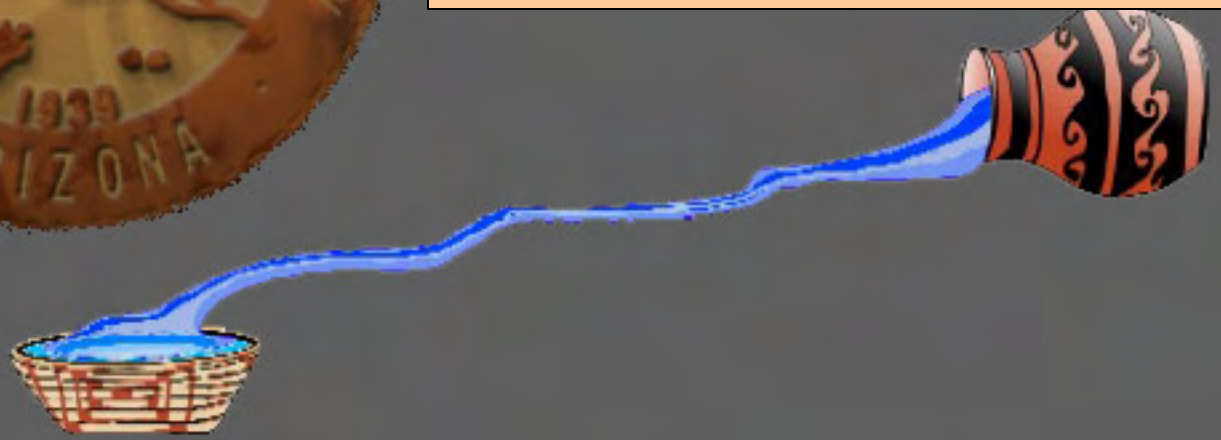
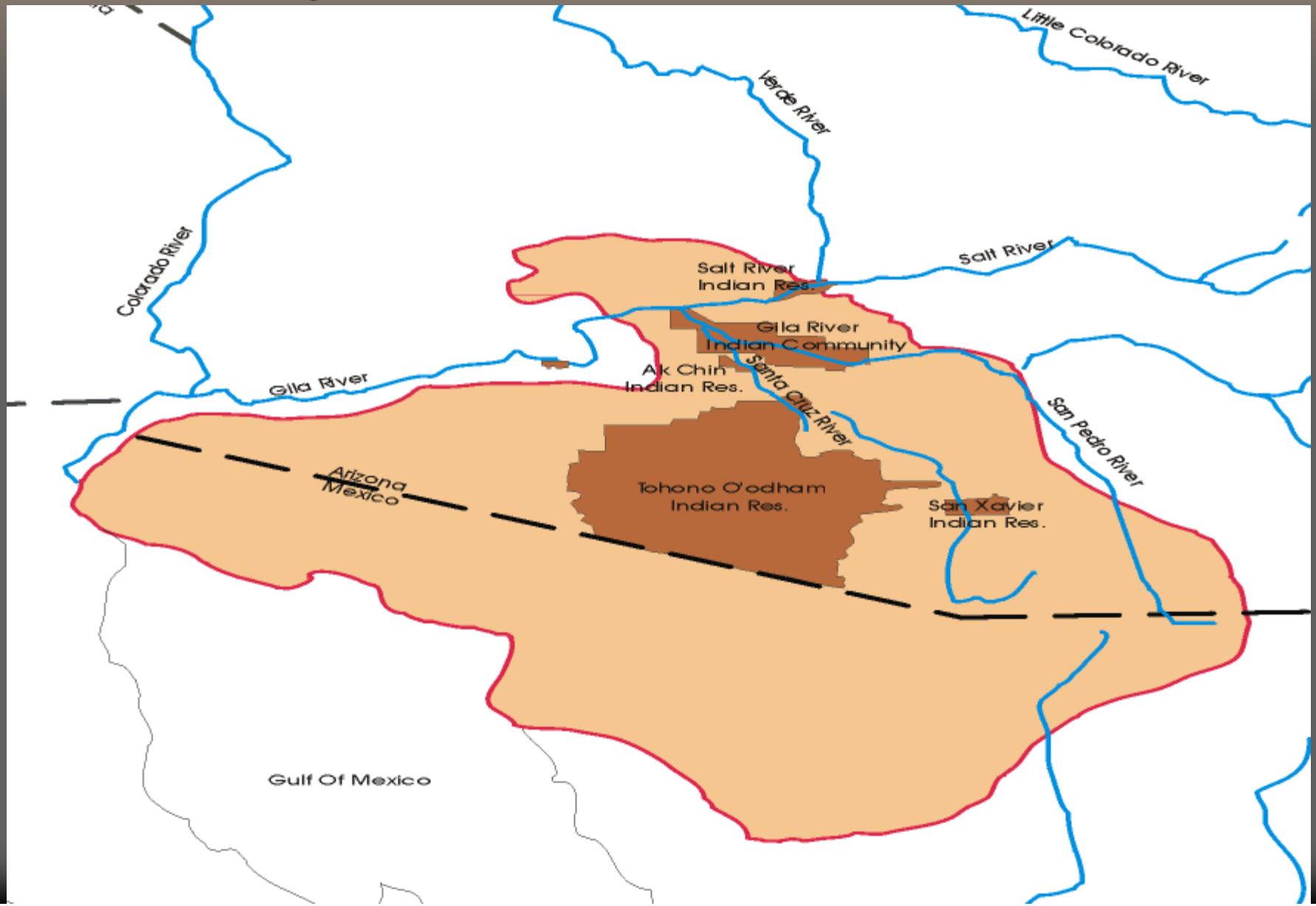
Overview and Historical Development Pima-Maricopa Irrigation Project

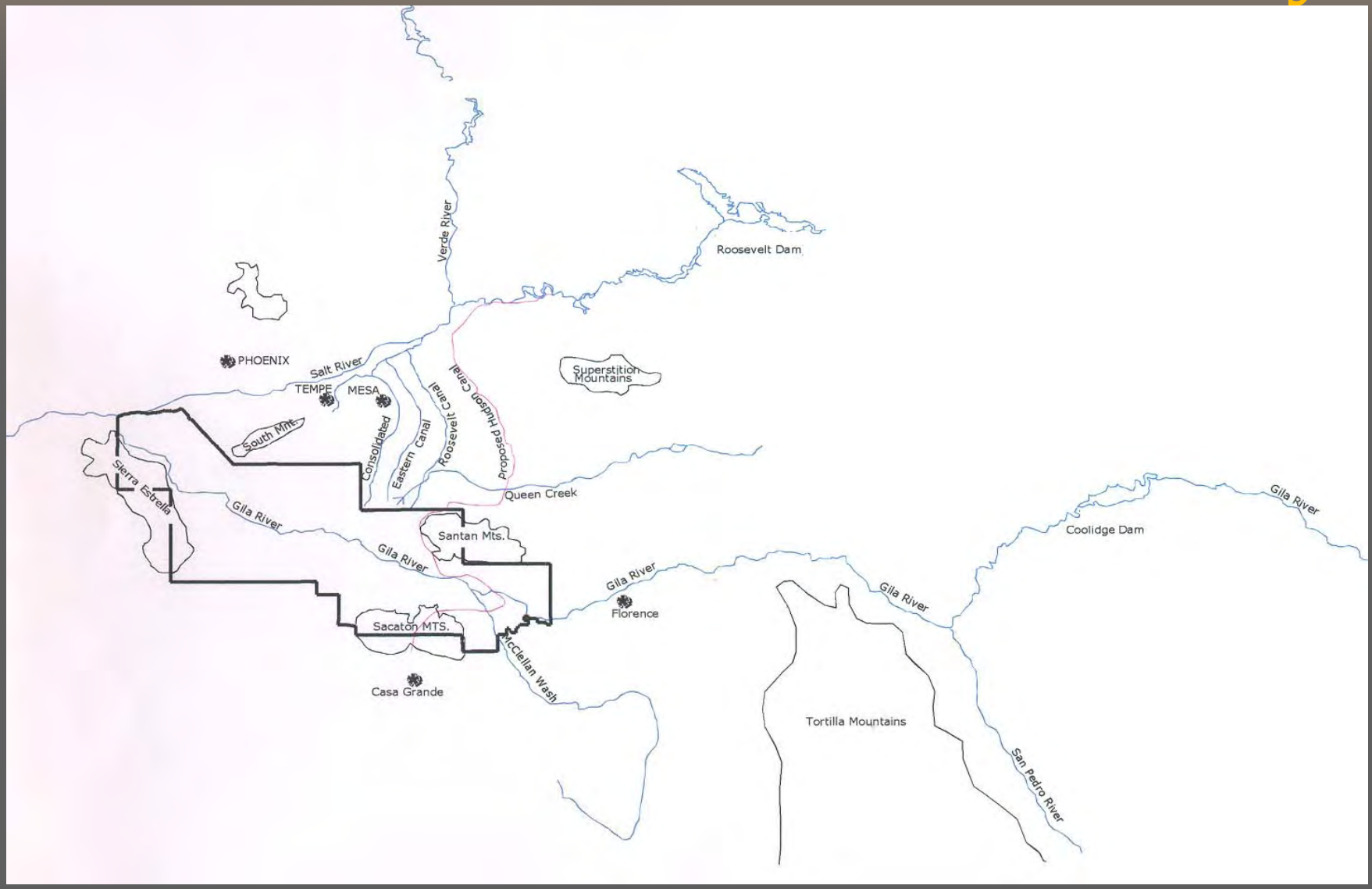
Presented by E. Lee Thompson
Program Director
Department of Land and Water Resources



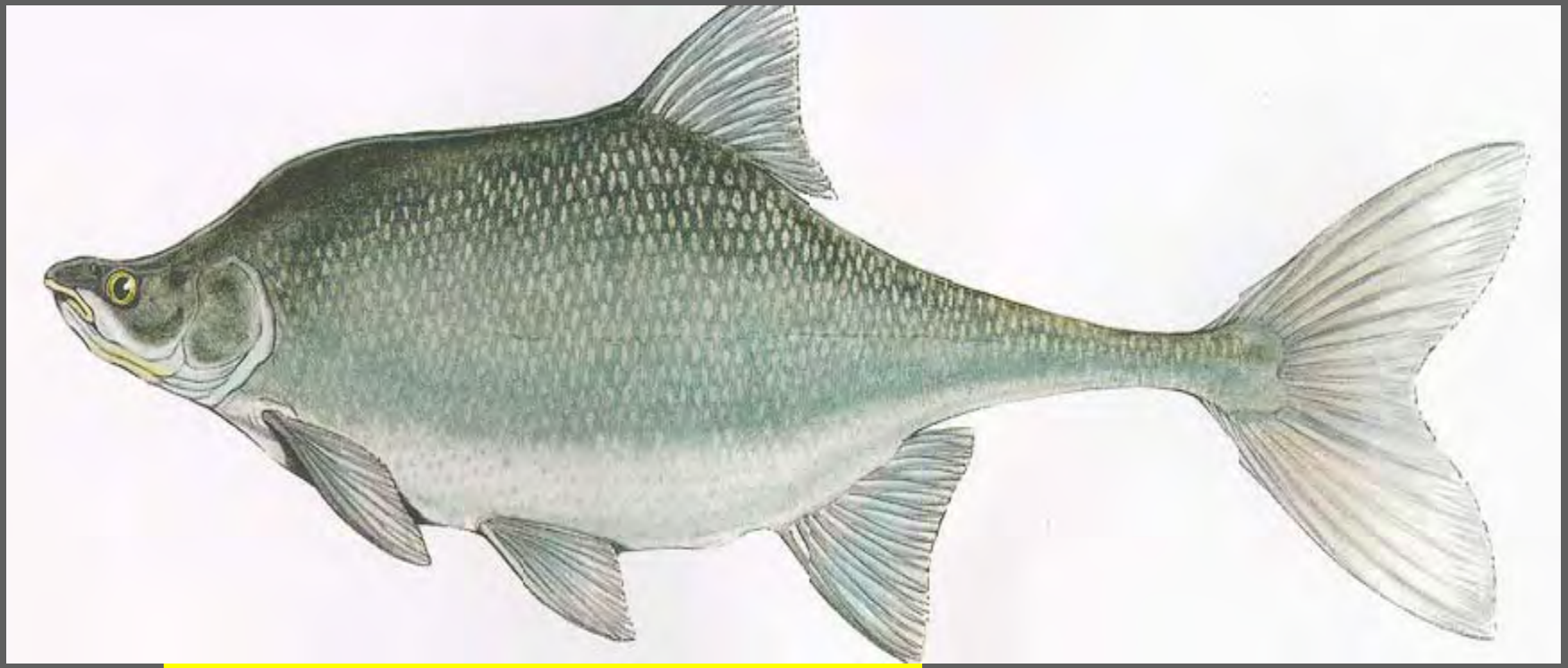
Aboriginal Lands of the O'otham



Gila River Indian Community

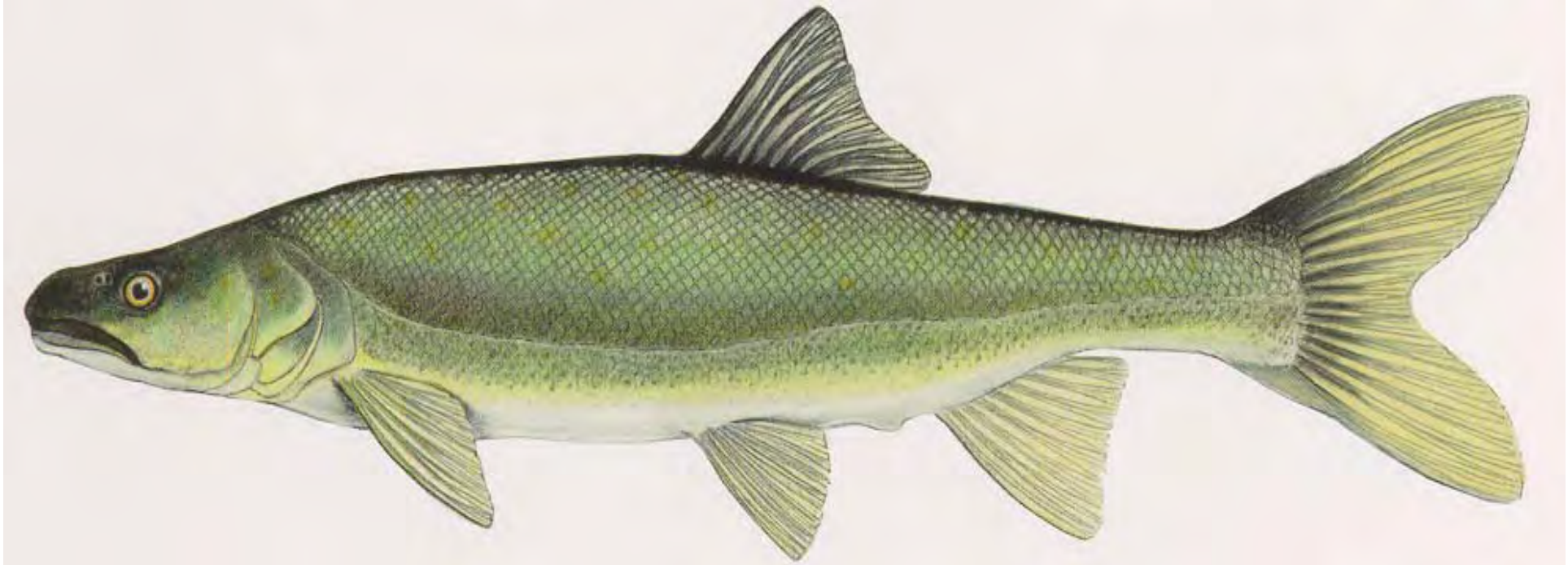


The Gila River was full of …



Bony Tail Chub,
6-24 inches

... and



Colorado pikeminnow,
24+ inches

Natural riparian areas

Father Eusebio Francisco Kino was the first to note “very large cottonwood groves” along the Gila River within the Pimeria Alta, or the land of the Upper Pimas.

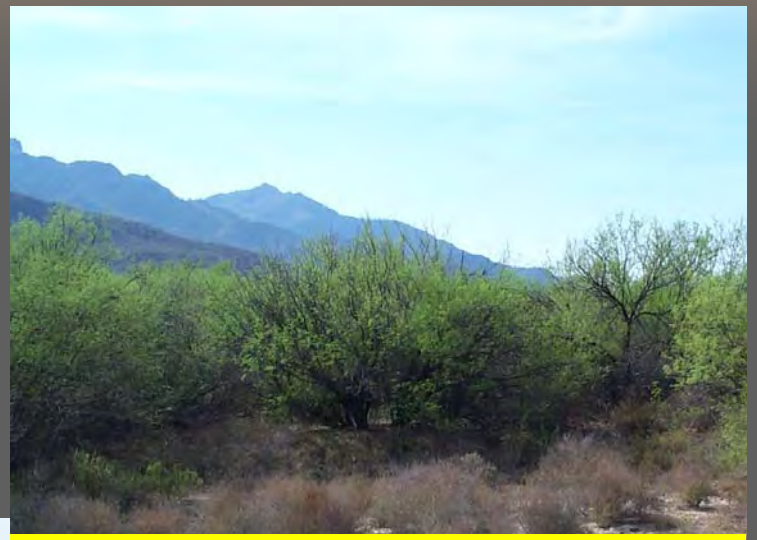
Father Eusebio Francisco Kino, November 1694

Natural riparian areas

Other Spanish priests noted the lush cottonwood and willow along the Gila River. In 1797, Fray Diego Bringas wrote: “As for trees, the banks of the river are covered with cottonwoods and willow which are the only timber for construction.”

It was a land of contrast . . .

Broad fields of wheat



Huge mesquite bosques

Vast areas of natural desert foods

And a flowing river

Trees and grasslands once abounded

. . . and productive farmland.

