



Vegetation in Rivers & Washes Modified for Flood Control



Theresa Pinto, AICP, CFM, PMP

Project Manager

Arizona Riparian Council April 5, 2013

Presentation Overview

- Background
- Modifying the Salt & Other Rivers
- Unplanned Vegetation Growth
- Issues with Vegetation
- Opportunities



Flood Control District of Maricopa County

- Established 1959
- Reduce county resident's risks of injury, death, and property damage due to flooding
- 4 Programs
 - Education
 - Identify Flood Hazards
 - Regulate Flood Hazards
 - Flood Hazard Mitigation



FCDMC Flood Control Facilities

- 81 miles of unlined channels
- 41 miles of lined channels
- 22 dams
- 45 acres of basins
- 35 acres of habitat mitigation



Guadalupe
FRS



BHOC



Skunk Creek



02 2013

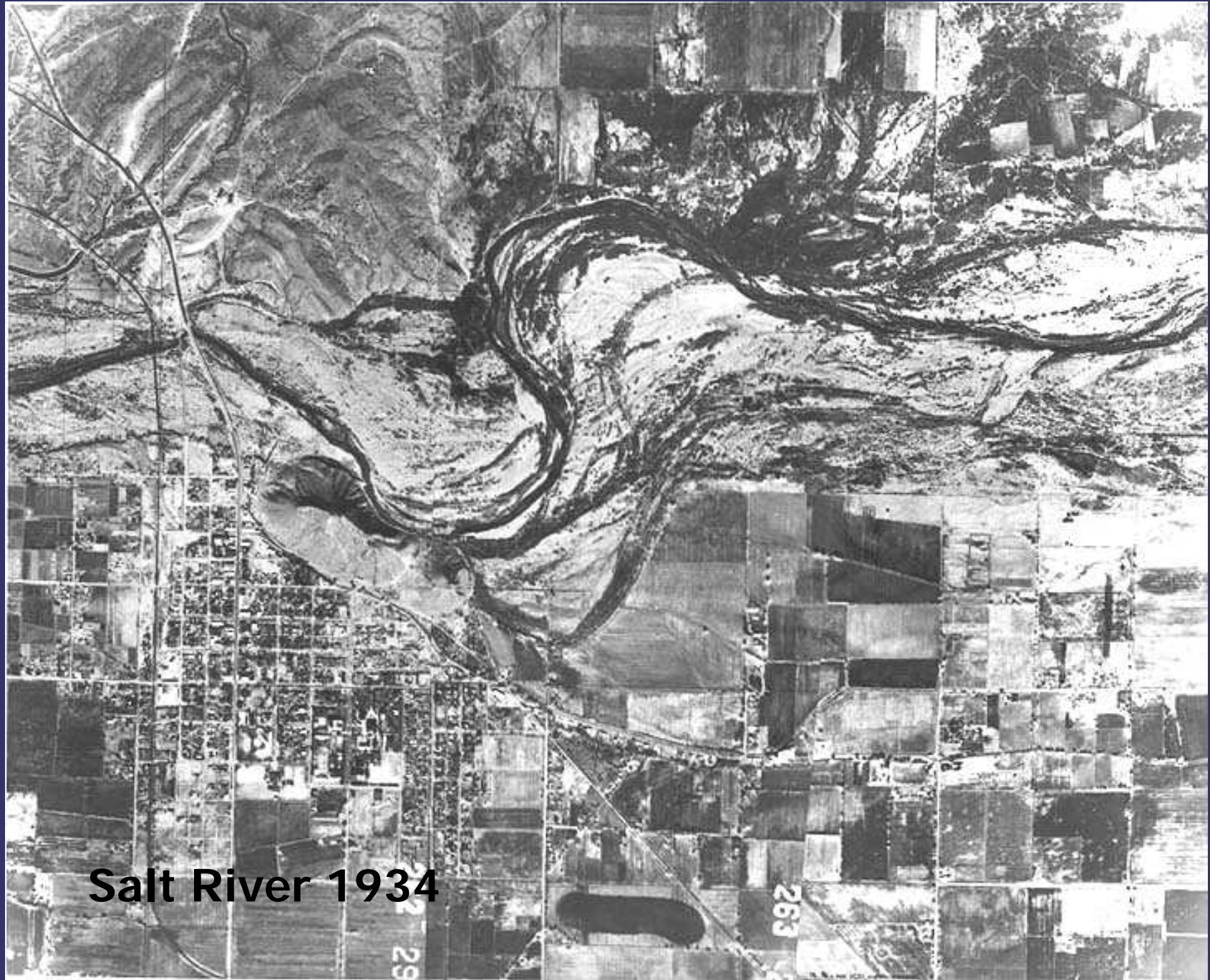
Modifying Rivers & Washes

- Bank Protection
- Channelization
- Levees

Results in:

- **Natural floodplains are constrained**
- More developable land
- Protects existing property
- Temporal habitat loss
- Maintenance obligations in-perpetuity





