Empress Holliday

Training and Engagement Associate/Research Assistant
Tijuana River National Estuarine Research Reserve (TRNERR)

Ancestral homelands of the Kumayaay Nation

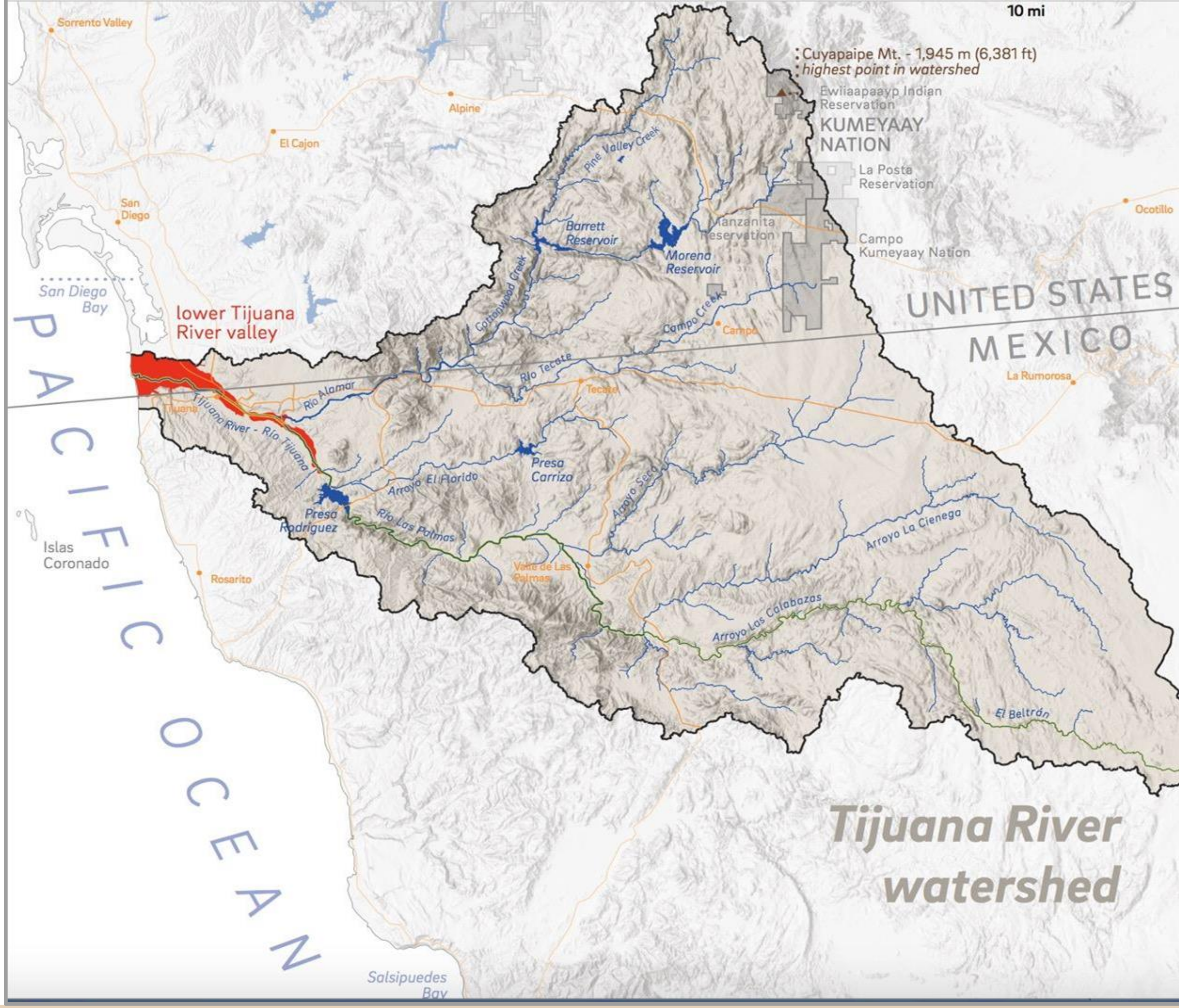
Caring for the Tijuana Estuary – what still persists

In the midst of funding challenges and changing administrations in the U.S. and Mexico, TRNERR staff have focused on nurturing and maintaining vital cross-border relationships and growing connections with the San Diego Indigenous community to promote and continue to improve Watershed health.

