

# SAN FRANCISCO WATERSHED 101



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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

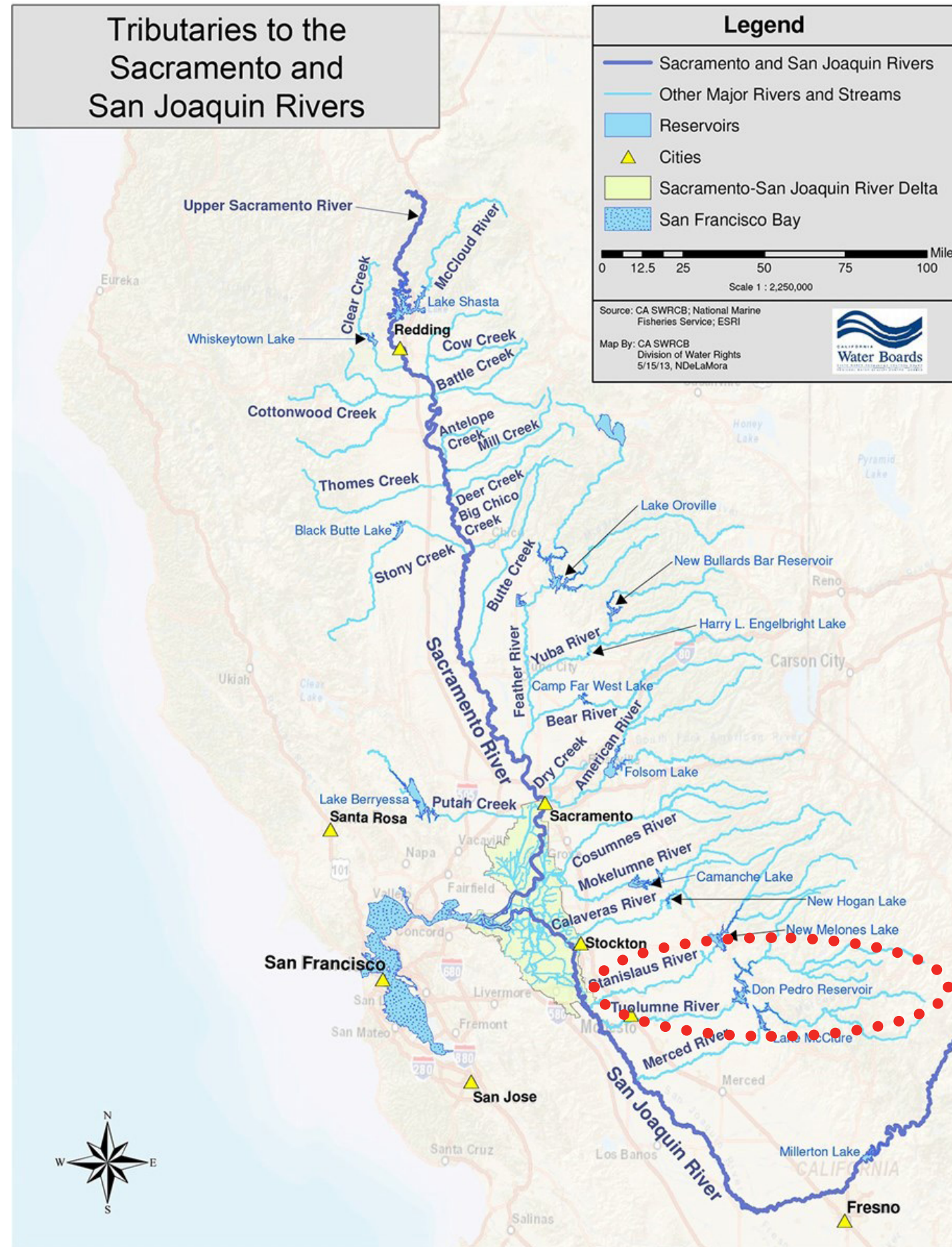
**GRAY INFRASTRUCTURE** IS ENGINEERED OFTEN CONCRETE AND STEEL SOLUTIONS FOR WATER POWER AND DEVELOPMENT

**GREEN INFRASTRUCTURE** IS NATURE BASED SOLUTIONS FOR WATER POWER AND DEVELOPMENT

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ALL WATER IS ONE BUT A FEW DEFINITIONS MIGHT BE HELPFUL

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



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WHERE DOES SAN FRANCISCO'S DRINKING WATER COME FROM?