18th Century descriptions

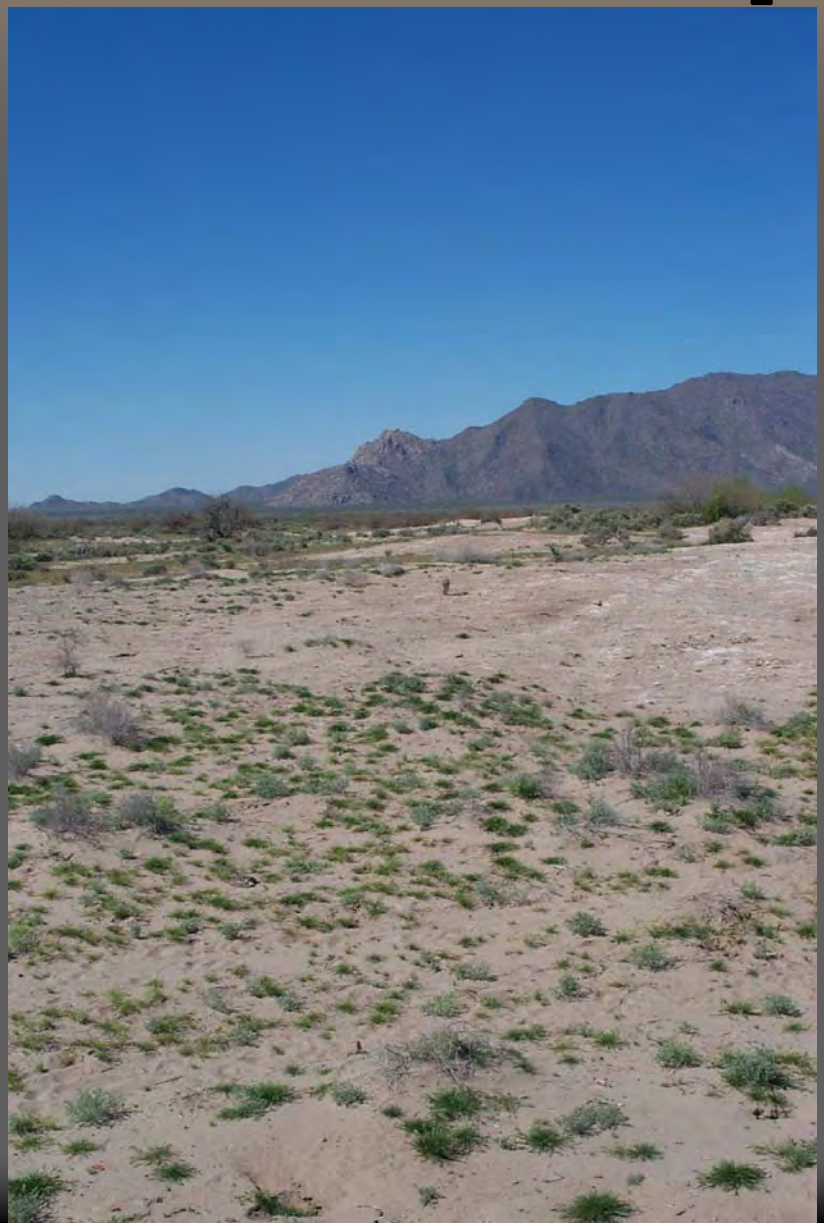
"All of these rancherias on either bank of the river and on the islands enjoy broad areas for the cultivation of crops. These Indians raise corn, beans, squash, and cotton. Those of Sudac-sson raise wheat by irrigation."

Father Jacobo Sedymayr, 1746

18th Century Maricopa Wells

Father Jacobo Sedymayr named the lush area between the Santa Cruz and Gila Rivers “Santa Teresa” in 1746. It later became known as Maricopa Wells.

Maricopa Wells



Maricopa Wells, shown today, was the central stage stop on the Butterfield Stage Line between Missouri and California. It was also a stop on the Overland Mail line.

de Anza Expedition

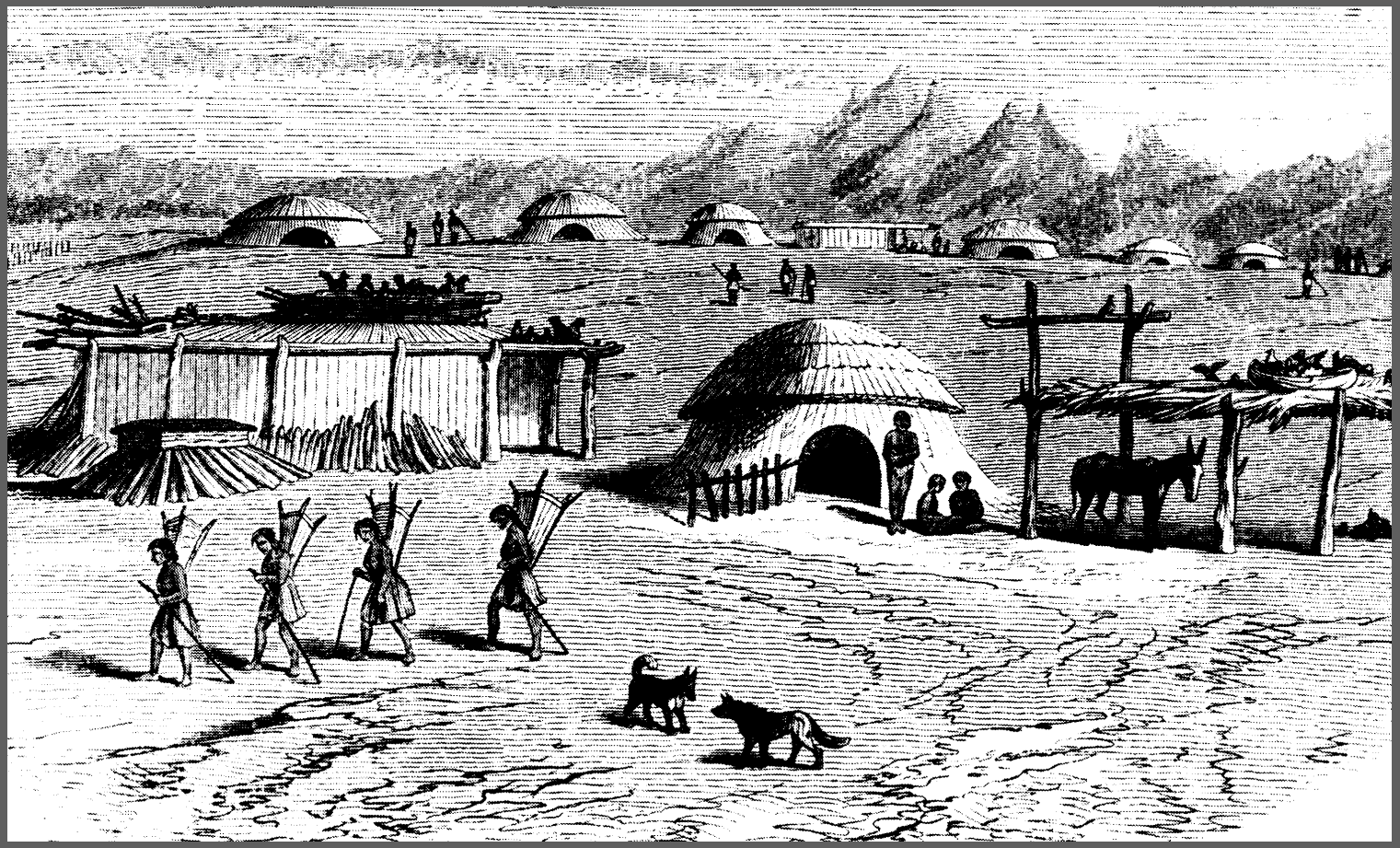
On November 1, 1775, Juan Bautista de Anza reached the Pima villages on his historic trip to establish Monterey, California.

Mexican War: 1846

"The whole distance [through the Pima Villages] was through cultivated grounds and a luxuriantly rich soil; there is a large [canal]well out from the river; the plain appeared to extend out in every direction fifteen or twenty miles."

Colonel Philip St. George Cooke, Mormon Battalion, 12/23/1846.

California Gold Rush, 1849-1851



An estimated 60,000 visitors came through the Pima villages.

California Gold Rush, 1849-1851

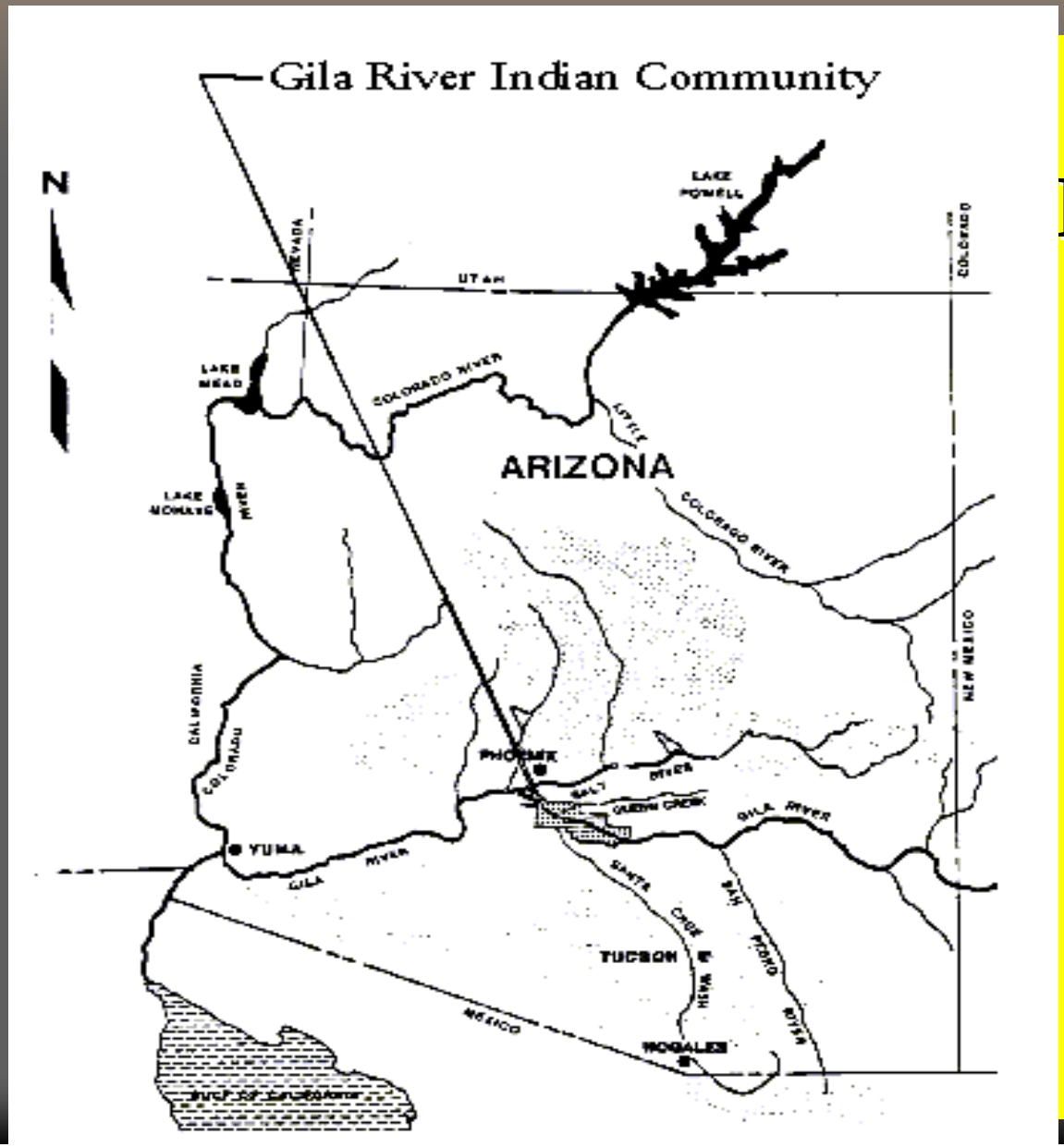
"They [Pimas] came into our camp with green corn, pumpkins, melons, kiln-dried wheat, peas, beans, dried corn, etc., sold in baskets or bags at such prices as you could bargain for."

Lorenzo D. Aldrich, California 49, October 1849

Mercy Patrols in the Desert, 1849-1851

"Their stores of wheat and corn have supplied many a starved emigrant, and restored his broken down animals."

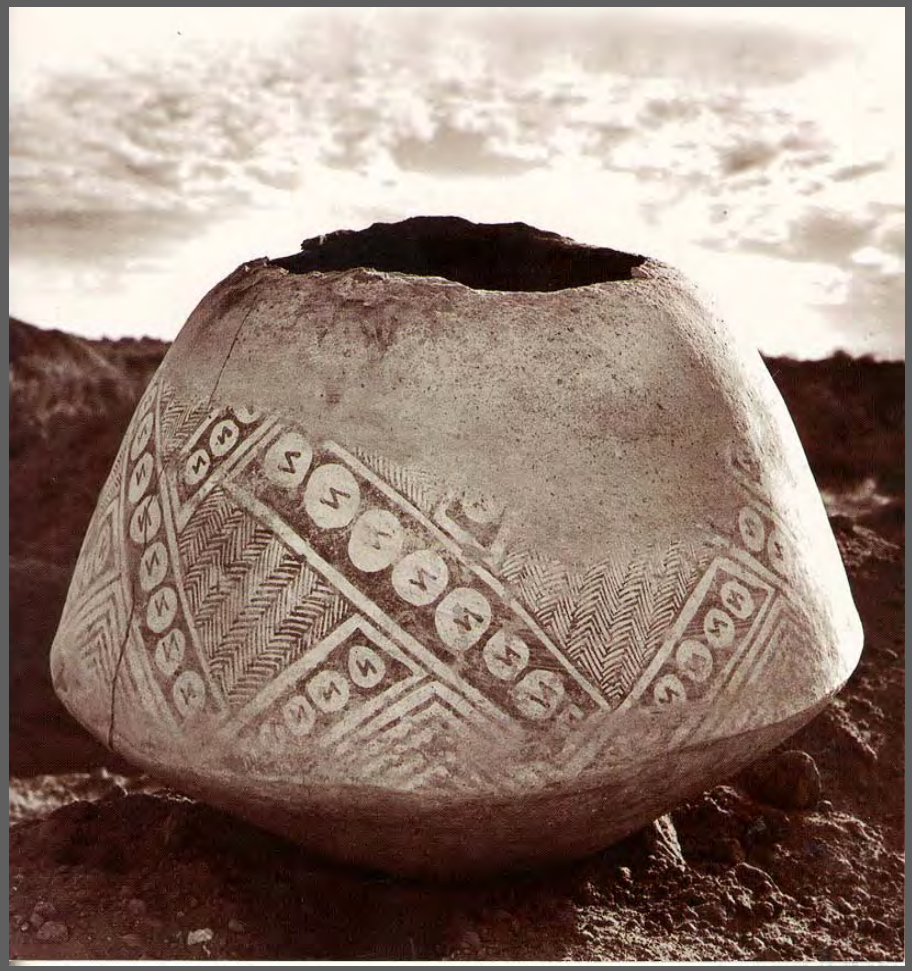
Lt. Sylvester Mowry, 1857



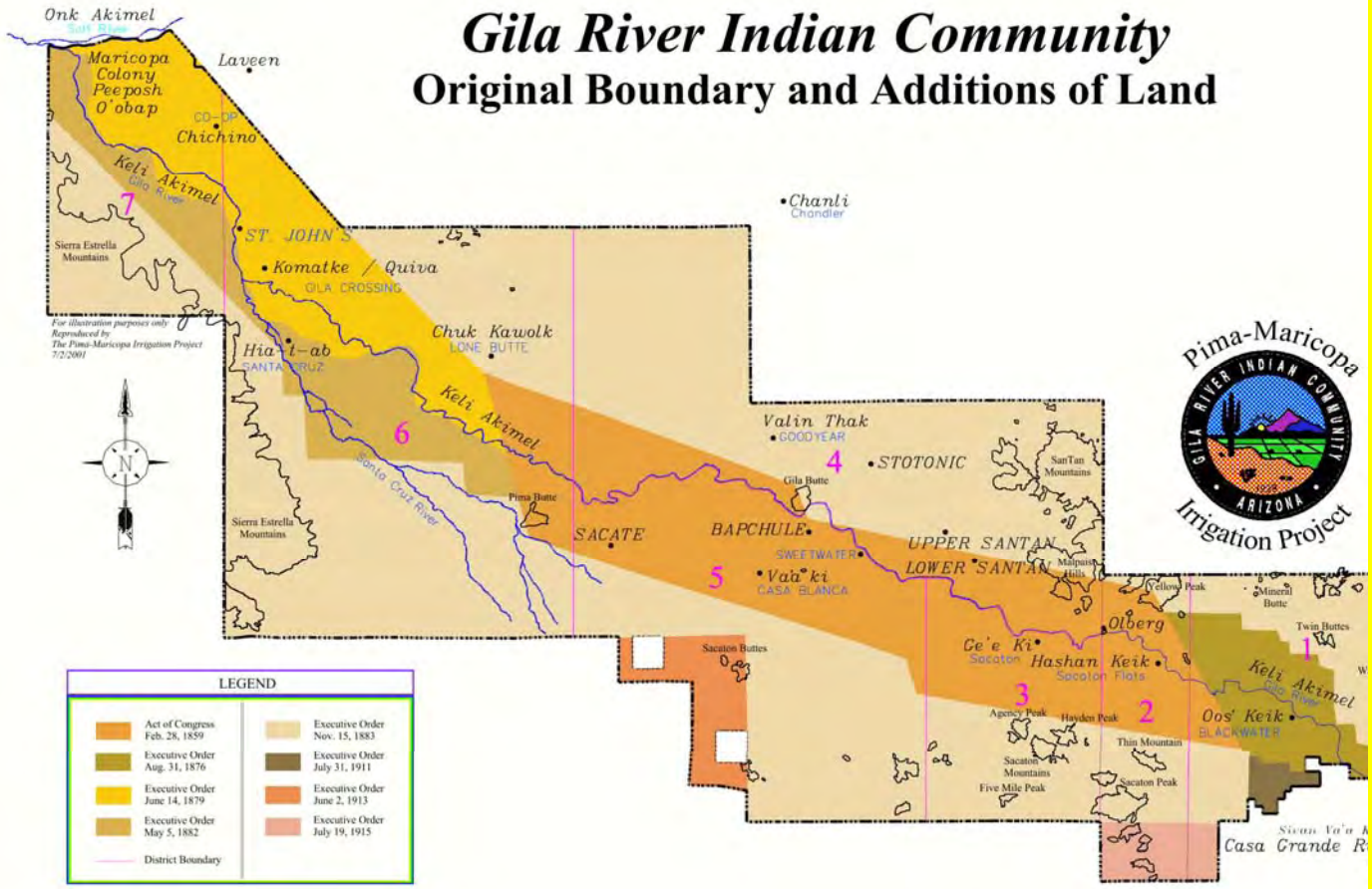
The "Pima Reservation" was established on February 28, 1859. It was the first reservation in what would soon become Arizona Territory.

