
FOG Control program		11/2/08 - 2/2/10
O&M Program (Measures & Activities)	8/31/07	11/2/08 - 2/2/10
Legal Authority		11/2/08 - 2/2/10
Design & Performance Provisions		5/2/09 - 8/2/10
Capacity Assurance Plan	8/31/08	5/2/09 - 8/2/10
Monitoring & Measurement/Audits		5/2/09 - 8/2/10

SSMP Requirements

- Governing board approvals required:
 - Development Plan and Schedule
 - Final SSMP
- Provision for public input during SSMP preparation
- Available to SWRCB/RWQCB/Public
- Audit every 2 years
- Update every 5 years

(1) Goals

- *“...properly manage, operate, and maintain all parts of the sanitary sewer system.”*
- *“...reduce and prevent SSOs, as well as mitigate any SSOs that do occur.”*
- Goals should address:
 - Overflow prevention and response
 - System reliability
 - Others (costs, safety, customer service)



(2) Organization

- Identify Legally Responsible Official
 - Person who certifies SSO reports
- Responsibilities for SSO response and reporting
- Organization chart for SSMP implementation
- Chain of communications (w/ contact info) for SSO response and reporting
 - 24/7/365 Call intake
 - Operator or voice mail with automated call out
 - 24/7/365 Duty crew, standby, or other provision

(3) Legal Authority

- Demonstrate owner's legal authority to:
 - Prevent illicit discharges to sewer system
 - Require proper design and construction
 - Ensure access for maintenance and repairs
 - Limit discharge of FOG and debris
 - Enforce violations
- Sewer use ordinances, service agreements, other legally-binding documents

(4) Operation & Maintenance Program

- O&M program elements:
 - a) Up-to-date system map
 - b) Preventive Maintenance (PM) program
 - c) Rehabilitation and Replacement Plan
(including inspection/condition assessment)
 - d) Employee Training
 - e) Equipment/replacement part inventories



(5) Design and Performance Provisions

- Design and construction standards and specifications for new/reconstructed sewer system facilities
- Procedures and standards for inspecting and testing new/reconstructed sewer system facilities

(6) Overflow Emergency Response Plan

- Purpose
 - Quick and effective response to SSOs to protect human health and the environment
- Contents
 - Notification procedures
 - To primary responders
 - To regulatory agencies
 - Response procedures
 - Containment and mitigation
 - Training program



(7) FOG Control Program

- Approach:
 - Evaluate if FOG control is needed
 - Develop FOG control program if needed
- Elements (as needed):
 - Public outreach/education program
 - Commercial FOG disposal locations
 - Legal authority to prohibit FOG discharges
 - GRE requirements, inspection, enforcement
 - Identification of sewers prone to FOG blockages
 - Appropriate source control measures in identified problem areas

(8) System Evaluation & Capacity Assurance Plan

- Purpose:
 - Provide “adequate” hydraulic capacity
- Plan Elements:
 - Capacity evaluation
 - Design criteria
 - Capacity enhancement measures (CIP)
 - Schedule

(9) Monitoring, Measurement, and Program Modifications

(10) SSMP Program Audits

■ Requirements:

- Maintain relevant SSMP information
- Monitor & measure SSMP effectiveness
- Assess PM program effectiveness
- Identify and illustrate SSO trends
- Update program elements as needed
- Audits every two years (with report)

(11) Communication Program

- Process for public to provide input on SSMP development and implementation
- Communication with satellite systems

Fairfield-Suisun Sewer District

About FSSD | Wastewater | Recycled Water | Storm Water

1010 Chadbourne Road
Fairfield, CA 94534-9700
Phone (707) 429-8930
Fax (707) 429-1280

Featured Links

- Board Agendas
- Board Minutes
- Board of Directors
- Board Workshop Agenda
- City of Fairfield
- City of Suisun City
- California Association of Sanitation Agencies
- Bay Area Clean Water Association

The Fairfield-Suisun Sewer District at your service

The Fairfield-Suisun Sewer District oversees wastewater collection and treatment, water recycling, and stormwater management services in a 41-square-mile area of Solano County, Calif. Our service area encompasses the cities of Fairfield and Suisun City as well as one of the nation's most strategically important military installations, Travis Air Force Base.

