

ENVIRONMENTAL DEFENSE FUND

Transboundary Solutions

A Water Trust, Policy, and Environmental Flows for the
Colorado River Delta

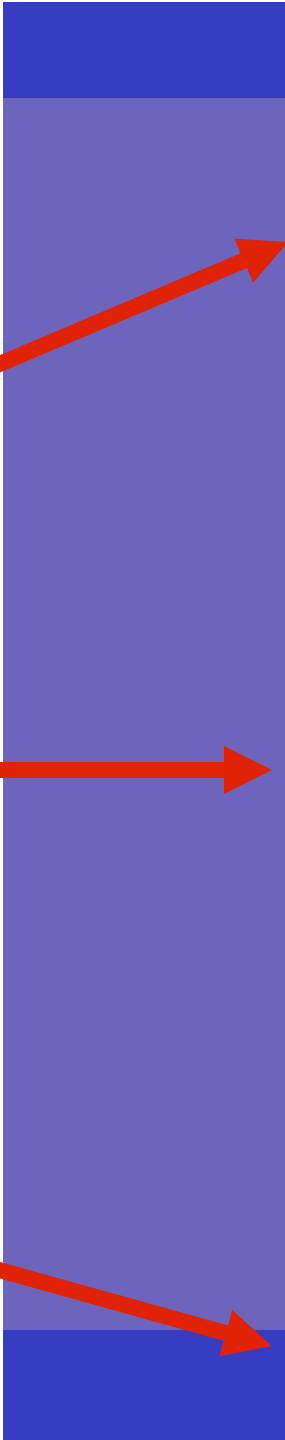
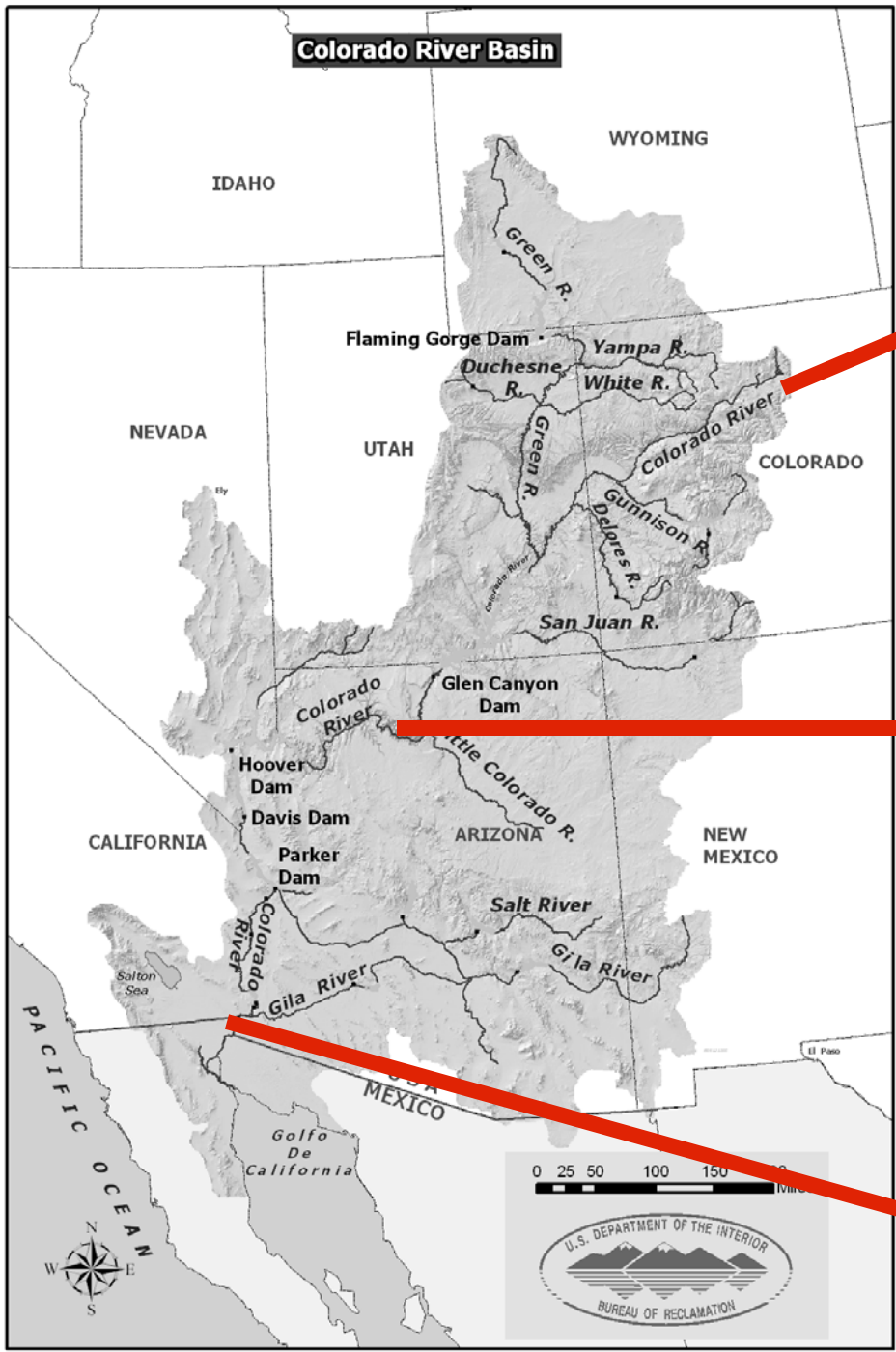
CU/Natural Resource Law Center

