



SAN FRANCISCO WATERSHED 101



Nasa

ALL WATER IS ONE



STORM WATER THE RUNOFF GENERATED WHEN PRECIPITATION FROM RAIN AND SNOWMELT EVENTS FLOWS OVER LAND OR IMPERVIOUS SURFACES WITHOUT PERCOLATING INTO THE GROUND. EPA

GROUNDWATER IS THE WATER FOUND UNDERGROUND IN THE CRACKS AND SPACES IN SOIL, SAND AND ROCK. IT IS STORED IN AND MOVES SLOWLY THROUGH GEOLOGIC FORMATIONS OF SOIL, SAND AND ROCKS CALLED AQUIFERS. GROUNDWATERFOUNDATION.ORG

POTABLE WATER IS DRINKING WATER
BLACKWATER AKA SEWAGE

GRAYWATER IS FROM SINKS, SHOWERS, LAUNDRY AND CAN BE USED FOR IRRIGATION

GRAY INFRASTRUCTURE IS ENGINEERED OFTEN CONCRETE AND STEEL SOLUTIONS FOR WATER POWER AND DEVELOPMENT

GREEN INFRASTRUCTURE IS NATURE BASED SOLUTIONS FOR WATER POWER AND DEVELOPMENT

ALL WATER IS ONE BUT A FEW DEFINITIONS MIGHT BE HELPFUL

Tributaries to the Sacramento and San Joaquin Rivers

FROM THE NORTH WE HAVE THE SACRAMENTO RIVER.



FROM THE SOUTH EAST WE HAVE THE SAN JOAQUIN RIVER

SAN FRANCISCO IS PART OF THE BAY DELTA BIOREGION

SIERRA SNOWPACK



WHERE DOES SAN FRANCISCO'S DRINKING WATER COME FROM?



TUOLUMNE RIVER

PHOTO: JOHN PARMENTIER NATURAL WILD AND SCENIC RIVERS SYSTEM

WHERE DOES SAN FRANCISCO'S DRINKING WATER COME FROM?