The District owns and operates a system of sanitary sewers and pumping stations that collect wastewater from homes and businesses in our service area and transfers it to a modern, efficient tertiary waste treatment plant for cleaning and recycling. We also operate programs to help capture and control pollutants that can be carried by rainfall runoff.

Fairfield-Suisun Sewer District protects public health and the environment for the communities we serve in an efficient, responsible and sustainable manner. We're here to serve you, and we invite you to learn more about the Fairfield-Suisun Sewer District.

Home | Sitemap

we create digital

Major Sewer Pipeline Upgrade To Start

As part of its ongoing, \$25 million, multi-year sewer upgrade projects, the District recently approved a contract to design and bid the construction for over two miles of upgrades to sewer pipelines.

The oldest pipelines in the project area are nearly a century old. The pipeline improvements are designed to help prevent sewage leaks and inflows of stormwater through cracks that can overload the treatment plant and cause sewage overflows.

Many Benefits for Customers

The project provides customer benefits, among them: increased reliability; environmental and public health safeguards; lower maintenance costs; less infiltration of storm waters; and prevention of overflows, spills and treatment plant overloads.

Priority to Minimize Construction Impact on Public

- The District will evaluate a variety of technologies to limit the impacts on customers. In some areas, the District may reline the pipelines from the inside, in other areas, use a technique in which a flexible pipe is pulled through the existing pipeline without extensive surface digging. In other areas, traditional trenching may be the best method to use.
- The contractor will upgrade or replace the pipe incrementally. The project will move in sections so that disruptions and inconvenience will be limited to the sections being worked on.
- Construction hours will be limited, strict dust and dirt controls will be in place and access will be maintained to homes and businesses.
- Public hearings will be held during the design stage to obtain input from customers and keep them informed.

November 2006

ROSS VALLEY SANITARY DISTRICT

PROTECTING OUR BEAUTIFUL BAY ENVIRONMENT

District Meets Strict New State Regulations

Meeting strict new statewide quality requirements on how wastewater is collected and treated requires a new kind of partnership between Ross Valley Sanitary District and its customers. Together we can protect the environment and public health.

Upgrade Plans In Place

In accord with state regulations, the District



Two Approaches to SSMP

- Option 1 - Meet Requirements
 - Describe current operations
 - Minimal effort
 - Place SSMP on shelf until required audit/update
- Option 2 – Opportunity to Change/Improve
 - Evaluate current operations
 - Identify opportunities for improvement
 - Implement changes
 - Measure improvement

If You Choose Option 1, Then...

- Sit back
- Relax
- Put your dark glasses on
- I will wake you when this presentation is over



If You Choose Option 2

- Up Close and Personal
- Requires more effort than *status quo*
 - Adds effort to full time Day Job
- Work outside comfort zone
- Must convince others to:
 - Provide support (People, Equipment, \$)
 - Change established patterns
 - Change the way they work

Special Note: Cities and Counties are Different from Special Districts

- Sewers are one of many services provided
- All services competing for limited resources
- Sewers are out of sight
- Sewers are not attractive issues
- Very high investment/replacement cost
- Success depends on gaining attention

Opportunities

- Assess real performance
 - Compare to peers
 - Compare to high performers
- Identify areas for improvement
- Adopt industry best practices
- Develop credible information to support resource needs
- Raise awareness of activities

Examples



- Based on 17 Collection Systems
 - 5 SSMPs complete
 - 12 SSMPs in progress

Training

- Overflow Emergency Response
- Training Program
 - Classroom Introduction
 - Hands-on application in field
- Containment Achieved
 - Year before training 0.5%
 - Year after training 45%

Sample Performance Metrics

- SSO Rate
 - < 6 SSOs/100 miles/year
- Response Time
 - ≤ 30 minutes during working Hours
 - < 60 minutes after hours
- Overflow Volume Distribution
 - $90\% \leq 100$ gallons
- Portion of Overflow Captured
 - $\geq 30\%$
- Portion of Overflows to Surface Waters
 - $< 40\%$

Performance Metrics (cont'd)

- Repeat SSOs
 - < None within 3 years
- Pump Station and Force Main SSOs
 - < 1 per 20 years of operation
- Field Crew Size
 - High velocity cleaning = 2
- Average Daily Production
 - High velocity cleaning = 12 lines/day

