North Bay Watershed Association
Marin Lateral Program Report

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1 Purpose

The purpose of this report is to provide the Marin wastewater agencies and other interested parties with information regarding approaches that are available to reduce peak wet weather flows that occur in the Marin County sanitary sewer systems during heavy rainfall events.

2 Problem Statement

During heavy rainfall events the Marin County wastewater agencies experience capacity-related sanitary sewer overflows (SSOs) and increased flows at the wastewater treatment plants. When the flows at the wastewater treatment plants exceed the capacity of the biological treatment process, then the treatment plant is forced to discharge a blended effluent consisting of a mixture of fully treated and partially treated wastewater. Both the SSOs and the discharge of blended effluent increase the quantity of pollutants entering San Francisco Bay.

SSOs are prohibited and sanitary sewer agencies are required by their General Waste Discharge Requirements (GWDR)[1] to assure they have adequate capacity to transport peak flows. Marin County wastewater agencies continue to expend public funds to increase the capacity of their sanitary sewer systems in order to minimize the frequency of capacity-related SSOs.

The discharge of blended effluent, which is currently permitted, may be limited or prohibited in the future by regulatory mechanisms that may include limiting peak flows entering the wastewater treatment plants to the capacity of the biological treatment facilities. Marin County wastewater agencies may be required to expend public funds to expand the capacity of their biological treatment facilities and/or to rehabilitate their sewer systems to reduce the levels of infiltration and inflow (I/I) or both.

3 Acronyms and Definitions

The acronyms and definitions of wastewater-related terms used in this report are:

ADWF means average dry weather flow.

Building Drain refers to the piping that extends downstream from the interior plumbing fixtures to the building cleanout located approximately two feet outside the building foundation. See Figure 1, Typical Lateral Terminology and Layout.

CCTV means closed-circuit television inspection.

Cleanout refers to a fixture that is installed to provide access to a sewer service lateral for maintenance, inspection, and diagnosing problems. See Figure 1, Typical Lateral Terminology and Layout.

CMSA means Central Marin Sanitation Agency.

GWDR means General Waste Discharge Requirements. It refers to the Statewide General Waste Discharge Requirements for Sanitary Sewer Agencies adopted by the California State Water Resources Control Board and provides the basis for the regulation of sanitary sewer system management, operations, and maintenance.

[1] Statewide General Waste Discharge Requirements for Sanitary Sewer Agencies, State Water Resources Control Board Order No. 2006-0003-DWQ, May 2, 2006

I/I means inflow and infiltration. A portion of the flow in the sanitary sewer system during dry weather is the result of I/I. The quantity of I/I entering a sanitary sewer system can increase dramatically during storm events. In the case of Marin County, the I/I during significant storm events has historically increased the total flow reaching the six Marin County wastewater treatment plants by a factor of 10 (19 million gallons per day during dry weather to over 200 million gallons per day during significant storm events).

Infiltration means the flow of storm water and/or ground water into a sanitary sewer system where the water entering the sewer flows through the soil.

Inflow means the flow of storm water into a sanitary sewer system where the water enters the sewer through constructed features (e.g. area drains, downspouts, cross connection to storm drain) or defects in the sewer that are open to the ground surface (e.g. open joint at top of sewer near a creek bank).

LGVSD means Las Gallinas Valley Sanitary District.

Lower Lateral means the portion of the lateral between the property line or easement boundary and the public sewer. See Figure 1, Typical Lateral Terminology and Layout.

MGD means million gallons per day.

NBWA means North Bay Watershed Association.

NSD means Novato Sanitary District.

Private Sewer Lateral refers to the privately owned portion of the sewer service lateral. Property owners in Marin County own the entire sewer service lateral (both the upper and the lower lateral). See Figure 1, Typical Lateral Terminology and Layout.

PWWF means peak wet weather flow.

RVSD means Ross Valley Sanitary District. RVSD is also referred to as SD #1.

SASM means Sewerage Agency of Southern Marin.

SD means sanitary district.

SD #1 means Sanitary District No. 1 of Marin County. SD #1 is also referred to as Ross Valley Sanitary District.

SD #2 means Sanitary District No. 2 of Marin County.

SD #5 means Sanitary District No. 5 of Marin County.

Sewer Service Lateral means the entire lateral and includes both the upper and lower lateral. See Figure 1, Typical Lateral Terminology and Layout.

SMCSD means Sausalito Marin City Sanitary District.

SRSD means San Rafael Sanitation District.

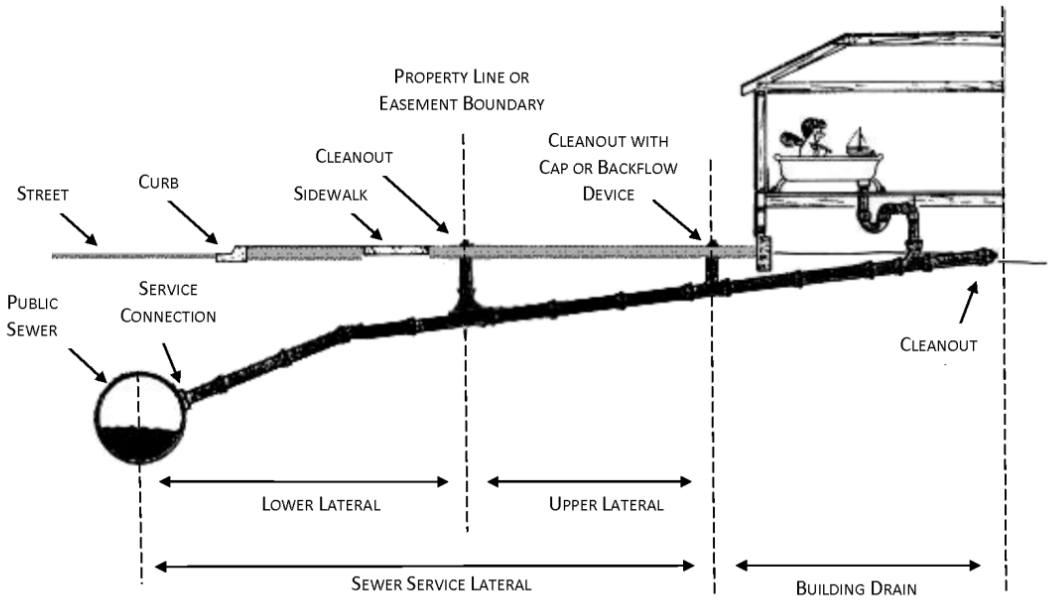
SSO means sanitary sewer overflow.

Upper Lateral means the portion of the lateral between the building drain cleanout and the property line or easement boundary. See Figure 1, Typical Lateral Terminology and Layout.