Minutes 320, 328, and 333 continue to be guides for enacting policy and facilitating cross border collaboration.

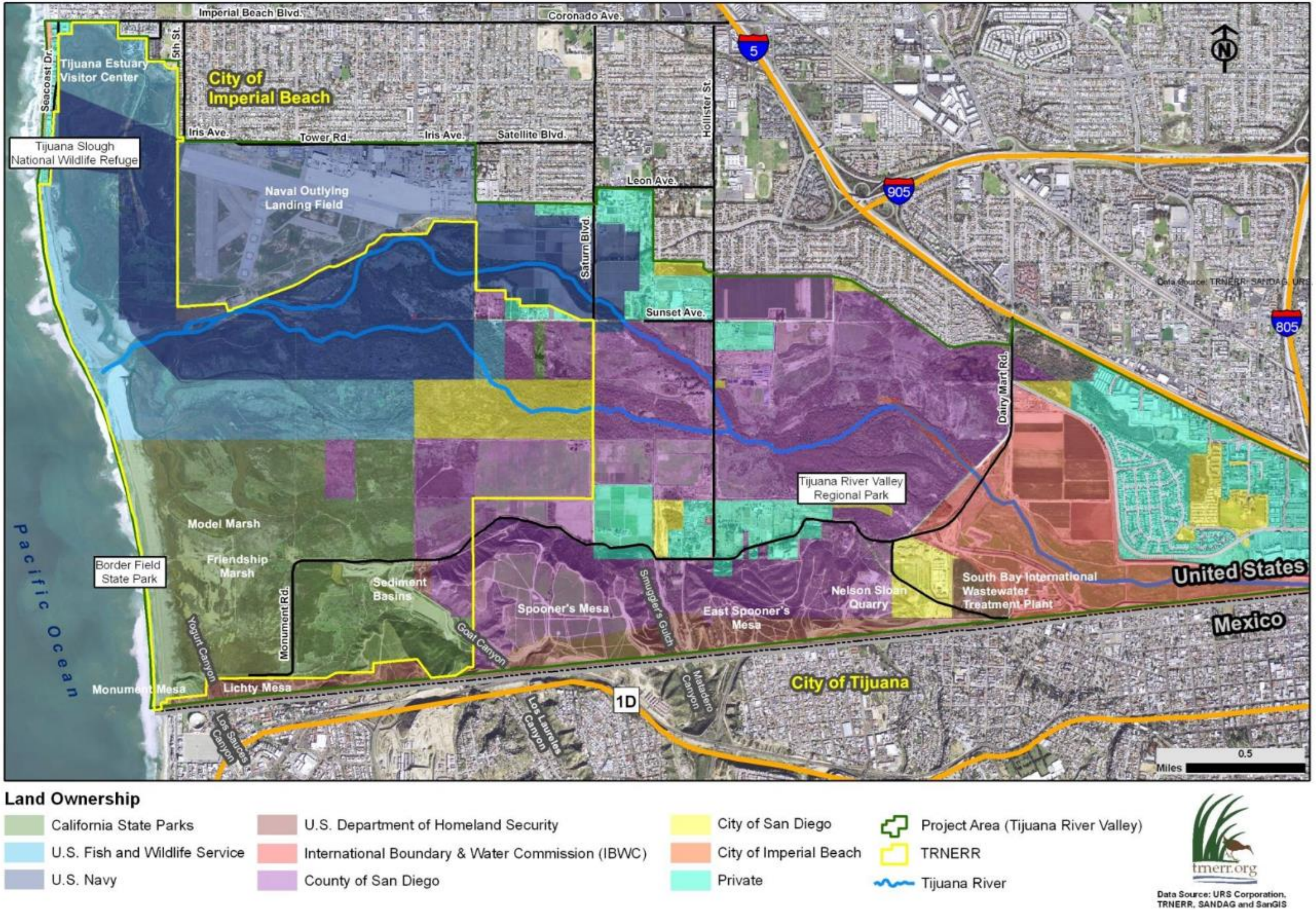
The Tijuana River Watershed (TRW)

- TRW is approx. 1,750 square miles
- Tijuana River is ~120 miles
- Its most western region spans Tijuana & San Diego:
    - The busiest land border crossing in the world
    - Known for high degree of endemism and biodiversity
- Both countries have long been connected by history, culture, commerce and geography