HETCH



HETCHY

PHOTO: SAN FRANCISCO PUBLIC UTILITIES COMMISSION

COURTESY SAN FRANCISCO PUBLIC

BEFORE HETCH HECHY WAS A RESERVOIR IT WAS A VALLEY IN THE TUOLUMNE RIVER SYSTEM

GRAY INFRASTRUCTURE

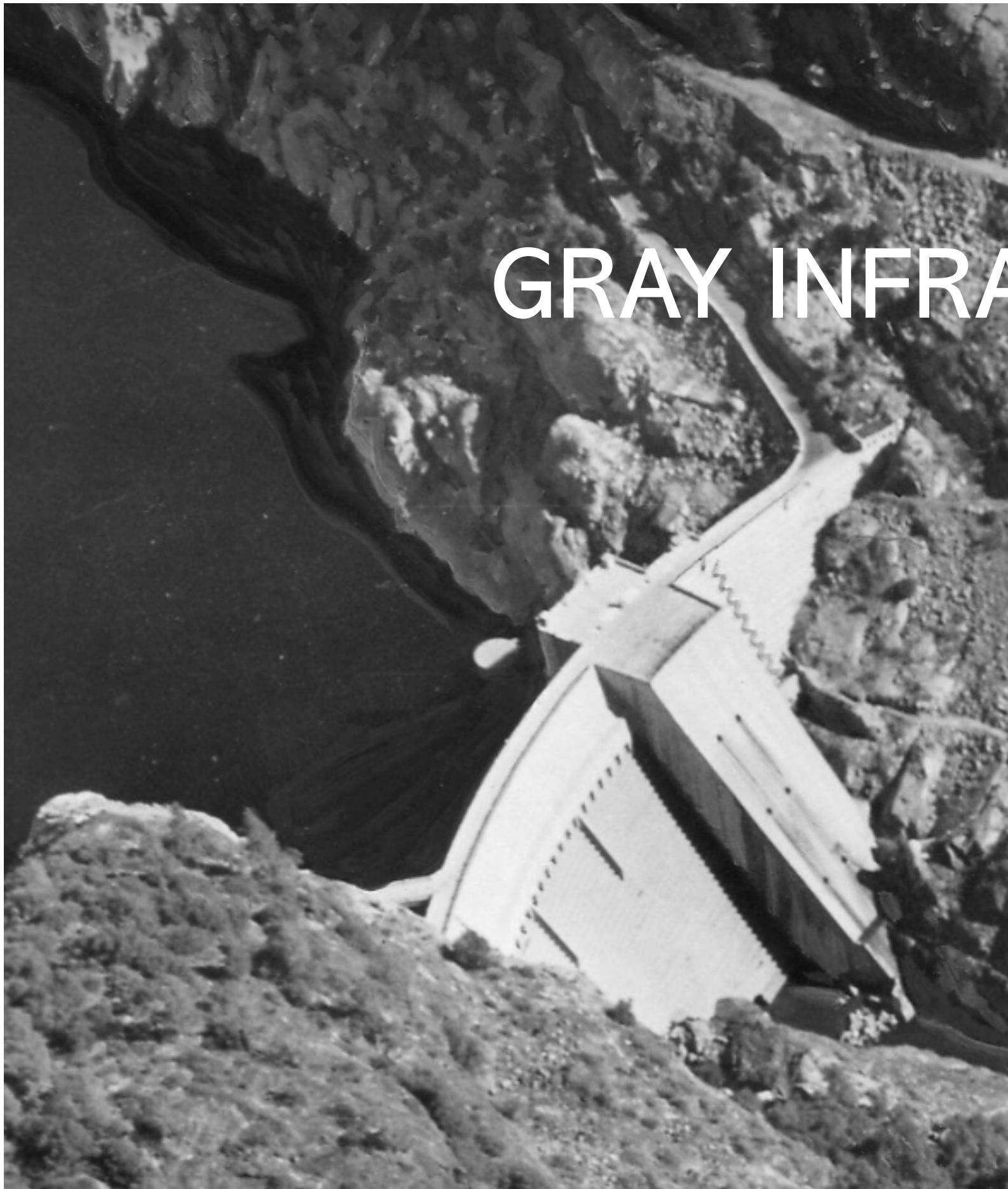
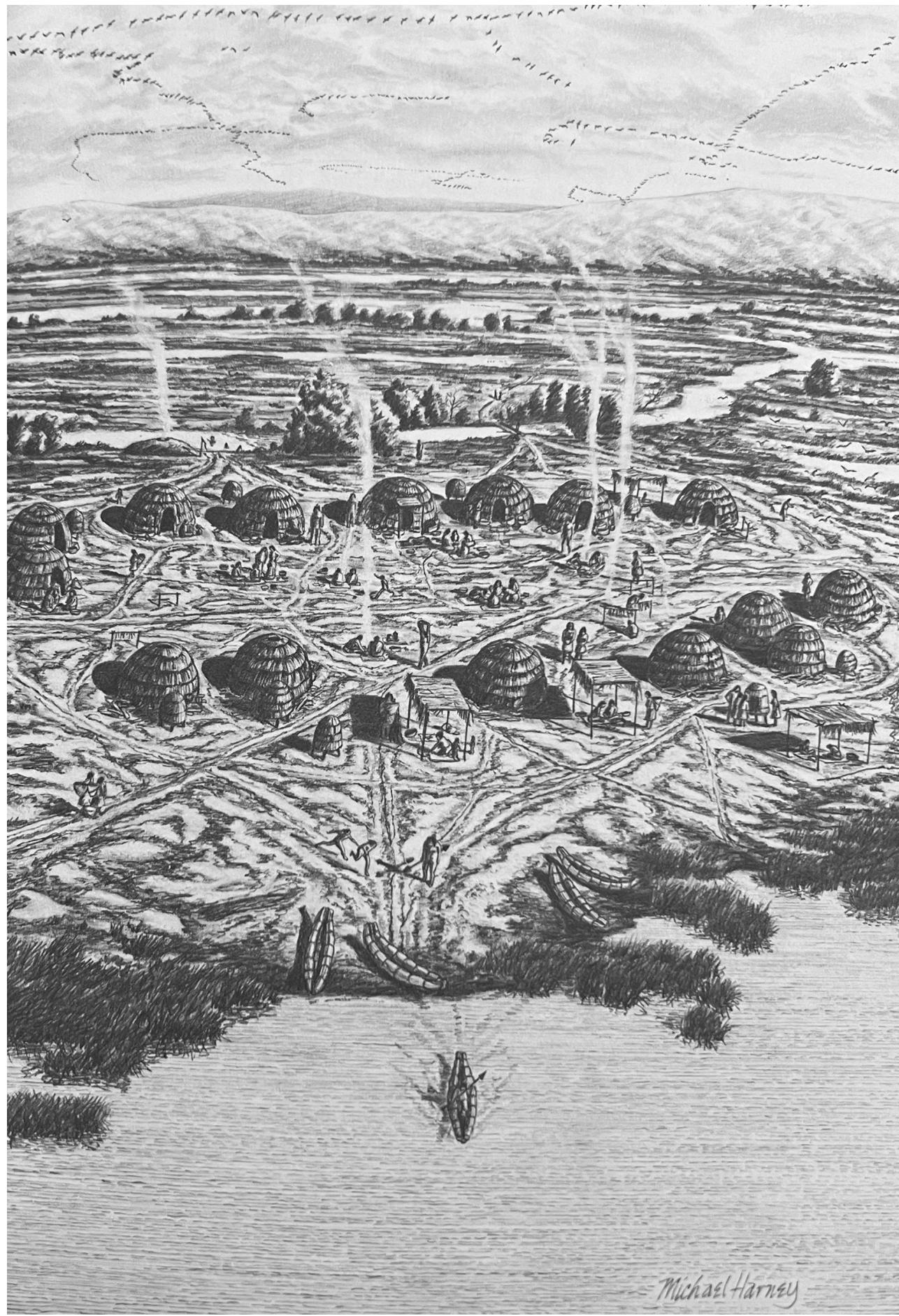