3.1 Lateral Terminology

This technical memorandum refers to sewer service lateral, lower lateral, and upper lateral. These portions of the sewer service lateral are delineated in Figure 1.

Figure 1: Typical Sewer Lateral Terminology and Layout



BASED ON GRAPHIC FROM NEWPORT NEWS, VIRGINIA (WWW.NNGOV.COM)

At this time, none of the Marin County wastewater agencies are responsible for the sewer service lateral. By way of comparison, approximately 70% of the estimated 1,100 wastewater collection system agencies in California have no responsibility for sewer service laterals; approximately 20% are responsible for the lower lateral; and approximately 10% are responsible for the entire sewer service lateral (lower and upper lateral).

4 Background

NBWA has nine member agencies that provide wastewater collection and treatment service to a combined population of approximately 247,000 in Marin County. The nine wastewater agencies participating in this project are shown on Table 1.

Marin County sanitary sewer systems have varying degrees of I/I. The combined effect of I/I is that it greatly increases flows in the sanitary sewer systems and at the wastewater treatment plants. These increased flows result in SSOs where the sanitary sewer system capacity is exceeded and in "blending" at some wastewater treatment plants.[2] Blending is practiced when peak flows exceed the capacity of the secondary treatment process. The treatment plant discharges a mixture of fully treated wastewater (secondary effluent) and partially treated wastewater (primary effluent). Blending has been a common design practice in the San Francisco Bay Area for over forty years and it is currently permitted at six Marin County wastewater treatment plants[2] and at over one third of the 48 wastewater treatment plants in the San Francisco Bay Region.

[2] The Marin County wastewater treatment plants that are designed and permitted to blend are CMSA, LGVSD, NSD, SMCSD, SASM, and SD #5. The NSD wastewater treatment plant will discontinue blending upon completion of current capital improvements to increase its secondary treatment capacity.

Table 1: Marin County Wastewater Agencies

Member Agency	Population Served	Connections to Sewer System	Quantity of Public Sewers, miles	Quantity of Private Sewer Service Laterals, miles
CMSA [1]	NA	0	0	0
• SD #1 [2]	50,000	20,358	203	200
• SD #2 [3]	11,300	5,700	45	60
• SRSD	38,000	10,000	130	60
LGVSD	32,000	9,210	102	53
NSD	56,000	28,000	198	238
SASM [4]	33,000	12,000	167	120
SD #5 [5]	8,500	3,800	39	36
SMCSD [6]	18,000	5,000	66	50
Totals	**246,800**	**94,068**	**950**	**817**

Notes:

1. CSMA operates a wastewater treatment plant and a small interceptor sewer system. The public sewers tributary to CSMA are the responsibility of SD #1, SD #2, and SRSD.
2. SD #1 (RVSD) includes the Towns of Fairfax, Ross, and San Anselmo; the City of Larkspur (including Bon Air); and the unincorporated areas of Sleepy Hollow, Kentfield, Kent Woodlands, Oak Manor, and Greenbrae. RVSD also includes San Quentin State Prison, and provides service to Murray Park.
3. SD #2 includes Corte Madera and portions of Tiburon and Larkspur.
4. SASM includes Almonte Sanitary District (SD), Alto SD, Homestead Valley SD, City of Mill Valley, Richardson Bay SD, and a portion of Tamalpais Community Services District.
5. SD #5 includes portions of Tiburon, Belvedere, and Paradise Cove.
6. SMCSD provides sewer service to the City of Sausalito and a portion of the Tamalpais Community Services District. Both agencies are responsible for their respective collection systems.

Although currently permitted, the practice of blending has been called into question by the staffs of the U.S. Environmental Protection Agency (EPA), Region 9, and the San Francisco Bay Regional Water Control Board. The regulators' concern is that blending does not meet the Clean Water Act standard of secondary treatment for all discharges. While no actions have been taken, one of the possible regulatory actions being considered is to issue future operating permits that limit peak flows entering the wastewater treatment plant to the capacity of the secondary treatment process. If this regulatory approach is implemented, then the wastewater agencies that currently blend would likely be given a schedule to come into compliance by decreasing I/I entering their sanitary sewer systems, providing storage for flows that exceed the capacity of the secondary treatment process, and/or increasing the capacity of the secondary treatment process. Schedules for these types of changes typically allow five to ten years for the impacted agencies to achieve compliance.

A similar issue arose when EPA rescinded the operating permits for three peak flow treatment facilities operated by the East Bay Municipal Utilities District (EBMUD) in Oakland, California. The peak flow treatment facilities were designed to provide storage and, when the storage capacity was exceeded, to provide primary treatment and disinfection prior to discharge. EPA and EBMUD entered into a Stipulated Order in July 2009 that requires EBMUD develop a method to allocate the treatment capacity of its main wastewater treatment plant to each of the seven satellite wastewater collection system agencies. EBMUD was also required to implement a regional private sewer lateral ordinance to support the reduction of I/I from private sewer laterals. EPA is currently in the process of negotiating enforcement orders with the seven satellites requiring them to reduce their peak flows. The timeframe for eliminating the discharges from the peak flow

treatment facilities included in EBMUD's Stipulated Order is ten years. The likely methods of peak flow reduction will include a combination of private sewer lateral inspection/repair/rehabilitation, public sewer inspection/repair/rehabilitation, and construction of storage facilities.

The sources of inflow entering the gravity sewers include sewer connections to the storm drain system, connection of private storm drains (e.g. private downspouts, foundation drains, and area drains), and manhole covers. The sources of infiltration into the gravity sewers include failed pipe joints, fractures, cracks, other openings in public gravity sewers and private sewer service laterals, and leaking manholes.

The nine participating Marin County wastewater agency sanitary sewer systems discharge to six wastewater treatment plants. Information regarding average dry weather flow (ADWF), peak wet weather flows (PWWF), and secondary treatment capacity in million gallons per day (MGD) for each of the treatment plants is shown on Table 2. At current I/I levels, the combined effect is to increase the flows ten fold (19 MGD of total flow entering the six wastewater treatment plants during dry weather to over 200 MGD during significant rainfall events). An estimated 60% of the total flow is discharged without receiving secondary treatment.

Table 2: Wastewater Treatment Plant Flows

Treatment Plant	Current ADWF [1], MGD	Current PWWF [2], MGD	Wet Weather Peaking Factor [3]	Secondary Treatment Capacity, MGD
CSMA[4]	7	100+	14	30
LGVSD	2.3	22	10	9.5
NSD	5.4	35	7	9[5]
SASM	2.6	44	17	24.7
SMCSD	1.3	12.6	10	6.0
SD #5	0.8	3.0	4	2.3
Totals	**19.4**	**217**	**NA**	**82**

Notes:
1. ADWF is the average daily flow for the three months with the lowest flows.
2. PWWF is the peak hourly flow.
3. Wet Weather Peaking Factor is the ratio of PWWF to ADWF.
4. Sewers tributary to CSMA are the responsibility of SD #1, SD #2, and SRSD.
5. NSD is completing a project to increase its secondary treatment capacity to 47 MGD.

