

2009 APR 30 PM 6:40

**CITY OF OAKLAND**  
**AGENDA REPORT**

TO: Office of the City Administrator  
ATTN: Dan Lindheim  
FROM: Community and Economic Development Agency  
DATE: May 12, 2009

RE: **A Report And An Ordinance Amending Chapter 13.08 Of The Oakland Municipal Code To Require The Installation Of Sewage Overflow Devices When Private Sewer Laterals Are Repaired Or Replaced Or Property Title Is Transferred**

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**SUMMARY**

An ordinance has been prepared that will require property owners to install a low-cost (\$35 to \$100) "pop-up" device on sewer lateral clean-outs which will divert sewer main backups onto front yards rather than inside buildings. The installation will be required when a private lateral is repaired or replaced or when property title is transferred. The devices are installed at ground level and are opened by the upward pressure of sewage and closed by gravity. They can be installed on existing clean-outs by homeowners without a permit. Mandatory installation of these devices will significantly reduce the dollar amount of damage claims paid by the City (approximately \$250,000 annually), facilitate the clean-up of raw sewage spills, and enhance the early detection by neighbors of sewer main backups.

**FISCAL IMPACT**

The requirement to retrofit sewer laterals with sewage overflow devices will reduce damage to private properties attributable to backflows in the City's sanitary sewer mains and, consequently, will reduce remuneration by the City to property owners for damage claims. The actual reduction in the dollar amount of payments cannot be estimated at this time.

**BACKGROUND**

**City Sewer Main Overflows**

A sanitary sewer overflow (SSO) is an unintentional release of sewage into the environment. SSOs from City sewer mains are caused by

- blockages due to pipe settlement or deterioration;
- blockages due to grease buildup, debris, and tree roots;
- inadequate capacity due to ground water seepage (Infiltration & Inflow - I&I) during inclement weather.

Item \_\_\_\_\_  
Public Works Committee  
May 12, 2009

Most SSOs are relatively small, and maintenance crews are usually able to recover the sewage before an overflow discharges into a creek or storm drain. SSOs are typically released through manholes, but they can be released into a building if a plumbing fixture (shower, toilet, etc.) is at a lower elevation than the nearest upstream manhole cover. The City annually reimburses property owners for \$250,000 in SSO damage claims.

SSOs are a severe public health hazard, and regional, state, and federal regulations impose monetary sanctions for overflows. SSOs must be reported to the Regional Water Quality Control Board, the state Office of Emergency Services, and the Alameda County Department of Environmental Health and are audited by the Environmental Protection Agency. Major spills (more than 1,000 gallons) must be reported immediately, and smaller spills can be reported within thirty (30) days. Last year, the City reported a total of four hundred (400) blockages.

### **City Sewer Main Rehabilitation**

In the past nineteen (19) years, the City has rehabilitated approximately thirty-five percent (35%) of its sanitary sewer system to reduce blockages and I&I. A significant volume of ground water, however, continues to flow into Oakland's sewer mains due to deteriorated private sewer laterals. Both blockages and I&I continue to cause backflows into buildings which do not have Sewer Backflow Valves ("one-way" gate valve). The majority of private laterals were installed in Oakland before the Plumbing Code required the installation of SBVs for new construction. There is no retrofit requirement for Sewer Backflow Valves in buildings constructed before 1967.

### **East Bay Municipal Utility District (EBMUD)**

EBMUD is preparing a new regulation which will require property owners to have their sewer laterals inspected (with a television camera) when the property is sold and to certify that:

- The pipe and joints are in good condition or that the sewer lateral has been repaired or replaced.
- A Sewage Backwater Valve is installed (existing or retrofitted) in the sewer lateral if the building's floor which has plumbing fixtures is at a lower elevation than the upstream manhole (primary sewage overflow point).

The ordinance is scheduled to be considered by the Board of Directors in the near future. Its adoption will contribute to the reduction of I&I throughout the City.