PHOTO: SAN FRANCISCO PUBLIC UTILITIES COMMISSION

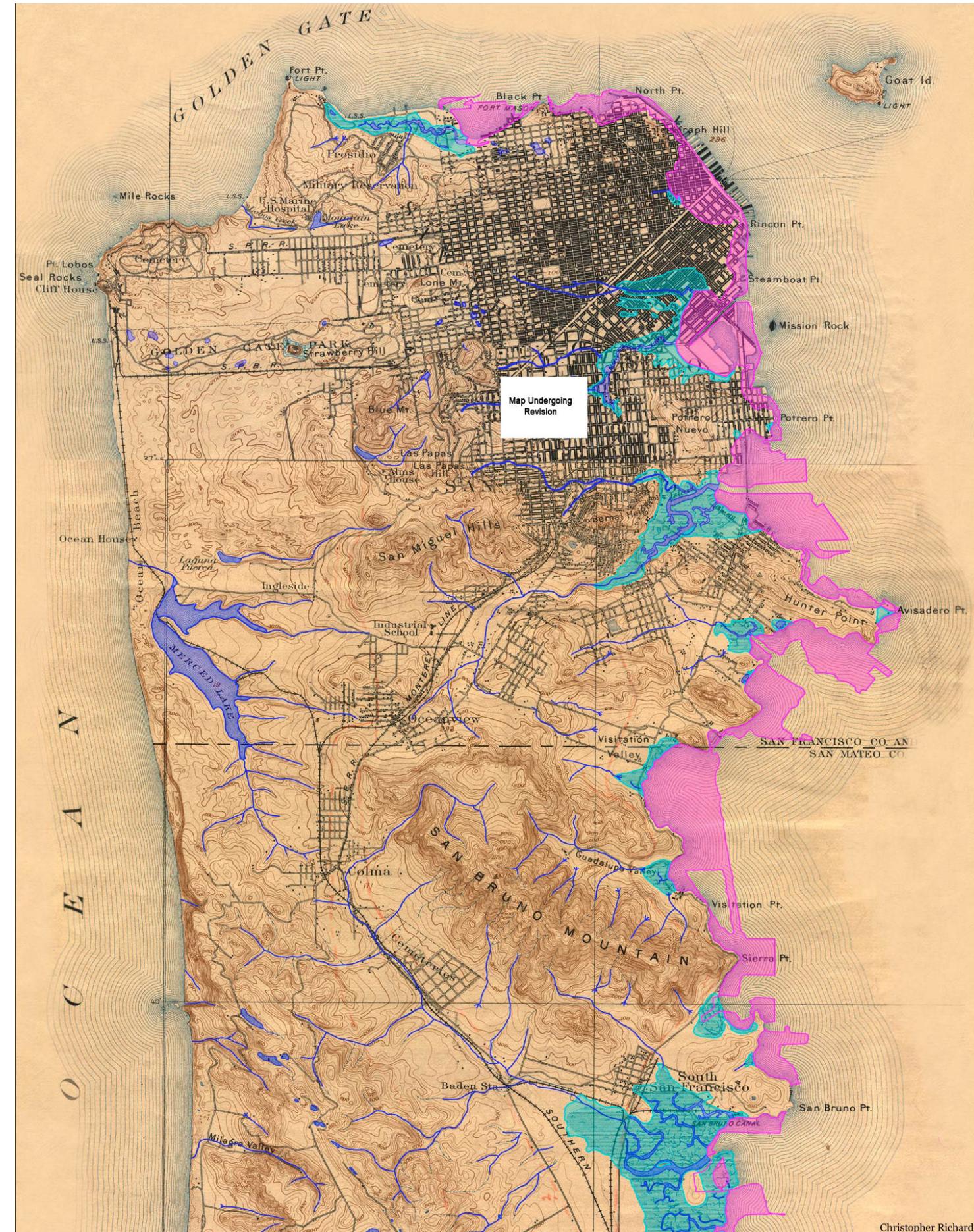


THE O'SHAUGNESSY DAM AND A COMPLEX SYSTEM OF PIPES AND TUNNELS CONVEY WATER TO SF



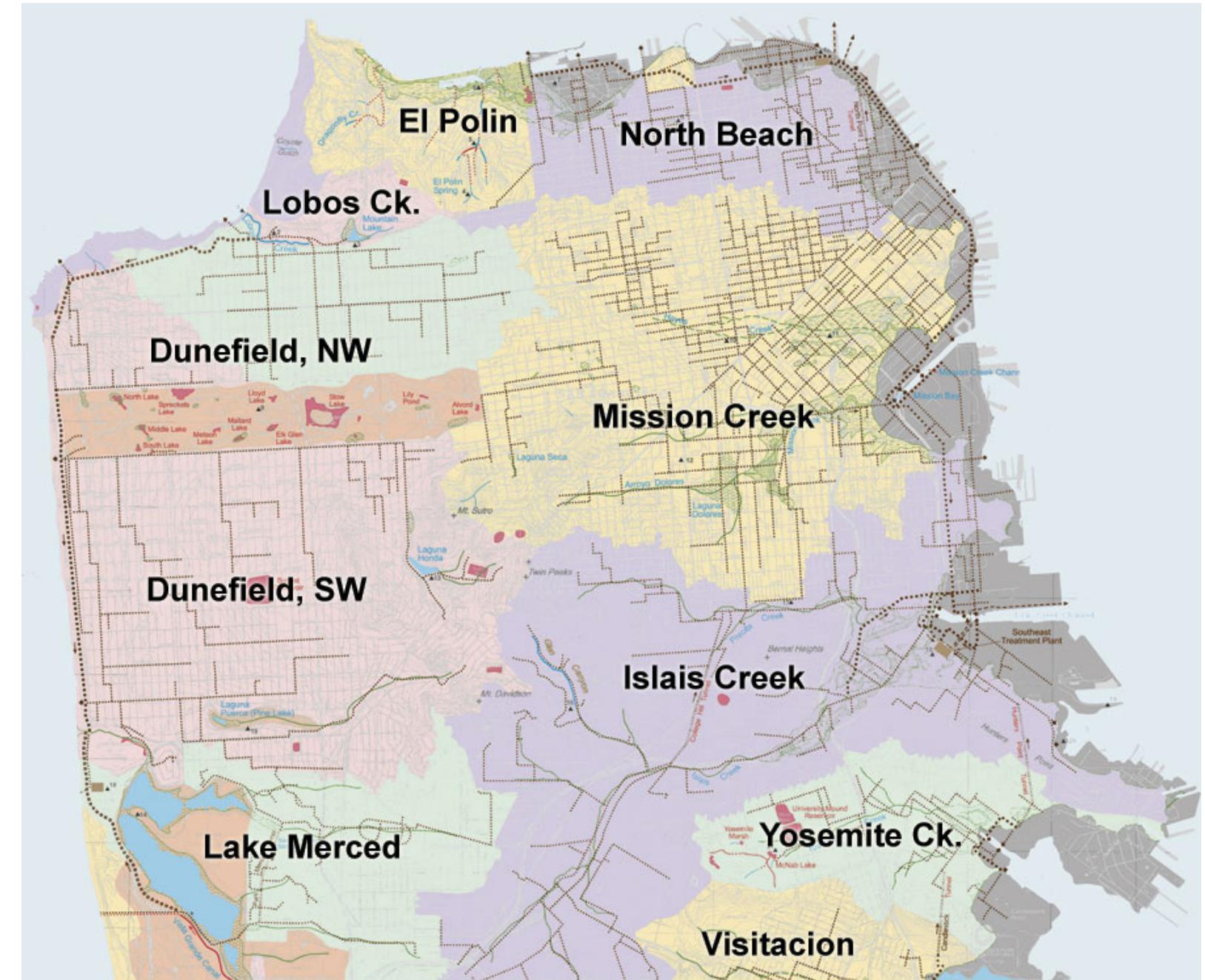
Etching by Michael Harney from *The Ohlone Way: Indian Life in the San*