I/I studies from other locales suggest that I/I entering the sewer system is evenly split between the public sewers and the private sewer service laterals. If this finding is applicable to Marin County, then over 100 MGD of I/I enters the sewer system through private sewer service laterals or approximately 0.7 gallons per minute per lateral during significant storm events.

The nine participating wastewater agencies have made improvements to their sanitary sewer systems to reduce the amount of I/I and/or to increase sewer system and treatment plant capacity. The six participating wastewater agencies with treatment plants have made improvements to treat or temporarily store peak flows. The cost of these projects between 2001 and 2007 totaled over $200 million or an average of $1,950 per connection.

5 Approaches to Reducing or Accommodating Peak Flows

There are a number of approaches to reducing peak flows that have been successfully employed by public agencies around the United States. The approaches include:

- I/I reduction in public sewer mains and private laterals,
- Construction of storage facilities to retain flows that exceed the capacity of the biological treatment process until the peak flows subside,
- Construction of expanded sanitary sewer capacity, and
- Construction of expanded biological treatment capacity.

Information on each of the approaches is presented in the following sections.

5.1 I/I Reduction

This approach includes the identification and elimination of major sources of I/I that enter public sewers and private sewer laterals.

5.1.1 Reduce Inflow into Public Sewers and Private Sewer Laterals

Inflow identification consists of a periodic and systematic inspection of the sanitary sewer system to identify both public and private sources of inflow. Flow monitoring, visual inspection, smoke testing, and dye testing are the common methods employed.

- Flow monitoring is used to identify sewer basins/sub-basins with elevated levels of inflow.
- Visual inspection of manhole covers (e.g. holes in covers in areas subject to flooding) and manhole interiors (e.g. connections to storm drains) identify sources of inflow and are followed by corrective actions (e.g. disconnection, manhole cover replacement).
- Smoke testing consists of blowing non-toxic chemical smoke into the public sanitary sewer system and systematically inspecting the vicinity for signs of smoke (e.g. smoke emanating from downspouts, area drains, cracks in soil) that indicate locations of inflow entry. When illicit storm water connections or faulty laterals are observed, the inflow sources must be eliminated by repair or rehabilitation. Enforcement action against recalcitrant property owners may be required.
- Dye testing is typically used to confirm the results of visual inspection or smoke testing. It consists of flushing dyed water into the suspected inflow source and observing the downstream sanitary sewer system for the presence of the dye.

5.1.2 Reduce Infiltration into Public Sewers

Infiltration reduction in public sewers is an iterative process.

- It begins with flow monitoring during wet weather to identify sewer basins with the highest levels of infiltration.
- The second step consists of condition assessment using closed circuit television (CCTV) or other internal inspection methods to identify structural defects (e.g. cracks, offset joints, holes in pipe) that allow the entry of infiltration.
- Once the major defects have been corrected in a sewer basin using repair, rehabilitation, or replacement then the flow monitoring is repeated. The second round of flow monitoring is used to identify sewer basins that continue to exhibit

high levels of infiltration. Infiltration reduction in these basins consists of rehabilitation or replacement of sewer pipe that may not have visible defects. For example, clay sewer pipe manufactured prior to 1958 has a joint every two to three feet that was sealed using cement mortar to fill the gap in the joint. These rigid cement mortar joints are known to fail over time due to soil movement and/or corrosion. The failed joints provide a pathway for infiltration.

5.1.3 Reduce Infiltration into Sewer Laterals

Infiltration occurs in sewer laterals similar to infiltration in public sewers. Structural defects and failed joints provide pathways for infiltration. There are four common approaches available to reduce infiltration from sewer laterals: incentives to private property owners to rehabilitate or replace sewer laterals, public replacement of the lower lateral during capital improvements to the sewer system, mandatory inspection or testing and repair/rehabilitation of the private sewer lateral, and public ownership of the sewer lateral.

5.1.3.1 Incentives

Incentives are used to encourage private property owners to voluntarily rehabilitate or replace their sewer lateral. Incentive programs that are commonly employed include reduced annual sewer service charge, annual fixed price or unit price bids for lateral rehabilitation, lateral repair/rehabilitation insurance pools, and/or public incentives (e.g. grants or low interest loans) to defray repair/rehabilitation costs.

- Reduction in the sewer service charge is justified based on the reduced cost of conveyance and treatment due to reduced flows at the treatment plant.
- The public agency role in providing a set bid price for rehabilitation/replacement can vary from the agency obtaining bids on behalf of the property owner to having the work done by an agency contractor and then billing the property owner for the completed work.
- Grants and low interest loans typically have a maximum amount (e.g. $2,000) per connection and a combined annual grant amount for budgeting purposes. Grants, low interest loans, and liens can be used to provide relief for low or fixed income customers.
- Insurance pools are administered by the agency or by a private entity working under contract to the agency. Under this approach, the property owner pays an annual fee (e.g. $50 per year) for coverage. The insurance fund then reimburses the cost of lateral rehabilitation/replacement with both a deductable amount and a maximum.

5.1.3.2 Public Replacement of the Lower Lateral

Some public agencies include replacement of the lower lateral in their gravity sewer rehabilitation/replacement projects. The agencies that are not responsible for the lower lateral include a mechanism to obtain property owner approval for the work or to take ownership of the lower lateral (the portion of the sewer lateral between the public sewer main and the property line) for the construction and warranty period and then return the ownership to the property owner. The cost of this approach increases the cost of the gravity sewer rehabilitation/replacement projects by up to 50%.

5.1.3.3 Sewer Lateral Inspection/Testing Program

Mandatory inspection programs are intended to identify and correct structural conditions that allow infiltration. The inspection requirement can be triggered by specific conditions:

significant remodel, change in use (e.g. conversion of a single family residence to a commercial activity), change in customer, or agency discretion. The property owner must obtain an inspection, typically using CCTV, at their expense and submit it for agency review. If the lateral passes the agency inspection criteria, then the agency issues a Compliance Certificate that is typically valid for a period of ten to twenty years. A more detailed description of Private Lateral Inspection Programs, including typical triggers, inspection and testing methods, control mechanisms, and incentives and affordability is included as Appendix A.

If the lateral fails the agency's inspection criteria, then the property owner must repair, rehabilitate, or replace the lateral at their expense. The agency inspects the work and conducts a final test that typically uses CCTV or low-pressure air to demonstrate that there are no significant leaks in the lateral. The agency issues a Compliance Certificate when the lateral passes the criteria for the final test. This process may involve correction of deficiencies and re-testing in order to pass the final test. A sample private sewer lateral ordinance that could be used to implement this approach is included as Appendix B and sample administrative procedures (from the City of Santa Barbara) are included as Appendix C.