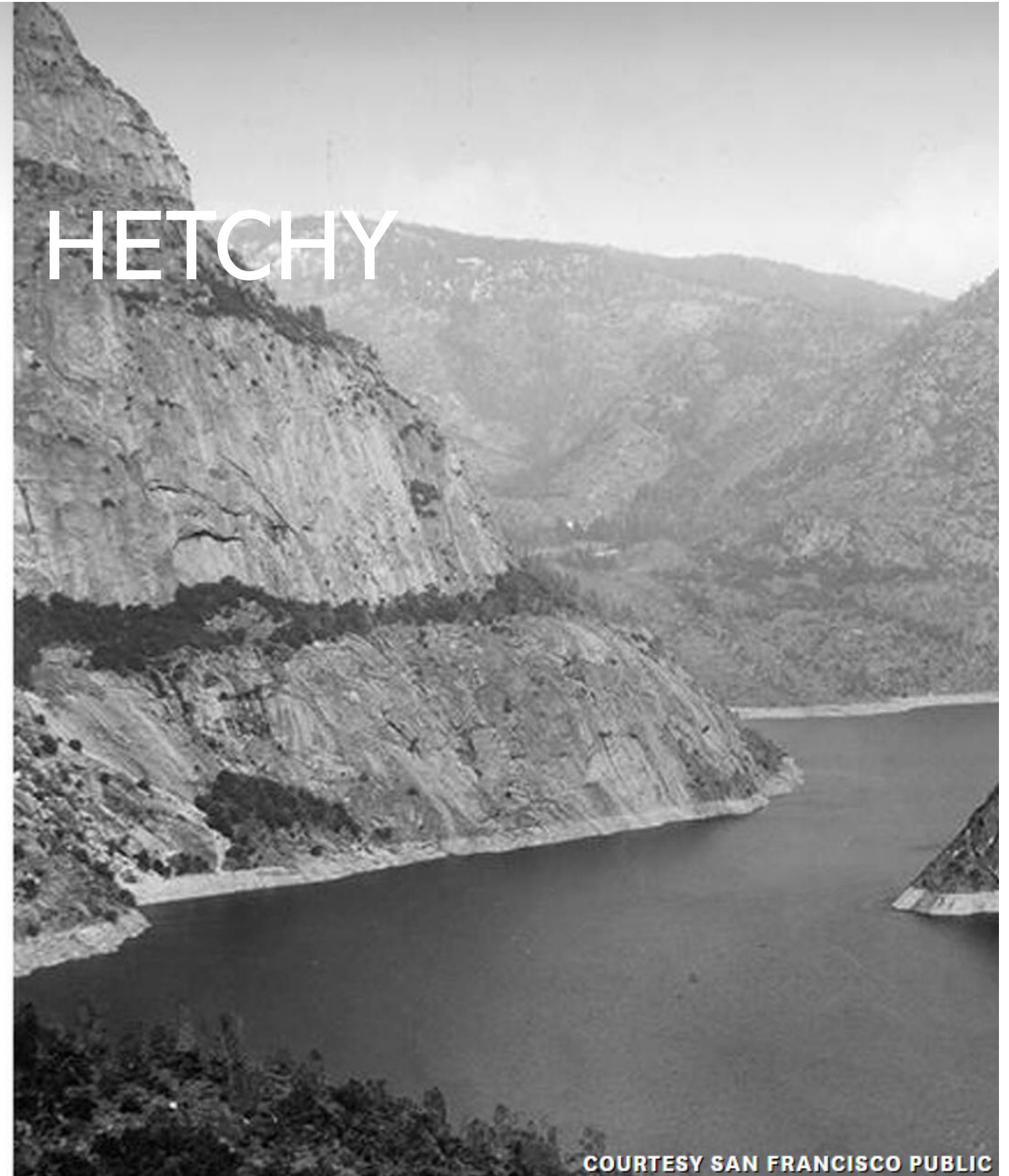
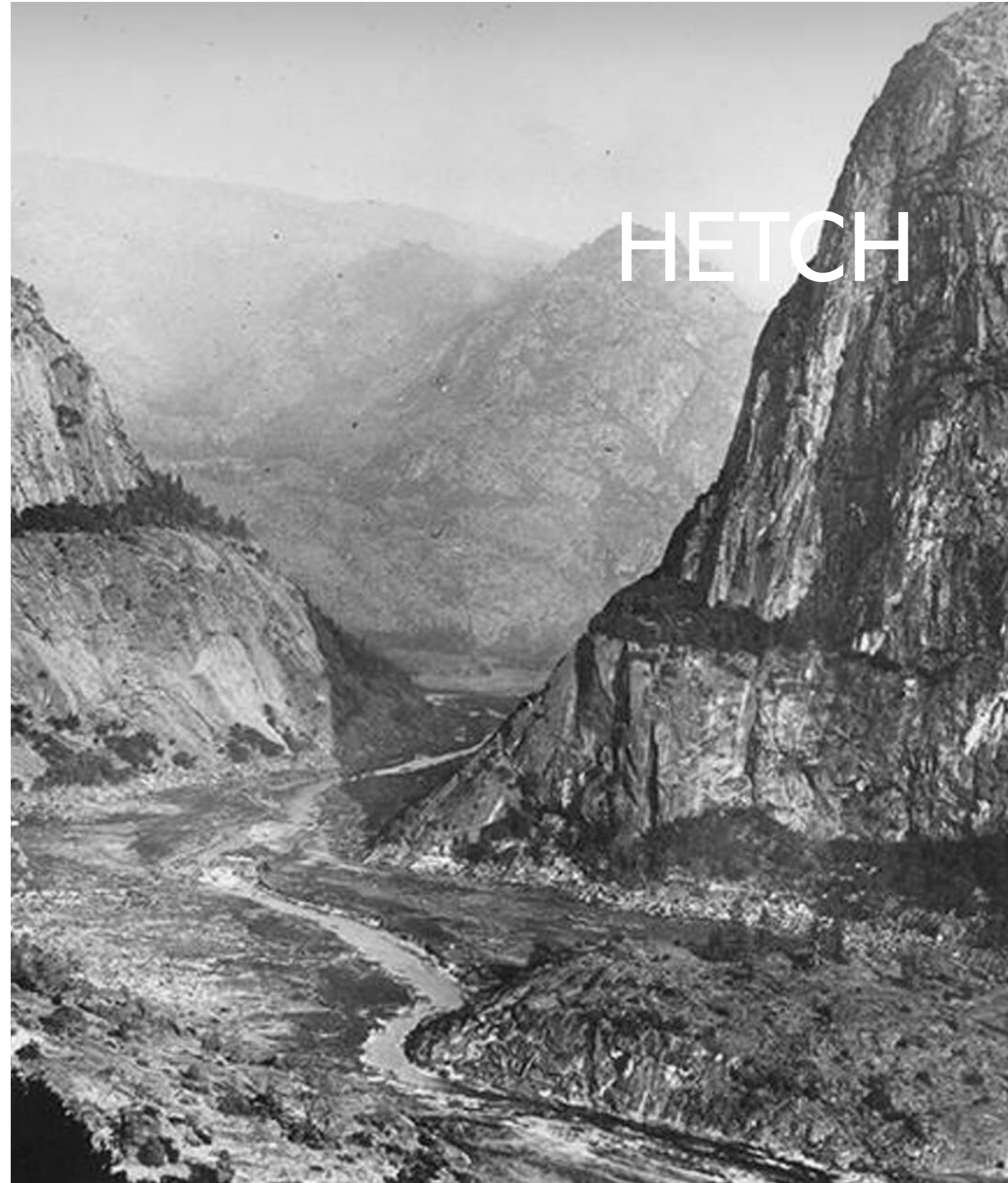


# TUOLUMNE RIVER

PHOTO: JOHN PARMENTIER NATURAL WILD AND SCENIC RIVERS SYSTEM

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WHERE DOES SAN FRANCISCO'S DRINKING WATER COME FROM?