### **Sewage Backwater Valve (SBV) and Sewage Overflow Device (SOD)**

A sewer lateral is a four inch (4") diameter buried pipe that connects a building's plumbing to the City sewer main. An SBV is installed directly in a sewer lateral when a plumbing fixture is below the upstream manhole cover. An SBV prevents a sewer main from back-flowing into a building. SBVs can require an expensive retrofit of a building's interior plumbing to isolate

upstairs fixtures from overflowing into the downstairs fixtures (“short-circuit”). An SOD (“pop-up” device) is installed on top of a sewer lateral clean-out but does not prevent sewage back-flow into a building. SODs allow sewage to overflow at ground-level and in many cases can protect a building from SSOs and from “short-circuits”. The Plumbing Code has required the installation of SBVs for new construction since 1967. There are no requirements, however, in the Municipal Code or Plumbing Code to retroactively install an SBV if a building were constructed before 1967.

The permit fee for replacing a sewer lateral is \$393 and excavating in the street is \$420. The approximate cost to replace a house lateral is approximately \$85 per lineal foot when all work is on private property. When the replacement extends into the street, the additional cost is approximately \$5,000. Retrofitting an interior plumbing system for an SBV (“short-circuit” relief) can cost approximately \$4,000.

COMPARISONS	SBV		SOD	
	plastic	brass	plastic	brass
Purchase cost	\$75 ±	\$300 ±	\$35 ±	\$100 ±
Permit required for installation	Yes		No	
Contractor required for installation	Yes		No	
Excavation required for installation	Yes		No	
Interior plumbing “short-circuit” potential	Yes		No	
Interior plumbing re-construction potential	Yes		No	
Interior damage from sewer main backups prevented	Yes		Potentially	

**Sanitary Sewer Overflow Statistics**

Annually,

- the Public Works Agency receives approximately four hundred (400) complaints of sewer blockages;
- the City Attorney’s Office processes approximately twenty (20) damage claims due to sewer backflows into buildings (dry and wet weather);
- the City Council approves approximately \$250,000 in remuneration to property owners.

**KEY ISSUES AND IMPACTS**

**Sewage Overflow Devices**

SODs are opened by the hydraulic pressure of back flowing sewage and closed by gravity. They are installed at ground level in place of the cap on a clean-out riser for sewer laterals. They

are relatively inexpensive and can be installed without professional experience. A permit is not required to install an SOD, and several manufactured devices are currently available. The Public Works Agency would determine which devices would be approved. The Contra Costa Consolidated Sanitary District has required SODs for new-home construction for more than twenty-five (25) years.

Although SODs are not designed to prevent sewage from back-flowing into a building, they can be very effective. When the installed elevation of an SOD is lower than the plumbing fixture, sewage will overflow in the yard. The cost/ benefit value for SODs is high because they:

- do not cause a “short-circuit” for interior plumbing;
- will protect many buildings which do not have an SBV;
- are relatively inexpensive to purchase and easy to install without a permit;
- will assist the City in complying with regional, state, and federal regulations;
- will significantly reduce property damage claims associated with sewer main backflows;
- will compliment the proposed EBMUD requirement to install SBVs by providing supplemental protection for the interior plumbing from “short-circuiting”.

### **Municipal Code Amendments**

The proposed amendments to Oakland Municipal Code Chapter 13.08 would add a definition for SOD and would mandate the installation of SODs when a sewer lateral is repaired or replaced or when the property title is transferred.

### **SUSTAINABLE OPPORTUNITIES**

#### **Economic**

The reduction of sanitary sewer overflows will enhance property values and decrease the City’s payment of property damage claims.

#### **Environmental**

The reduction of sanitary sewer overflows will decrease a significant public health hazard.

#### **Social Equity**

The reduction of sanitary sewer overflows will benefit all Oakland residents.

### **DISABILITY AND SENIOR CITIZEN ACCESS**

There is no direct impact or benefit to seniors or citizens with disabilities.

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**RECOMMENDATION AND RATIONALE**

Staff recommends that the Committee accept this report and forward the proposed ordinance to the City Council for consideration.

**ACTION REQUESTED OF THE CITY COUNCIL**

Staff recommends that the City Council adopt the proposed ordinance amending Municipal Code Chapter 13.08 to require the installation of Sewage Overflow Devices when sewer laterals are repaired or replaced and when property title is transferred.