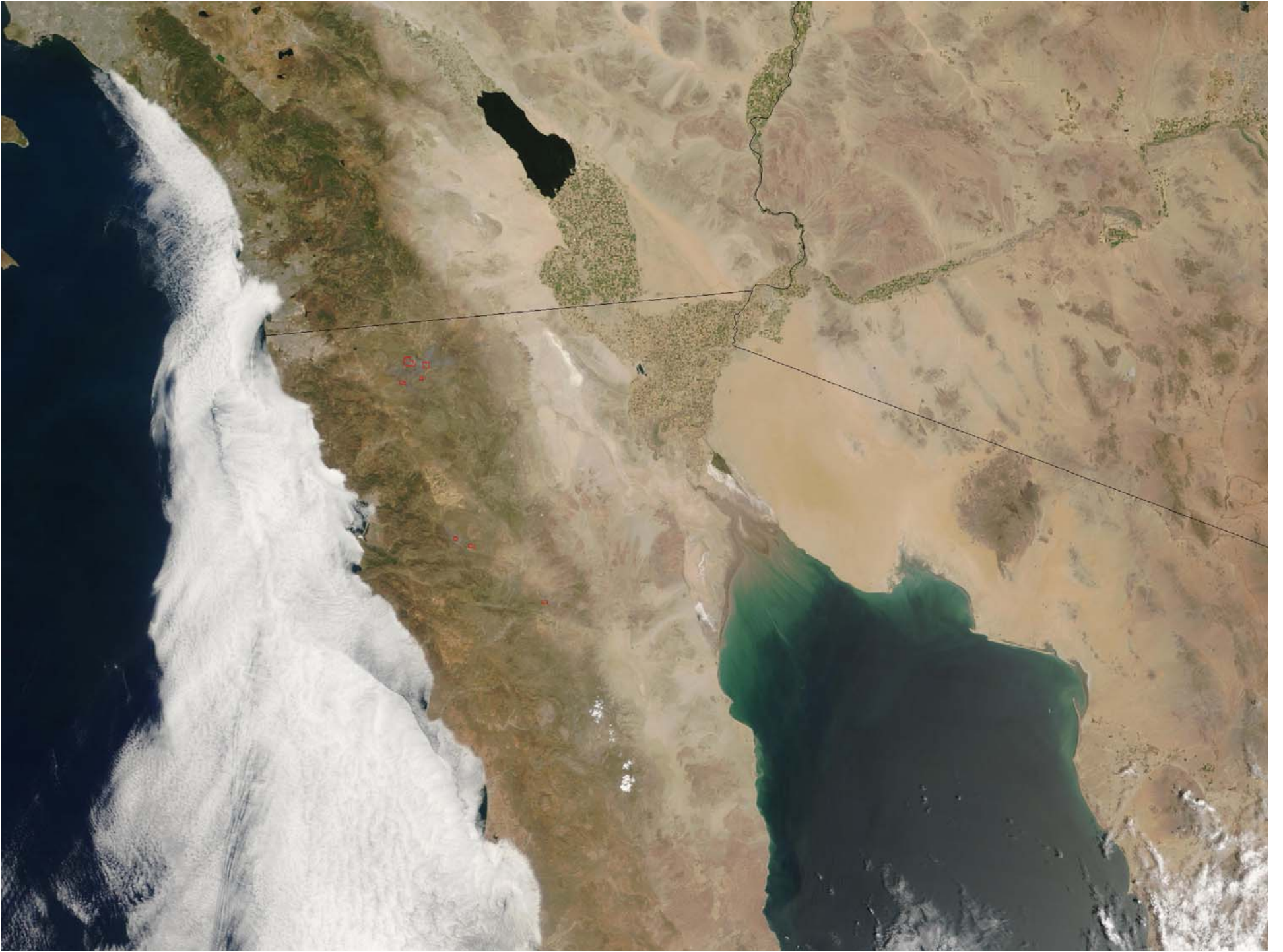
June 4, 2009



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finding the ways that work





Morelos Dam: last diversion point on the Colorado River