SAN FRANCISCO IS ON OHLONE LAND



MAP: HISTOPO

HISTORIC SAN FRANCISCO PENINSULA



MAP: CALIFORNIA TRAVEL

MAP: OAKLAND MUSEUM OF CALIFORNIA

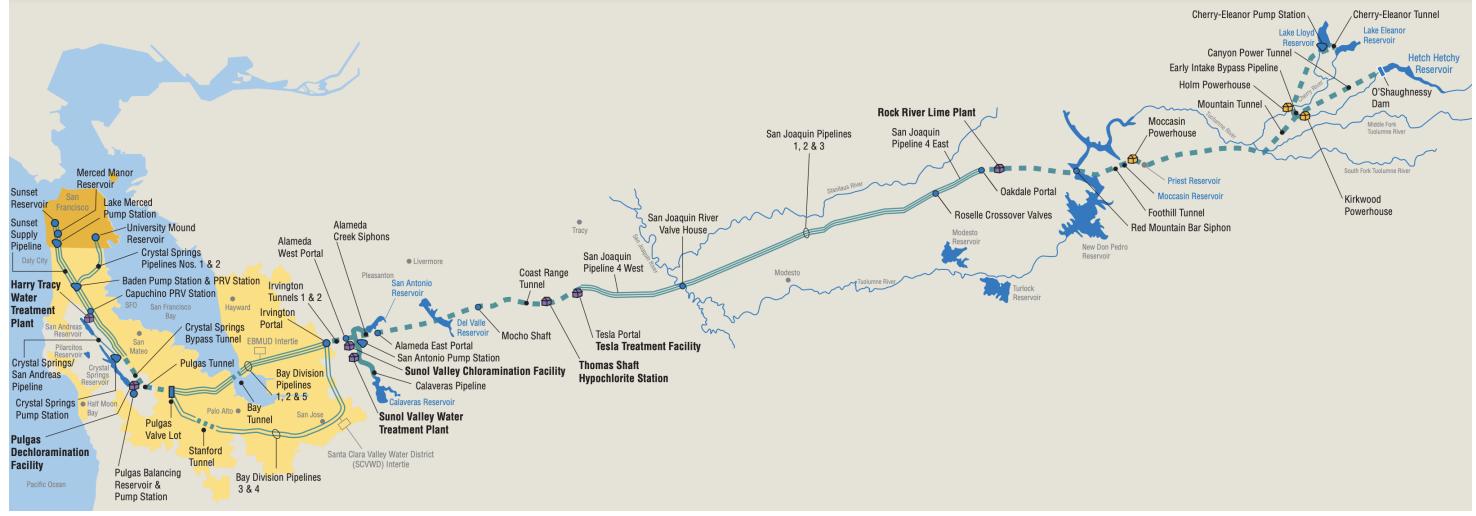
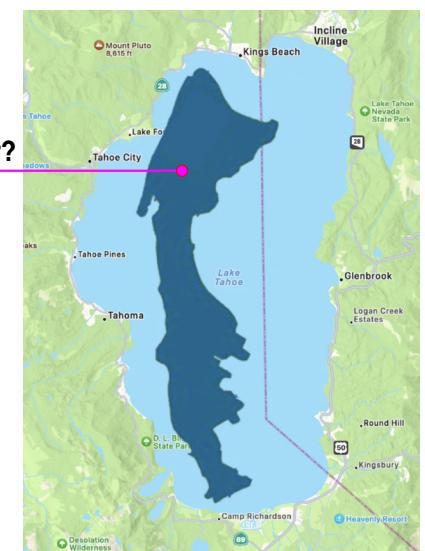
NEIGHBORHOODS AND WATERSHEDS

San Francisco Groundwater Basins (the 7 aquifers)



-  Lobos Basin
-  Marina Basin
-  Downtown Basin
-  Islais Valley Basin
-  South San Francisco Basin
-  Visitacion Valley Basin
-  **Westside Basin**

Note: San Francisco's seven aquifers are hydrologically disconnected.