The Akimel O'otham "River People"

The Pee Posh
"The People"



The Reservation



Recognized by Congress in 1859 in "acknowledgement of their loyalty to this government and the many kindnesses heretofore rendered by them to our citizens."

Irrigation Farmers

Brush dams were used to divert the waters of the Gila River to the farmlands across the Community.

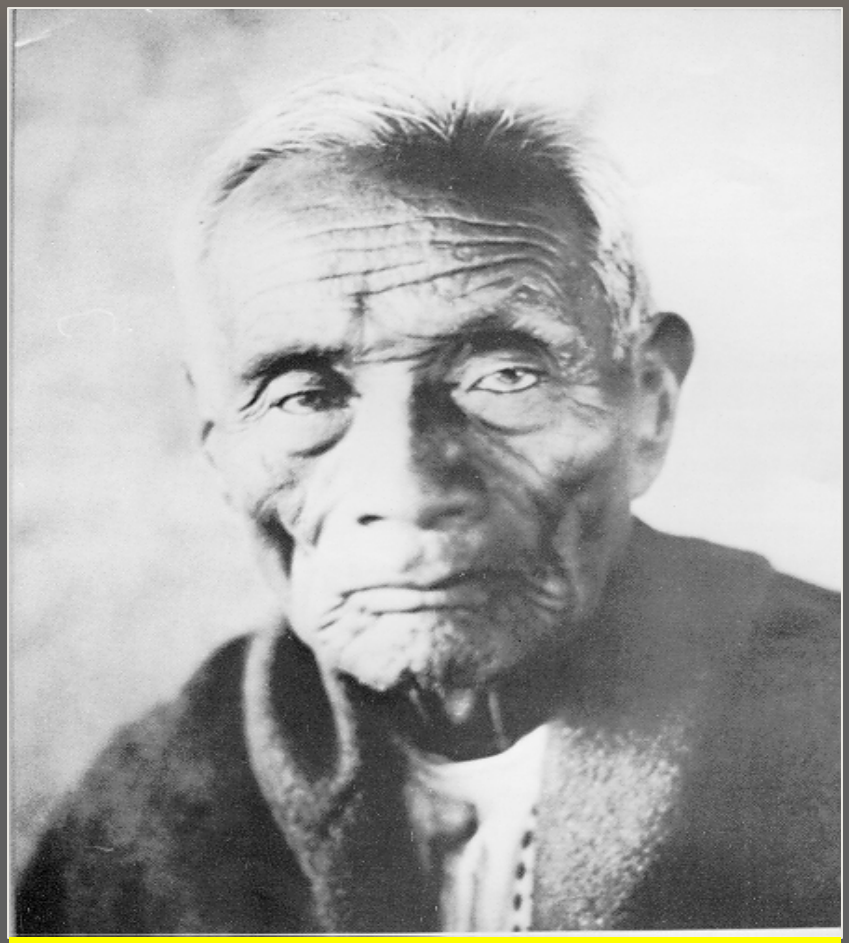
Farmers since time immemorial

- "luxuriant" farms
- large herds of animals
- Once was the "bread basket" of Arizona.
- 1862: over one million pounds of surplus wheat sold

19th century was a time of change

Between the late 1840s and 1911, when he died, Pima Chief Antonio Azul worked to protect his people as they watched their water—and prosperity—dry up.

Upstream settlers were arriving



Mavith Kavdom (Antonio Azul), the last head chief of the Pimas.

In 1866, settlers arrived in the Florence-Casa Grande Valley above the reservation.

Within six years, a colony of whites from the Salt Lake Basin settled in the Upper Gila Valley.

The Florence Canal meant more change

In 1886, the Florence Canal was constructed and took the entire flow of the river. The Justice Department was asked to stop the project; it did nothing.

Environmental change was occurring as well

- By the 1830s, the beaver were trapped out.
- By the 1870s, overgrazing and deforestation were widespread upstream.
- In 1869 the Gila River went dry for the first time in recorded history. Drought conditions made matters worse.

The Years of Famine: 1880-1920

The people faced hard times. The Maricopa were better off than the Pima because the Salt River still flowed. Life for the Pima was difficult and hard. By the early 1890s, there was an insufficient flow of water in the river to farm on the reservation.

The Years of Starvation: 1892-1904

Between 1892-1904, Community members—deprived of their water—cut nearly a hundred thousand acres of mesquite to sell off the reservation. They did this to provide food for their families.

A Pima Calendar Stick

1896-97 “The river practically dry. The Blackwater Indians were forced to leave homes to sell wood.”

A Pima Calendar Stick,1931

The National Media focused on the Pima Crisis in 1900

"That 6,000 Pima Indians, always the consistent and active friends of the white man, should be reduced from a condition of wealth and great prosperity to actual starvation through neglect of the federal government … seems a … killing of friends."

"Indians Starving: Six Thousands Perishing on Gila Reservation Because of Lack of Water, *Chicago Tribune*, 1900

Local Media Reaction

"Justice has been sleeping long enough in this case, so long in fact that a tribe which for a hundred years had never cost this government a dollar is today reduced to penury, want and idleness."

"Pima Indians: Recommendation of Aid for this Worthy Tribe," *Tucson Citizen*, April 1900

The Little Gila River

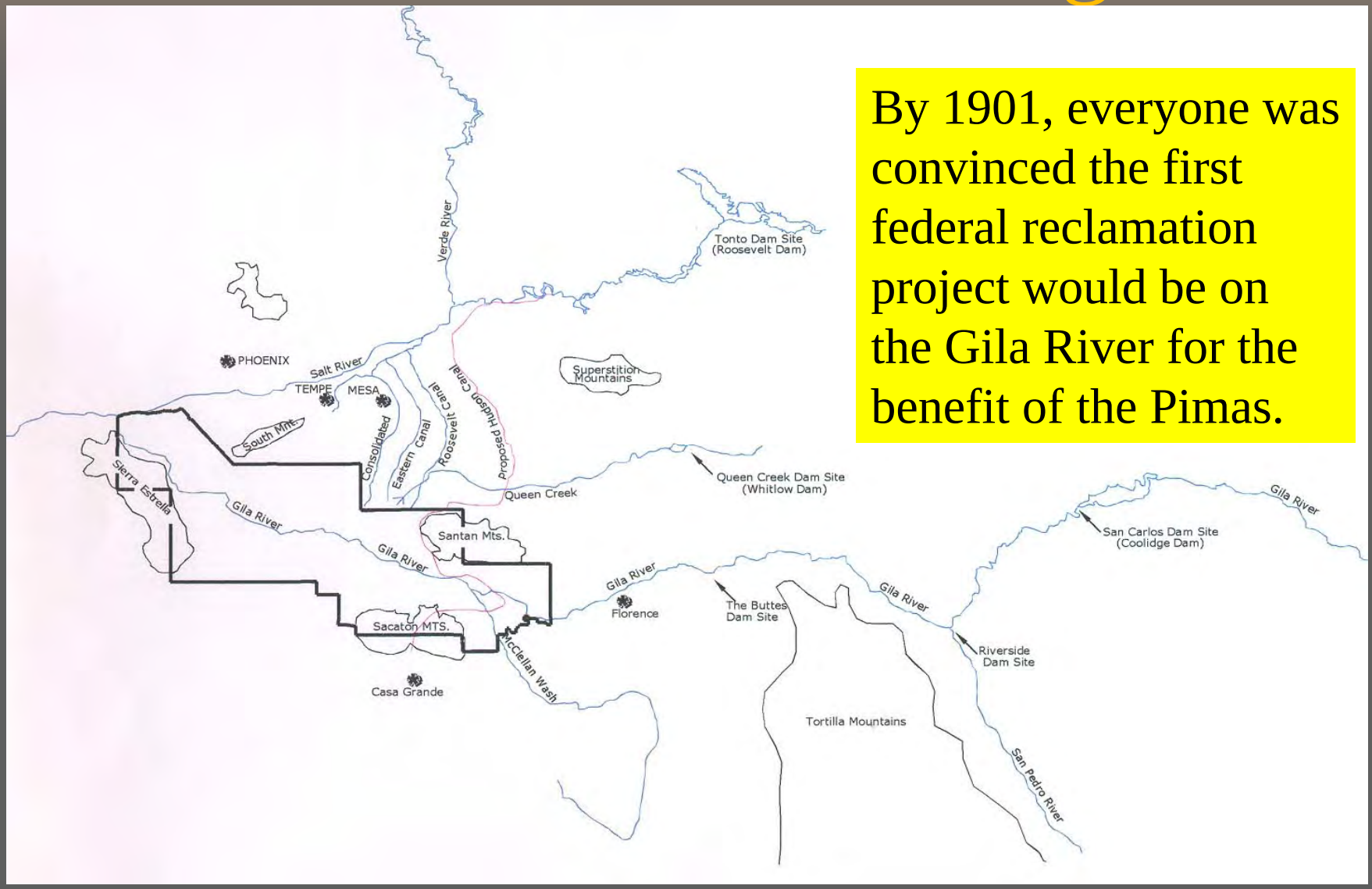
In 1903, the government irrigation engineer ordered the Little Gila closed. Water ceased to flow for more than a dozen years.

Remnants of an Environmentally Decimated System

District One near the head of the Little Gila

District Five near the mouth of the Little Gila

Where should the dam go?



By 1901, everyone was convinced the first federal reclamation project would be on the Gila River for the benefit of the Pimas.

The Buttes Site

Twenty-five miles east of the reservation, the original Buttes site projected a capacity of 174,040 acre feet.

The Queen Creek Site

Thirty miles northeast of the reservation, limited flow meant a reservoir with just 28,000 acre feet of water.

The Salt River Valley Site

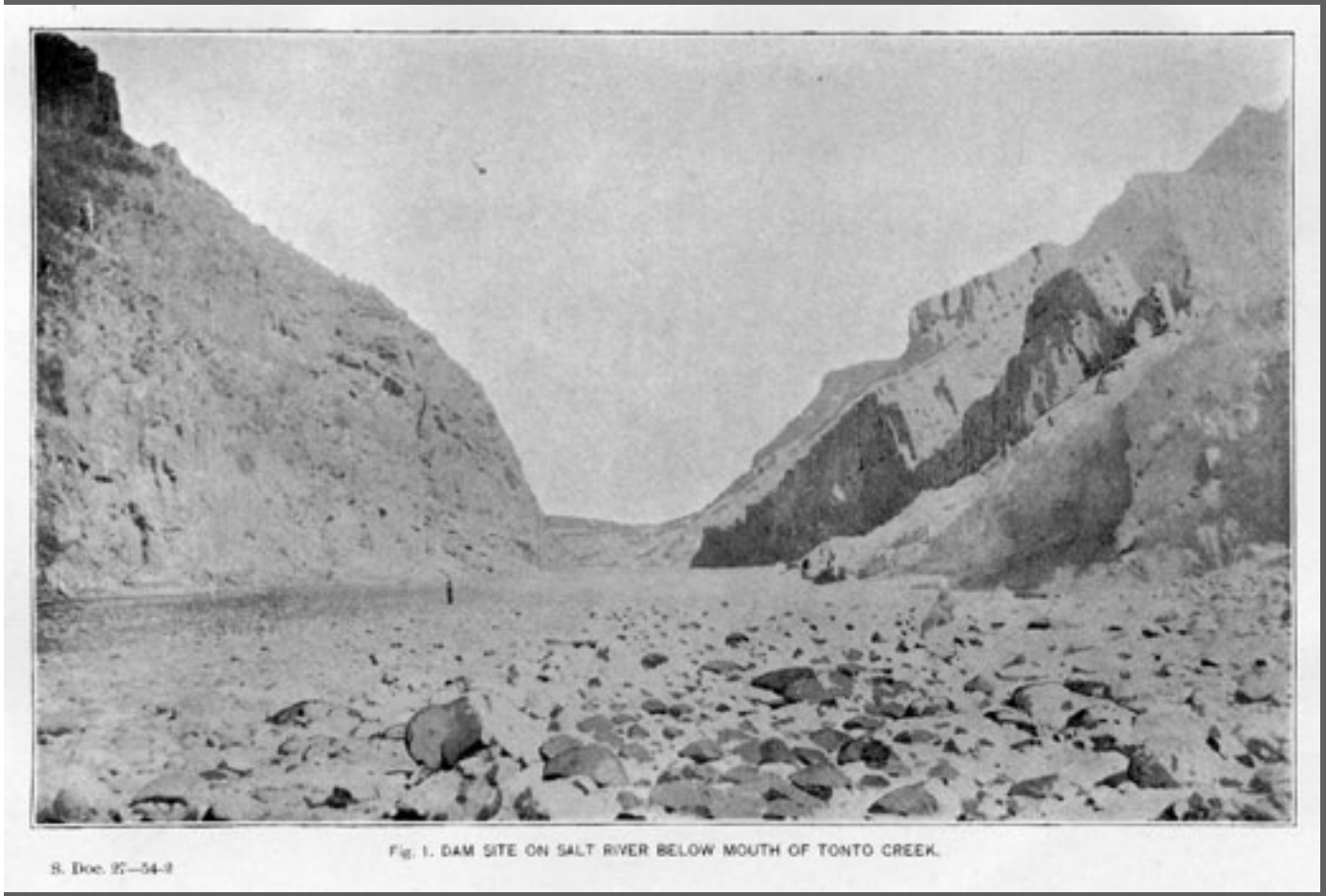


Fig. 1. DAM SITE ON SALT RIVER BELOW MOUTH OF TONTO CREEK.

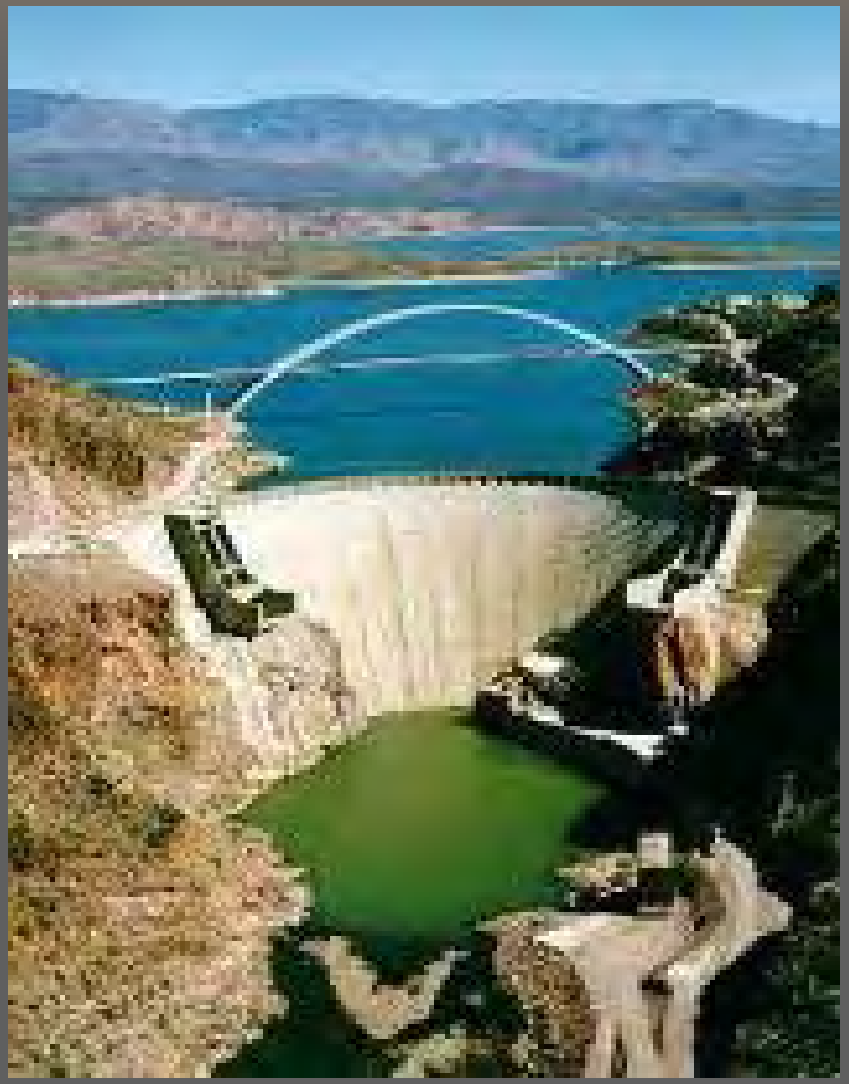
S. Doc. 25—54-2

Sixty miles east of Phoenix, the "Tonto" site could store more than 800,000 acre feet of water.