transboundary solutions

Transboundary Solutions

Colorado River Delta Water Trust

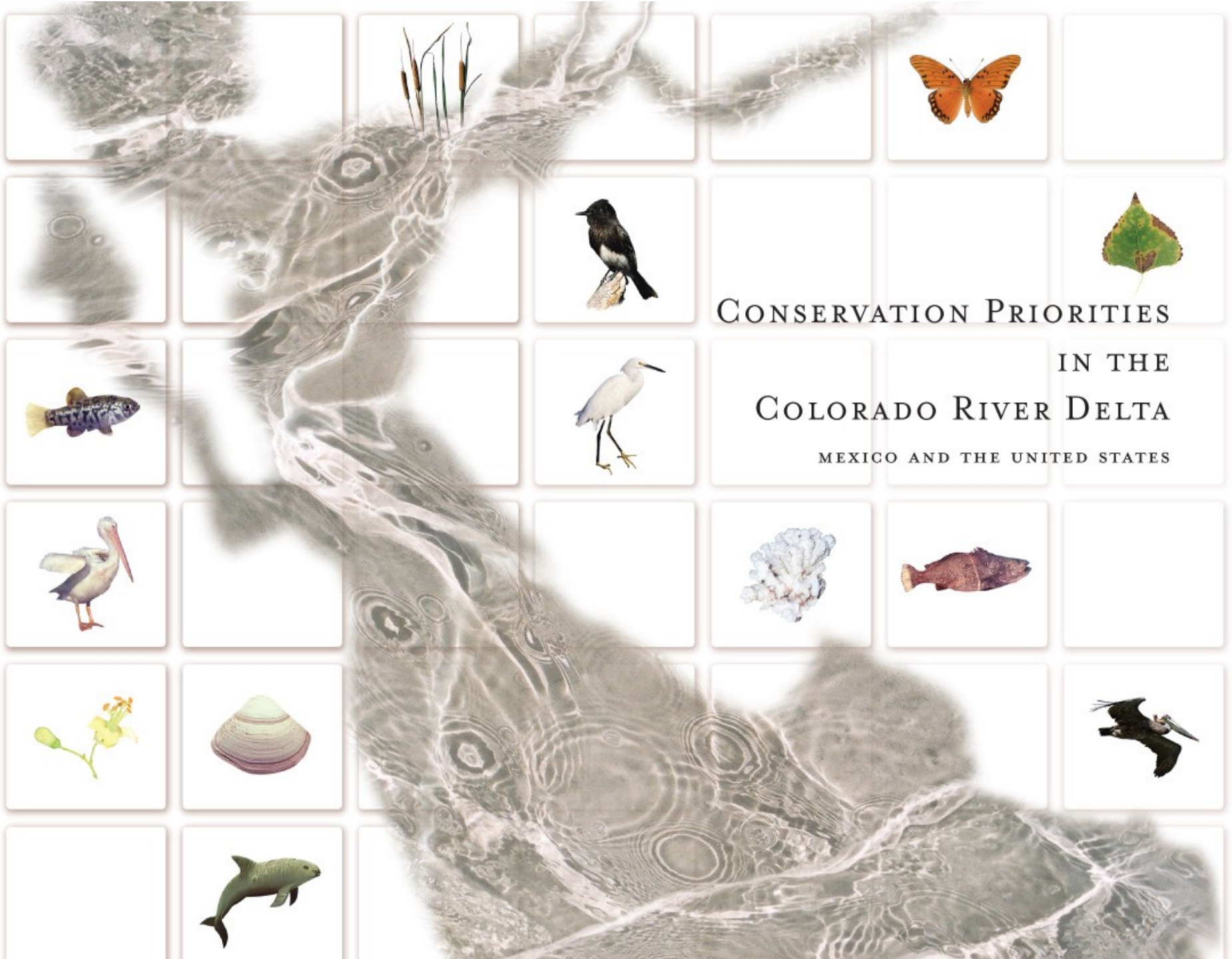
I – Water for the mainstem:
transboundary riparian restoration