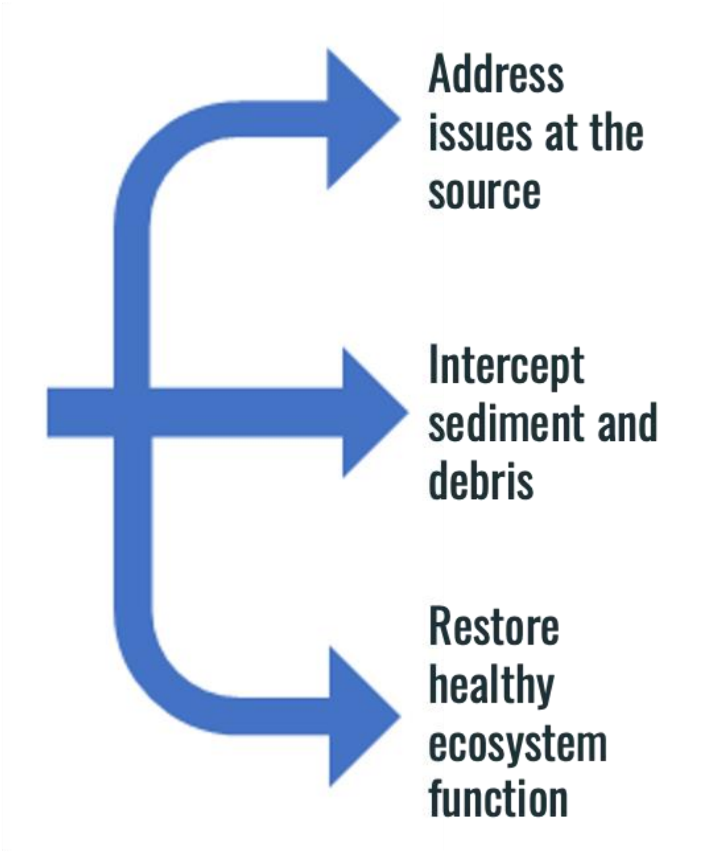
The Tijuana Estuary

- The largest and most intact coastal wetland in southern California
- Located within the Tijuana River National Estuarine Research Reserve and the Tijuana Slough Wildlife Refuge
- A “living lab” for research and for monitoring various metrics of climate change along the coast
- Ecological and management challenges include sedimentation, tropicalization, water quality, invasive species, flooding, and **marine debris**