Industry Best Practices

- Rigorous recording of SSOs and related data
- All SSOs investigated using CCTV to identify primary cause
- CMMS to schedule and record PM activities
- All gravity sewers scheduled for PM
- Sewer cleaning quality assurance/ quality control program

Industry Best Practices (cont'd)

- Quality and productivity goals for field crews
- Field crew observations and recommendations captured
- Cleaning frequency and method evaluated each cleaning cycle
- FOG Source Control Program focused on problem areas
- Periodic drills to practice use of emergency equipment

Emerging Industry Best Practices

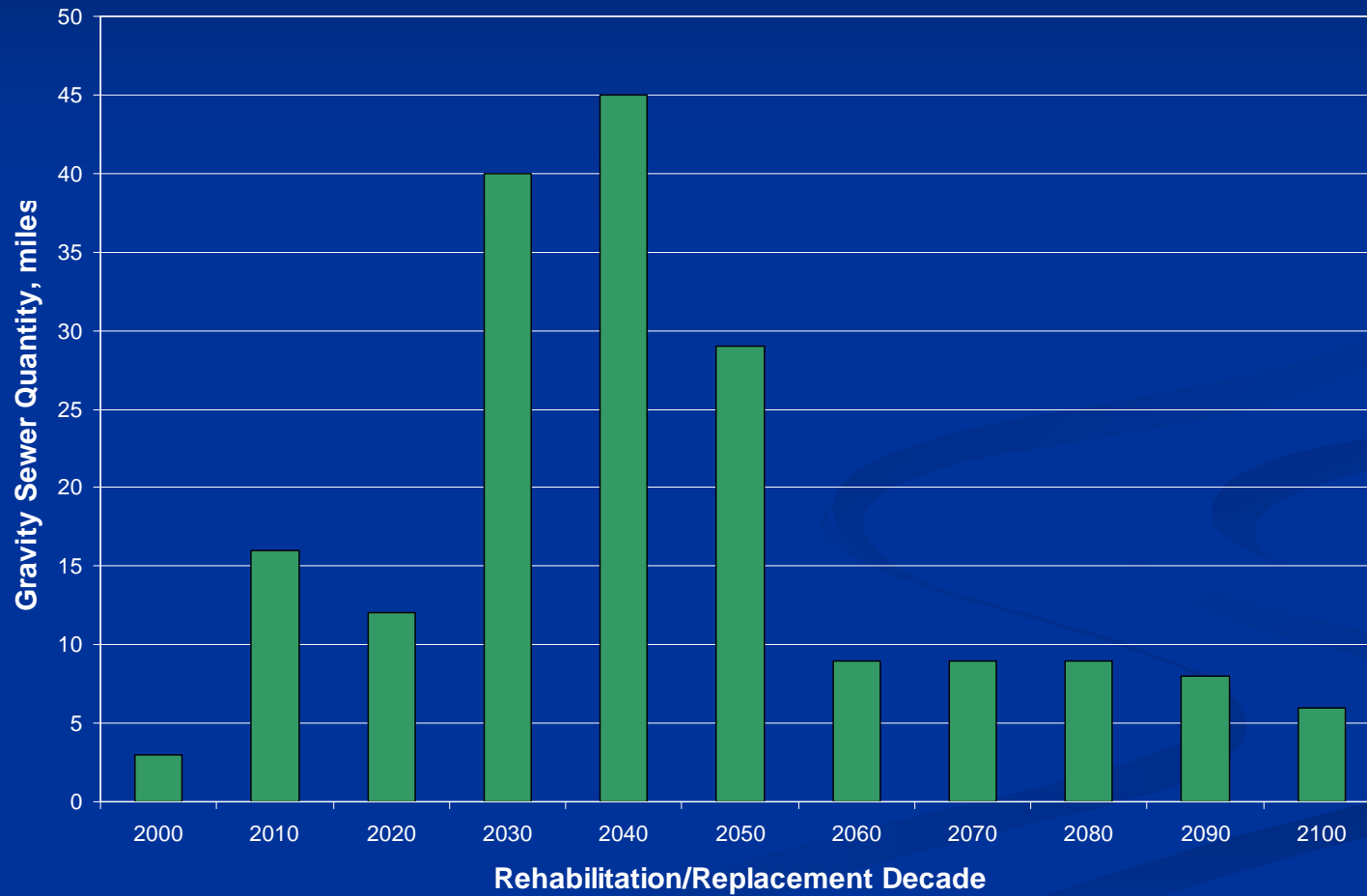
- CCTV Inspection vs. Cleaning
- Multiple crew response to SSO events
 - 1 crew focused on restoring flow
 - 1 crew focused on containment
- Application of subsequent rounds of condition inspection to establish rate of deterioration
- Asset management methods