II – The Ciénega de Santa Clara:
protecting a wetland and preventing
an international dispute

PS: who foots the bill?



Water Trust for the Restoration of the Colorado River Delta



CONSERVATION PRIORITIES
IN THE
COLORADO RIVER DELTA
MEXICO AND THE UNITED STATES

Legend / Leyenda

-  Marsh / Marisma
-  Dryland (Upland) Revegetation / Restauración de Zonas Áridas (Terrenos Altos)
-  Cottonwood / Willow Revegetation / Reforestación con Sauces y Álamos
-  Mesquite Revegetation / Reforestación con Mezquite
-  Mexico & US Border- 1973 / Frontera México Y USA- 1973
-  Cleared Public Safety & Flood Control / Zona Limpia para la Seguridad Pública y el Control de Inundaciones
-  Open Water / Agua Superficial
60 Ft Channel / Canal de 60 Pies (18 metros)
-  Agriculture / Agricultura
-  Colorado River Miles / Millas del Río Colorado

Total Acres/ Total de Actes

Mexico Park Area: 27.0 Acres, 11.0 Hectares
 Área del Parque en México: 27.0 Actes, 11.0 Hectáreas

Total Open Water: 39.0 Acres, 15.8 Hectares
 Total de Agua Superficial: 39.0 Acres, 15.8 Hectáreas

Total 60 Ft Channel: 16,265 Linear Feet, 4,958 Linear Meters
 Total del Canal de 60 Pies (18 metros): 16,265 pies lineales, 4,958 metros lineales

Total Dryland (Upland) Revegetation: 560.0 Acres, 227.0 Hectares
 Total de Restauración de Zonas Áridas (Terrenos Altos): 560.0 Acres, 227.0 Hectáreas