The San Carlos Site

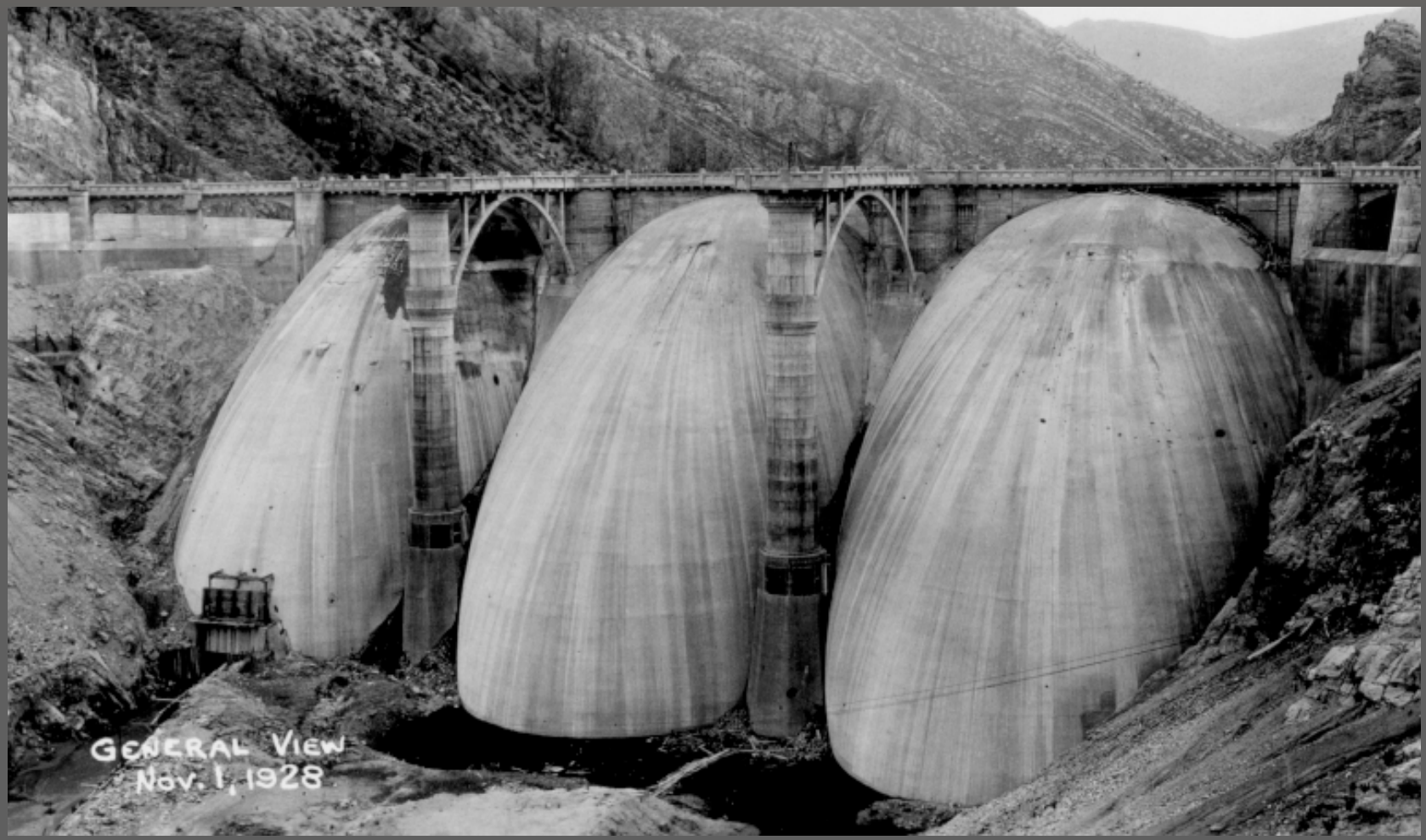
Located at the western edge of the San Carlos Apache Reservation, San Carlos had a capacity of 741,000 acre feet.

A Decision in 1903



In 1903, the Tonto Site (Roosevelt Dam) was selected as the first reclamation project but not without controversy.

In 1924, San Carlos Dam and the San Carlos Irrigation Project was authorized.



Coolidge Dam was dedicated in March of 1930

In 1929 “subjugation” of the Pima Reservation began.

Nearly 2,000,000 trees were removed from the reservation.

Groundwater pumping off the reservation began in earnest. The Pimas largely continued to farm with teams of horses.

Stopped by Picacho Reservoir and impacted by groundwater pumping, McClellan Wash no longer flows.

In 1936, the Lower Gila Dam and bridge was built.

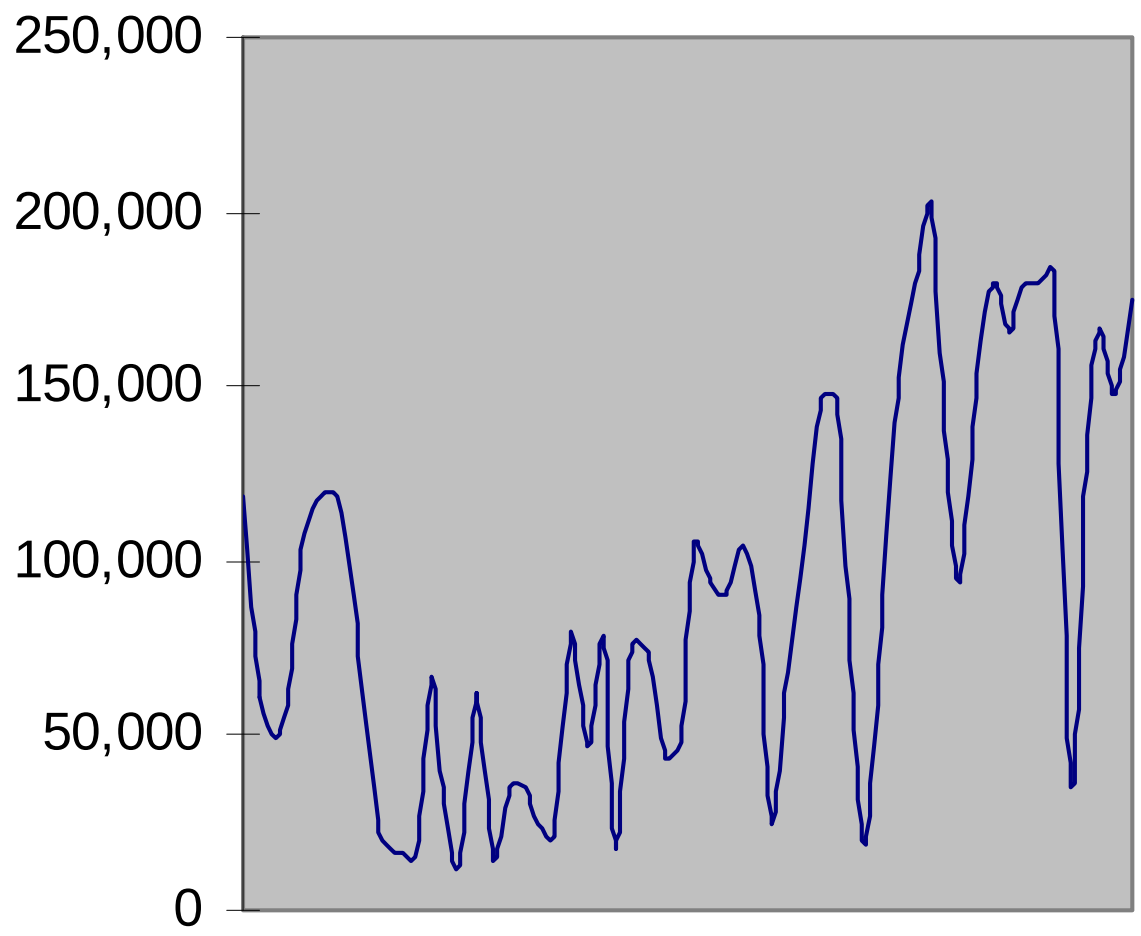
Was the San Carlos Project successful?

NO!

Why?

Large areas of land were too alkali for agriculture.

Erratic and Insufficient Water



Surface water available to the GRIC via Coolidge Dam between 1937-1994.

Water Availability

What other reasons?

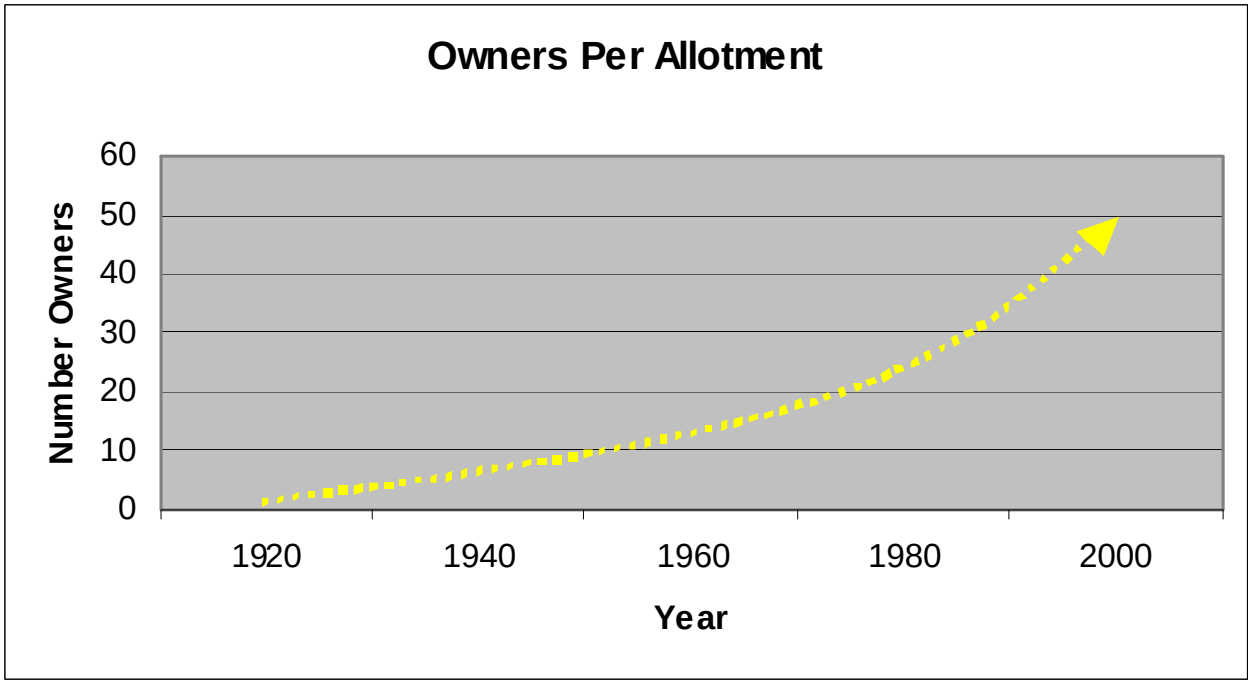
Inefficient irrigation system and lack of financing to engage in modern farming.

Inefficient Delivery System

Originally scheduled to be line with concrete, the system was earth lined and only covered the east end of the reservation.

The effect of allotment

GRIC was allotted between 1913 and 1921. Since then the number of land owners per allotment has increased substantially.



The Current System

- The San Carlos Project:
  - 50,546 on-reservation acres
  - Currently more than 70 years old
  - Is earth lined
  - Severely deteriorated.

In the meantime …

GRIC water supply was never fully put to use.

Non-Indians continued to use the water that legally belonged to the Community.

Lacking financial resources, the Community struggled to keep its water.

Present

Gearing up for P-MIP

- Long history of litigation.
- 1968 CAP legislation in lieu of settlement to appease the Tribe?
- 1970s continued planning meetings.
- Arnold Juan, Chair of the Natural Resources Committee, deeply involved
- In the late 1970s, the Agency Superintendent took over .

The 1980s

- 1982 water delivery contract presented to the tribal (179,300 acre-feet of water).
- Council agonized over it for two days before rejecting it because:
  - GRIC had to pay for the water up front (other users didn't)
  - A portion would convert to effluent water in 2008.
- Between 1982-1988, planning and discussion continued.

Late 1980s

- Interest was rekindled and task force appointed to review CAP.
- Met with Reclamation and others to formulate a plan.
- Severe drought affecting the Community and San Carlos Lake went dry.
- Recommendations made to Council and they began to study the plan.

The CAP Interconnect in 1990

The CAP interconnect saved the agricultural economy of The reservation and awakened the Community to how Important a reliable source of water was.

- The Community began to realize how important a reliable and dependable source of water was.
- The team worked out an agreement and the CAP interconnect was built within 6 months.
- The GRIC began receiving CAP water for the first time.

Moving towards P-MIP

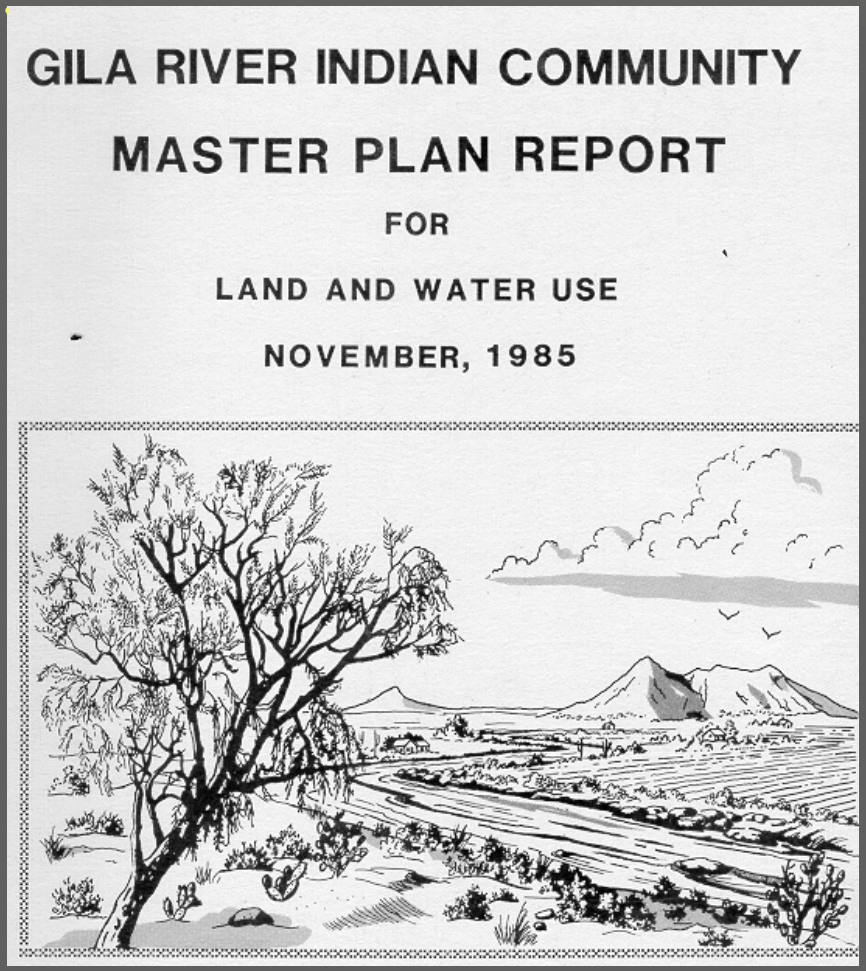
- A concerted effort to reach an agreement with Reclamation and CAP.
- Asked "why would we want to participate in the CAP?"
  - Costly water ($65 an acre-foot)
  - Other participants could not afford payments
  - It was cheaper to run wells or use gravity water from SCIP or SRP

1992 Agreement with Reclamation

- GRIC not forced to accept effluent in lieu of CAP water.
- Pay for the water as it was used.
- Would not have to reimburse construction costs
- Benefits:
  - Reliable source of water
  - Construction funds that BIA would never have to complete the surface water delivery system
- 1992 GRIC signed a water delivery contract

Beginning of P-MIP

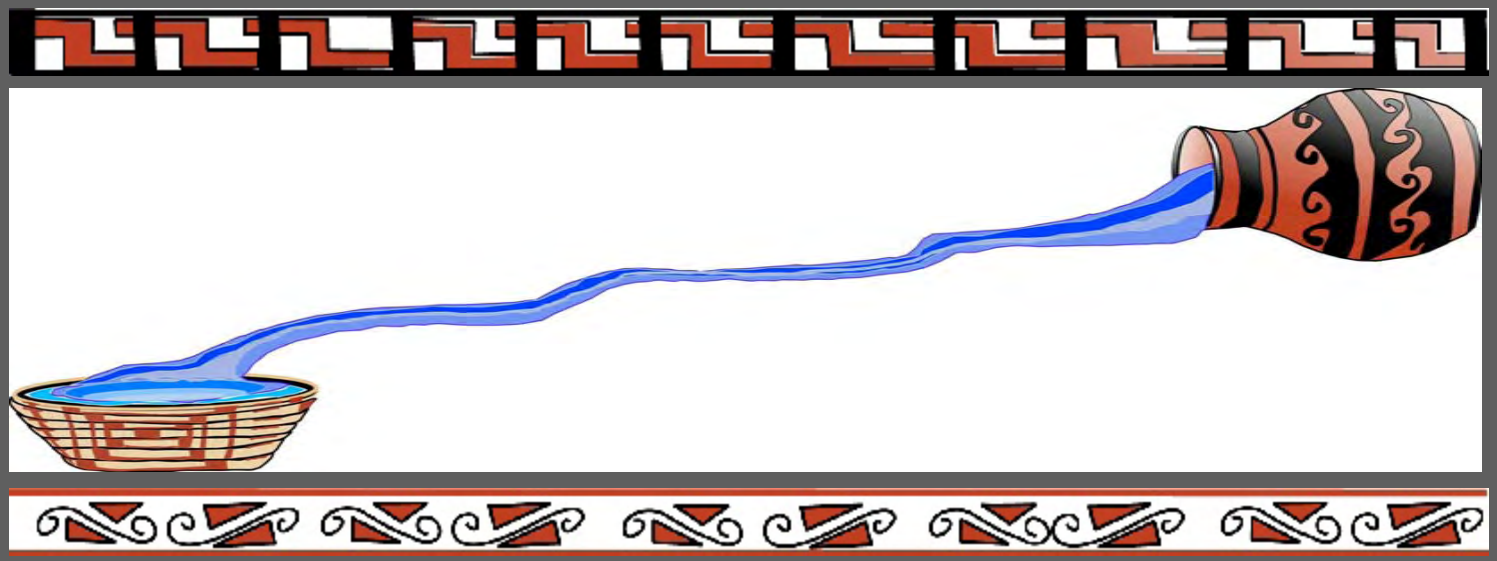
- Built from temporary to full time staff.
- Reclamation controlled.
- 1994 GRIC told it would take 8-10 years to complete the Environmental Impact Statement (before construction begins).
- Need to speed up the process
  - GRIC came up with the PEIS and used the 1985 Community Master Plan
  - Slowly broke away from Reclamation



Self-Governance

- In 1996, GRIC became the first Indian tribe to put an irrigation system under self-governance. P-MIP is a tribal program partially funded by the Bureau of Reclamation.

Pima-Maricopa Irrigation Project Development



Mission Statement

- To develop a distribution system, agricultural lands and riparian habitat areas for beneficial use of water resources.