5.1.3.4 Public Ownership

Public lateral ownership is employed by agencies for a variety of reasons including reducing infiltration from sewer laterals. Approximately 20% of the estimated 1,100 sanitary sewer agencies in California own the lower lateral and an additional 10% of sanitary sewer agencies own both the lower and upper lateral. The ownership responsibility includes maintenance, repair, and rehabilitation/replacement of the sewer lateral. Under this approach the public agency takes over ownership of the sewer lateral, monitors its performance with respect to maintenance, infiltration, and SSOs, and rehabilitates or replaces the sewer lateral when appropriate.

5.2 Provide Storage for Flow Peaks

This approach employs storage facilities either upstream of the treatment plant or on/near the treatment plant site (between the primary and secondary treatment processes). The upstream storage facilities can consist of one large facility or several smaller facilities distributed throughout the sewer system. The storage facilities can consist of above ground or buried tanks, covered basins, or portions of the sewer system where large diameter pipe or tunnels are installed to provide storage capacity.

5.3 Increase Sanitary Sewer System Capacity

This approach is focused on transporting peak flows to the treatment plant. It consists of eliminating capacity limitations within the gravity sewer system by installing parallel sewers or by increasing the size of existing sewers. It is capable of reducing the number of capacity-related SSOs; however, it can increase the magnitude of peak flows at the treatment plant.

5.4 Increase Treatment Capacity

This approach is focused on providing additional secondary treatment capacity. It can consist of increasing the capacity of the biological treatment process or adding treatment processes that are capable of meeting the biological treatment effluent quality requirements.

6 Preliminary Evaluation of Approaches

The high level evaluation of each of the ten approaches or combinations of approaches that were identified in Section 5 is presented on Table 3. Elimination of the expensive and/or ineffective approaches suggest that a program to manage peak wet weather flows in Marin County would include elements 1, 4, 6, and 8 from Table 3. These elements, which would address I/I from both the estimated 950 miles of public sewers and over 800 miles of private sewer laterals in Marin County, are:

- Implement a periodic smoke-testing program to identify and eliminate sources of inflow entering public sewers and private sewer laterals. The effectiveness of this activity can be increased by using flow monitoring data to identify sewer basins (or sub-basins) with elevated levels of I/I during storm events to prioritize these areas for smoke testing. To be successful, this activity must be supported with work processes and resources to ensure that identified sources of inflow are corrected.
- Implement a private sewer lateral inspection and testing program to reduce I/I from the estimated 94,000 private sewers laterals in Marin County. To be successful, this activity will need stakeholder buy-in, legal authorities, work processes, and resources to support the program. The real estate community has expressed concerns and is opposed to inspection/repair/replacement options that impact or may impact the escrow process. In order to be accepted, the triggers (e.g. change of customer vs. transfer of title) and the inspection/ repair/rehabilitation process must not delay the close of escrow. The rate of progress toward reducing I/I from private sewer laterals can be accelerated through the use of incentives to encourage voluntary repair or rehabilitation/replacement efforts.
- Continue/accelerate public sewer repair, rehabilitation, or replacement efforts aimed at the reduction of infiltration. The effectiveness of this activity can be increased by using flow-monitoring data to identify sewer basins (or sub-basins) with elevated levels of I/I to prioritize the areas for condition assessment. To be successful, this activity will need the work processes and resources to ensure that gravity sewers with elevated levels of I/I are rehabilitated or replaced.
- Replace the lower sewer lateral during projects to rehabilitate/replace the public sewer main. This approach, which is currently practiced by a number of Marin County agencies (including the Ross Valley Sanitary District and the Tamalpais Community Services District), reduces infiltration that occurs in the public right-of-way. The effectiveness of this approach can be increased by public agency actions to encourage concurrent rehabilitation/replacement of the upper lateral by including a bid item for the contractor to rehabilitate/replace the upper lateral during the sewer main construction project and making that cost available to the property owner.

A detailed evaluation would be needed to select the best approach or combination of approaches for each agency because of the variation in conditions from agency to agency. It is beyond the scope of this work to provide a detailed, agency-level evaluation of the alternatives.

Table 3: Preliminary Evaluation

Approach Number	Description	Pros	Cons
1*	Identify and Eliminate Inflow into Public Sewers and Sewer Service Laterals	Effective approach to reduce inflow portion of peak flows. Most effective when coupled with flow monitoring to identify areas with high levels of inflow.	Must repeat fieldwork periodically to maintain inflow at low levels. Requires notification to the public prior to testing. Some property owners will act to prevent discovery of prohibited connections. To be effective, requires repairs to public facilities and enforcement of corrective actions for private property.
2	Reduce Infiltration into Public Sewers	Actions needed are within public agency authority.	Rehabilitation projects are expensive. Impacts associated with construction work.
3	Continue Status Quo - Private Ownership of Sewer Service Laterals	Inexpensive.	Property owners act when lateral fails. Ineffective at reducing infiltration into sewer laterals.
4*	Use Incentives to Reduce I/I Entering Sewer Service Laterals	Inexpensive.	Voluntary nature of approach limits effectiveness (limited number per year/actions may not occur where needed).
5	Mandatory Disclosure of Sewer Service Lateral Problems at Time of Sale	Inexpensive	Voluntary nature of approach limits effectiveness. Voluntary repair/rehabilitation may not occur where needed.
6*	Public Rehabilitation/Replacement of Lower Lateral during Public Sewer Rehabilitation/Replacement Projects	Addresses all lower laterals over time.	Expensive – adds 50% to the cost of public sewer rehabilitation/replacement.
7	Public Rehabilitation/Replacement of entire Sewer Service Lateral during Public Sewer Rehabilitation/ Replacement Projects	Very Effective	Significantly more expensive that Approach #6.
8*	Mandatory Inspection and Repair/Rehabilitation/Replacement when Sewer Service Lateral does not meet Agency Standards	Addresses all sewer laterals over time. Cost of individual lateral paid by property owner.	Repair/rehabilitation may not occur where needed. Requires long time (25+ years) to address majority of laterals.
9	Public Ownership of Lower Lateral	Partial solution - effective at reducing infiltration entering through lower lateral.	Partial solution – may increase infiltration entering through the upper lateral. Expensive.
10	Public Ownership of Sewer Service Lateral (includes upper and lower lateral)	Effective.	Expensive.
11	Add Storage Facilities for Peak Flows	Cost effective approach to reducing peak flows.	Difficult to site storage facilities. Public opposition to storage facilities. Potential for odors and vectors if not properly operated.
12	Increase Secondary Treatment Capacity	Provides secondary treatment for all sewage within design criteria.	Requires space for additional treatment facilities. Expensive to construct. Expensive to operate. Increased energy use. Not feasible in all locations.