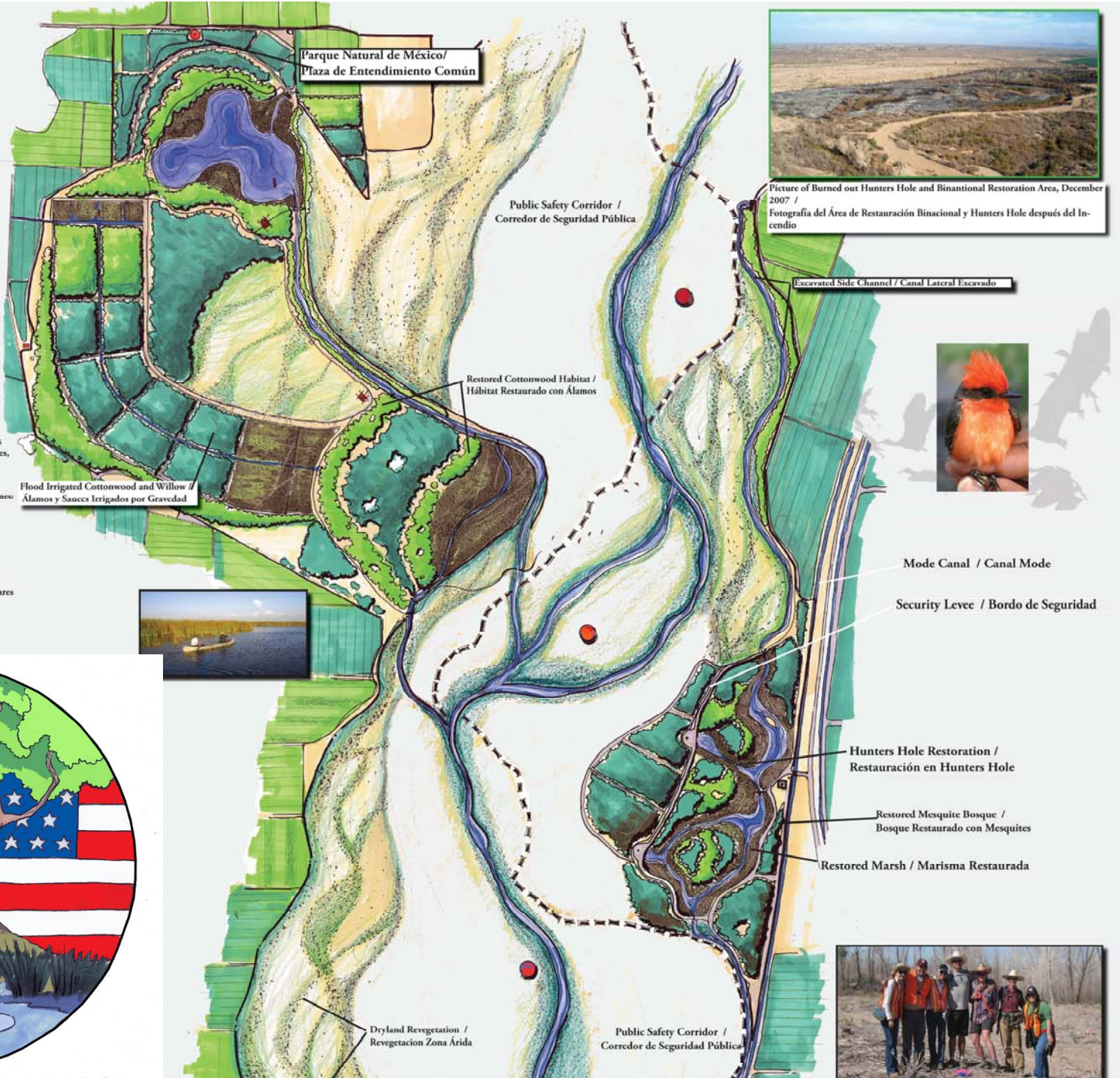
Total Cleared Public Safety / Flood Control: 511.5 Acres, 207.0 Hectares
 Total de Zona Limpia para la Seguridad Pública y el Control de Inundaciones: 511.5 Acres, 207.0 Hectáreas

Total Marsh: 45.0 Acres, 18.2 Hectares
 Total de Marisma: 45.0 Acres, 18.2 Hectáreas

Total Mesquite Revegetation: 165.5 Acres, 67.0 Hectares
 Total de Reforestación con Mezquite: 165.5 Acres, 67.0 Hectáreas

Total Cottonwood / Willow Revegetation: 119.3 Acres, 48.3 Hectares
 Total de Reforestación con Sauces y Álamos: 119.3 Acres, 48.3 Hectáreas