Respectfully submitted,

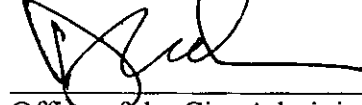


Walter S. Cohen, Director  
Community and Economic Development Agency

Prepared by:

Raymond M. Derania  
City Engineer  
Building Services Division

APPROVED AND FORWARDED TO  
THE PUBLIC WORKS COMMITTEE



Office of the City Administrator

Introduced by  
**FILED**  
OFFICE OF THE CITY CLERK  
OAKLAND  
Councilmember  
2009 APR 30 PM 6:40

Approved for Form and Legality

**DRAFT**

City Attorney

## OAKLAND CITY COUNCIL

ORDINANCE No. \_\_\_\_\_ C.M.S.

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### AN ORDINANCE AMENDING CHAPTER 13.08 OF THE OAKLAND MUNICIPAL CODE TO REQUIRE THE INSTALLATION OF SEWAGE OVERFLOW DEVICES ON PRIVATELY MAINTAINED SEWER LATERALS

**WHEREAS**, the City of Oakland annually experiences sewage backflows in its sanitary sewer mains which are maintained by the Public Works Agency; and

**WHEREAS**, these sewage backflows result in sewage overflows into adjoining privately owned buildings; and

**WHEREAS**, these sewage backflows annually result in extensive damage to private property and significant remuneration by the City, exceeding \$21,000 per month, to compensate owners for cleaning their premises and repairing and replacing interior building finishes, furnishings, and personal possessions; and

**WHEREAS**, the Municipal Code of the City of Oakland does not currently regulate the installation of sewage backwater valves in private sanitary sewer piping (laterals), which are designed to prevent sewage backflows from sewer mains into buildings; and

**WHEREAS**, a requirement to retroactively install sewage backwater valves would typically require extensive modification of the interior plumbing of a building; and

**WHEREAS**, said retroactive installation of sewage backwater valves would be a costly and disruptive requirement for property owners; and

**WHEREAS**, sewage overflow devices, which are installed on the exterior risers of sewer laterals and are activated by the hydraulic pressure of back flowing sewage, are a proven technology and an inexpensive mechanism to mitigate the risk from sewage backflows and reduce the dollar amount of property damage by allowing the surface dispersion of sewage over the ground of adjoining properties; and

**WHEREAS**, the installation and maintenance of sewage overflow devices will help protect public health, the environment, and private property from the effects of sewage backflows through earlier detection and more manageable containment and clean-up; and

**WHEREAS**, requiring owners to install sewage overflow devices when they repair or replace sewer laterals or sell their property will add minimally to the cost of the repair work or the sales transaction; and

**WHEREAS**, it is in the best interests of the City and public health and safety to establish regulations which require property owners to install and maintain approved sewage overflow devices; and

**WHEREAS**, the requirements of the California Environmental Quality Act (CEQA) of 1970, the Guidelines as prescribed by the Secretary for Resources, and the provisions of the Statement of Objectives Criteria and Procedures for Implementation of the California Environmental Quality Act have been satisfied and in accordance with Sections 15061.3 and 15301 of the California Code of Regulations this project is exempt from the provisions of the California Environmental Quality Act; now, therefore

**THE COUNCIL OF THE CITY OF OAKLAND DOES ORDAIN AS FOLLOWS:**

**Section 1.** The City Council find and determines that foregoing recitals to be true and correct and hereby adopts and incorporates them into this Ordinance.

**Section 2.** The Oakland Municipal Code is hereby amended to add, delete, or modify sections as set forth below. Section numbers and titles are indicated in **bold** type; additions are indicated by underscoring type; and deletions are indicated by ~~strike-through~~ type. Portions of the regulations not cited or now shown in underscoring or strike-through type are not changed.

**Section 3.**

Chapter 13.08 of the Municipal Code of the City of Oakland, entitled Sewer Lateral Regulations, shall be amended as follows:

**13.08.020 Definitions.**

The following words and phrases, wherever used in this chapter, shall be construed as defined in this section unless otherwise required by the context. The singular shall be taken to mean the plural and the plural shall mean the singular when required by the context of this chapter. The following definitions will not necessarily apply to other portions of this code:

“Building sewer” means that particular sanitary sewer which lies between a point two feet from the building or structure it serves, to and including its connection with the sewer system or other point of discharge and which carries sewage and liquid wastes from public or private premises to a public or private sewer system, individual sewage disposal system or other point of discharge or point of disposal.