COURTESY SAN FRANCISCO PUBLIC

PHOTO: SAN FRANCISCO PUBLIC UTILITIES COMMISSION

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

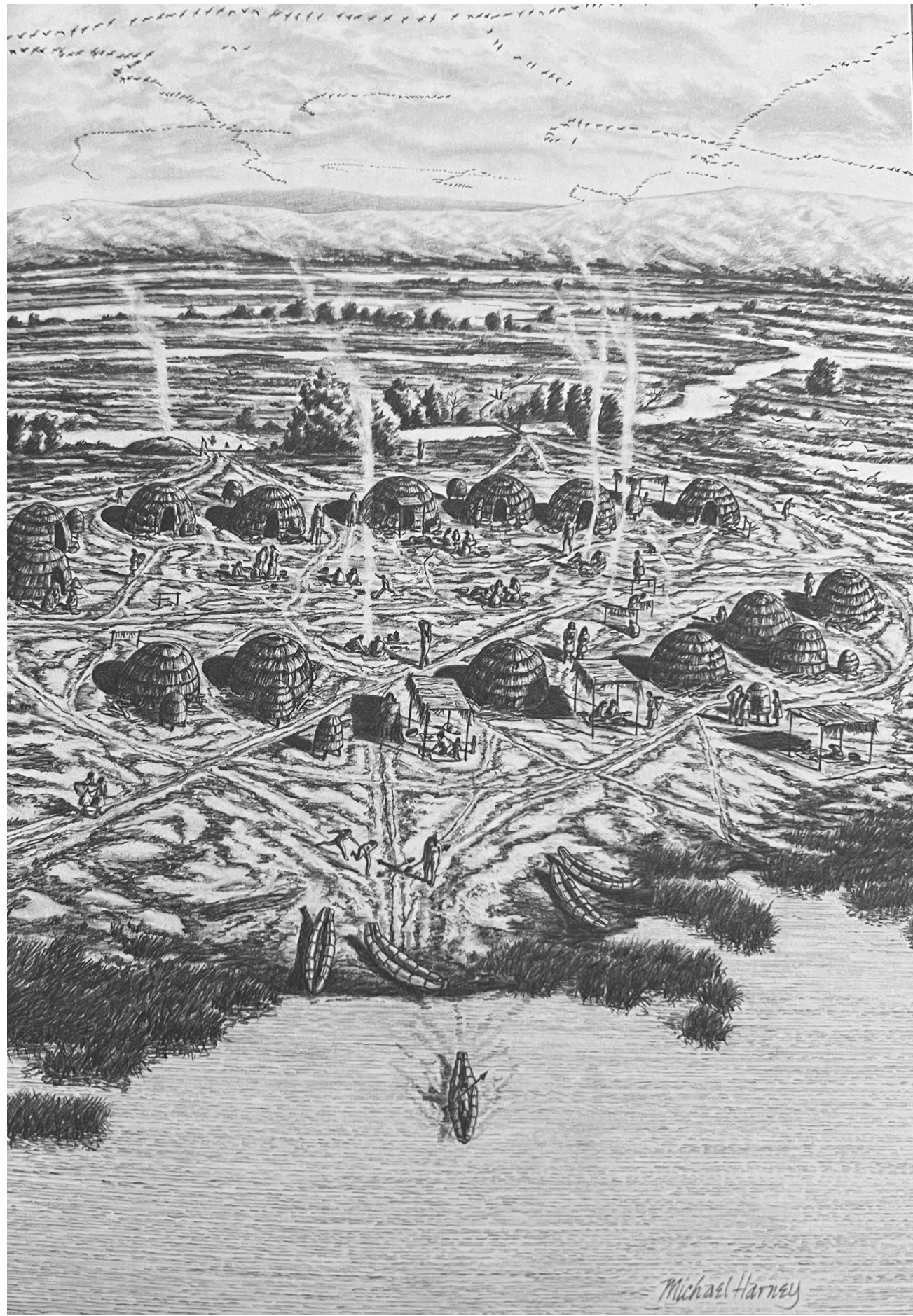
# GRAY INFRASTRUCTURE



PHOTO: SAN FRANCISCO PUBLIC UTILITIES COMMISSION

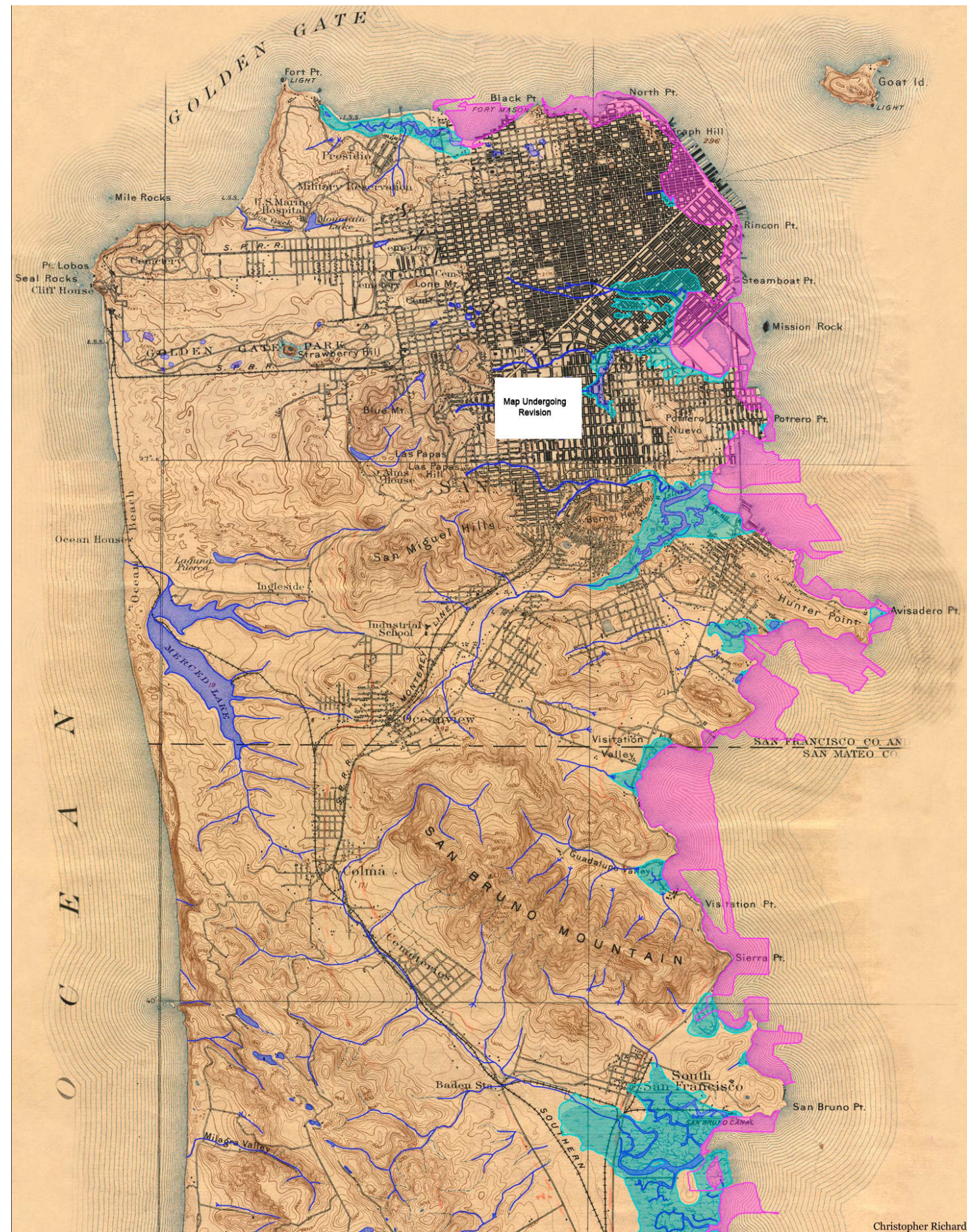
THE O'SHAUGHNESSY DAM AND A COMPLEX SYSTEM OF PIPES AND TUNNELS CONVEY WATER TO SF





