# **RECLANATION** Managing Water in the West

# Reclamation's Water-Supply Activities

Presentation for the US Army Corps of Engineers 'Water Supply Working Group', September 17, 2014



U.S. Department of the Interior Bureau of Reclamation

### **Topics Covered:**

1. Reclamation's history, mission, project purposes and activities

2. Reclamation's water-related contracts and contracting authorities

3. Project cost allocation and water pricing

4. Newer Reclamation directions and programs

### **History of Reclamation**

Created in 1902 to help address the development of the semi-arid/arid American West through the development of water projects for irrigation



# **Annual Average Precipitation**



# **Mission Statement**

To manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.





# **Reclamation Projects**



### **Reclamation Water Deliveries**

### Serves more than 10 million irrigated acres, and 1 out of 5 western farmers

Enables farmers to produce 60% of the nation's vegetables, and 25% of its fruit and nut crop



### **Reclamation Water Deliveries**

# Serve about 31 million people with municipal, industrial, and residential supplies.



### **Reclamation Power Production**

Second-largest producer of hydroelectric power in the United States.

53 powerplants provide more than 40 billion kWh annually (enough to serve approximately 3.5 million homes)



# **Flood Control**

- Regulation of flood waters has prevented destruction of cities and agricultural lands
- Billions of dollars of flood damage avoided by Reclamation actions since 1950



### **Recreation**



 About 90 million visitors annually to Reclamation projects and lands

• Approximately 300 recreation sites that feature fishing, boating, and/or camping

### **Other Uses**

Supplemental water deliveries for other uses, including endangered species recovery and management of National Wildlife Refuges.



# **Project Water Rights**

- Project water appropriated in conformance with state water law (§8 Reclamation Act of 1902)
- Reclamation typically holds the water rights for our projects (less often, irrigation districts or others control the right)
- Normally, Reclamation *contracts* for deliveries of project water, without a transfer of rights
- Generally, deference to state law, except if in conflict with an overriding federal interest or Congressional directive
- The lower Colorado River is unique: federalized river reach, with Reclamation serving as water master

# Water Supply Contracting, and Contracting Authorities



### **Reclamation's Unusual Status**

- No organic statute: Reclamation's activities are authorized by a series of laws over time (collectively, "Reclamation Law")
- Patchwork of authorities, both broadly applicable and project-specific
- Thus, difficult to make blanket statements about water-related contract provisions – case-by-case variations

# **Commonly-Cited General Authorities**

- Reclamation Act of 1902\*
- Warren Act of 1911\*
- Miscellaneous Purposes Act of 1920
- Reclamation Project Act of 1939\*
- 1956 Act & 1963 Act
- Water Supply Act of 1958
- Federal Water Project Recreation Act of 1965

\* Probably the most commonly-cited



# Example of project-specific considerations:

#### Fryingpan-Arkansas Project (Act of Aug 16, 1962)

- Allowable purposes specified
- Allows repayment period of 50 years
- Defines interest rate on unamortized balance of repayment
- Incorporates by reference other specific documents:
  - Cites specific <u>engineering plans</u>
  - Cites specific '<u>operating principles</u>' adopted by the State of Colorado
  - Incorporates part of an EIS

# **Contract Types**

 Over time, statutory law has authorized <u>a variety of</u> possible water-related contract types, for example:

#### - Repayment

- Water service (supply)
- Excess capacity
- Exchange
- Settlement
- Safety of Dams

### **Repayment Contracts**

- Irrigation under Sec. 9(d); M&I under Sec. 9(c)(1) of the 1939 Act
  - 40 year repayment term
    - Project specific legislation may allow a longer repayment period
    - 10 year development period available for irrigation
  - No contract termination date
  - Water use in perpetuity
  - Set cost obligation
  - Interest is included in M&I, power, etc. construction component
  - Repayment <u>does not</u> transfer ownership
    - Congressional authorization req'd for Title Transfer

### Water Service Contracts

- Irrigation under Sec. 9(e) of the 1939 Act
- M&I and miscellaneous purposes under Sec. 9(c)(2) of the 1939 Act
- Reclamation has discretion in establishing the construction component of pricing
- Charges must cover appropriate O&M
- 40 year maximum term (may be renewed)
- Use of water is only for contracted term

## Which type to use?

#### Repayment

- Costs are allocated (may be interim allocation)
- Long-term commitment by beneficiary
- Water Service
  - Cost allocation is uncertain
  - Contractor doesn't want permanent water supply



# Excess Capacity – Warren Act Contracts

- Non-project irrigation water under Warren Act of 1911
- Capacity must be available without impairing project water deliveries or harming irrigators
- Charges based on construction and O&M costs of the project
- No maximum term in Warren Act
  - Policy limits term to 40 years

# **§14 Exchange Contracts**

- Authorized under Section 14 of the 1939 Act
  - Allows exchange of water in time or place
    - Considerable discretion in terms
    - Must be in the interest of Reclamation and the project