* Recommended elements for consideration in Marin County.

Appendix A: Private Sewer Lateral Inspection Programs

There are currently 15 out of approximately 115 wastewater agencies in the San Francisco Bay Area that require private sewer lateral inspection/testing. The number of private sewer lateral inspection programs has increased in recent years with 6 of the 15 programs implemented since 2005. One regional treatment agency, under a Stipulated Order with the Environmental Protection Agency, is currently developing a program that will add three of its satellite agencies that do not have private sewer lateral inspection programs. The current list of the San Francisco Bay Area programs is shown on Table A-1.

Table A-1: San Francisco Bay Area Agencies with Private Lateral Inspection Programs

Agency	Location	Service Area Population	Year Ordinance Enacted
City of Alameda	Alameda	72,300	1988
City of Albany	Albany	16,400	1997
City of Berkeley	Berkeley	102,700	2006
City of Burlingame	Burlingame	28,200	1986
Castro Valley Sanitary District	Castro Valley	55,000	Circa 1998
West County Wastewater District	North Richmond	29,100	2008
Crockett Community Services District	Crockett	3,422	Circa 2008
Cupertino Sanitary District	Cupertino	61,800	Circa 2006
Stege Sanitary District	El Cerrito, Kensington, and Southern Richmond	30,100	2005
City of Richmond	Central Richmond	102,200	2006
City of San Mateo	San Mateo	91,600	In Progress
City of Sausalito	Sausalito	7,200	1991
Vallejo Sanitation and Flood Control District	Vallejo	116,800	1994

The private lateral inspection program elements typically include:

- Triggers for Inspection/Testing
- Inspection and Testing Methods
- Control Mechanism
- Incentives and Affordability

Triggers for Inspection/Testing

Private lateral inspections are usually initiated based on defined trigger events or activities. The triggers typically include:

Sale of Property / Transfer of Title

The most common trigger is sale of property or transfer of title. Lateral inspection and testing at this time is similar to termite and roof inspections in that it is part of the disclosure process that informs the prospective owner of potentially significant future costs that would be associated with lateral repair or replacement. The current real estate sales rate in Marin County suggests an average turnover rate of once every 25 to 35 years. In considering the method of implementing this trigger, it is important to remember that the real estate community has concerns regarding the timing and would prefer inspection and repair/replacement options that do not impact the closing of escrow.

Remodel Above a Threshold Value

Private lateral inspection programs based on sale of property take a significant period of time to achieve measureable results (e.g. 25 to 35 years as shown above). Including major remodels has been shown to add 10% to 35% additional properties annually to the program and thus decrease the time needed to achieve measurable results. The threshold is typically stated as a fixed amount (e.g. estimated cost of remodel greater than $100,000) or a portion of the assessed value (e.g. 15%). The fixed amount is attractive from the standpoint that the number of properties included in the program increases over time as the result of inflation of construction costs.

Change in Use

This trigger would apply when residential connections are converted to commercial use (e.g. catering service) and when commercial connections are converted to a different use category (e.g. restaurant to brewery). The purpose for the lateral inspection, in addition to addressing its structural condition, is to assess whether the existing lateral is capable of handling the changed wastewater flows. The agency would be informed of the changes through either the business permit or health department licensing processes, or both.

Change of Customer

This trigger would apply to residential and commercial properties when a new customer applies to change the billing information for water service. This trigger is an alternative to the Sale of Property/Transfer of Title trigger and would take the private lateral inspection out of the escrow process. This trigger would rely on the real estate community to disclose the inspection requirement to the buyer and the seller. It would also require the cooperation of the water utility in providing a list of properties where the customer had changed.

Other Triggers

The triggers listed above are the more common triggers for private lateral inspection. Agencies use a variety of other triggers that are intended to address agency-specific issues. These other triggers include:

- Flow monitoring indicates the property is located in an area identified as having elevated levels of I/I,
- Smoke testing indicates there is a problem with the private lateral,
- Inspection of the public sewer reveals conditions in the private lateral that may contribute to I/I or cause a blockage in the public sewer,
- An overflow from the private lateral entered the public right-of-way causing a nuisance,
- Construction and/or connection of additional living quarters,
- Installation of additional plumbing fixtures, and
- Following private lateral repair or replacement.

Inspection and Testing Methods

There are three inspection and testing methods that are readily available for the purpose of determining the condition of a private sewer with regard to I/I. The following discussion is limited to the three methods that are in common practice; however, the program should provide a process for the inclusion of new inspection and testing methods as they become readily available. The three methods in common practices are:

CCTV Inspection

CCTV Inspection systems for small diameter sewers (e.g. sewer laterals) are widely available and reasonably priced ($5,000 to $25,000 per unit). Typical costs for the inspection of sewer laterals by private contractors are on the order of $300; however, contractors in some areas waive the cost if the property owner contracts for the repair or replacement of the lateral. The advantages of the CCTV method are that it is quick, effective, employs current technology, is difficult to fraudulently manipulate the test, and the results can be recorded for future reference. It can be used to identify laterals that are in need of repair or replacement. Its major disadvantage is that it cannot determine whether or not the lateral leaks.

The implementation of this inspection method requires the development of passing criteria (e.g. no repair or rehabilitation/replacement required). Sample inspection and passing criteria are shown on Table A-2.

Table A-2: Sample CCTV Inspection and Passing Criteria

Area	Criteria
CCTV Operator	The CCTV operator performing the inspection must hold a current Pipeline Assessment and Certification Program (PACP) certificate issued by the National Association of Sewer Service Companies (NASSCO). This is a national certification program. Obtaining a certificate requires 1.5 days of classroom training and passing a written examination. The current cost of obtaining a certificate is approximately $750 (not including salary and travel expense). This requirement may result in a shortage of certified CCTV operators during the first year of implementation.
Video Content and Quality	The video must start and end with a view of the front of the building showing distinguishing features and the street number. The video picture shall be clear, the rate of inspection shall not exceed 30 feet per minute, and the operator shall stop long enough at each defect to provide adequate time for evaluation.
Passing Criteria	Cleanout cap(s) securely in place. No visible root intrusion. No visible infiltration or exfiltration. No connections that allow non-sanitary wastewater to enter the lateral. No significant structural defects: • No structural defects with a PACP structural severity index > 1 • No more than one observed structural defect with a PACP structural severity index of 1 per lateral Note: Common PACP defects with a structural severity index of 1 are shown on Figures A-1, A-2, and A-3.