“Common private sewer” means any privately owned and maintained sewer which serves as the disposal point for two or more building sewers. A common private sewer is either a sanitary sewer or a storm water sewer, but it cannot be used as a combination of both.

“Inflow/infiltration correction program” (also called “I/I correction program” and “infiltration/inflow correction program”) means those particular projects being designed, or designed and being constructed, constructed or proposed to be constructed by the city of Oakland and/or its agents for the purpose of complying with the requirements of that certain order issued by the California Regional Water Quality Control Board and being Order No. 84-67 and any other state, federal, or local legislation related thereto.

“Lower building sewer lateral” means all that portion of the building sewer lateral which lies within a public right-of-way or lies within an easement granted for the purpose of constructing or maintaining a sanitary sewer or some such other similar purpose.

“Manhole” means an underground structure large enough to be physically entered by a person for the purpose of inspecting and maintaining a sewer or a portion thereof.

“New sewer connection” means a connection to a public sewer or common private sewer which has not previously existed. This does not include reconnection, repair, or replacement of an existing sewer lateral either at the same or at a different location. An existing sewer lateral which would be going to a higher use (such as an increased number of dwelling units) would be subject to an increased sewer service charge and/or sewer connection fee for the increase in use.

“Point of discharge” (also called “discharge point”) means that point at which the materials conveyed by a sewer leave a specific section or length of sewer (by design or inadvertently).

“Point of disposal” (also called “disposal point”) means the point at which any material conveyed by a sewer enters any facility for treatment or processing or otherwise leaves the sewer system by design.

“Point of origin” means that particular point on a building sewer which lies closest to the building or other structure which it serves.

“Project” means any portion of work including, but not limited to, the repair, construction and/or replacement of parts of the sewer system subject to the inflow/infiltration correction program which are accomplished under a specific project number issued by the ~~Office of Public Works~~ City.

“Sanitary sewer” means any public or private sewer designed and/or constructed for the purpose of conveying sewage or other liquid waste from building sewer to or toward a point of disposal or discharge.

“Sewage” means ~~water carrying waste~~ all liquid effluent, including any suspended solids therein, which is conveyed from residences, commercial and industrial establishments all types of premises through a sewer or any combination of such wastes, but excluding storm water when conveyed in a separate storm system, for treatment and/ or disposal, excepting flow from natural drainage and rainfall.



“Sewer” means any pipe conduit or channel, being either open or closed, the purpose of which is to convey sewage, liquid waste, other liquids or water from a collection point to or toward discharge point.

“Sewer main” means (also commonly called “main sewer”) means any public sewer or portion thereof which conveys sewage between the point or discharge of a building sewer and the point of disposal of said public sewer.

“Sewage Overflow Device” means an approved plumbing fitting that is installed at the top of an exterior cleanout riser for a sanitary sewer lateral and is activated by the hydraulic pressure of sewage and allows back flowing sewage to discharge over the ground surface and prevents the intrusion of rodents and other vector into the sewer piping system.

“Sewer system” means either the entire network or a portion of that network of sewers under the jurisdiction of the city and all the appurtenances thereto. This shall include both conveyances for sanitary flow and storm water and other liquid waste flows.

“Storm sewer” means (also commonly called “storm drain” or “storm water conduit”) means any public or private sewer designed and/or constructed for the purpose of conveying rainwater or other waters deposited by natural causes, but not including sewage and wastewater.

“Upper building sewer lateral” means all that portion of the building sewer as herein above defined which lies within the privately owned property abutting a public right-of-way or easement.

### **Section 13.08.120**

The size, extent, construction, installation, operation, use, maintenance, and abandonment of building sewers, and common private sewers, sewage overflow devices, and standard cleanouts, and the connections thereto shall be in accordance with the provisions of this chapter and shall be the responsibility of the owner of the property served or servable by the sewer system. All devices shall be maintained and repaired by the property owner and provide for their uninterrupted function and purpose for which they were designed.