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

SAN FRANCISCO IS ON OHLONE LAND

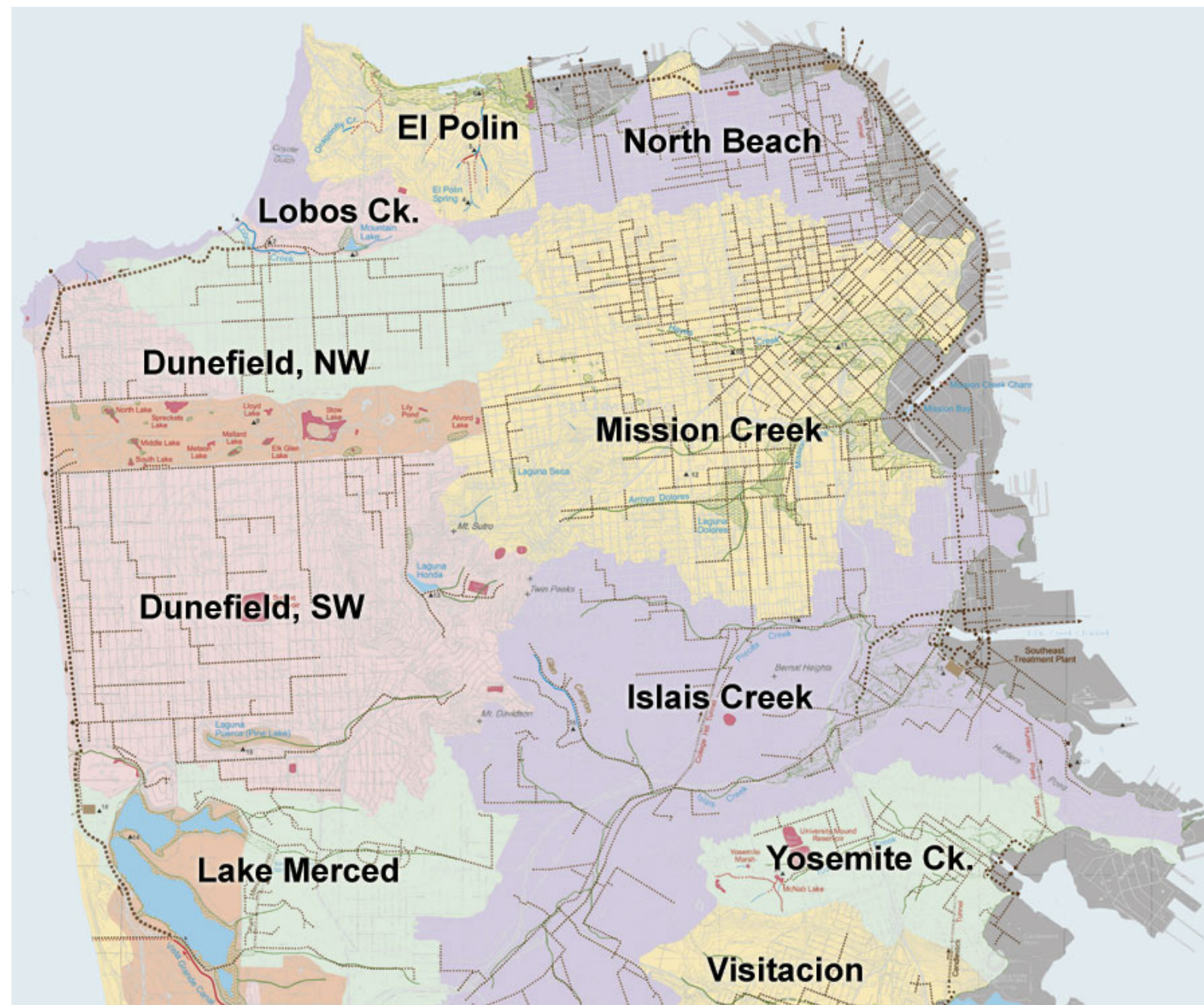


MAP: HISTOPO

# HISTORIC SAN FRANCISCO PENNINSULA



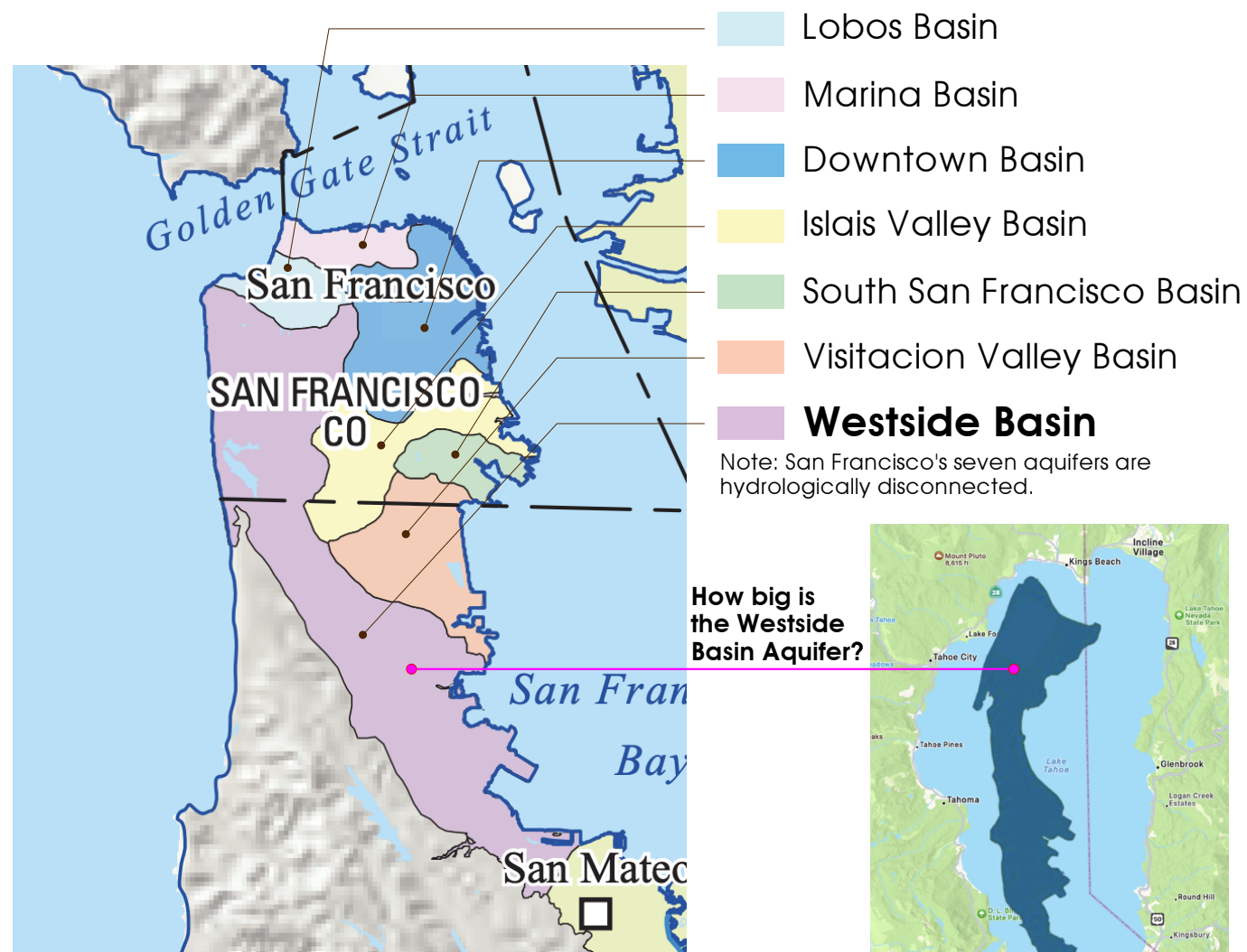
MAP: CALIFORNIA TRAVEL



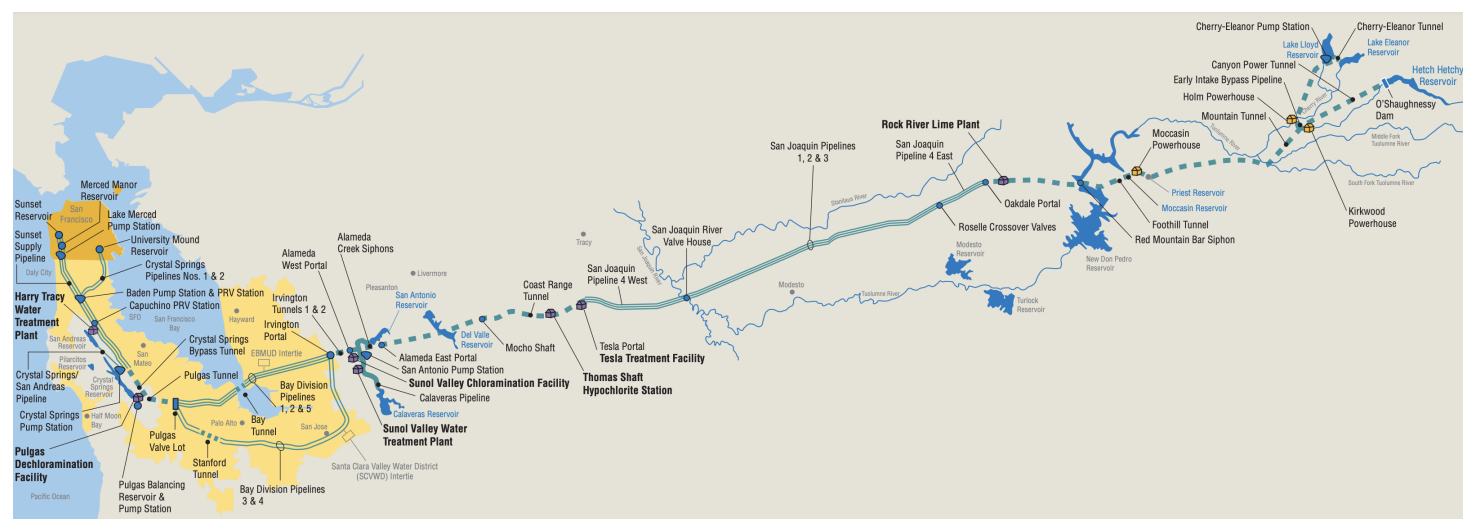