Figure A-1: Circumferential Crack

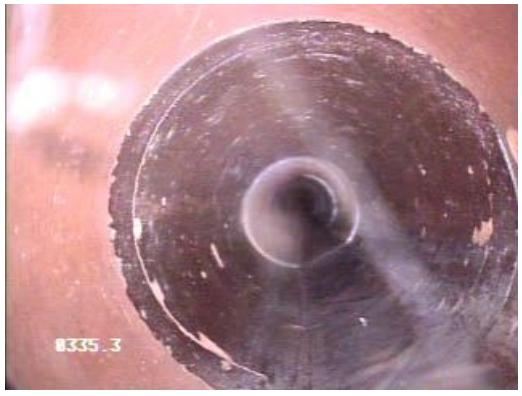


Figure A-2: Offset Joint, Medium

Figure A-3: Separated Joint, Medium

Low Pressure Air Test

Low-pressure air test equipment for small diameter sewers is relatively inexpensive and readily available. It is the same equipment that is used to test in-building drain piping during code compliance inspections. The test equipment consists of inflatable pipe plugs, a pressure gauge, a source of compressed air, and a stopwatch. The testing process typically takes from one to two hours and typically costs $200 to $600. Pipe plugs are installed at both ends of the lateral and air is added until the internal pressure is stabilized at four pounds per square inch (psi) and then reduced to 3.5 psi. The actual test, which is typically witnessed by an agency inspector, takes five minutes. Typical passing criteria are that the pressure loss during the test period (typically five minutes) must not exceed one psi. This test method is considered a good method to confirm that the repair or replacement work has been completed to an acceptable standard.

The advantages of the low-pressure air test are that it demonstrates whether or not the lateral leaks and it requires very little of an agency inspector's time to witness the test. The disadvantages are that it can be difficult to achieve a good seal between the inflatable plugs and the lateral, the pressure must be increased when the lateral is below the groundwater, and there are a number of ways to manipulate the test outcome. The low-pressure air test does not test the watertight condition of the connection to the public sewer.

Water Leakage Test

The water leakage test equipment for small diameter sewers is relatively inexpensive and readily available. The test equipment consists of inflatable pipe plugs, a standpipe, a source of water, a tape measure, and a stopwatch. The testing process can take from two to six hours and is similar in cost to the low-pressure air test. Pipe plugs are installed at both ends of the lateral and the four-inch diameter standpipe is installed on the cleanout. The lateral is filled with water to at least two feet above the cleanout and the water level is allowed to stabilize. The standpipe is topped off at the start of the test and the water level is maintained by adding measured amounts of water during the duration of the test. The actual test, which is typically witnessed by an agency inspector, takes 30 minutes. Typical passing criteria are that the water loss during the test period must not exceed four gallons irrespective of the size or length of the lateral.

The advantages of the water leakage test are that it demonstrates whether or not the lateral leaks and it requires very little of an agency inspector's time to witness the test. The

disadvantages are that it can be difficult to achieve a good seal between the inflatable plugs and the lateral, the length of the standpipe must be increased when the lateral is below the groundwater, and there are a number of ways to manipulate the test outcome. The water leakage test does not test the watertight condition of the connection to the public sewer.

Control Mechanism

All current private lateral inspection programs rely on a Compliance Certificate or similar document as the control mechanism. The wastewater agency issues a transferable Compliance Certificate to the property owner when the lateral has met the inspection and testing requirements. The length of time that the Compliance Certificate is valid varies based on the nature of the work completed. The duration is typically 10 years when the lateral passes the initial inspection or was repaired and it is 20 years when the lateral has been replaced (including full length rehabilitation). Newly constructed laterals are typically given a 20 year Compliance Certificate.

One method to avoid delaying the close of escrow is to issue a Conditional Compliance Certificate. This approach requires that provision be made for an escrow account to cover the cost of inspection/testing and repair or rehabilitation/replacement during the period that the Conditional Compliance Certificate is valid (typically three to six months).

Lateral Inspection and Testing Program Cost

The majority of the annual cost of a private lateral inspection and testing program is associated with the labor required to support the program. The estimated combined program cost for the Marin County wastewater agencies is shown on Table A-3. The estimate is based on 2,300 real estate transactions/customer changes per year and an additional 300 remodels per year. The cost model estimates that the wastewater agency cost would be on the order of $200 per private lateral inspected. The estimated cost does not include the cost to the property owner, which could range from $300 (inspection and testing) to over $6,000 in the event the private sewer lateral requires rehabilitation or replacement in order to pass the test.

The quantity of private lateral inspections can vary widely during the course of a year. In a recent detailed evaluation, the monthly rate of private lateral inspections varied by a factor of four between the slowest month and the most active month. The changing workload may make it difficult for a public agency to staff the program. The use of contract inspection staff may be an appropriate approach.

The methods available to agencies for recovering the cost of a private lateral inspection program include: fees (e.g. permit, inspection, re-inspection, and compliance certificate issuance) or fines for not meeting or following agency requirements. There are also methods to ensure payment in the event the property owner defaults. Those methods include a bond or deposit to ensure the work is completed or liens against the property.

Incentives and Affordability

Lateral repair or replacement can be a significant expense. Replacement costs vary but are typically on the order of $2,000 to $6,000. Longer laterals, laterals located in difficult work locations, or those with expensive surface level improvements can be significantly more costly. Because of the cost, many agencies offer incentives for property owners to participate in lateral programs. The incentives typically include grants or low interest loans.

In both cases, the total amount is implemented with an annual limit and offered on a first come, first-served basis.

Examples of methods employed by public agencies include:

Table A-3: Private Lateral Inspection Program Level of Effort and Cost Estimate

Activity	Estimated Cost	Assumptions
Developing and publishing standards	$1,700	Standards are developed every 5 years and require 120 labor hours to develop and publish
Issuing permits for inspection/ testing	93,000	Issuing a permit requires 0.5 labor hours
Witnessing inspection/testing	93,000	Witnessing a test requires 0.5 labor hours
Notify property owner of test results	93,000	Notification letter requires 0.5 labor hours
Issuing permits for repair/ replacement	93,000	Issuing a permit requires 0.5 labor hours
Inspecting repair/replacement	186,000	Inspecting construction requires two 0.5 hour visits
Issuing Certificates of Compliance	93,000	Issuing and recording Certificate of Compliance requires 0.5 labor hours
Keeping records	3,400	Record keeping requires 4 labor hours per month
Receiving and deciding appeals	2,500	One appeal per month requires 3 labor hours
Monitoring property sales and building permits	3,400	Researching property sales and building permits requires 4 labor hours per month
Coordinating activities with the real estate community	1,700	Requires quarterly meetings with local realtors association at 6 labor hours
Subtotal	**$663,700**	
Program management and administration cost (10%)	66,000	
Annual Program Cost	**$729,700**	
Program cost per private lateral inspected	$205	