Salt River 1934

Salt River 1965 I-10 Bridge







LOOP
202

N Mill Ave

N Scottsdale Rd

E Curry Rd

N McClintock Dr

Salt River

San Francisco Canal

FW

W 1st St

E Rio Salado Pkwy

S Ash Ave

S Mill Ave

E Veterans Wy

S Rural Rd

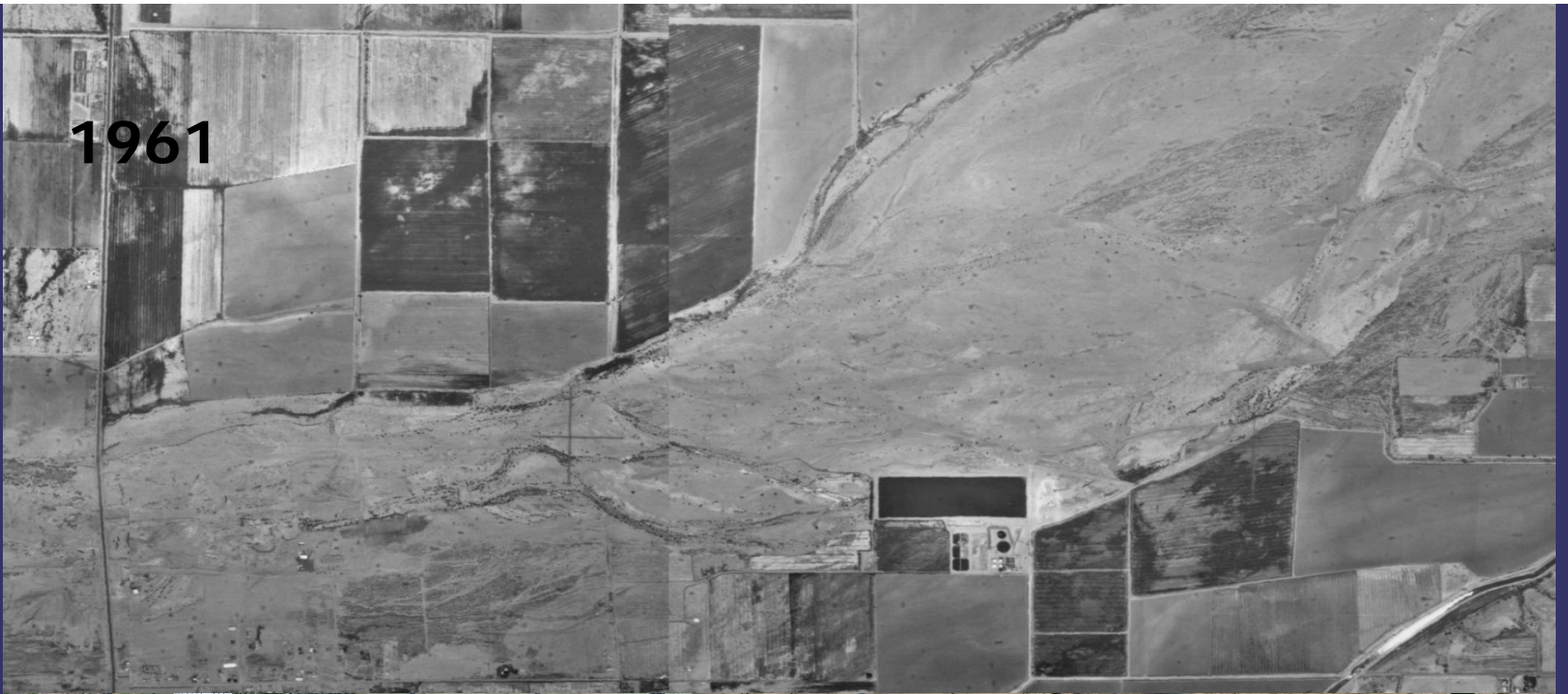
W University Dr

E University Dr

S McClintock Dr

Hayden Canal

1961



2012



Effects of Vegetation

- Reduces Conveyance Capacity



Mosquitoes & Other Public Concerns



Challenges:

Maintenance Issues

- Structural Integrity
- Maintenance Roads
- Low Flow Channels

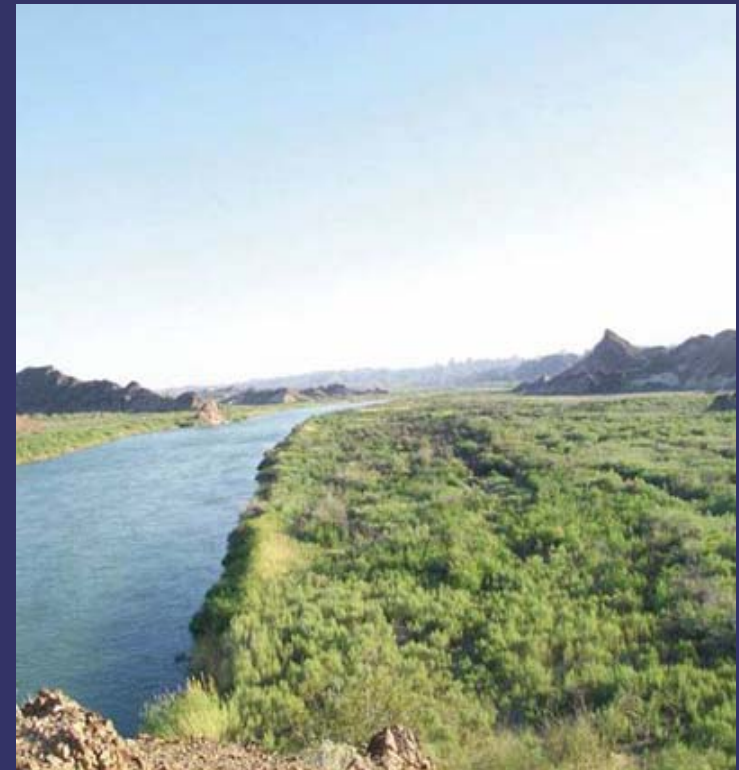


Conclusions & Key Points

Results of Urbanization

Includes:

1. Significant reduction in floodplains width and area for flood conveyance
2. Flood conveyance channels were designed to support no or little vegetation
3. Amount and sources of water discharges were unanticipated
4. Constant water discharges resulted in volunteer vegetation growth
5. "Volunteer" riparian habitat needs to be removed or managed



Opportunities & Needs:

- Embrace Volunteer & Urban Habitat
 - Value the significance
 - Establish how it complements or achieves other desired objectives
 - Justify the need for large scale vegetation removal
 - Develop and evaluate alternatives
- Research to support
 - Vegetation effects on riverine functions
 - Economic benefits of riparian vegetation
 - Quality of life, health, air quality, recreation, etc.
- Community Involvement



Challenges:

Property Values



Questions?