Total Saltgrass: 22.31 Acres, 9.0 Hectares
 Total de Pasto Salador: 22.31 Acres, 9.0 Hectáreas



Picture of Burned out Hunters Hole and Binational Restoration Area, December 2007 /
 Fotografía del Área de Restauración Binacional y Hunters Hole después del Incendio



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Trust acquisitions

| Transaction | Amount (USD) | Date | Ha | Total AF | Total m3 | Cost/ha (USD) | Cost/af (USD) |
|-----------------|----------------|------------|------------|--------------|------------------|---------------|---------------|
| Limitrophe-WFF | 102,559 | 1/9/2008 | 96 | 778 | 960,000 | 1,554 | 192 |
| 24 HA NAWCA-501 | 36,000 | 10/30/2007 | 24 | 195 | 240,000 | 1,500 | 185 |
| 6 HA NAWCA-501 | 9,000 | 10/30/2007 | 6 | 49 | 60,000 | 1,500 | 185 |
| 20 HA NAWCA-391 | 28,074 | 9/28/2006 | 20 | 162 | 200,000 | 1,404 | 146 |
| 20 HA NAWCA-391 | 28,074 | 9/28/2006 | 20 | 162 | 200,000 | 1,404 | 146 |
| 6 HA NAWCA-391 | 8,422 | 9/28/2006 | 6 | 49 | 60,000 | 1,404 | 146 |
| Total | 212,129 | | 172 | 1,395 | 1,720,000 | | |

Plus an additional USD \$248,000 (NFWF and Packard)

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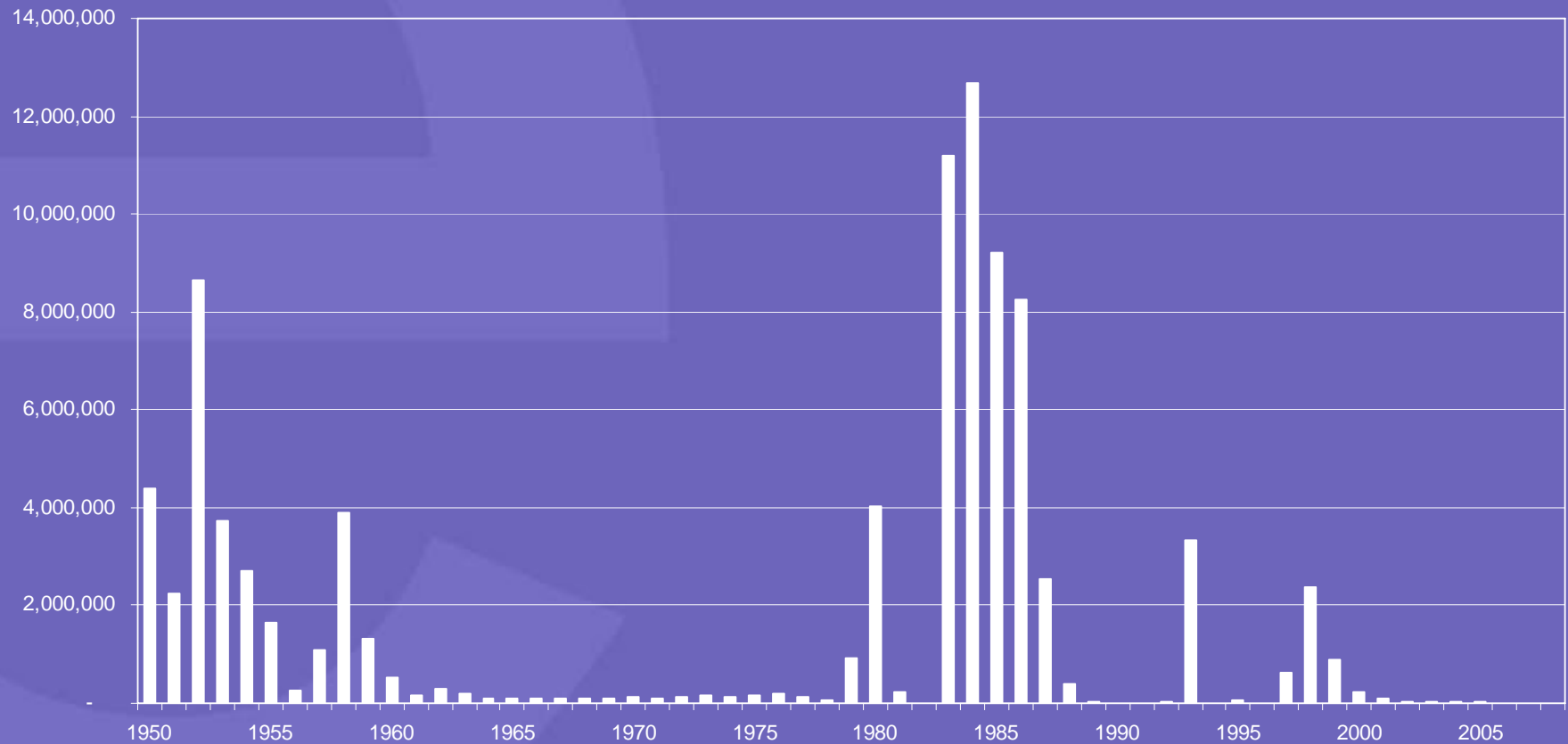
Colorado River Delta Restoration: Moving forward!