- *Lateral Repair/Replacement Insurance.* This method consists of mandatory lateral repair/replacement insurance to defray the cost to the property owner. The insurance is mandatory and paid with the sewer service charge. The costs are typically controlled by placing an upper limit to the coverage (e.g. $2,000) and setting a deductable amount (e.g. $500). The cost of the insurance program is included in the sewer service billing with costs on the order of $20 and up per month.
- *Master Contracts*. This method consists of the public agency soliciting bids for fixed or unit price lateral rehabilitation/replacement. The bids are based on doing the work to the agency standards. The bids from private contractors for annual inspection, replacement and repair rates are typically lower than those that can be obtained by an individual property owner.
- *Lateral Repair or Replacement During Mainline Repair/Replacement at Property Owner Cost.* This method is implemented by adding a provision to selected mainline repair or replacement contracts for the contractor to also provide lateral repair and replacement at a cost that is lower than can be obtained individually. Costs are reduced by economies of scale and the fact that the contractor is already mobilized in the neighborhood.

- *Lateral Repair or Replacement During Mainline Repair/Replacement at Agency Cost.* This method is implemented by adding a provision to selected mainline repair or replacement contracts for the contractor to also provide lateral repair and replacement at the agency's cost. Costs are reduced by economies of scale and the fact that the contractor is already mobilized in the neighborhood. The savings in operating costs and downstream capital programs typically justifies paying the cost of the lateral repair or replacement.

Affordability to low and/or fixed income residential customers is typically a concern to managers and elected officials during the development of a private lateral inspection program. Program options to deal with these situations can include grants, low interest loans, and completing the work using agency funds and future reimbursement through a lien against the property.

Appendix B: Sample Private Sewer Lateral Ordinance

WHEREAS, inflow and infiltration (I/I) into private sewer laterals causes or contributes to discharges of untreated and partially-treated wastewater into San Francisco Bay; a large proportion of the peak I/I flows entering the [City's/District's] sanitary sewer system during wet weather events are the result of I/I from private sewer laterals;

WHEREAS, I/I into private sewer laterals can be substantially reduced by implementing a program requiring inspection, repair or replacement, and confirmation testing; and

WHEREAS, [City/District] staff have recommended that the [City Council/Board of Directors] codify requirements for the inspection, repair or replacement, and confirmation testing of the private sewer laterals within the [City's/District's] jurisdiction;

NOW, THEREFORE, BE IT ENACTED by the [City Council/District Board of Directors] that the [Municipal Code/District Code], Section [XX-XXX], as amended from time to time, is hereby further amended to add TITLE [XX] as follows:

TITLE [XX]

INSPECTION AND REPAIR OR REPLACEMENT OF PRIVATE SEWER LATERALS

Section 1: Definitions

The following terms apply to this TITLE:

A. "Cleanout" means a pipefitting and associated piping connected to a sewer pipe that provides access to the pipe for purposes of inspection, maintenance, and diagnostic purposes.
B. "Complete Replacement" means rehabilitation or replacement of the entire length of the private sewer lateral.
C. "Conditional Compliance Certificate" means a Compliance Certificate issued by the [City/District] when requested by the property owner in order to allow a transfer of title to proceed without delay. Issuance of a Conditional Compliance Certificate shall be based on the establishment of an escrow account in accordance with the [City's/District's] escrow

instructions and with adequate funds to cover the cost of lateral replacement. Conditional Compliance Certificates shall be valid for 180 days.

D. "Compliance Certificate" means a certificate issued (1) by the [City/District] indicating that the private sewer lateral complies with the [City's/District's] standards set forth in this TITLE. If the Compliance Certificate is obtained as a result of complete replacement of the private sewer lateral, the Compliance Certificate shall be valid for 20 years from the date of issuance. If the Compliance Certificate is obtained without complete replacement of the private sewer lateral then the Compliance Certificate shall be valid for 10 years from the date of issuance.

E. "Non-sanitary-sewer connection" means anything that directly or indirectly conveys storm water, surface water, roof runoff, intercepted groundwater or subsurface drainage into sanitary sewers, including, but not limited to, down spouts, yard or area drains or other sources of stormwater or other run-off.

F. "Private sewer lateral" means that part of the sewer piping that extends from the end of a building drain to the first-encountered publicly owned sanitary sewer pipe.

G. "Structure" means any structure or building as defined in the applicable Plumbing Code that is provided with public sewer service.

Section 2: Standards for Private Sewer Laterals

This TITLE's standards for private sewer laterals are as follows:

A. All joints shall be watertight and all pipe shall be sound.

B. The private sewer lateral shall be free of any structural defects such as fractures, cracks, leaks, breaks, openings, or missing portions.

C. All cleanouts shall be securely sealed with a proper cap or overflow device at all times.

D. There shall be no non-sanitary connections.

E. The private sewer lateral shall not be subject to measureable quantities of inflow or infiltration.

Section 3: Public Nuisance

A private sewer lateral constitutes a public nuisance when it is not in compliance with the [City's/District's] standards set forth in this TITLE. Each day the private sewer lateral is not in compliance with these standards constitutes an additional day of violation.

Section 4: When a Compliance Certificate is Required

A. **Title Transfer.** Prior to transferring title to any real property that contains any structure with a private sewer lateral within the [City's/District's] wastewater service area, the transferor property owner shall disclose the requirements of this TITLE and provide a copy of a valid Compliance Certificate to: (1) the transferor's real estate broker, if any, (2) the transferee, (3) the transferee's real estate broker, if any, and (4) the escrow holder, if any.

B. **Change of Customer.** Whenever the name on the wastewater/sewer service utility account is changed for any real property that contains any structure with a private sewer lateral within the [City's/District's] wastewater service area, the [City/District] shall require the new customer to provide a copy of a valid Compliance Certificate to the [City/District].

C. **Construction and Remodeling.** Whenever a property owner applies for any permit or other approval needed for construction, remodeling, modification or alteration of any structure with a private sewer lateral within the [City's/District's] wastewater service area, the property owner shall provide a copy of a valid Compliance Certificate to the public agency responsible for approving completion of the building permit. Notwithstanding the foregoing, this paragraph shall not apply to remodeling, modification or alteration work where the cost of the work is less than one hundred thousand dollars ($100,000).

D. **Change in Use.** Whenever a property owner applies for any permit or other approval needed to change the use of any structure with a private sewer lateral within the [City's/District's] wastewater service area, the property owner shall provide a copy of a valid Compliance Certificate to the public agency responsible for issuing the permit or other approval. For the purposes of this TITLE the addition of a second dwelling unit shall constitute a change in use.