#### **13.08.410 Two-way cleanout fitting and riser and sewage overflow devices required - Rehabilitation of existing building sewers or portion(s) thereof.**

Whenever an existing building sewer or common private sewer with existing connection to any building, structure or premises which has its point or discharge within the public right-of-way is wholly or partially rehabilitated, a two-way cleanout fitting and riser and a sewage overflow device shall be constructed in the vicinity of the right-of-way line adjacent to the property from where the building sewer originates. Sewage overflow devices shall be

installed at an elevation and subsequently adjusted to an elevation that protects the property upon which it is installed.

Partial rehabilitation under this section shall mean the rehabilitation either of the upper or lower sewer lateral, as said upper and lower sewer laterals are defined under Section 13.08.020. Partial rehabilitation shall also mean the rehabilitation of any portion(s) of the building sewer, combined length of which exceeds ten feet.

**13.08.520 Requirement for standard cleanout fitting and riser and sewage overflow device adjacent to building and for inspection of upper and lower sewer lateral -- inflow/ infiltration correction program.**

When the repair/ replacement of any portion of an upper building sewer lateral is necessary pursuant to the findings of testing required by Section 13.08.510, an standard approved cleanout fitting and exterior riser and a sewage overflow device shall be ~~inserted~~ installed into the upper building sewer lateral in the vicinity of the building drain.

The ~~exact~~ location of the cleanout riser ~~is subject to the approval~~ shall be approved by the Director of Public Works or his or her duly authorized representative. Sewage overflow devices shall be installed at an elevation and subsequently adjusted to an elevation that protects the property on which it is installed. Cleanout risers and sewage overflow devices shall be accessible for maintenance by the property owner. This section does ~~shall~~ not apply to any building sewer or private common sanitary sewer which conveys ~~waste~~ sewage by means of a pressurized line.

**13.08.522 Requirement for installation of a sewage overflow device upon transfer of property ownership**

As a condition of the sale of a building or other transfer of ownership, the property owner shall cause a sewage overflow device to be installed on an existing exterior cleanout riser where such riser serves the upper or the lower building sewer lateral.

**Section 4. Applicability**

**A. Construction and Severability**

Should any article, section, subsection, sentence, clause, or phrase of this ordinance or exhibit be held to be invalid or unconstitutional, the offending portion shall be severed and shall not affect the validity of remaining portions which shall remain in full force and effect.

**B. Authority**

This ordinance is enacted by the Council of the City of Oakland pursuant to the police powers accorded to the City by and through section 106 of the Charter of the City of Oakland and Article XI of the Constitution of the State of California.

**C. Effective Date**

Upon final adoption by sufficient affirmative votes of the Council of the City of Oakland or by approval of a reconsideration by said Council, this ordinance shall be effective as provided in section 216 of the Charter of the City of Oakland.

**IN COUNCIL, OAKLAND, CALIFORNIA, \_\_\_\_\_, 2009**

PASSED BY THE FOLLOWING VOTE:

AYES - BROOKS, DE LA FUENTE, KAPLAN, KERNIGHAN, NADEL, QUAN, REID,  
AND PRESIDENT BRUNNER

NOES -

ABSENT -

ABSTENTION -

ATTEST: \_\_\_\_\_  
LATONDA SIMMONS  
City Clerk and Clerk of the Council  
of the City of Oakland, California

DATE OF ATTESTATION \_\_\_\_\_

FILED  
OFFICE OF THE CITY CLERK  
OAKLAND  
2009 APR 30 PM 6:40

NOTICE AND DIGEST

**AN ORDINANCE AMENDING CHAPTER 13.08 OF THE OAKLAND  
MUNICIPAL CODE TO REQUIRE THE INSTALLATION OF SEWAGE  
OVERFLOW DEVICES ON PRIVATELY MAINTAINED SEWER LATERALS**

The ordinance would amend Chapter 13.08 of the Oakland Municipal Code to require the installation of sewage overflow devices when a property owner replaces or repairs the sewer lateral or sells the property or otherwise transfers ownership. Enactment of the proposed amendment would significantly reduce the annual damage caused by sewage backflows from City maintained sewer mains into buildings.