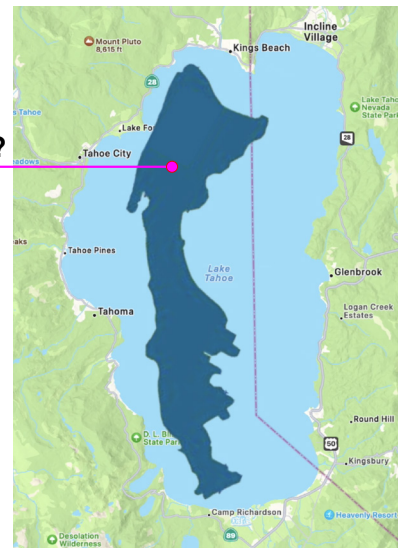
MAP: OAKLAND MUSEUM OF CALIFORNIA

## NEIGHBORHOODS AND WATERSHEDS

# San Francisco Groundwater Basins (the 7 aquifers)



How big is the Westside Basin Aquifer?



REVISIONS	BY

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

**WESTSIDE WATER RESOURCES**  
 San Francisco

Date	7/16/25
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PHOTO: CHRONICLE LIZ HALALIA

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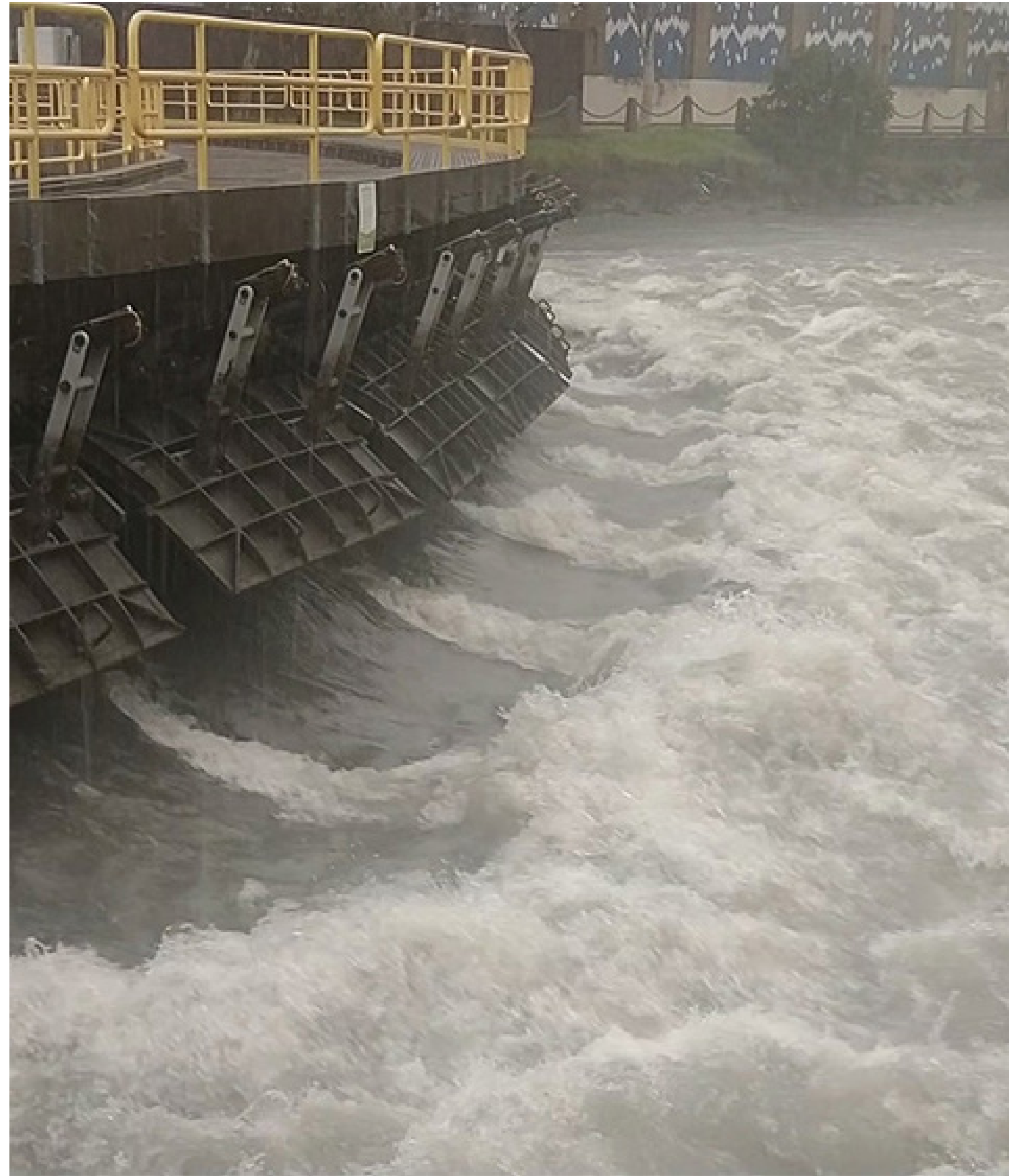
PUMP FOR THE FIRST MUNICIPAL WATER SUPPLY IN SAN FRANCISCO