Workload vs. Staffing

Activity	Annual Workload	Required Staff
Hot Spot Cleaning	40 miles	0.9
Routine Cleaning	44 miles	1.2
Service Call Response	360	1.0

Based on 130 mile collection system

Rehab/Replacement Needs



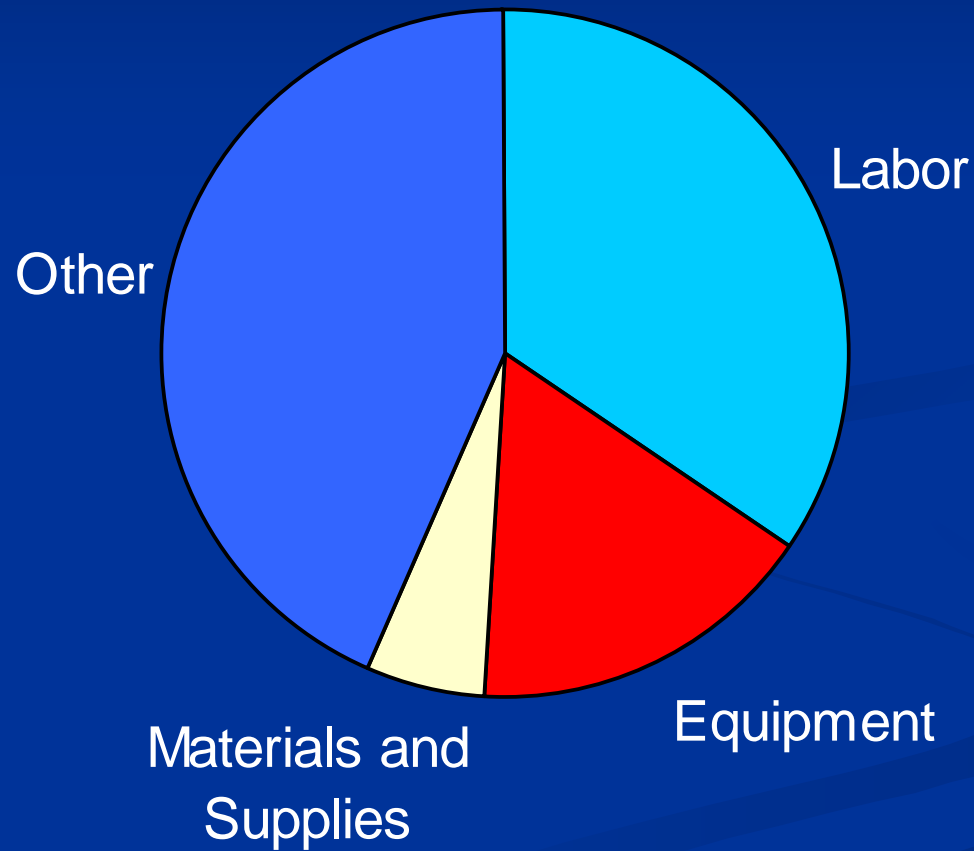
Condition-based Nessie Curve

Equipment Needs

- Workload
- Staffing
- Equipment
- Spare equipment



Spare Equipment Cost



Raise Awareness

- SSMP steps involving elected approvals
 - SSMP Development Plan and Schedule
 - Budget(s)
 - SSMP Adoption
- SSMP steps involving elected notification
 - Public notification of SSMP preparation
 - Performance Reporting



Take Away Points

- SSMP Preparation is an **Opportunity**
 - Gain insights
 - Gain support for programs
 - Improve performance
 - Inform Policy and Decision Makers
 - Gain access to needed resources



Discussion/Questions ?

JLarson@LarsCon.com

925.360.6600

gju@rmcwater.com

925.627.4100