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**ORANGE COUNTY WATER DISTRICT**  
ORANGE COUNTY'S GROUNDWATER AUTHORITY

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November 5, 2018

**RE: Update on Orange County Groundwater Basin Cleanup Projects**

Dear Community Stakeholder:

The following is an update regarding the Orange County Water District's (OCWD; the District) groundwater cleanup efforts in the North and South Basin areas.

Work is steadily proceeding on both groundwater remediation projects. Faced with protracted litigation, inadequate action from most of the parties responsible for the contamination, and continually spreading plumes, the OCWD Board of Directors instructed staff to proceed with formal remedial investigations and feasibility studies (RI/FS) for the North and South Basin plumes. This work is being done in conformance with National Contingency Plan (NCP) protocols to preserve the District's rights to recover costs from those responsible and provide technical support for additional regulatory enforcement actions.

The RI/FS and the early action cleanup work are being paid for by OCWD. To help offset these financial liabilities and protect ratepayers, OCWD has applied for and received partial funding from the Proposition 1 Groundwater Sustainability Grant through the California State Water Resources Control Board. Grant funding eligibility is limited to 50 percent of the cost of studies and construction. The much higher cost of long-term operation and maintenance will not be eligible under the program. It is expected that funding of that work will ultimately derive from the responsible parties.

North Basin [Fullerton, Anaheim, & Placentia areas]

Following requests from OCWD and state agencies, the U.S. Environmental Protection Agency (EPA) assumed the role of lead regulatory oversight agency in a multi-agency effort to address the groundwater characterization and remediation in the North Basin. OCWD, with EPA's oversight, is focused on the larger areas of the comingled plumes, while the State Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board, Santa Ana Region (RWQCB) continue with their focus on the source-site cleanup activities. OCWD is performing a NCP-compliant RI/FS. The RI involves installing monitoring wells to further investigate the lateral and vertical extent of areas with elevated concentrations of groundwater contamination. The FS involves developing and evaluating alternatives to contain those areas. Containing areas with elevated concentrations of contamination is considered an Interim Remedy. Additional characterization will likely be needed to determine the ultimate or final remedy outside of the OCWD interim remedy.

The current scope of the North Basin RI includes the installation of 21 monitoring wells at 12 locations in the areas surrounding the many sources of industrial contamination. This work supplements many prior studies that OCWD has conducted. To date, OCWD has installed

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approximately 100 monitoring wells in the North Basin area. Sixteen of the 21 RI monitoring wells have been installed. Construction of the new monitoring wells is expected to be completed by early November. The well installations will provide important geological and groundwater quality information needed to fill existing data gaps. OCWD has a sophisticated computer model of groundwater flow in the North Basin area that will be continually updated and used to develop and evaluate remedial alternatives for the FS, and to help optimize a design once a remedy is selected for plume capture, control, and contaminant removal.

EPA will propose implementation of one of the alternatives in the FS. Following public review and comment, EPA will select the remedy to be implemented. To protect ratepayers and the local economy, OCWD anticipates that the responsible parties will pay for the remedial action, either through a voluntary settlement with the EPA or enforcement action via listing North Basin on the National Priorities List. It is expected that the RI/FS will be completed in late 2020. Based on that schedule, remedy implementation could commence in 2021.

It is also noteworthy that OCWD has placed into operation extraction well EW-1 before the RI/FS was completed. Well EW-1 is in the northeast North Basin area and where the contaminant plume is diving down into the Principal zone and threatening nearby production wells. The operation of EW-1 was deemed too important to wait because of the threat to nearby production wells. Continuous extraction from this well acts as a safety net to capture contamination before it can migrate downward and into the Principal Aquifer Zone. That well has been operational since October of 2017.

Members of the public are invited to attend an open house and community meeting about North Basin hosted by the EPA and the California Department of Public Health on **Wednesday, November 14, 2018 from 6 to 8 p.m.** at the Fullerton Public Library. For more information, visit [www.epa.gov/superfund/orange-county-north-basin](http://www.epa.gov/superfund/orange-county-north-basin).

#### South Basin [Irvine, Santa Ana, & Tustin areas]

In the South Basin, OCWD is also proceeding with an areawide RI/FS much like that being done in the North with the same objectives in mind. What is different is the regulatory oversight remains with the State Regional Water Quality Control Board and the Department of Toxic Substances Control. Federal oversight has not been requested, and placement of the site on the National Priorities List is not considered necessary at this time.

While the mass of contaminant release in the South Basin is on par with the North Basin, the geology is different and likely will require a different cleanup approach. In the North Basin, groundwater velocities are relatively high, and the plume spreading has extended more than five miles laterally and several hundred feet deep. In the South, the soil is more layered causing the contaminants to move more slowly laterally and with less of a downward vector. Even with the more layered geology, the South Basin plume has still spread two miles long and one mile wide. In this area, the RWQCB and DTSC will oversee both the source-site cleanups as well as the comingled downgradient plumes.

The RI/FS work continues in the South Basin area with the recent completion of the 21 additional wells in six clusters. This work, like that in the North supplements many years of study already performed in the industrial South Basin area, most of which was done on the private properties that have known releases of contaminants going back at least to the 1950s. Since completion of the drilling activities, the focus has shifted to work on developing a computer model for use in the upcoming feasibility study and remedy implementation. This project like the North Basin is also partially supported by grant funding from the State Water Resources Control Board's Prop 1 program. It is expected that the RI/FS work will be completed in mid-2019, after which a remedy

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selection will be made in collaboration with the state agencies and with input from the public as called for in both the California Environmental Quality Act (CEQA) and the NCP protocols.

These new developments in the North and South Basin areas bring together many formerly disparate elements. Work scopes are defined and tentatively agreed upon by the District and all three regulatory agencies; RI/FS work is proceeding in a systematic and NCP-compliant fashion; grant funding has been applied for in both areas; and active funding is provided by the District and willing PRPs. Hopefully the PRPs will see what is emerging as voluntary and cooperative remediation activities as good alternatives to continued litigation.

Staff will continue its commitment to open-session updates at board meetings, publications in our newsletters, and updates to our groundwater producers. If you have any questions, please do not hesitate to contact me at [whunt@ocwd.com](mailto:whunt@ocwd.com) or (714) 378-8229. For more information you may also visit <https://www.ocwd.com/what-we-do/water-quality/groundwater-cleanup/>.

Sincerely,



William T. Hunt  
Director of Special Projects

Encl. Orange County North Basin Community Meeting flyer  
Cc: Members of the Orange County U.S. Congressional Delegation  
Members of the Orange County California State Legislature Delegation  
Orange County Board of Supervisors  
Orange County City Councils  
OCWD Groundwater Producers  
Orange County Sanitation District Board and General Manager  
Orange County Business Council