

# UPCOMING FIELD SURVEYS BROOKMAN SEWER PROJECT

Clean Water Services and its contractors will continue to perform field surveys on properties in the Brookman Area. Survey work may include land surveying, wetland surveys, vegetation surveys, and cultural resources surveys. Here is what field crews will be focusing on as they do survey work on your property.

## Land Surveying

Surveyors will be working to create a detailed map of the area. They will be taking measurements with survey instruments mounted on tripods, GPS units and aerial drones. They will map all of the features of the land, including buildings, fences, driveways, trees, utilities, wells, and septic systems. They will also map the elevation of the land including any features such as ditches, hills, valleys, and streams. They will review available land survey data from previously filed surveys and property deeds to locate property markers. This data will be used to accurately show property lines on the map. The surveyors will also review the title history for all the properties to ensure that any easements encumbering a property are considered.



### Wetlands

Wetland survey work will consist of mapping jurisdictional wetlands and waterways using a GPS unit. Field crews will dig shallow pits to evaluate soil conditions. Pits are typically no bigger than 20 inches deep by 10 inches wide. Field crews will take care to leave as minimal a trace as possible. Minor clearing of vegetation may be conducted by hand (e.g. using blades) to allow for access across a property where dense vegetation, such as blackberry thickets, are present. Wetland surveys will typically not exceed one day in duration for all but the largest properties.



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## Vegetation

Vegetation surveys will generally focus on areas near streams and wetlands. These surveys typically will not exceed one day in duration for all but the largest properties. No ground disturbance will occur except for very minor vegetation trimming as needed to navigate the site. Often this work will be done in conjunction with the wetlands survey.

#### **Cultural Resources**

Cultural resources surveys include pedestrian (walking) surveys and shovel probing. Field crews may use flagging tape and pin flags to mark artifacts that are identified on the surface, or to mark shovel probe locations. All probes will be backfilled upon completion, and all flagging and pin flags will be removed upon leaving the property. Any items from earlier than 1968 will need to be recorded. Cultural resource staff will photograph structures that are 45 years old or older. They will not collect or remove anything from the properties. Cultural resources work will not exceed one day in duration for all but the largest properties.

## Geotechnical (Soil) Survey

Geotechnical Engineers will be collecting soil samples at various locations throughout the project. They may use a variety of tools including shovels, hand or powered augers, and drilling rigs. They will collect soil samples at various depths and perform soil tests to determine soil characteristics such as the strength and type of soil and depth to groundwater. This information is used to ensure that the sewer pipe can be installed properly and to identify the appropriate trench shoring system to protect workers.