Project Goals

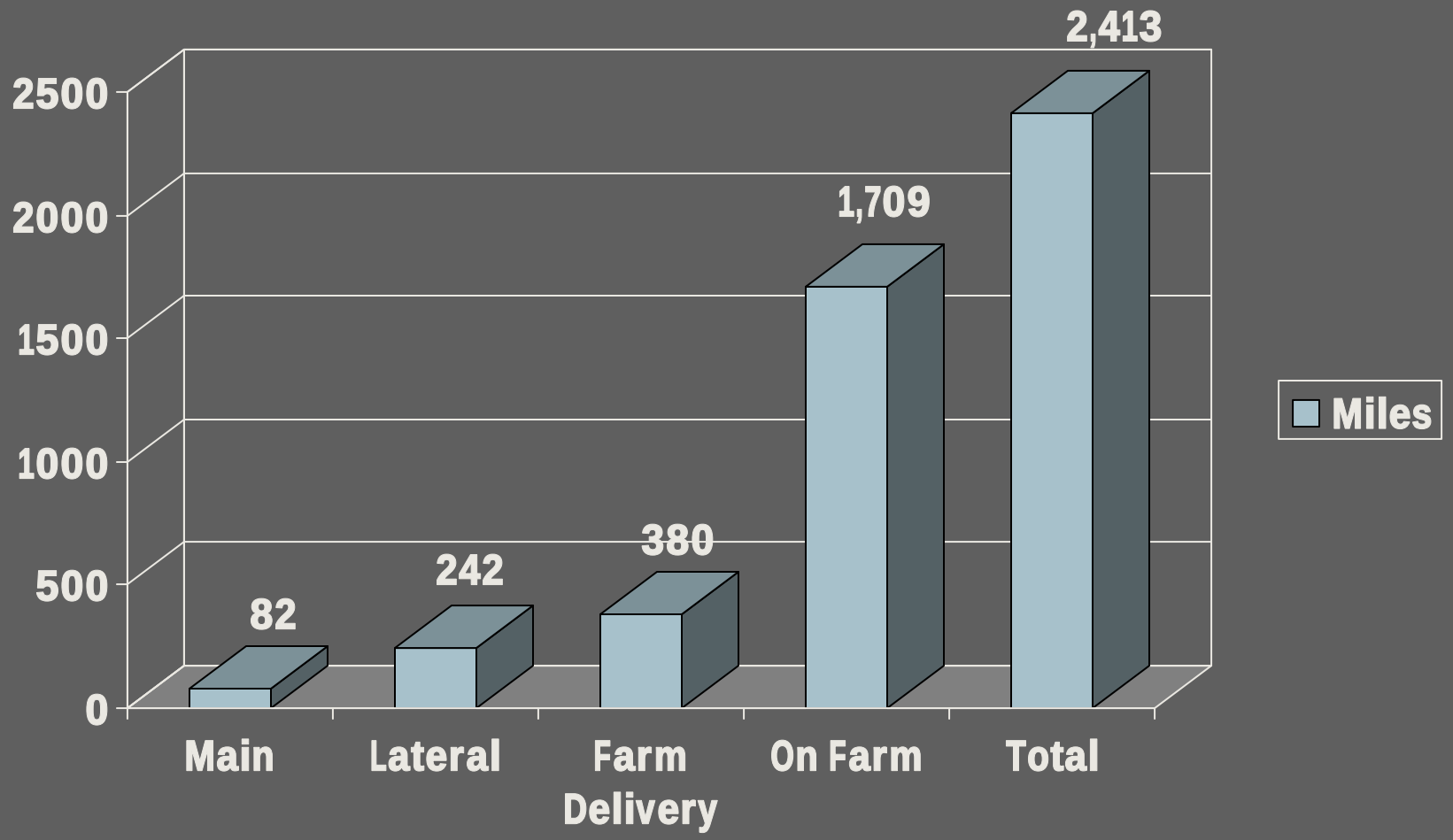
- Restore the use of water to the Pima and Maricopa people
- Put Pima and Maricopa rights to the water to beneficial use
- Demonstrate and exercise sound management to ensure continuity of the Community's traditional economy of agriculture

Where are we going?

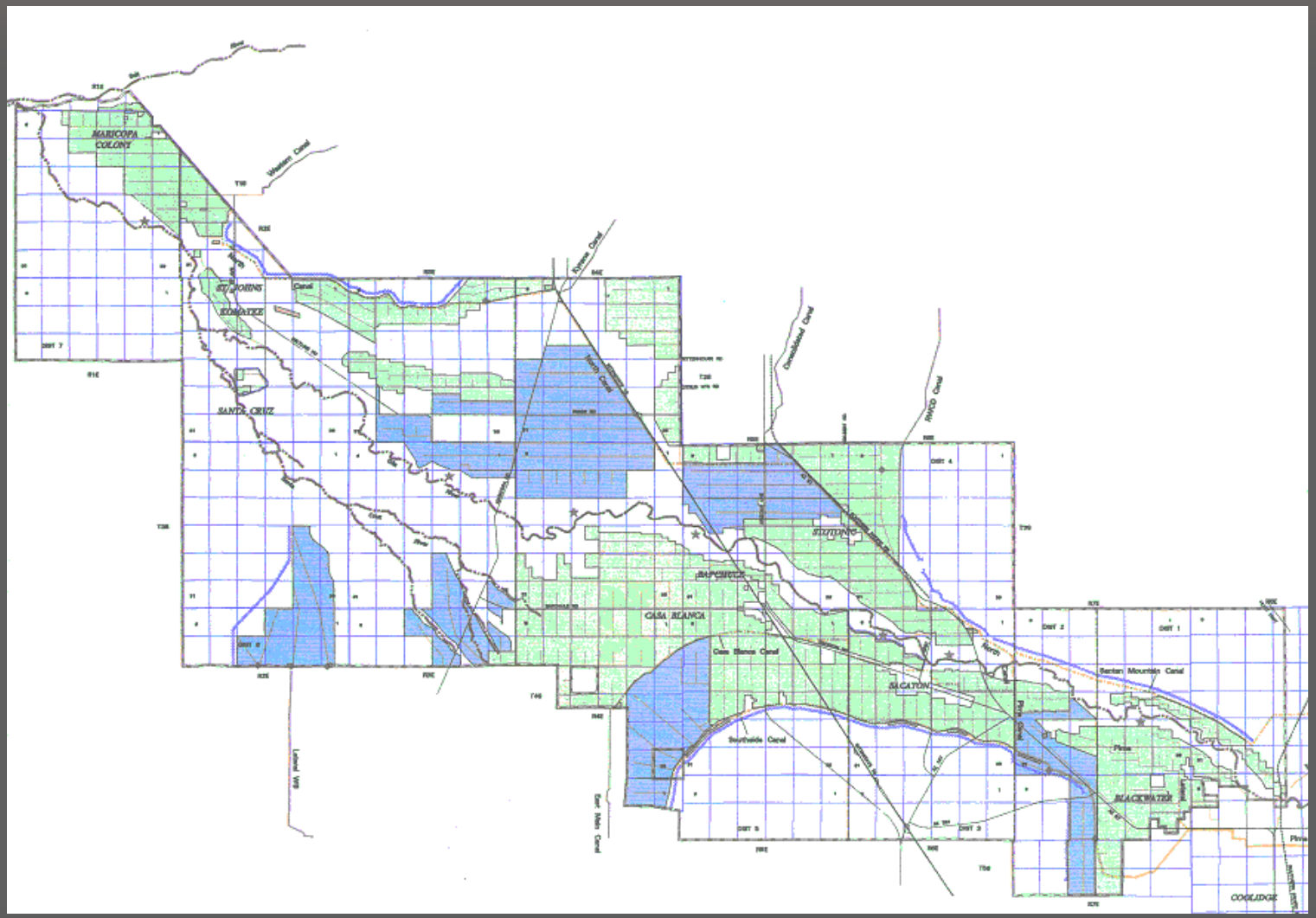
- Planning, designing and constructing a 2,400 mile system of canals, pipelines and laterals

- Irrigate up to 146,330 acres of Community land

2,400 miles of irrigation delivery system



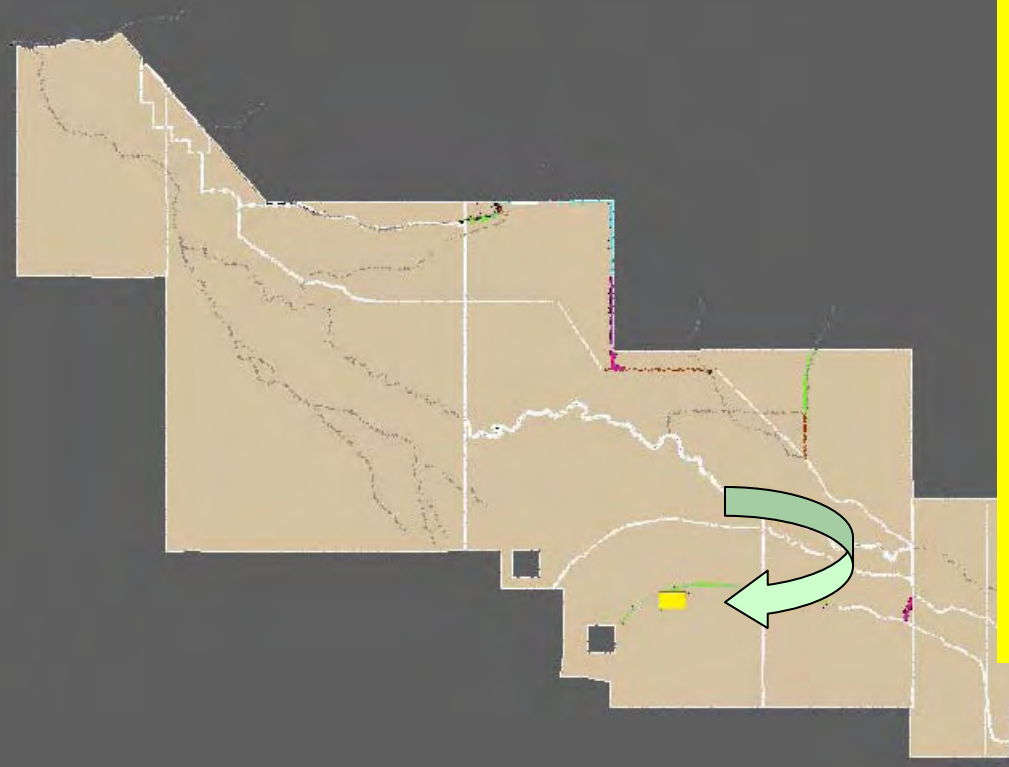
Where is the land?



What will this allow?

- Restore the agricultural heritage of the Pima and Maricopa people
- Provide economic self-sufficiency for the Gila River Indian Community

1996 Construction: Sacaton Ranch South Reservoir

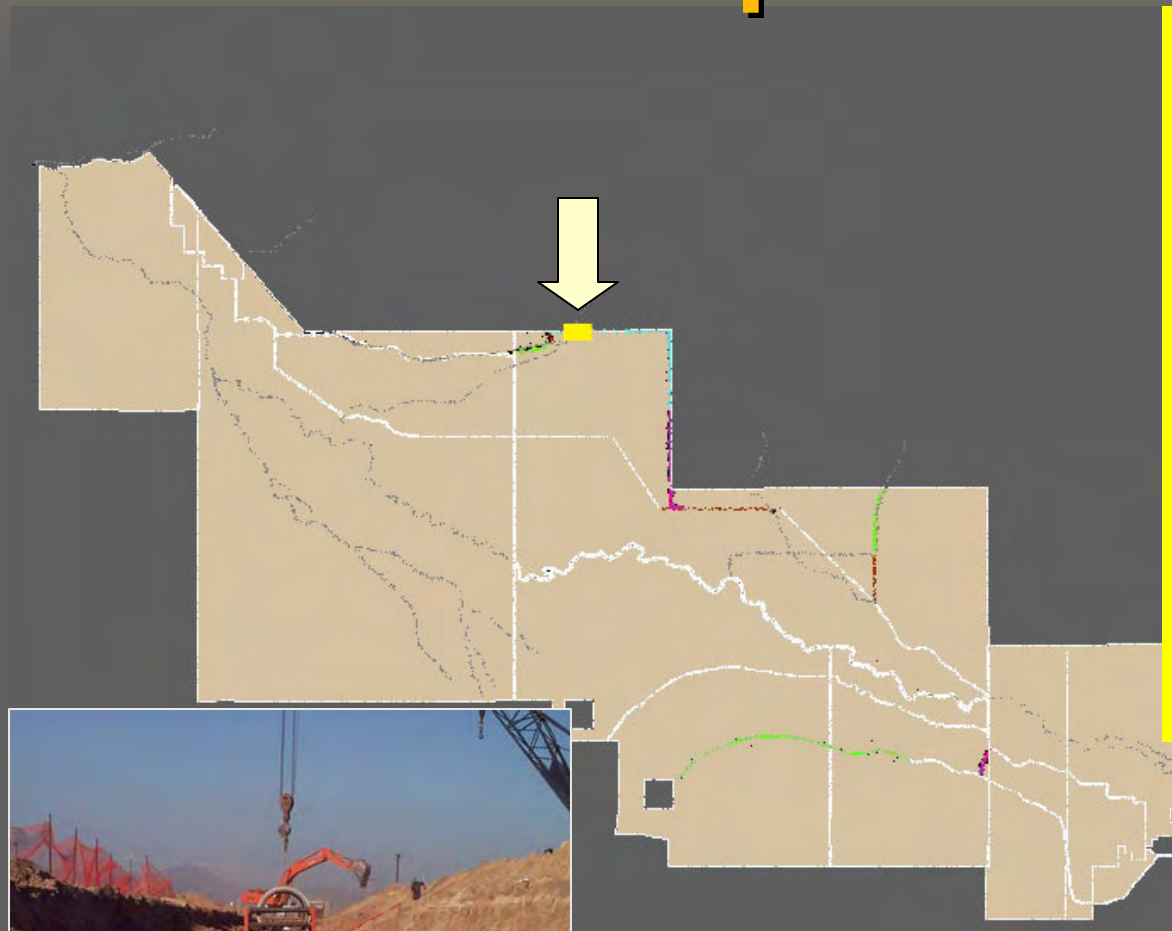


- Contractor: Gila River Farms Construction
- Period: 7/1996 to 4/98
- Cost: $1 million

1997 Construction: Four Mile Post Pipeline and Pump Station

- **Contractor:** Gila River Farms Construction
- **Period** 1997
- **Cost:** $940,000
- **Length:** 1.5 miles

1998 Construction: Reach MM-1C Pipeline



- Contractor:
  T&T Construction
- Period:
  11/2/98 to 5/21/99
- Cost:
  $4.1 million
- Length: 1.6 miles

1999 Construction: Reach MM-1D Pipeline

- Contractor:
  Kiewit Western Construction
- Period:
  5/10/99 to 12/10/99
- Cost: $3.2 million
- Length: 0.65 miles

1999 Construction: Reach MM-1B Pipeline

- Contractor:

  Martin K. Eby Construction
- Period:

  9/14/99 to 5/12/00
- Cost: $5.1 million
- Length: 2.8 miles

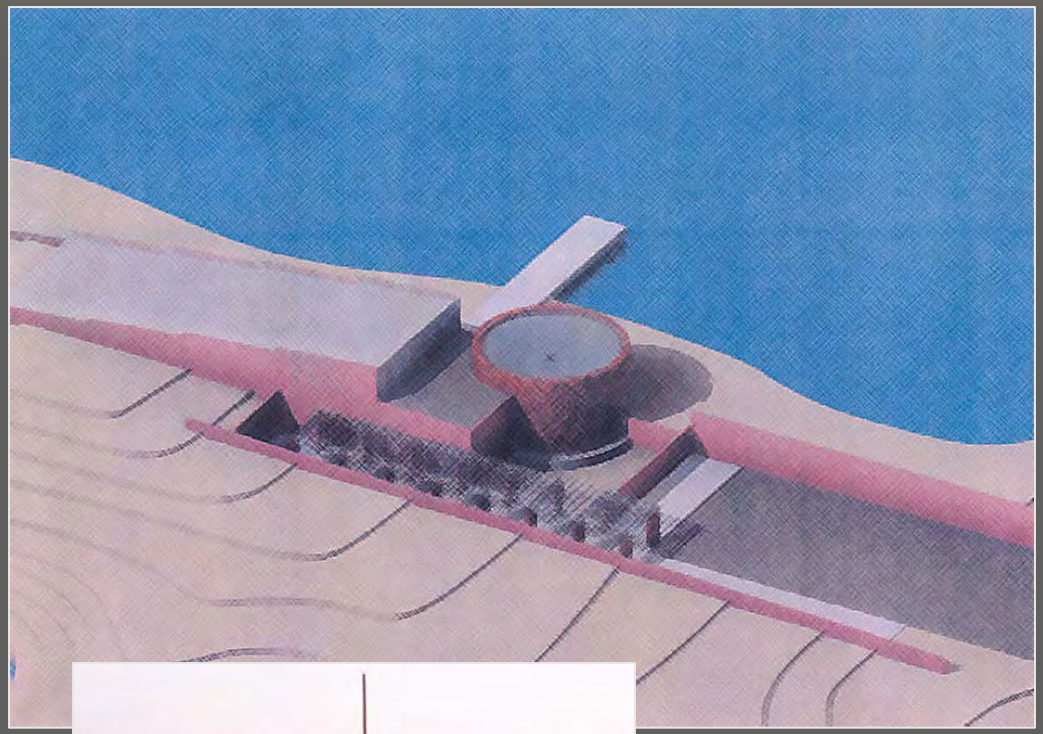
2000 Construction: Reach MM-1A Schedule a Pipeline

- Contractor:

  Pulice Construction Company
- Period:

  6/12/00 to 3/8/01
- Cost: $5.7 Million
- Length: 2.56 miles

2000 Construction: Heritage Center Reservoir Earthwork



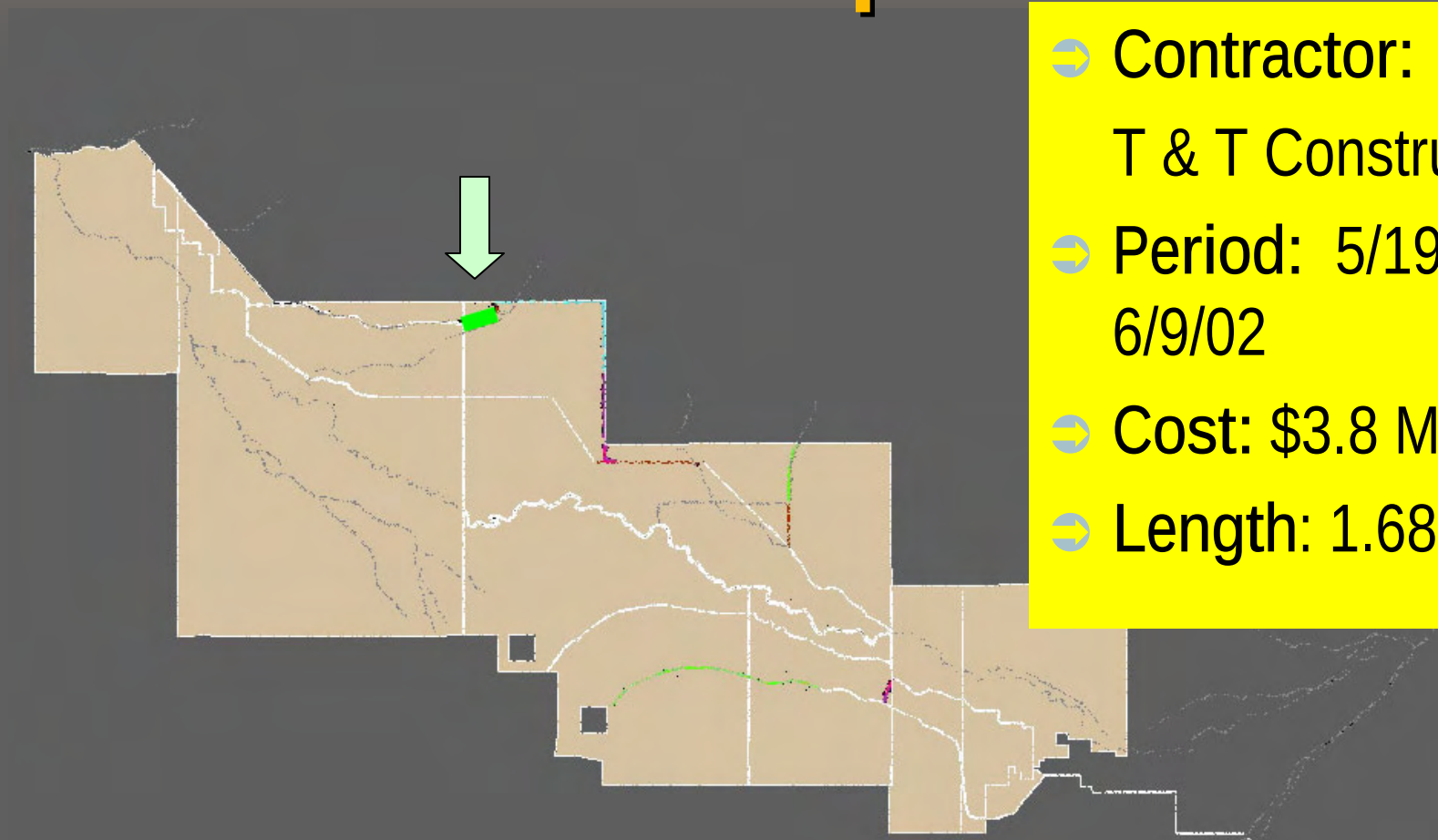
- **Contractor:** Gila River Farms Construction
- **Period:** 7/19/00 to 10/8/01
- **Cost**: $1.4 million

2001 Construction: Reach MM-1A Schedule b Pipelines

- **Contractor:** T&T Construction/ Tonto Welding Joint Venture
- **Period:**

  5/7/01 to 4/19/02
- **Cost:** $12.3 Million
- **Length:** 4.37 miles

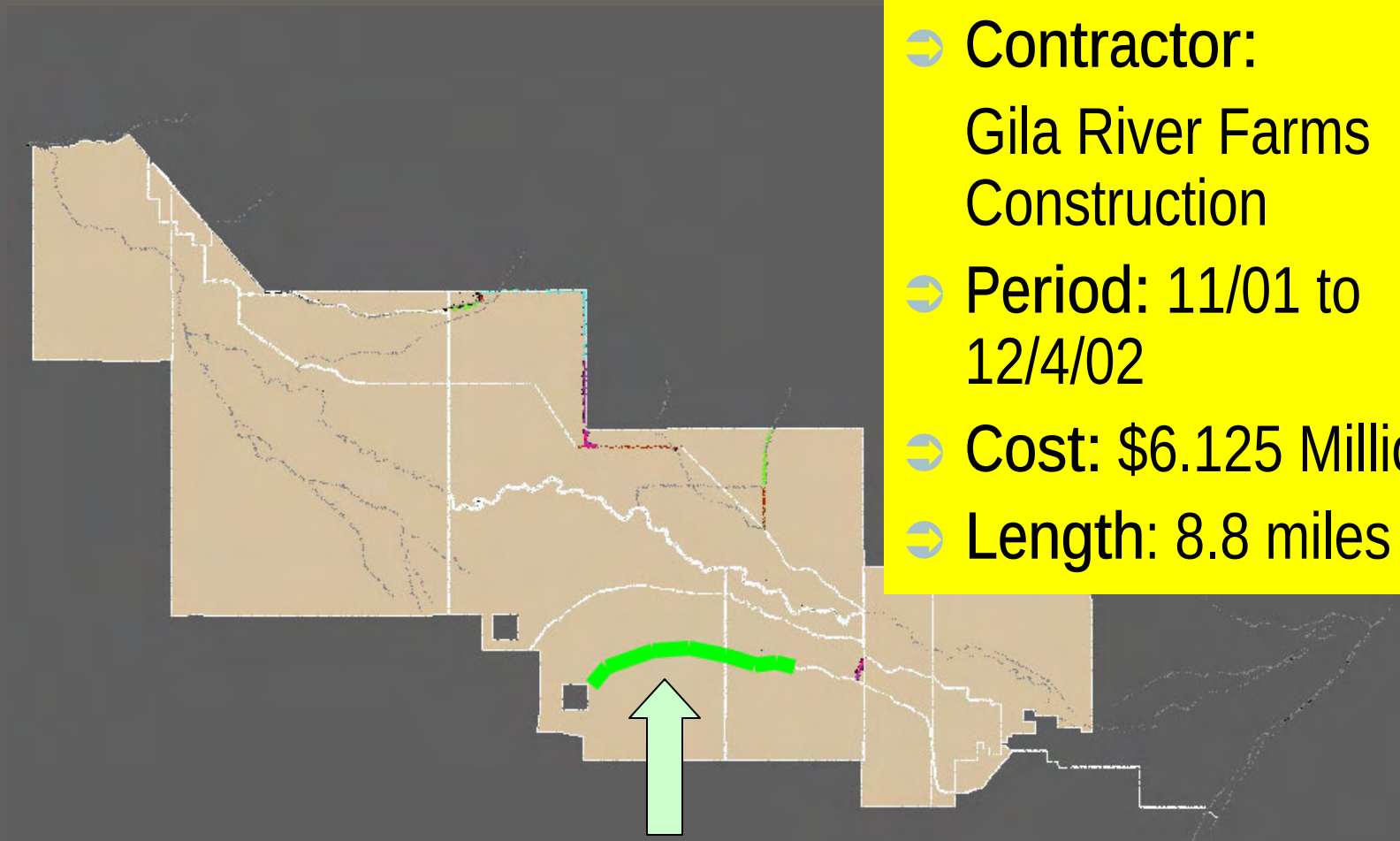
2001 Construction: Reach WS-1B Pipeline



- Contractor:

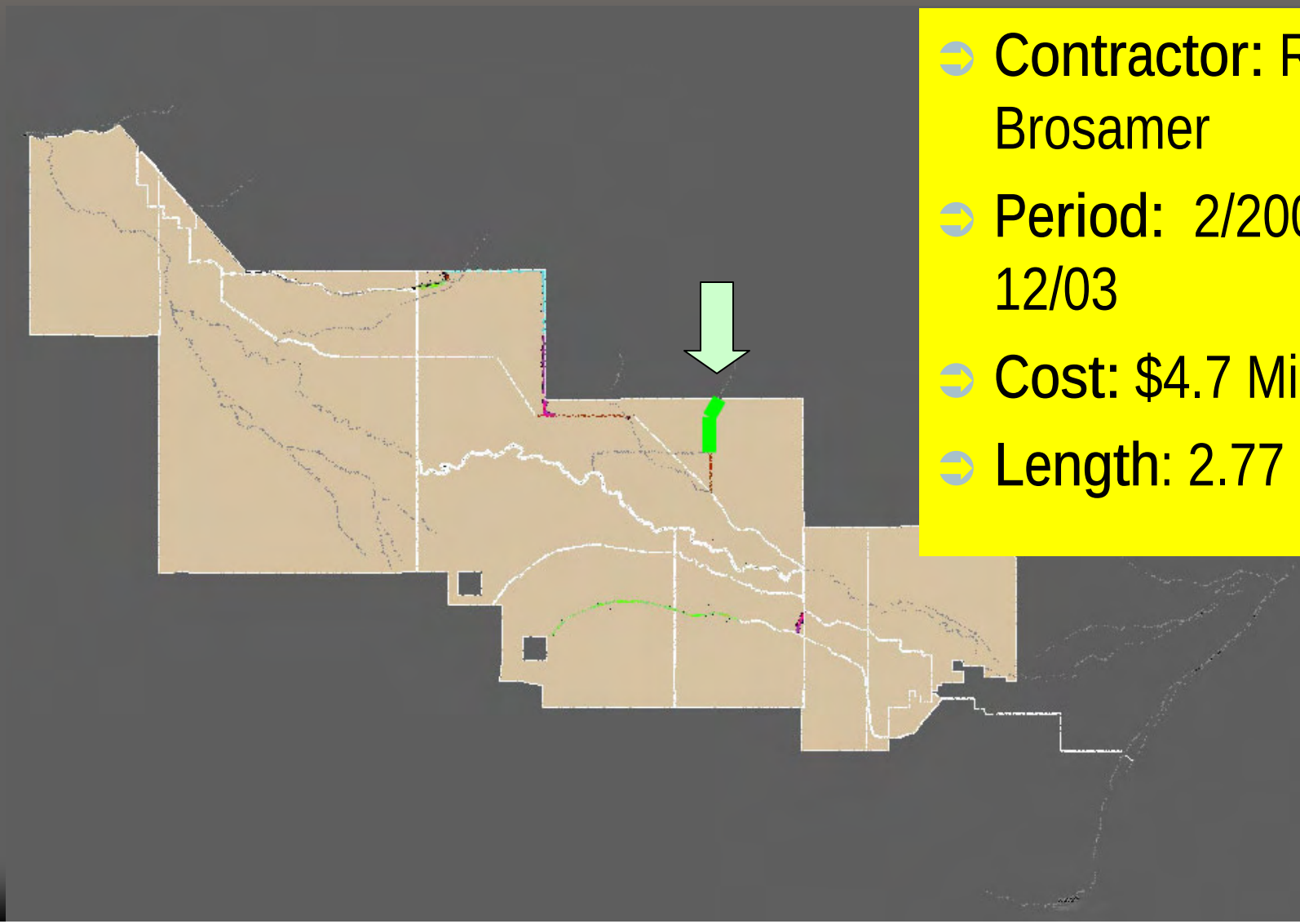
  T & T Construction
- Period: 5/19/01 to 6/9/02
- Cost: $3.8 Million
- Length: 1.68 miles

2002 Construction: Reach BW-IIB Canal



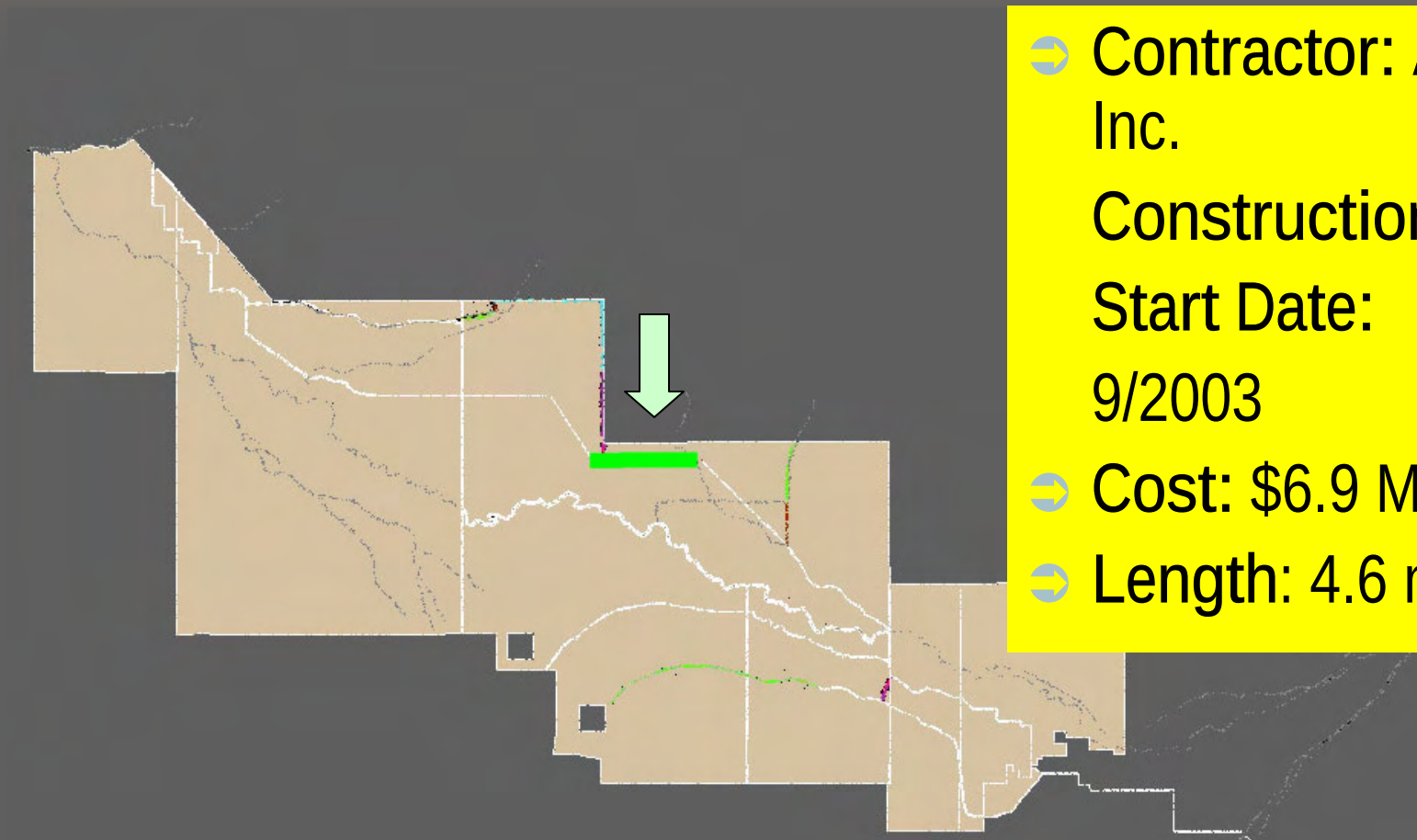
- Contractor:
  Gila River Farms Construction
- Period: 11/01 to 12/4/02
- Cost: $6.125 Million
- Length: 8.8 miles

2003 Construction: Reach ST-IVA Canal



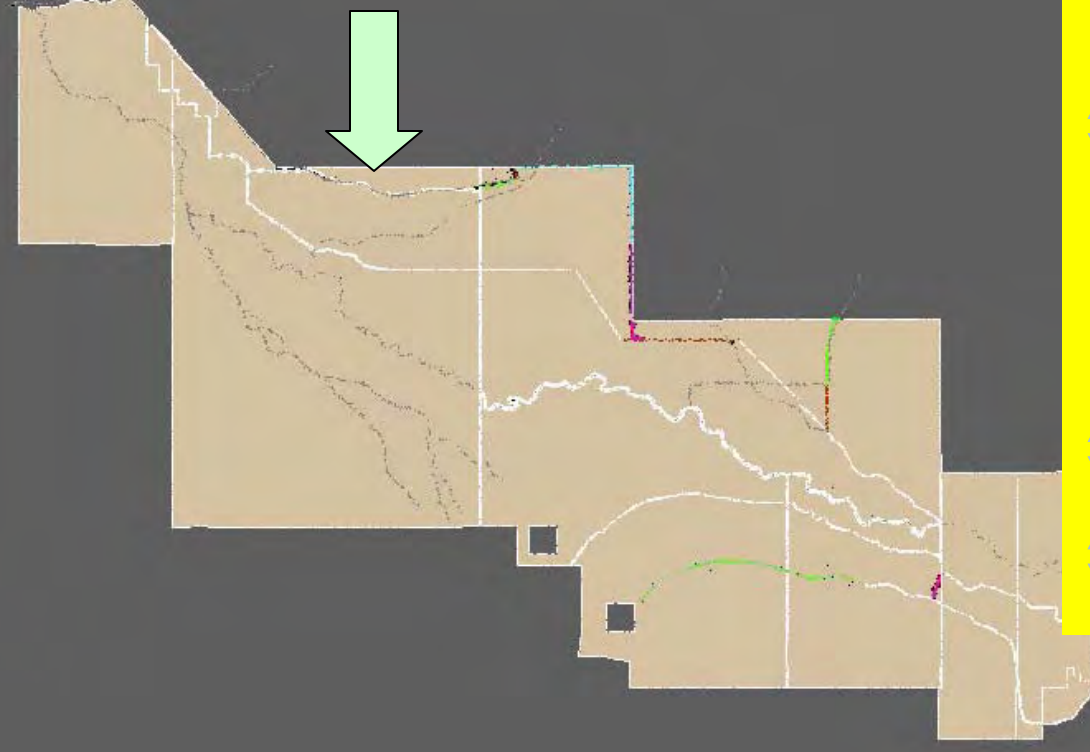
- **Contractor:** R & L Brosamer
- **Period:** 2/2003 to 12/03
- **Cost:** $4.7 Million
- **Length:** 2.77 miles