E. **[City/District] Request.** Whenever a property owner who owns a structure with a private sewer lateral within the [City's/District's] wastewater service area and who does not possess a valid Compliance Certificate receives notice from the [City/District] requesting that the property owner obtain a Compliance Certificate, the property owner shall obtain a Compliance Certificate within six (6) months.

Section 5: How to Obtain a Compliance Certificate

Whenever a Compliance Certificate is required under this TITLE, a property owner who does not hold a valid Compliance Certificate shall do the following at the property owner's expense using properly licensed contractors.

A. **Repair or Replacement.** The property owner shall have an inspection performed (1) to determine whether the private sewer lateral is in compliance with the [City's/District's] standards set forth in this TITLE and (2) if not, to identify the repair or replacement work needed to bring the private sewer lateral into compliance with those standards. The property owner shall perform any and all repair and replacement work needed to bring the private sewer lateral into compliance with those standards.

B. **[City/District] Confirmation.** After the property owner determines (through any combination of inspection, repair or replacement) that the private sewer lateral is in compliance with those standards, the property owner shall, upon payment of the required fee established pursuant to this TITLE, perform confirmation testing in the presence of a [City/District] employee or agent authorized to witness the test. If the confirmation testing demonstrates that the private sewer lateral is in compliance with those standards, then the [City/District] shall issue a Certificate of Compliance.

C. **Procedures for Confirmation Testing.** The [City/District] shall prepare and maintain written requirements governing the performance of confirmation testing. These requirements shall be made available to property owners and their contractors upon request. Property owners and their contractors shall comply with these requirements.

Section 6: Fees

The [City Council/District Board of Directors] may establish fees by resolution for administration of this TITLE.

Section 7: Violation – Penalty

Any violation of any provisions of this TITLE shall be deemed a misdemeanor but may be cited and prosecuted, in the discretion of the enforcing officer, as an infraction, and shall be punishable as set forth in Section [_____] of the [Municipal Code/District Code].

Section 8: Remedies

The remedies specified in this TITLE are cumulative.

Section 9: Effective Date

This TITLE shall become effective on _____, 2010.

Appendix C: Sample Private Sewer Lateral Program Administrative Procedures from the City of Santa Barbara

SECTION I – WHEN INSPECTION IS REQUIRED

This section explains when inspection is required; outlines the administrative process used to notify property owner of inspection requirement; and details the timeline for compliance.

A. Health And Safety Inspections (SBMC 14.46.040.A.) - this includes inspections required in response to:

- A spill from a private sewer lateral; and/or
- Observing lateral problems (roots, excess clear flow, failed mainline connection) during inspection of City lines; and/or
- Potential problems noted during smoke testing (smoke emitting from the ground or connection of outdoor drain).

1. Property owner will be sent a letter notifying them that a described defect has been identified, and will be provided with a list of qualified plumbers to conduct an inspection. Property owner will be directed to inspect the line and submit the required inspection form and videotape within 30 days.
2. If inspection form is not submitted within 30 days, a second letter will be sent to the property owner directing that the inspection be completed within 15 days and notifying the property owner that failure to complete the required inspection within the designated time frame will result in the issuance of an administrative citation.
3. If inspection is not conducted and/or required forms are not submitted within the required time, a Notice of Administrative Citation will be issued together with direction to complete the required inspection within 10 days of the date of the notice or face an additional Administrative Penalty of $150, and referral to the City Attorney's office for enforcement.

Nothing in the above guidelines shall prevent the City from requiring a more timely (or immediate) response if the sewer lateral is causing an on-going threat to public health or safety. An example of such a threat is a cross connection with a storm drain, or an overflow into the public right-of-way.

B. B. Events Requiring An Inspection Of Residential Sewer Laterals (SBMC 14.46.040.B.):

1. Inspections required for addition of 400 or more square feet of new dwelling space as determined by the Building Official.
   a. Property owner will be notified of the requirement to submit a sewer lateral inspection video and inspection form by Community Development staff at the time that they submit plans for Community Development review.
   b. The property will be "flagged" in the computerized permit monitoring system – Advantage.
   c. Submittal of the standardized inspection report will be required prior to issuance of a Building Permit.
   d. Public Works staff will review the video and issue either a Compliance Certificate or Notice of Required Repairs. Prior to issuance of the Building Permit, the Advantage database will be updated to indicate whether repair

work is needed.

If review of the video shows that the sewer lateral needs repair or replacement, that work will be required to be completed prior to issuance of a Certificate of Occupancy. Repairs will be verified by either the Building Inspector, or Public Works Inspector.

2. Inspections required for two or more new plumbing fixtures:
    a. Property owners will be notified of the requirement to submit a sewer lateral inspection video and report by Community Development staff at the time that they submit plans for Community Development review.
    b. The property will be "flagged" in the computerized permit monitoring system – Advantage.
    c. Submittal of the standardized inspection report will be required prior to issuance of a Building Permit.
    d. Public Works staff will review the video and issue either a Compliance Certificate or notice of required repairs. Prior to issuance of the Building Permit, the Advantage database will be updated to indicate whether repair work is needed.
    e. If review of the video shows that the sewer lateral needs repair or replacement, that work will be required to be completed prior to issuance of a Certificate of Occupancy. Repairs will be verified by the Building Inspector, or Public Works Inspector.

C. Inspection Of Commercial Properties, Condominiums And Other Common Interest Developments (SBMC 14.46.040.C.)

1. Commercial properties and common interest developments are required to inspect their laterals once every ten years.
    a. Public Works staff will identify the APN numbers and accompanying addresses for the owners of all properties requiring sewer lateral inspections, using data available from the City's automated map.
    b. Notices will be sent to the property address, and listed property owner. If a property management company is on record for the site, they will also be provided with a notice. Notices will advise the property owner that a sewer lateral inspection must be completed, and proper documentation submitted to the City within 90 days of the date of the notice.
    c. If no inspection occurs within the required time, a second notice will be sent requiring inspection within 30 days of the date of the notice, and advising that failure to complete the required inspection will result in the issuance of a $100 Administrative Penalty.
    d. If the inspection is not conducted and/or required forms are not submitted within the required time, a Notice of Administrative Penalty will be issued together with direction to complete the required inspection within 10 days of the date of the notice or face an additional Administrative Penalty of $150, and referral to the City Attorney's office for enforcement.

D. Exemptions – Sewer Lateral Inspections Will Not Be Required Under The Following Conditions (SBMC 14.46.040.D.):

1. The Property owner submits documents showing that the sewer line has been installed within 20 years of the current date, and proper documents can be produced to show that the line was installed in accordance with codes and

inspected. Proof of either a Building Permit or Public Works Permit shall be required.

2. The sewer line has been inspected within three years of the current date and the property owner can produce a copy of the Compliance Certificate showing that inspection did not indicate a need for repair.