- Allocation of water is feasible
- Large-scale protection of the floodplain is feasible
- Resilient ecosystem: restoration is feasible
- Beneficial for regional economy

Restoration Requires Instream Flows

- Irrigated, off-channel restoration is expensive, labor intensive
- Requires continued 'gardening' in absence of natural hydrologic regime
- Conservation strategy includes baseflows and pulseflows

Flows Below Morelos Dam 1950-2008



transboundary solutions

Trust to Create Delta Instream Flows

- Baseflow of 2 cms (50,000 af/year) – Trust goal to acquire in 5 years
- Occasional pulse flow of 100-200 cms for several weeks (260,000 af/year)
 - requires storage – Mexico has none
 - new policy mechanism needed

US-MX agreement?

- Room for improvement on CO River
- Surplus, All American Canal, and Drop 2 viewed by MX as problems/failures
- 2007 shortage guidelines anticipate MX participation
- Some US water users with “urgent” needs to augment supplies
- e-flows not yet addressed in delta

Binational Negotiations

- IBWC initiated 2007
- Federal and state governments, US LB urban wholesalers, NGOs
- Work in progress

Binational Negotiations

- Conservation in Mexico
- 'New Water' via desal in Mexico
- Mexican participation in shortage management
- Environmental Flows

Lake Mead Storage for Mexico?

- ‘Intentionally Created Surplus’ created in 2007 Interim Guidelines
- ICS provides for multi-year storage in Mead
- Coalition of NGOs worked to define “Conservation Before Shortage” alternative with proposed Mexican participation in ICS
- ROD limited to domestic policy but EIS contemplated Mexican ICS and opened door to negotiations

Intentionally Created Mexican Allocation?

Bank conserved Mexican water in Lake Mead for:

- Exchange with US water users
- Shortage supply for Mexico
- Occasional pulse flows for Mexico via Water Trust

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On the other hand... the Yuma Desalting Plant



