

The Urban Drool Tool: Investigating unnatural water balance and flow in Orange County

Orange County Public Works ("OCPW") has teamed up with the Moulton Niguel Water District ("MNWD") and OC Code Lab to launch a new pilot California Data Collaborative ("CaDC") stormwater project. Our aim for this collaboration is to gain insight on surface water drainage areas where altered dry weather water balance or flow regimes have been identified. Many of these stream reaches are impacted by unnatural, unpermitted, non-exempted dry weather flows (Urban Drool).

The ability to quantify and visualize the amount of Urban Drool contributing to discharges at storm drain outfalls can help to determine the most appropriate and effective actions to restore natural water balance. The ongoing drought conditions in California have fostered the collaboration of multiple agencies and focused on the nexus of water resources as both a supply and environmental issue. Addressing systemic water overuse during the drought requires a critical investigation into Urban Drool's role in water supply, balance and quality.

There are two final products: a public facing web application and an internal facing application. The public facing web app allows a user to type in their address and be plotted on a map. Then they are given personalized information based on their address, such as average overuse of water in their neighborhood, records of water saving improvements, rebate programs, and storm drain outfall information. This will encourage water use within budget, improve watershed education, and distribute rebate and competition information.

An internal facing web app will allow a user to see a map of the OCPW outfalls within the MNWD Service Area. The outfall icons will indicate the two scores that outfall received regarding flow (OCPW's composite score) and water inefficiency (MNWD). Clicking on an icon leads the user to a closer look map that shows detailed historical information for the drainage catchment, including inefficient water use, smart meter information, flow studies, and Best Management Practices employed. This tool will inform watershed management decisions, help employ targeted water conservation strategies, and be instrumental in addressing unnatural water balance in Orange County.