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# Middle Hillsdale RDII Pilot Project Mainlines

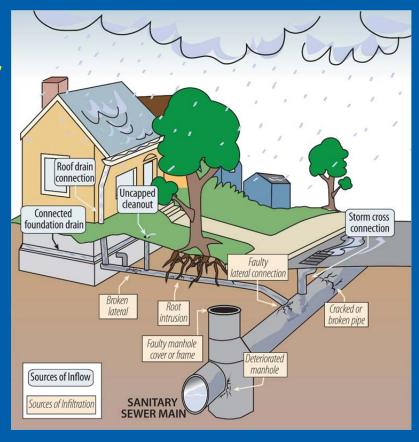
**Engineering Services** 

By: Scott T. Gibson, P.E.



# RDII: Rain Derived Inflow & Infiltration

Inflow and Infiltration or I & I is the term used for groundwater and rainwater that enter the sanitary sewer system through direct connections such as roof drains or through defects such as cracks or broken joints in pipes.





# RDII can cause Sewer System Overflows (SSO) that present a serious public health hazard



Overflows result in discharges to surface waters or to the ground.

Recurring overflows at SW Dewitt St. led to a Mutual Agreement and Order with DEQ.

The Middle
Hillsdale Project is
part of the solution
to the Dewitt SSO
problem and
required by the
agreement.



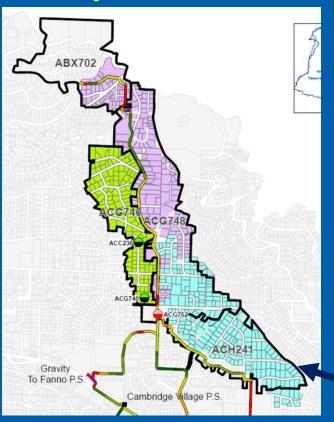
#### **Prior Council Action**

City Council Resolution No. 36977 in November of 2012 described the RDII Program, the MAO and supported the Pilot Projects including this Middle Hillsdale effort



# Middle Hillsdale Project

**Upper Burlingame Sanitary Sewer Basin** 



This project will rehabilitate or replace 13,700 feet of 8 inch sewer pipe to prevent groundwater from entering the sanitary sewer system. It will reduce sewer overflows & reduce the risk of basement sewer backups. The Engineer's Cost Estimate is \$1,009,000.



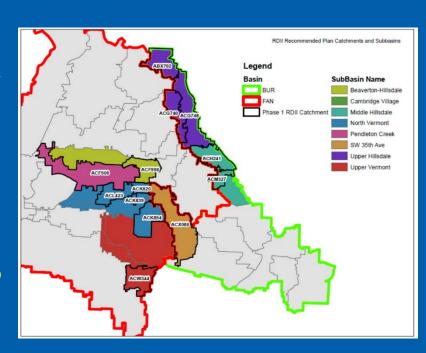
Middle Hillsdale Project Area

### **RDII Program**

The RDII Program is working in the Burlingame and Fanno Sanitary Sewer Basins as depicted on the map.

The highlighted project areas have high RDII rates based on studies using meters placed in sewer pipes and hydraulic analysis.

The goal is to reduce the flow of stormwater into the pipes in order to maintain capacity for the sewage from homes & businesses and prevent the backup of sewage into streets & basements.





## **Future Steps**

BES will continue to work on projects to reduce RDII in the identified areas of the Burlingame and Fanno Sanitary Sewer Basins.

Within the next few months, City Council will be asked to authorize contracts for work in rehabilitating sewer laterals in the Pendleton & 45<sup>th</sup> Project Area and the Middle Hillsdale Project Area.

BES continues to evaluate the project areas to prioritize the project schedules and will continue to design and construct projects as part of this program until the risks have been abated

No overflows to streets or basements for winter storms less than a 25 year recurring interval.