transboundary solutions

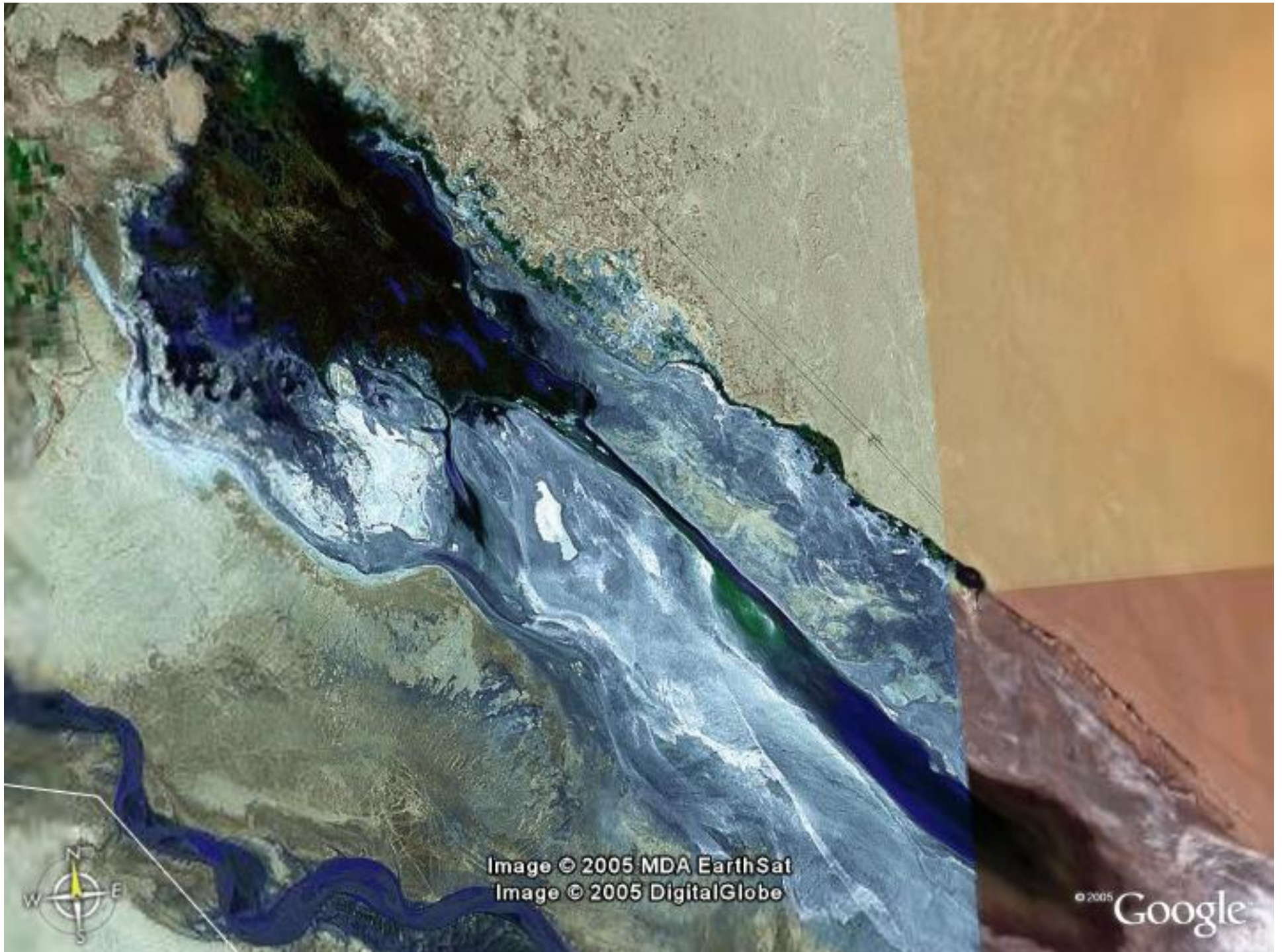


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Colorado River

USA
MEXICO

Proposed 2009 YDP Pilot

- Under NEPA review, but US does not at present recognize need to assess or mitigate transboundary impacts
- Two key problems:
 - Harm to Cienega
 - Disruption of binational negotiations

“Fill the Hole”

- EDF and ProNatura proposed use of Water Trust to acquire some of the water needed to maintain quantity and quality of flows to Cienega
- Trust commitment conditioned on equal match from both US and MX governments
- Agreement from US and MX via IBWC

Delta Water Trust is creating solutions but who pays?

- Trust has raised significant funds from private donors as well as some from government wildlife programs
- Is that sustainable?
- Trust provides vehicle for US water users to avoid diplomatic problems and environmental harms (notwithstanding legal requirements)
- Is there a model where the beneficiary pays?