2003 Construction: Reach ST-1D Canal



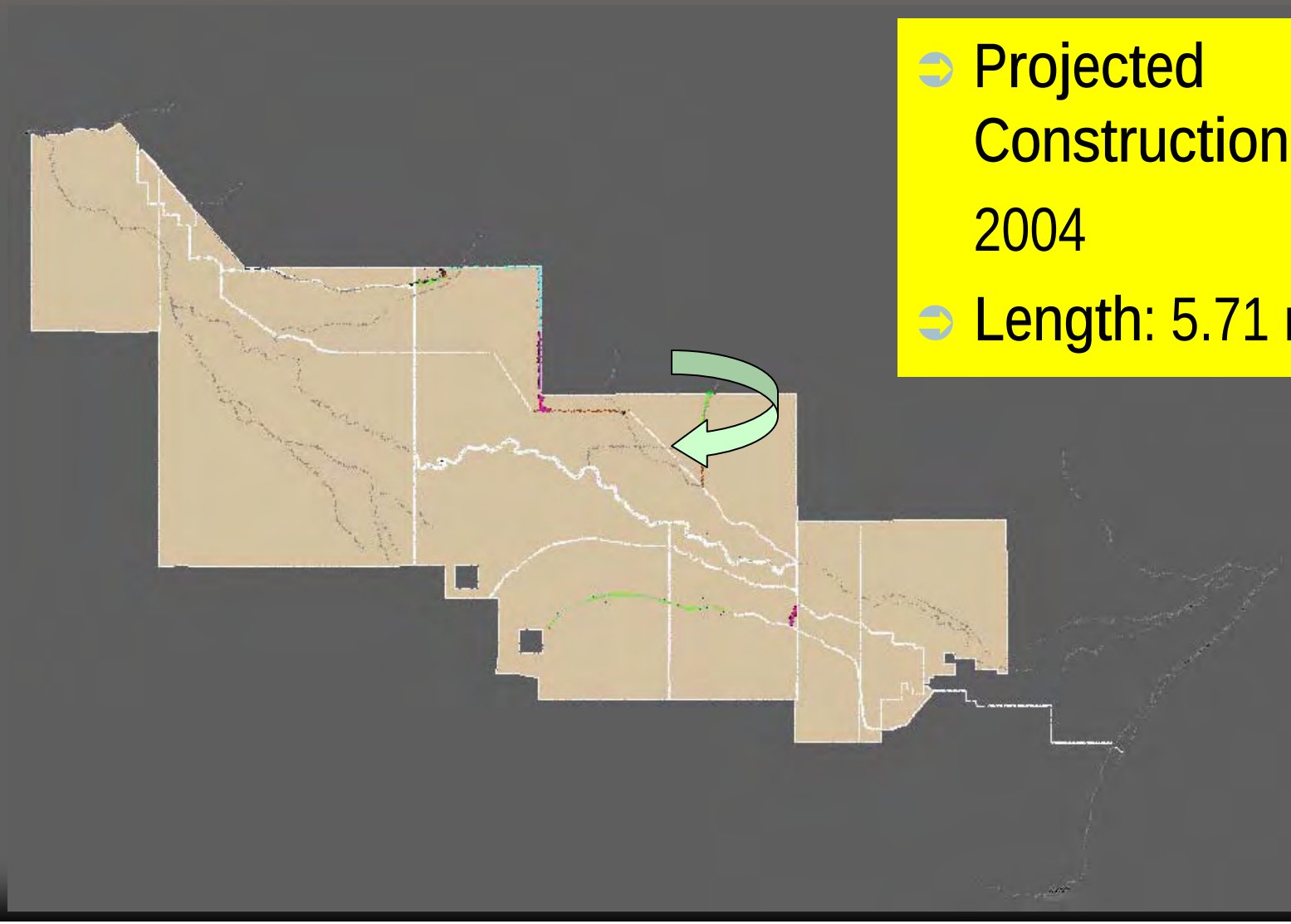
- Contractor: Archon Inc.
- Construction Start Date: 9/2003
- Cost: $6.9 Million
- Length: 4.6 miles

2003 Construction: Reach WS-1C Pipeline



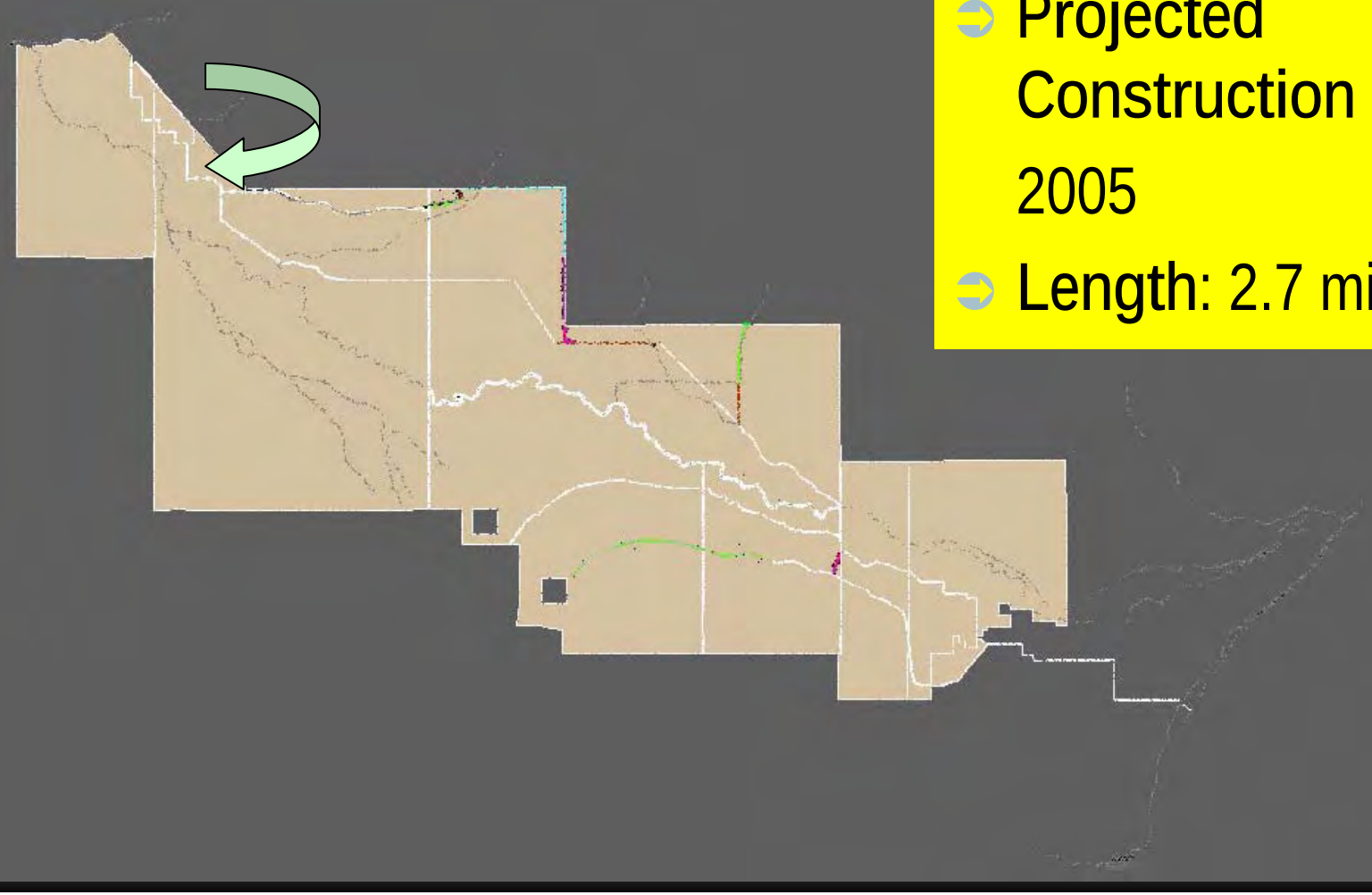
- **Contractor:** Kiewit Construction
- Construction Start Date: 9/2003
- **Cost:** $11.2 Million
- Length: 5.71 miles

Projected 2004 Construction: Reach ST-IC Canal



- Projected Construction Date: 2004
- Length: 5.71 miles

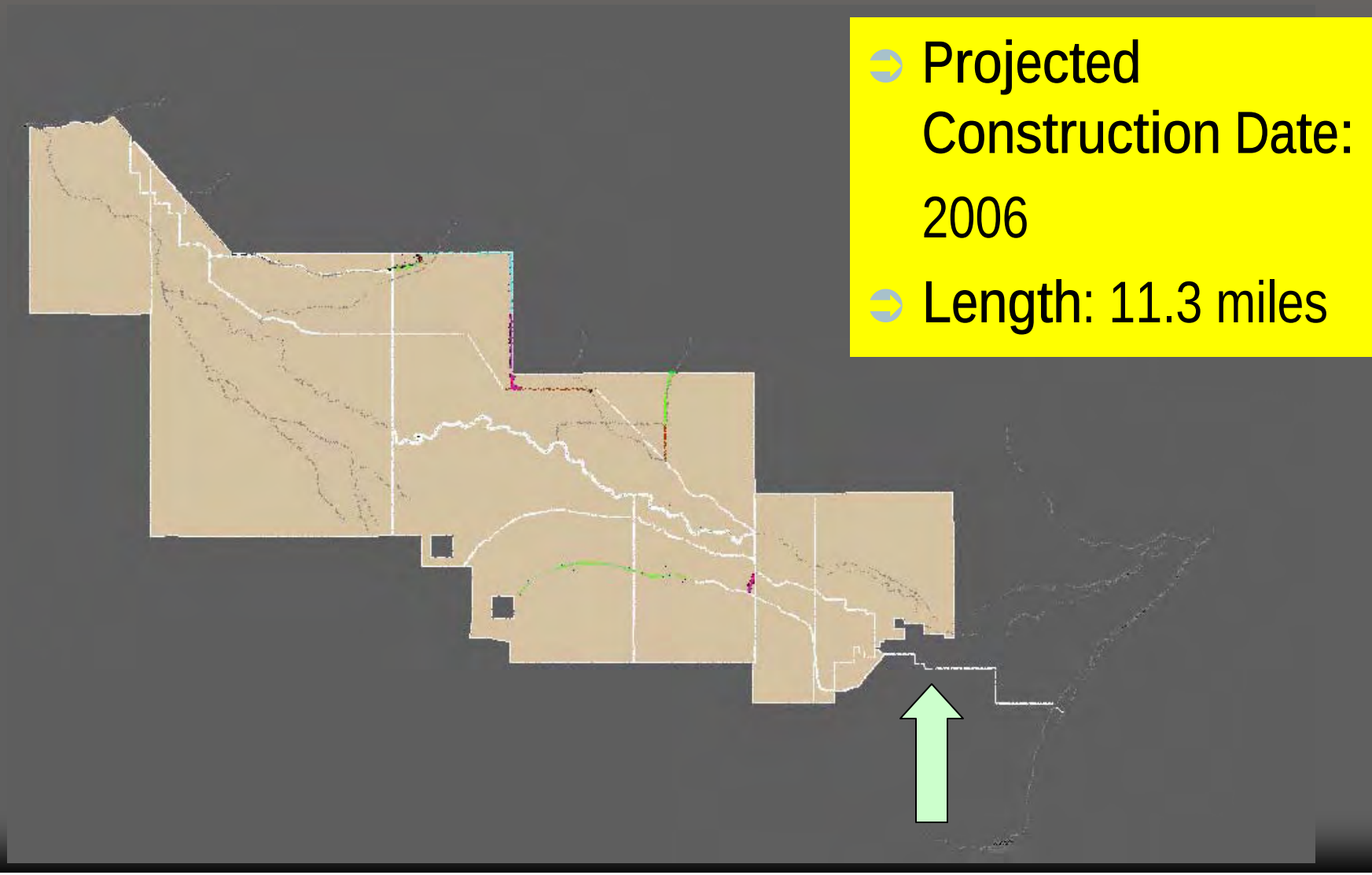
Projected 2005 Construction: Reach WS-ID Pipeline



- Projected Construction Date: 2005
- Length: 2.7 miles

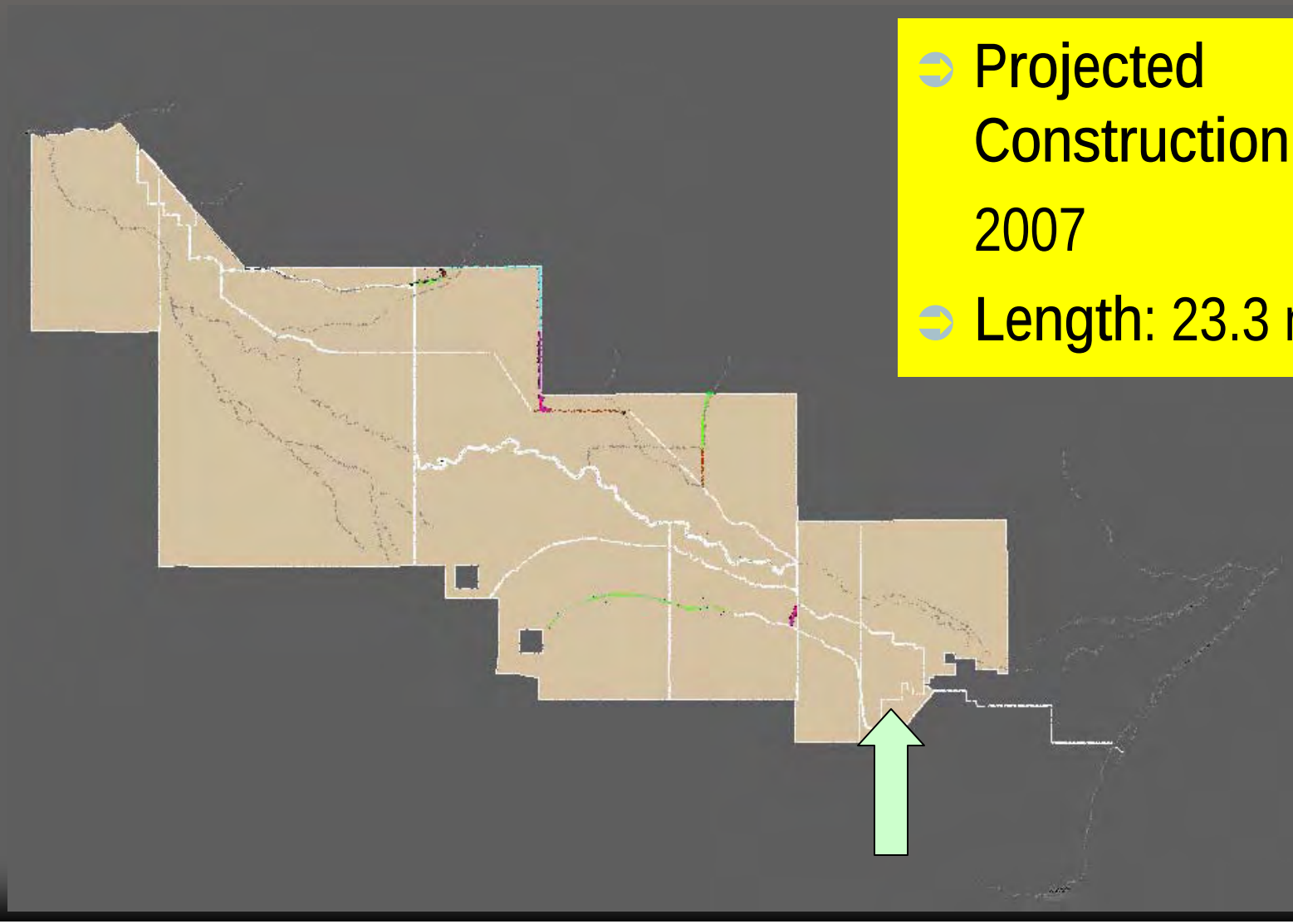
Projected 2006 Construction: Reach BW-IA Canal