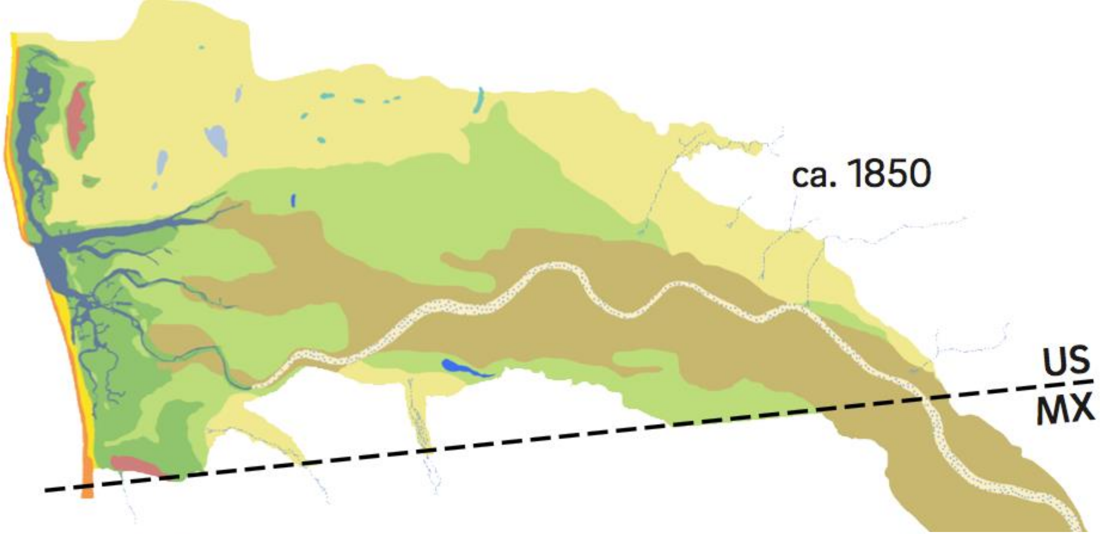


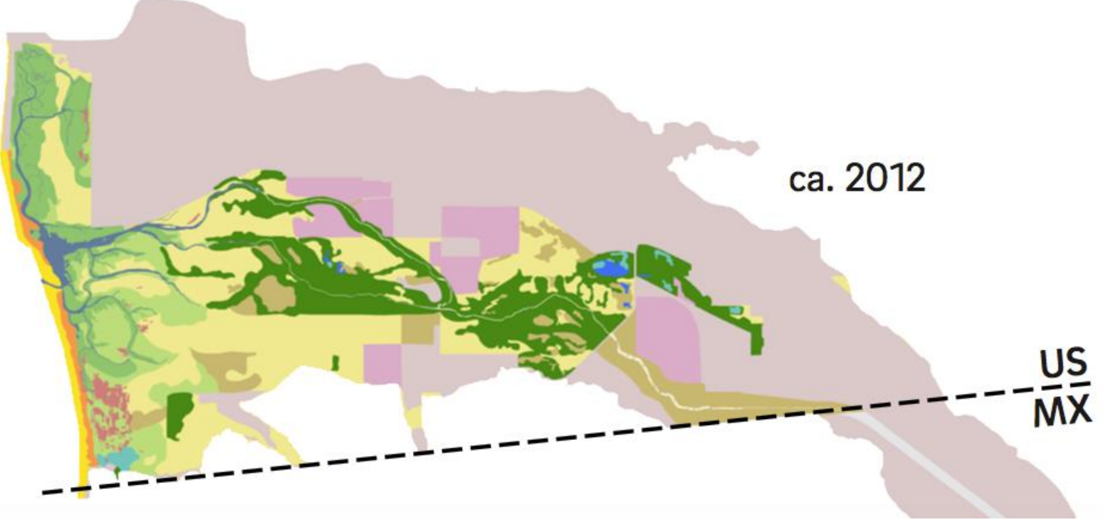
Imperial Beach Blvd.
Coronado Ave.
5
Tijuana Estuary Visitor Center
Seacoast Dr.
5th St.
City of Imperial Beach
Iris Ave.
Tower Rd.
Iris Ave.
Satellite Blvd.
Hollister St.
Tijuana Slough National Wildlife Refuge
Naval Outlying Landing Field
Leon Ave.
905
Saturn Blvd.
Sunset Ave.
805
Dairy Mart Rd.
Tijuana River Valley Regional Park
Model Marsh
Friendship Marsh
Border Field State Park
Pacific Ocean
Monument Rd.
Sediment Basins
Spooner's Mesa
Smuggler's Gulch
East Spooner's Mesa
Nelson Sloan Quarry
South Bay International Wastewater Treatment Plant
United States
Mexico
Yogurt Canyon
Goat Canyon
Monument Mesa
Lichty Mesa
City of Tijuana
1D
Los Sauces Canyon
Los Laureles Canyon
Canyon
Matadero Canyon
0.5
Miles
Land Ownership
California State Parks
U.S. Fish and Wildlife Service
U.S. Navy
U.S. Department of Homeland Security
International Boundary & Water Commission (IBWC)
County of San Diego
City of San Diego
City of Imperial Beach
Private
Project Area (Tijuana River Valley)
TRNERR
Tijuana River
trnerr.org
Data Source: URS Corporation, TRNERR, SANDAG and SanGIS