SFPUC

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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**



UN-TREATED SEWAGE

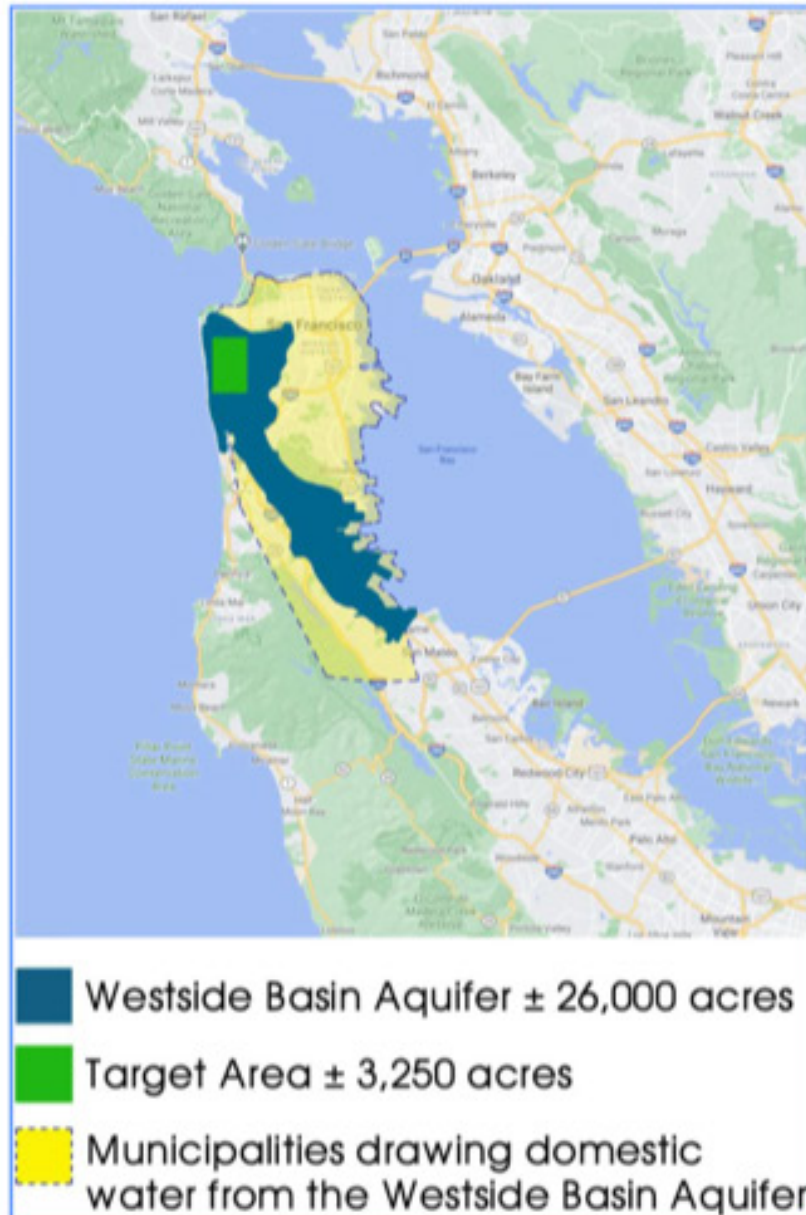
Ocean Beach at:  
**VICENTE STREET**

Be a part of the solution →

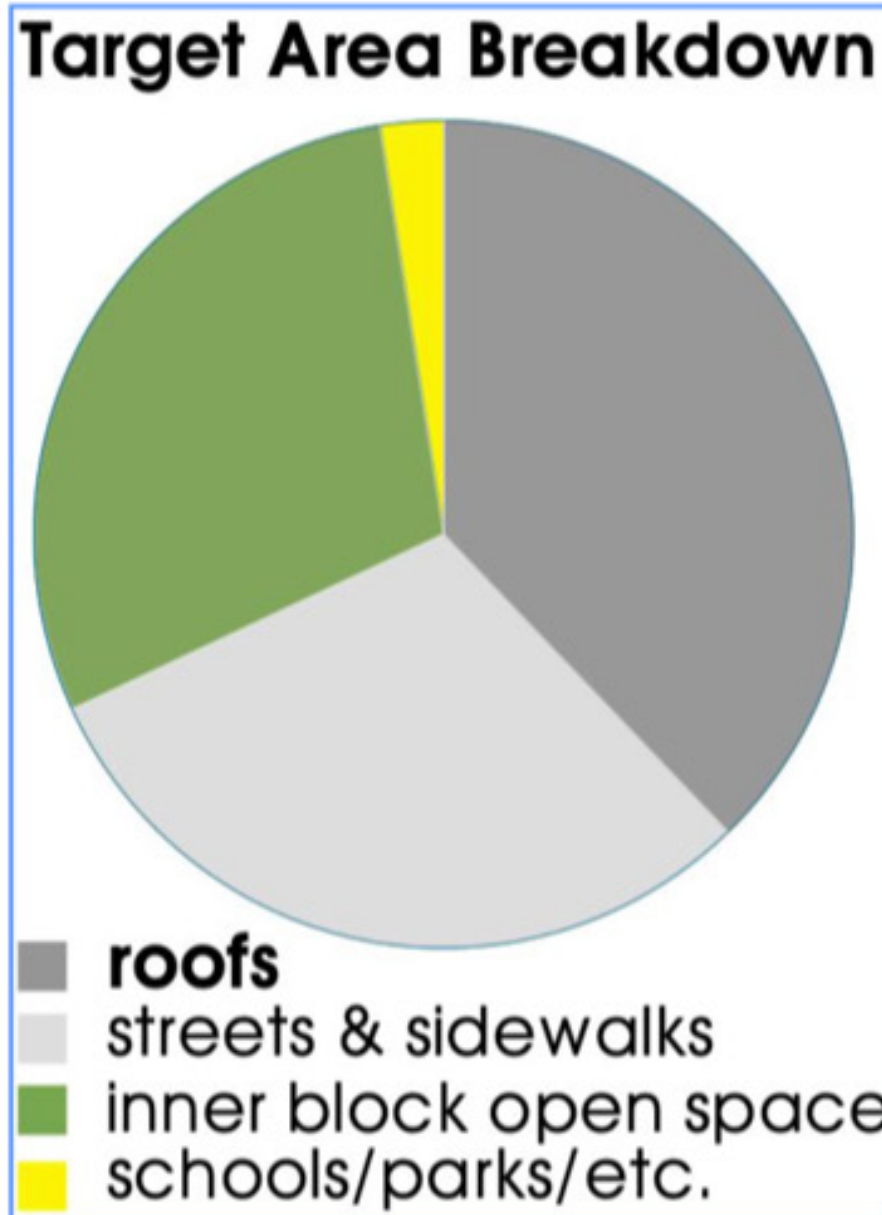




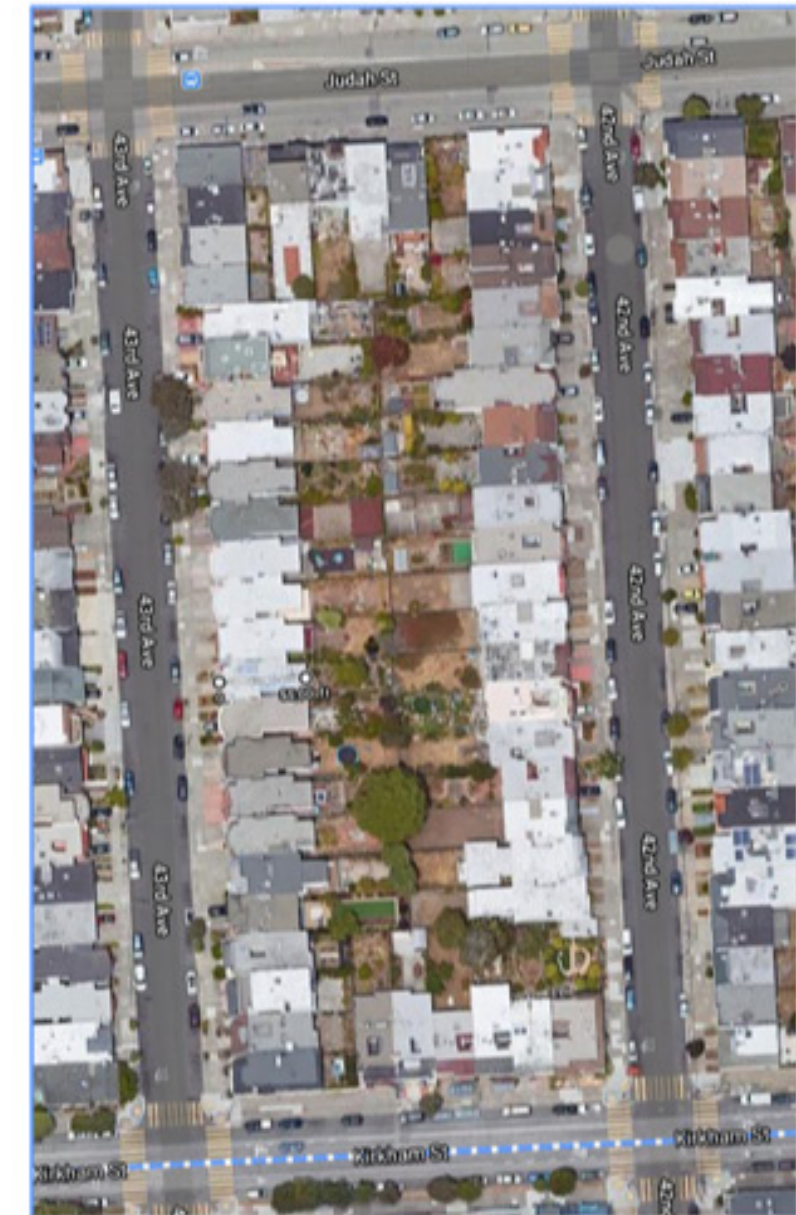
# We have found the low-hanging fruit



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



*~1/3 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*



LAKE MERCED



**PERVIOUS SURFACES ALLOW WATER TO PERCOLATE AND BECOME GROUND WATER**

**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**

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

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

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**HOW CAN WE PROTECT OUR WATERSHED?**



PHOTO: MARGARET AUSTIN

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## WATERSHED SAVING FEATURES IN ACTION

# SAN FRANCISCO WATERSHED 101

## Questions and Discussion