- Projected Construction Date: 2006
- Length: 11.3 miles

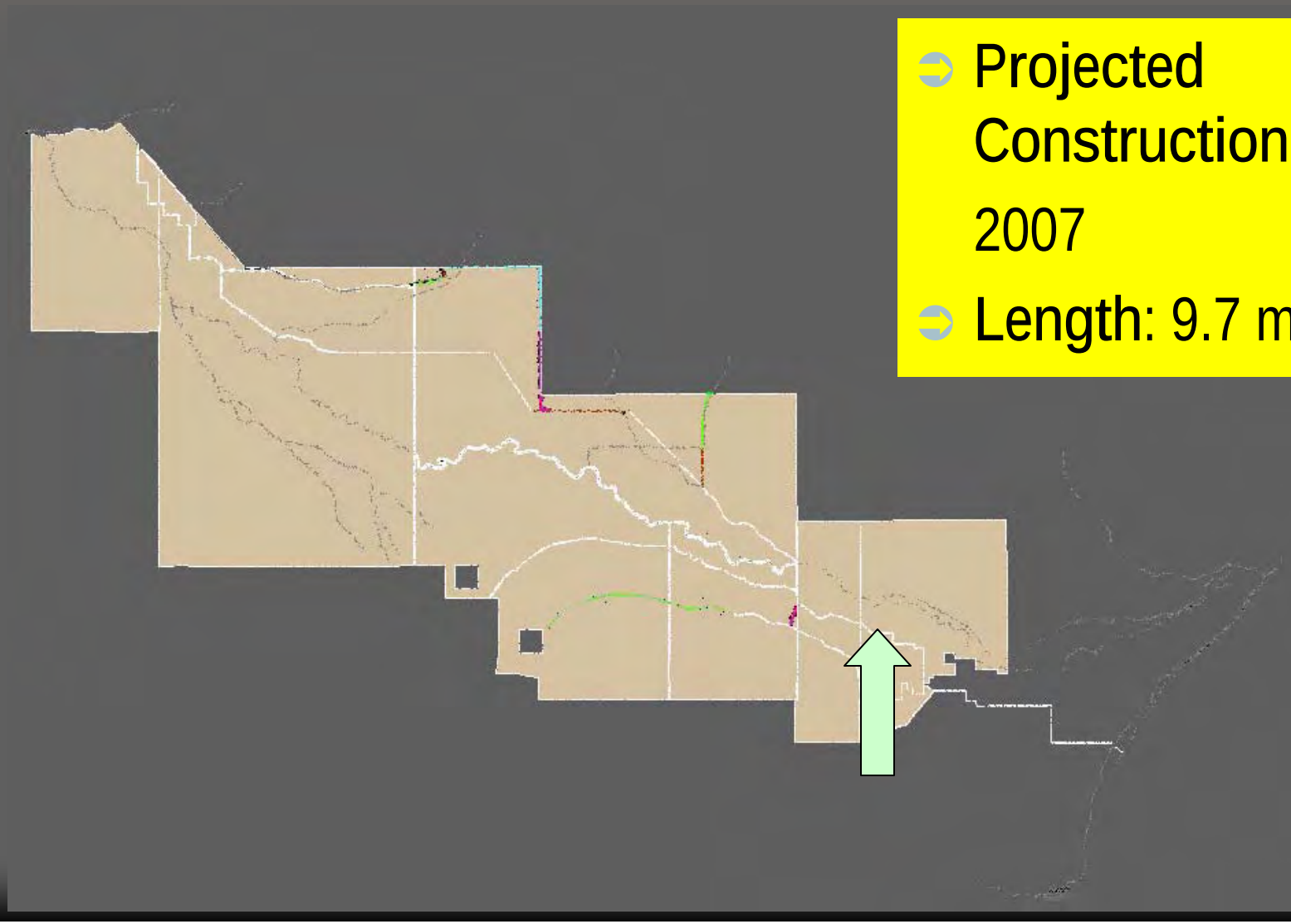


Projected 2007 Construction: Reach BW-IIA Canal

- Projected Construction Date: 2007
- Length: 23.3 miles

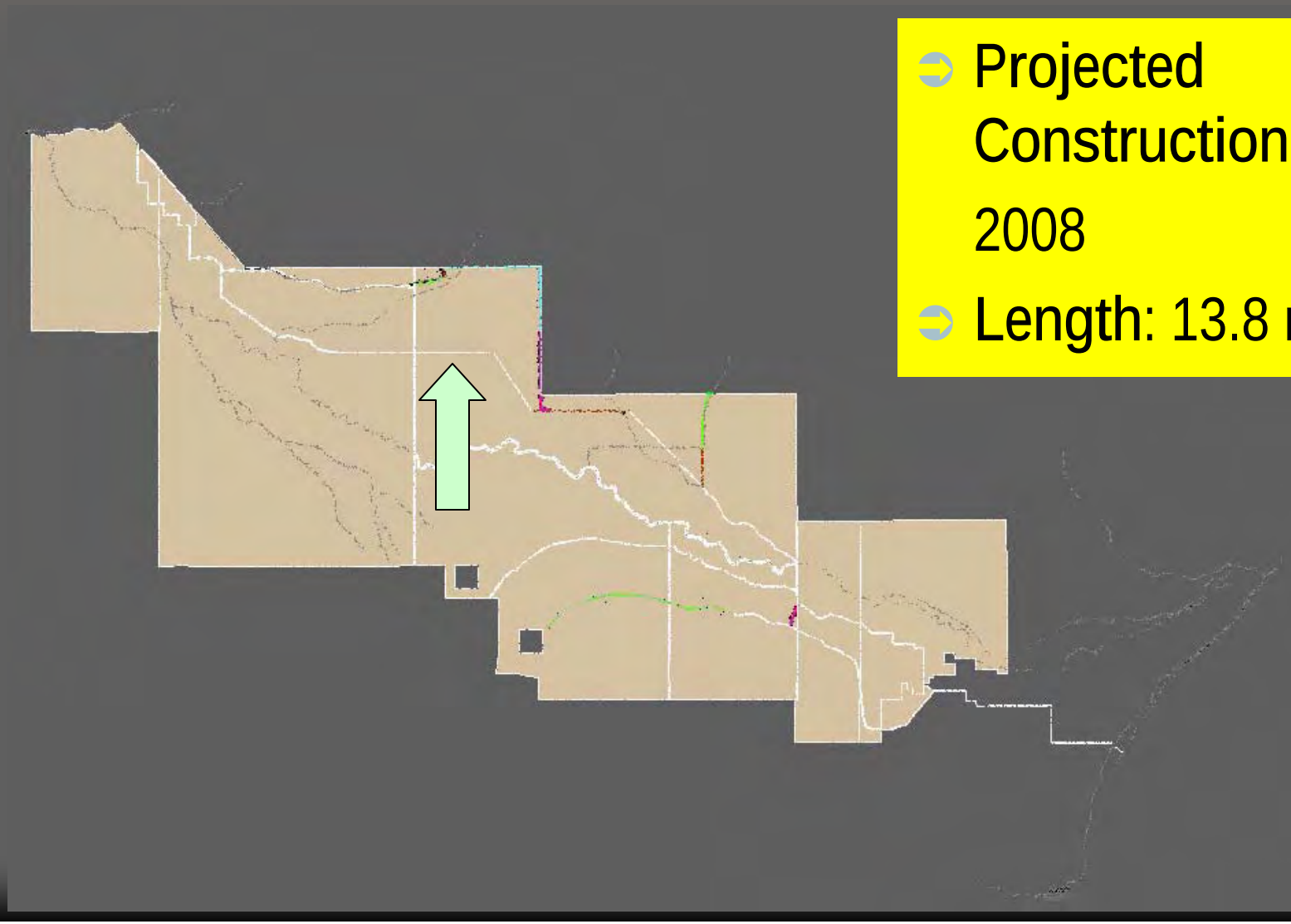


Projected 2007 Construction: Reach BW-IB Canal



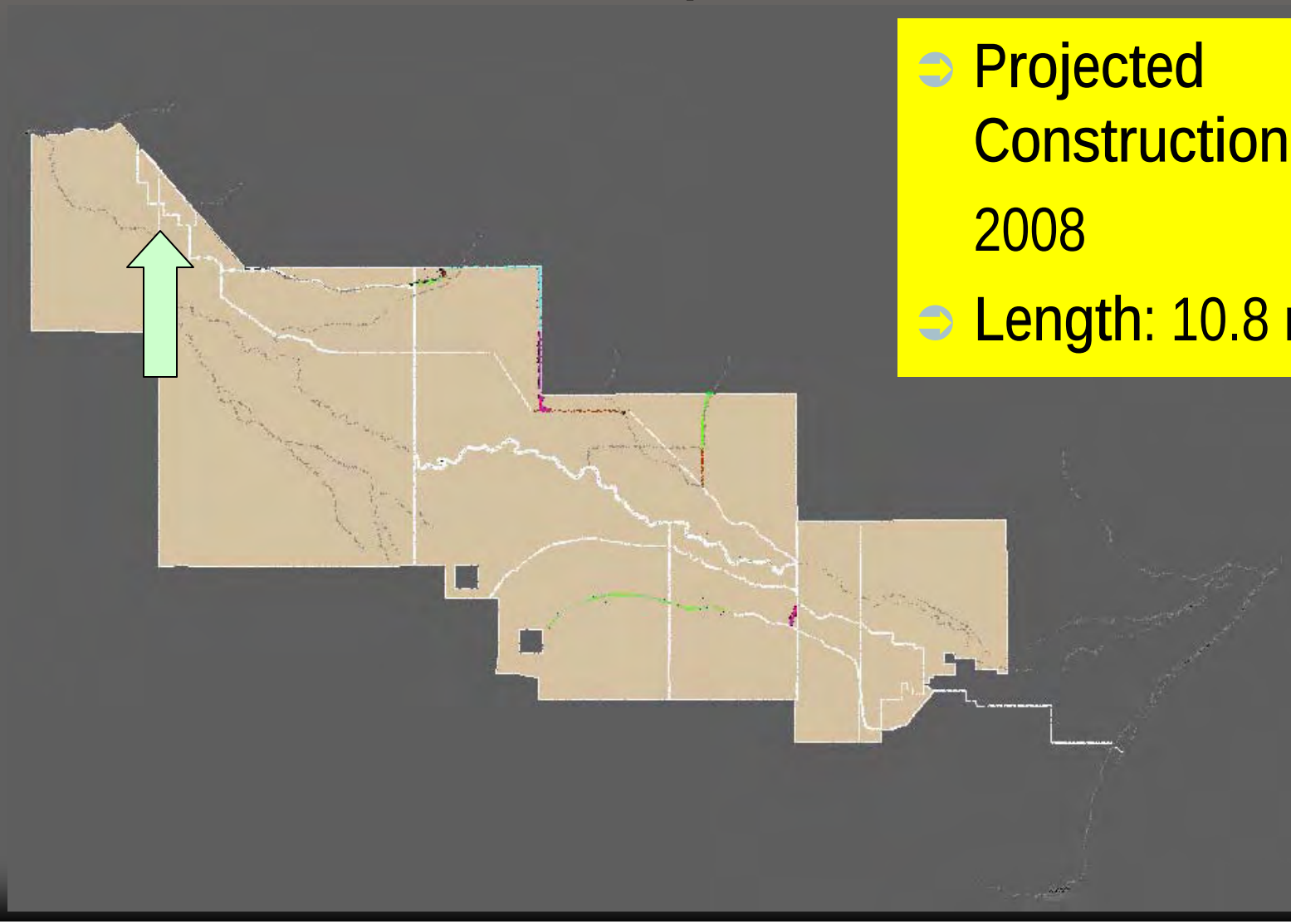
- Projected Construction Date: 2007
- Length: 9.7 miles

Projected 2008 Construction: Reach WS VB & VC Canal



- Projected Construction Date: 2008
- Length: 13.8 miles

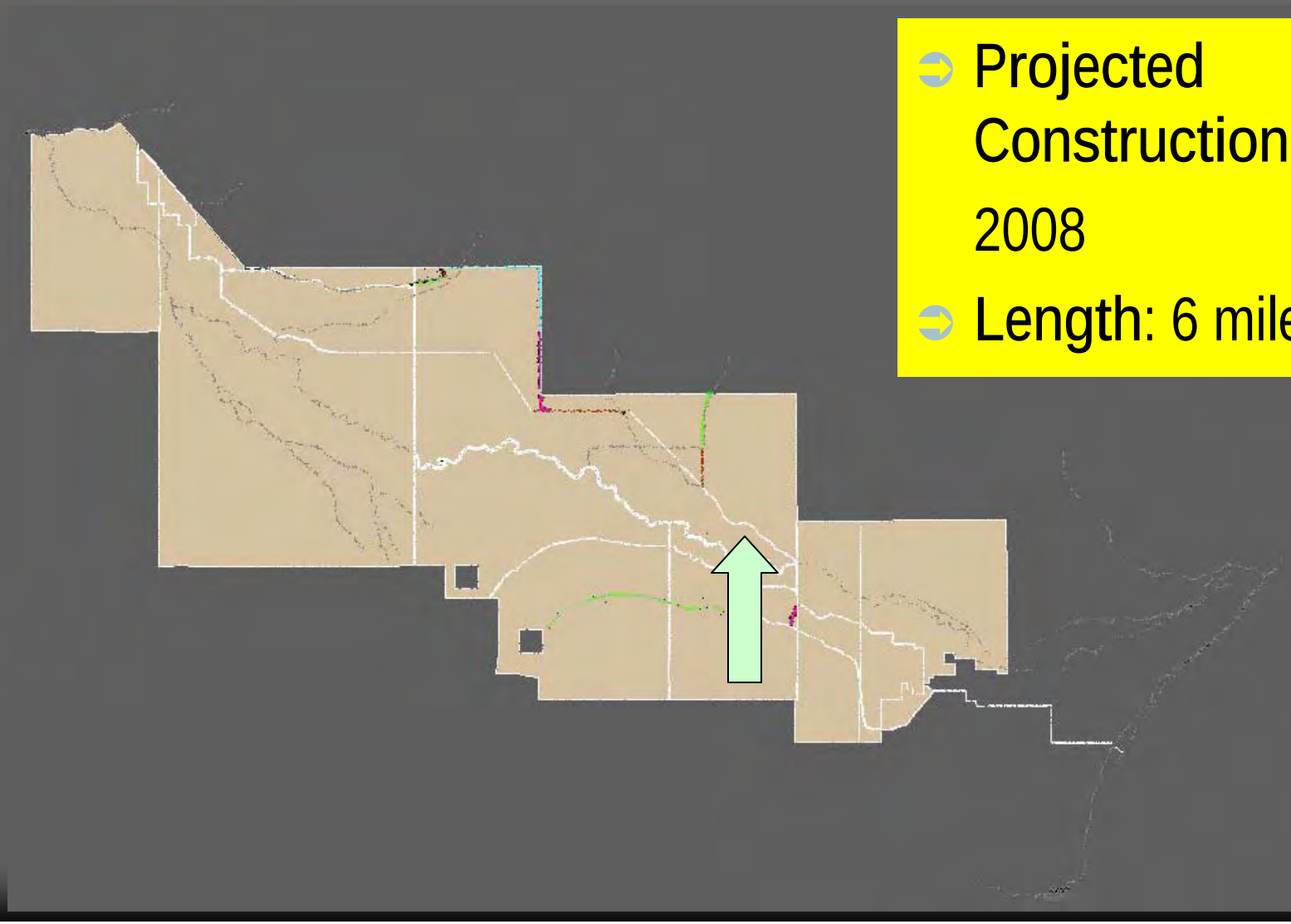
Projected 2008 Construction: Reach WS IE, IF Canal



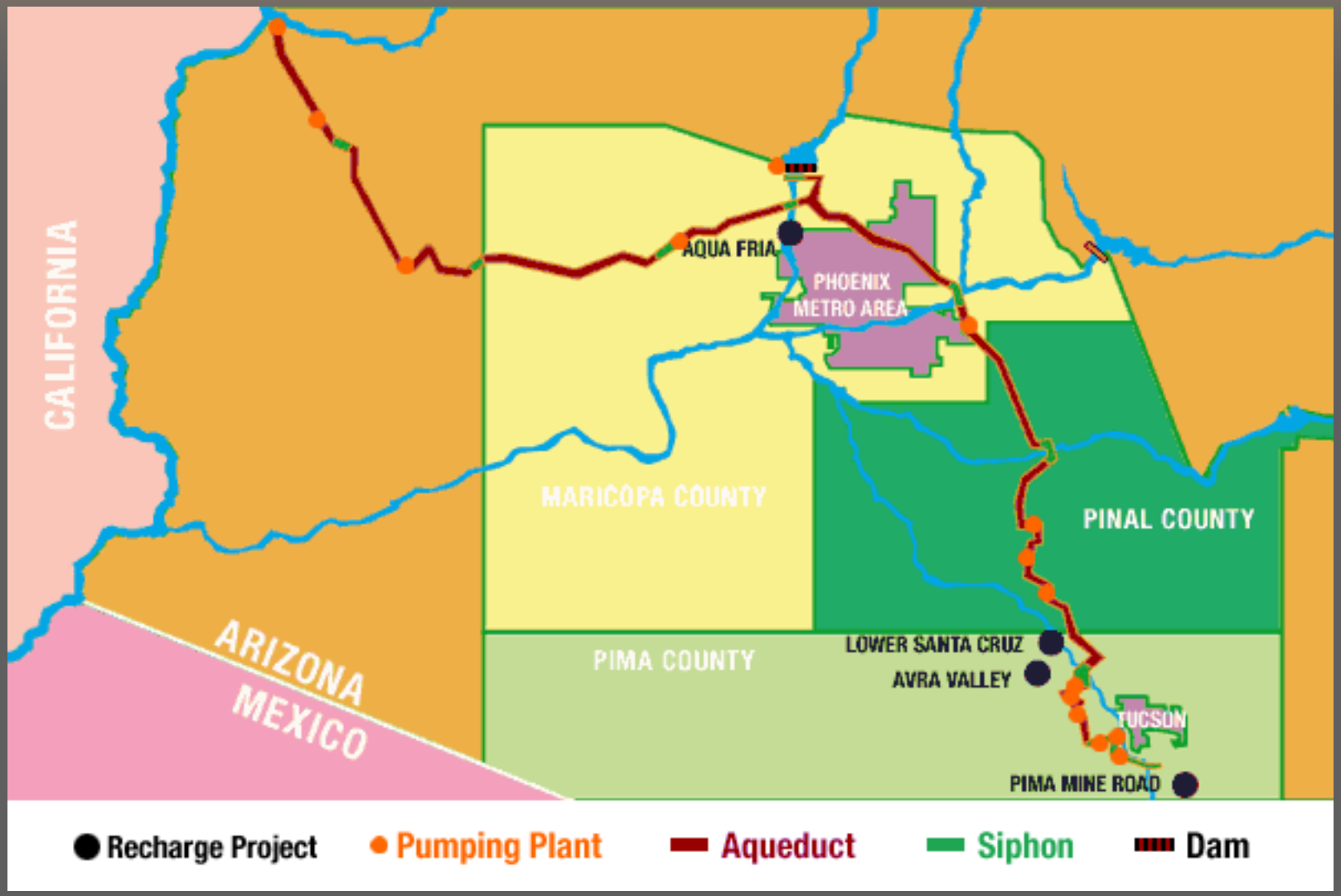
- Projected Construction Date: 2008
- Length: 10.8 miles

Projected 2008 Construction: Reach ST-IB Canal

- Projected Construction Date: 2008
- Length: 6 miles



Much of the water will come through the CAP



What will this allow?

The GRIC to restore its agricultural heritage and secure a stable economy that will benefit the Community.

Water Supply Management

Common use delivery system

Riparian Restoration

While the river cannot be made to flow again, riparian areas will be constructed along the irrigation route.

After more than a century of limited farming, the future is looking bright for the Gila River Indian Community. It is coming full circle to rebuild its agricultural heritage.

Small grain field within the Community

Community cattle producer

Alfalfa field in the center of the Community

Gila River Farms Olives

Gila River Farms Citrus