# Project Cost Allocations and Water Pricing





Based on economic benefits generated by the Project for each purpose



#### Fish & Wildlife





#### Recreation



#### Flood Control





### **Project Purposes**



### **Ability To Pay**

- Irrigation repayment adjustments based on <u>ability to pay</u> (ATP)
- ATP studies conducted to determine repayment ability
  - Studies assess the financial capability of an entity to repay its allocated share of reimbursable construction costs

#### Aid to Irrigation

- Picked up by other reimbursable project purposes: Usually power on projects with a power component; sometimes M&I if authorized by statute
- No interest



Multi-purpose Project with Aid to Irrigation

(other project revenues, e.g. Power)



Typically paid as a *per-acre-foot* cost

# New Directions, New Programs



#### Percentage Change in Population Growth, 1990 to 2000



# **Drought Vulnerabilities**



### WaterSMART Program

#### • Established by Secretarial Order 3297, February 2010 to

- Establish a framework to provide federal leadership and assistance on the efficient use of water
- Integrate water and energy policies to support the sustainable use of all natural resources
- Coordinate the water conservation activities of the various Interior offices
- Important to Reclamation's implementation of the SECURE Water Act (P.L. 111-11, Title IX, Subtitle F)

# Reclamation Components of WaterSMART

- WaterSMART Grants
  - Water and Energy Efficiency
  - System Optimization Review
  - Advanced Water Treatment
  - Climate Analysis Tools
- Basin Study Program
  - Basin Studies
  - Landscape Conservation Cooperatives
  - West-Wide Climate Risk Assessments
- Title XVI
- Cooperative Watershed Management Program



### WaterSMART Grants

- Implements Section 9504 of the SECURE Water Act
- Requires a minimum of 50% non-Federal cost-share contribution
- Selected through a competitive process
- Generally must be completed within two to three years from funding date
  - Result: projects have a near-term impact on water and energy conservation and improved water management

### WaterSMART Grants

- Provide financial assistance for the following types of projects:
  - Water and Energy Efficiency Grants:
    - Seek to conserve and use water and energy more efficiently, increase the use of renewable energy, protect endangered species, or facilitate water markets

#### – System Optimization Reviews:

- Broad look at system-wide efficiency focused on improving efficiency and operations of a water delivery system, water district, or water basin
- Advanced Water Treatment Pilot and Demonstration Projects:
  - Address the technical and economic viability of treating and using brackish groundwater, seawater, impaired waters, or otherwise creating new water supplies within a specific locale
- Grants to Develop Climate Analysis Tools:
  - Development of tools to more efficiently manage water in a changing climate

The FY 2015 FOA for Water and Energy Efficiency Grant applications is expected to be posted in Fall 2014. RECLAMATION

# **Basin Study Program**

#### West-Wide Climate Risk Assessments (WWCRAs)

 Baseline assessments of the risks and impacts of climate change to water supply, demand, and operations conducted by Reclamation in a consistent manner in the major Reclamation river basins. Information may be leveraged in subsequent Basin Studies.

#### Basin Studies

 Basin Studies – Reclamation partners with entities with water management authority in the 17 Western States to evaluate future water supply and demand imbalances in a changing climate and develop potential mitigation and adaptation strategies to meet future demands.

#### Landscape Conservation Cooperatives (LCCs)

 Partnerships to develop applied science tools to help resource managers address landscape-scale challenges.

#### **Funded Basin Studies**

22 Basin Studies funded since 2009

#### <u>2009</u>

- Colorado River Basin
- Milk/St. Mary Rivers Basin
- Yakima River Basin

#### <u>2010</u>

- Niobrara River Basin
- Truckee River Basin
- Santa Ana River Basin
- Henrys Fork of Snake River
- S.E. California Regional Basin
  2011
- Lower Rio Grande River Basin
- Santa Fe Basin
- Klamath River Basin
- Hood River Basin
  2012
- Upper Washita River Basin
- Sacramento-San Joaquin Rivers
- Republican River Basin
- Pecos River Basin
- L.A. Basin

#### <u>2013</u>

- San Diego Watershed
- West Salt River Valley

#### <u>2014</u>

- Upper Red River Basin
- Missouri River Headwaters
- Upper Deschutes River Basin



### **Reclamation LCC History**

- Reclamation participates in Desert and Southern Rockies to fund research activities, to meet shared priorities with LCC partners, designed to enhance the conservation and management of natural resources with a nexus to water
- This includes developing tools to assess the impacts of climate change and other landscape scale stressors within the boundaries of the Southern Rockies and Desert Landscape Conservation Cooperative and adapt to those stressors
- 22 LCCs
  - Desert and Southern Rockies sponsored by Reclamation
  - Great Basin sponsored by BLM
  - Appalachian sponsored by NPS

# Cooperative Watershed Management Program

- Reclamation implemented Phase I in 2011
- Used to establish or expand a watershed group
- Annual FOA is approximately \$250,000
- Awards are fro two years of funding, if the project sponsor shows significant progress at a 270-day review
- Phase II & III are authorized, but not implemented
  - Are for on the group watershed restoration projects

# Program Management Office Contacts



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# **Questions?**

