



# Shoring the Water Quality Basin

Crews have spent the summer undergrounding utilities and relocating sewer lines on Woodside Avenue. With these improvements in mind, the County is turning its focus to the Water Quality Basin (Basin) on the project site.

The Basin filters stormwater runoff before it flows into Los Coches Creek. To improve the stormwater management system, crews are installing box culverts underground on the east side of the Basin that will handle larger volumes of stormwater. This improvement will help prevent Woodside Avenue from seasonal flooding and control water volumes from a 100-year storm. The box culvert-installation process includes the following:

- > **Digging and installing shoring poles:** Crews drove large steel poles deep into the soil to form temporary shoring walls that create the channel for the box culverts. A shoring wall is like a temporary retaining wall that holds back dirt in a dig and prevents the sides from caving in. Crews used a standard shoring technique called 'low vibration' to shake the poles at a fast rate to break up the soil underneath and drive them deep into the ground. Some poles in the Basin are 50 feet deep!
- > **Installing shoring walls:** After the shoring poles were installed, crews slide placed plates in between the poles, which hold the plates up like walls. This shoring system resembles a temporary retaining wall that will hold the soil up on both sides of the hole as crews dig down vertically.
- > **Excavating the Basin:** Crews will dig the shoring channel and install box culverts to create a large steel channel, similar to an underground tunnel.
- > **Backfilling and landscaping:** After the box culverts are installed underground, crews will backfill with dirt to cover the channel and landscape the area to return it to its natural status from before the improvements.

The County is mitigating impacts from this work by limiting excavation to daytime hours and controlling dust from being blown around Woodside Avenue. Thanks for your patience while crews work in the Basin.



## Project Update: Current Construction Activities

Crews are working on:

- › **Sewer line relocation:** Crews are installing 12" and 21" sewer lines down Woodside Avenue. Crews are working around other utilities as they move east towards the end of the project site.
- › **Dry utility relocation:** Crews are coordinating with SDG&E and communication utilities to finish utility undergrounding along Woodside.

- › **Water Quality Basin prep:** Over the next few months, crews will excavate the channel along the shoring system and install box culverts.
- › **Box culvert installation:** Crews are working on the construction of the box culvert that will be jacked and bored under SR 67 in October.

With schools in session, drop-off and pick-up times for students can impact traffic on Woodside Avenue, so crews are coordinating traffic plans to manage congestion. Please plan your commute during construction.



## Meet the Team

**Project Engineer/Inspector,  
Matthew Walkowiak (HDR, Inc.)**

**Q** What do you do on the project?

**A** I inspect work on the project site and verify compliance with project plans and specifications. Inspections can include:



*Project Engineer, Matthew Walkowiak*

preventative measures for storm water compliance; temporary traffic control used during working hours; and, overall general safety related items for workers and the public. I also review design plans, submittals, and requests for inspections.

**Q** What do crews do to control dust on Woodside Avenue?

**A** We use street-sweeping machinery to keep materials like dirt and dust at a minimum. Piles of material kept onsite are covered to minimize wind erosion. We also sprinkle water to weigh loose dirt down. This task can be challenging – too much water and we risk making the site muddy, too little water and we risk not controlling dust pollution enough.

**Q** What can crews do to divert stormwater flows away from Woodside Avenue?

**A** It depends on the amount of stormwater we receive in a given amount of time. This project is to improve an inadequate storm water conveyance system, which

consists of a Basin, pipe culverts (small pipe channels instead of large box channels), and an open channel drainage ditch. Measures we can take to protect work in progress include pumps to control water, berms (mounds of dirt), temporary culverts, and drainage ditches.

**Q** What is unique about this project?

**A** The culverts we are installing are so large they take up half of the street underground and conflict with all of the utilities that run under Woodside Avenue. We have to coordinate our work with four different water agencies, three dry utility companies, and Caltrans, just to name a few. We also have to excavate and construct underground improvements according to state and federal regulations. Coordinating with so many agencies in such a small project area makes this a very complex project—something that can go unappreciated because it is done behind a desk and not on the job site.

The Basin undergoing excavation right now was a previous water quality project by the County. The Basin was once a neglected property overrun with invasive *Arundo donax* grass (also known as Giant reed). The *Arundo* was fed by stormwater that flowed in from the original stormwater system at the end of the property. In 2004, the County removed this invasive species and restored the landscape with native plants and trees. As stormwater flows towards Los Coches Creek, the Basin filters pollutants through its soil and tree roots. The current improvement project on Woodside is to upgrade the capacity of the stormwater management system to help control seasonal flooding.

**Did  
You  
Know**