Three-pronged approach




TUFFBOOM

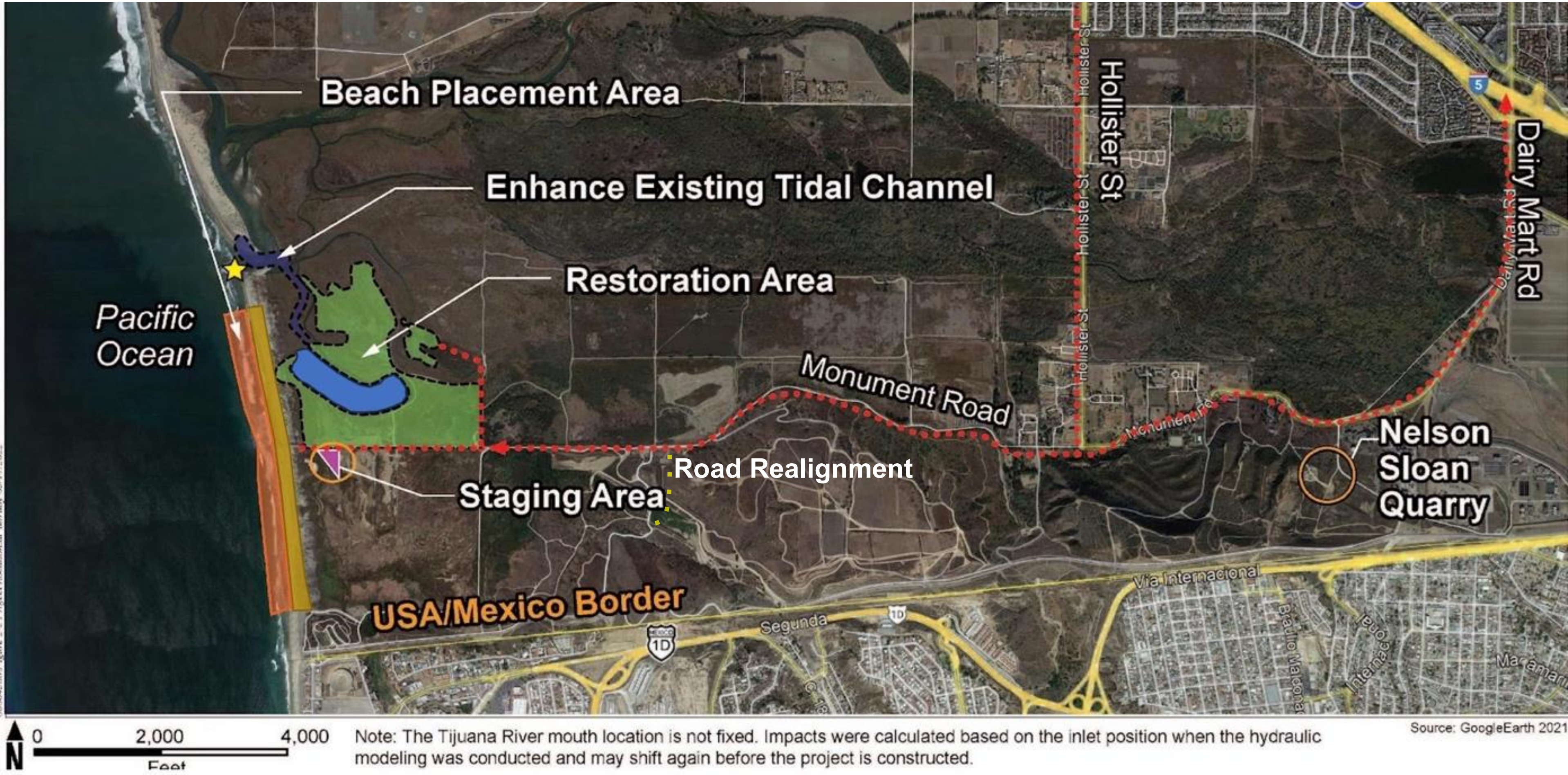




Eroding Hillsides in Tijuana

Old Entrance Kiosk to Border Field State Park (ca. 2000)

High Salt Marsh Buried in Sediment



Note: The Tijuana River mouth location is not fixed. Impacts were calculated based on the inlet position when the hydraulic modeling was conducted and may shift again before the project is constructed.

Source: GoogleEarth 2021

ECOSYSTEM SERVICES

PROVISIONING SERVICES

Products obtained from ecosystems

- FOOD & FRESH WATER
- WOOD & FIBER
- BIOCHEMICALS
- GENETIC RESOURCES
- FUEL

REGULATING SERVICES

Benefits obtained from the regulation of ecosystem processes

- CLIMATE REGULATION
- FLOOD REGULATION
- EROSION CONTROL
- DISEASE REGULATION
- WATER PURIFICATION

CULTURAL SERVICES

Nonmaterial benefits obtained from ecosystems

- AESTHETIC
- SPIRITUAL
- EDUCATIONAL
- RECREATIONAL
- CULTURAL HERITAGE
- SENSE OF PLACE

SUPPORTING SERVICES

Services necessary for the production of all other ecosystem services

- NUTRIENT CYCLING
- SOIL FORMATION
- PRIMARY PRODUCTION


Tijuana River
FUTURE
FUTURO
HERITAGE
IN BLOOM

Thank you!

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