REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

EXECUTIVE OFFICER SUMMARY REPORT
OCTOBER 14, 2020

ITEM 9

SUBJECT
Next Generation Monitoring. *(Celeste Cantu and Laurie Walsh*)

STAFF RECOMMENDATION
This is an informational item for discussion and the Board will not take an action.

KEY ISSUE
Modern monitoring technologies enhance the ability to efficiently prevent, reduce, treat, and avoid pollution, in keeping with San Diego Water Board's overall mission of restoring and protecting water quality and beneficial uses within the San Diego Region. These technologies can extend the Board's reach in space and time to monitor compliance, collect water quality and other environmental data, and perform enforcement work. Board Member Celeste Cantu will be presenting information on the status of the Next Generation Monitoring Project initiative at today's meeting.

PRACTICAL VISION
This item is consistent with the mission of the Monitoring and Assessment chapter of the Practical Vision, which calls for accurate and efficient monitoring and assessment programs to track the status and trends of conditions in San Diego Region waters, identify sources of impairment, assess the effectiveness of management actions, and effectively communicate key findings to the public, stakeholders, and decision-makers.

DISCUSSION
The overarching goal of the San Diego Water Board's Next Generation Monitoring Project is to evaluate and pilot-test the use of modern monitoring methods, including remote sensing tools, to support the mission of the Water Boards and assist with compliance, monitoring, and enforcement work across California. Staff from the San Diego, Lahontan, and San Francisco Bay Regional Water Boards have been working collaboratively since 2018 to screen available technologies, identify opportunities for local pilot projects, and develop creative solutions for the challenges associated with implementation of a state-wide next generation monitoring tools program.

Traditional monitoring methods typically require a substantial amount of staff time. These methods necessitate expenditure of person-hours in the deployment of sampling devices and the collection of field data, with additional time spent on travel to and from field sites. Accordingly, traditional methods can limit the reach of environmental agencies, responsible parties, and dischargers because decisions must be made regarding prioritization of monitoring activities. Modern monitoring methods have the potential to require fewer human resources in the long term. Technologies such as satellite imagery and surveillance cameras that use machine learning require initial field efforts for "ground truthing" but have the potential to greatly increase in efficiency over time.

Storm Water Program staff are currently collaborating with the City of San Diego to pilot-test the use of CCTV cameras to monitor compliance with the statewide *General Permit for Discharges of Storm Water Associated with Construction Activity* (Construction General Permit or CGP). The pilot test is being conducted to monitor compliance with the CGP during construction to expand the City's North City Water Reclamation Plant and Pure Water Facility. Storm Water staff have access to live feeds and imagery archives for two cameras that are positioned on different areas of the construction site. The Project has been underway since 2018 and is being used to assess the effectiveness of using next generation monitoring technologies to monitor permit compliance in real time or near real time and maximize efficiency of staff resources.

LEGAL CONCERNS
None

PUBLIC NOTICE
The Meeting Notice and Agenda for today's meeting was posted on the San Diego Water Board's website and sent to those who subscribe to the email list for Board meetings.

SUPPORTING DOCUMENTS
None