Soularch Design
1381 C 43rd Avenue
San Francisco, California 94122

**WESTSIDE WATER
RESOURCES**
San Francisco



Date	7/16/25
Scale	n.t.s.
Drawn	DJ
Job	
Sheet	

SAN FRANCISCO WATERSHEDS AND AQUIFERS



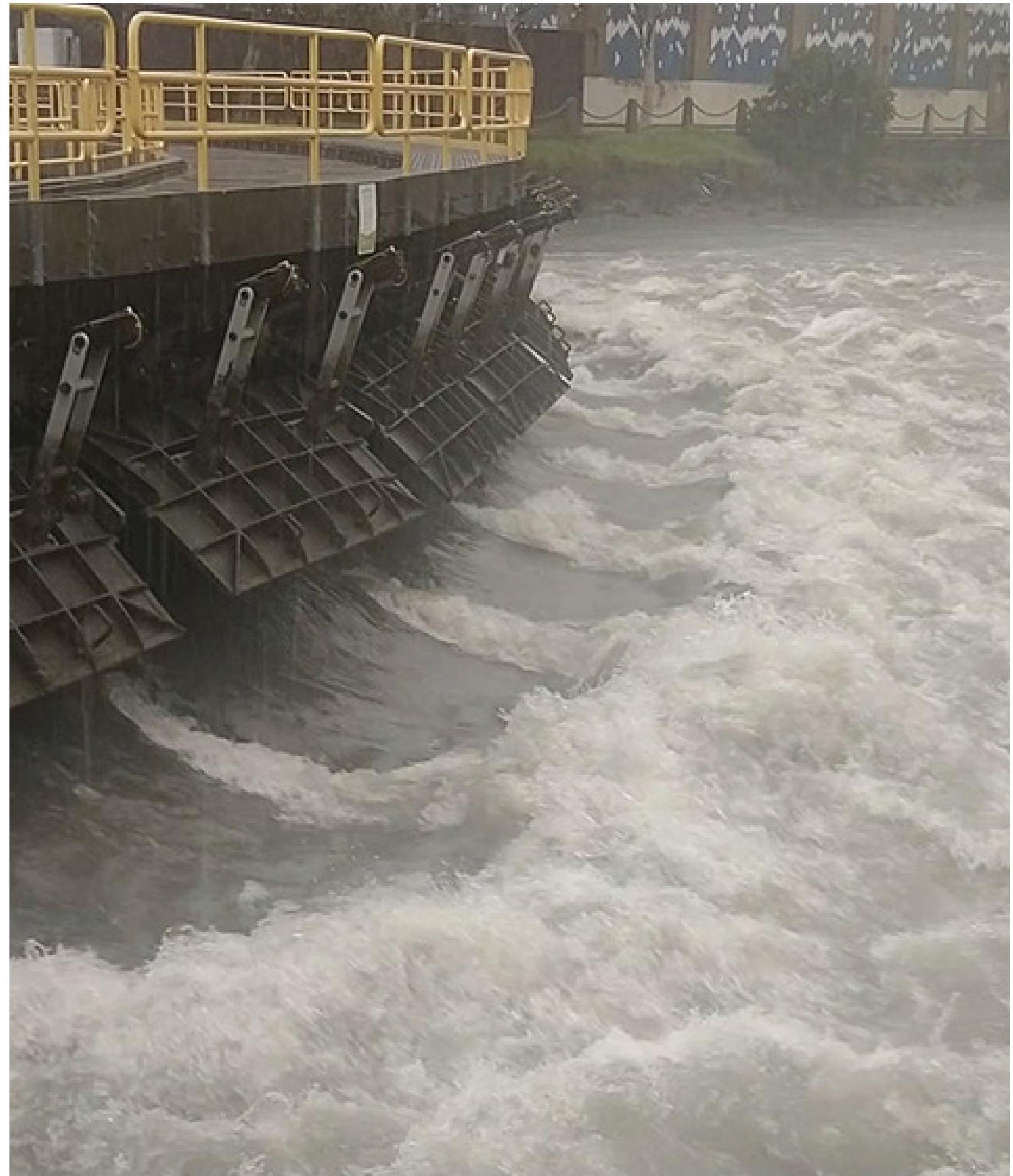
PHOTO: CHRONICLE LIZ HALALIA

PUMP FOR THE FIRST MUNICIPAL WATER SUPPLY IN SAN FRANCISCO



SFPUC

SAN FRANCISCO COMBINES STORMWATER AND BLACKWATER



WHEN ATMOSPHERIC RIVERS HAPPEN THEN RAW SEWAGE GOES INTO THE BAY AND OCEAN

WHEN IT RAINS, SAN FRANCISCO'S COMBINED SEWER/STORMWATER SYSTEM IS QUICKLY OVERWHELMED...THIS IS THE RESULT!



UN-TREATED
SEWAGE



Ocean Beach at:
LINCOLN WAY

STORMWATER
TO
GROUND WATER RECHARGE

← WILL PREVENT THIS FROM HAPPENING →



Ocean Beach at:
VICENTE STREET

UN-TREATED
SEWAGE

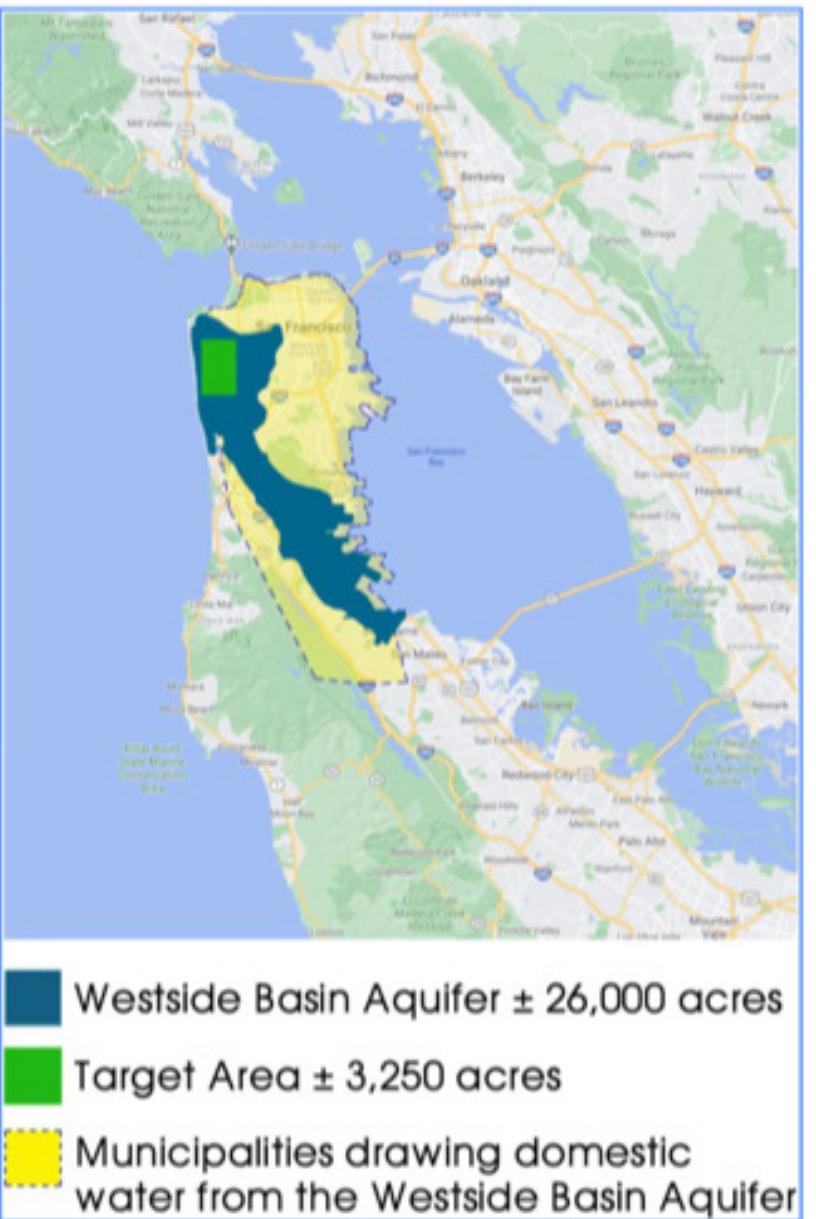
Be a part of the solution →



ORGANIZATIONS WE SUPPORT AND WHO SUPPORT US

WEST SIDE SOLUTIONS

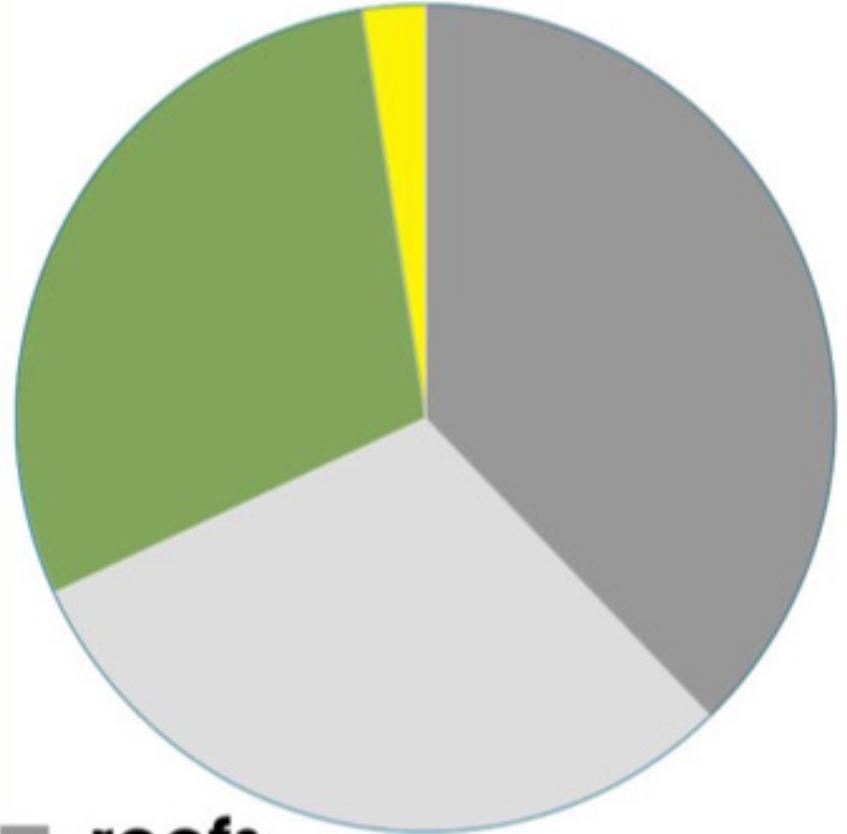
We have found the low-hanging fruit



District 4 sits over the “mouth” of the WBA and contains the lowest hanging fruit for aquifer recharge

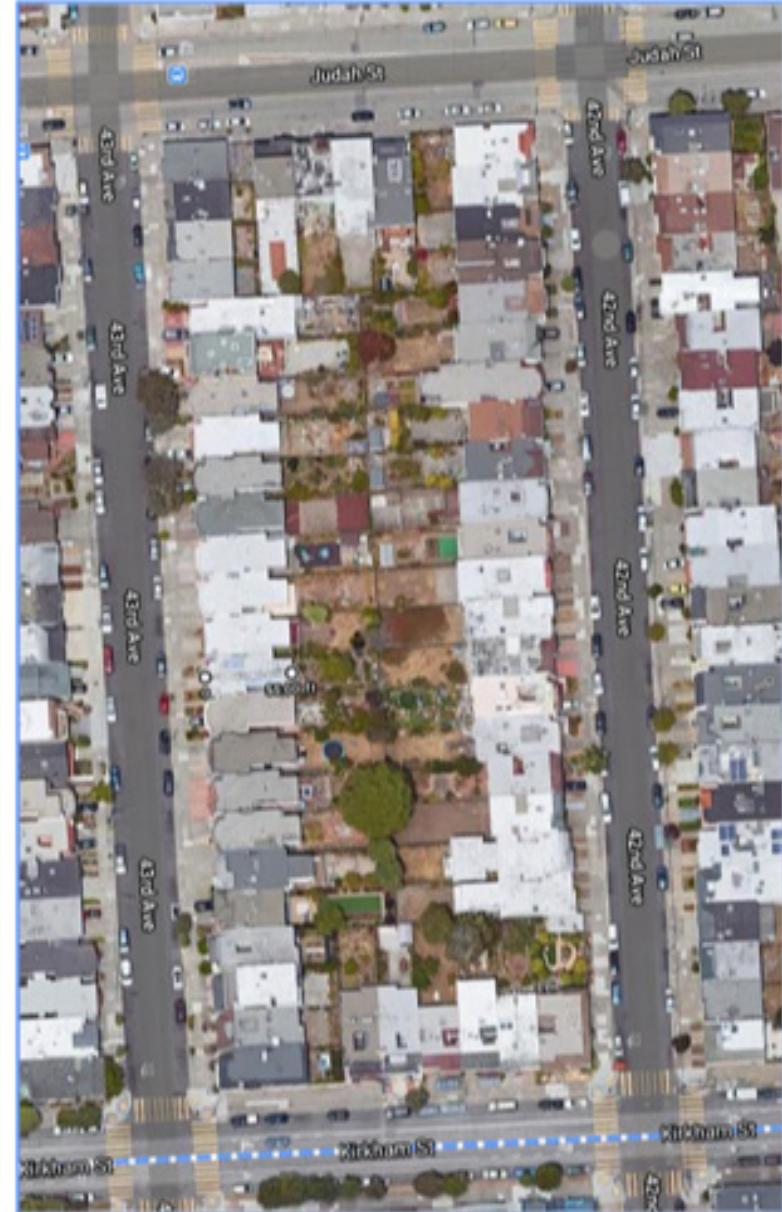
Westside Water Resources - Coastal Basin Aquifer Restoration Program

Target Area Breakdown



- roofs
- streets & sidewalks
- inner block open space
- schools/parks/etc.

~½ of District 4 is covered by rooftops - these impermeable surfaces interrupt the hydrological cycle



District 4's blocks are natural candidates to come together to form grant groups



HARVEY PARK CLUBHOUSE SITE
1/25/20 OpenSFHistory.org

LAKE MERCED



PERVIOUS SURFACES ALLOW WATER TO PERCOLATE AND BECOME GROUND WATER

SLOW THE FLOW CAPTURE AND HOLD RAINWATER ESPECIALLY IN UPHILL NEIGHBORHOODS.

PROTECT THE WATERSHED FROM MICROPLASTICS ADD A MICROPLASTIC FILTER TO YOUR WASHER. USE CLAY OR MINERAL BASED PAINTS. USE ROOFING MATERIALS WITHOUT PLASTIC SUCH AS SILICONE OR GREEN ROOFS

INSTALL GRAYWATER SYSTEMS WHOLE HOUSE OR POINT OF USE GRAYWATER SYSTEMS FOR TOILET FLUSHING, SHOWERS AND LAUNDRY.

HOW CAN WE PROTECT OUR WATERSHED?



PHOTO: MARGARET AUSTIN

WATERSHED SAVING FEATURES IN ACTION

A wide-angle photograph of the Golden Gate Bridge in San Francisco, California. The bridge's iconic red towers stand tall against a clear blue sky. The water in the foreground is a deep blue, with small white-capped waves. The bridge's cables stretch across the frame, leading the eye towards the horizon.

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Questions and Discussion