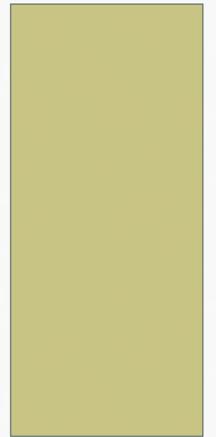


YUMA AREA AGRICULTURE

WATER USE & EFFICIENCY



YUMA AREA AGRICULTURE

- \$3 billion industry.
- Grow over 175 different crops.
 - Lettuce, other leafy greens, broccoli, cauliflower, celery, onions, beets, melons, dates, seed crops, lemons, wheat, cotton, grasses.
 - Year-round. 2 growing seasons.
- 80 to 90% of the Nation's leafy greens and other vegetables for the winter months (November – March/April) are grown and/or processed in the Yuma area.
 - Grow more than one *billion* pounds of lettuce per growing season, or more than 15 servings of lettuce per growing season for every person in the Nation.
 - 2,500 trucks leave Yuma daily during these months.
- Soil, Water, Climate, Infrastructure, Innovation & Labor
- Irreplaceable

WATER SOURCES

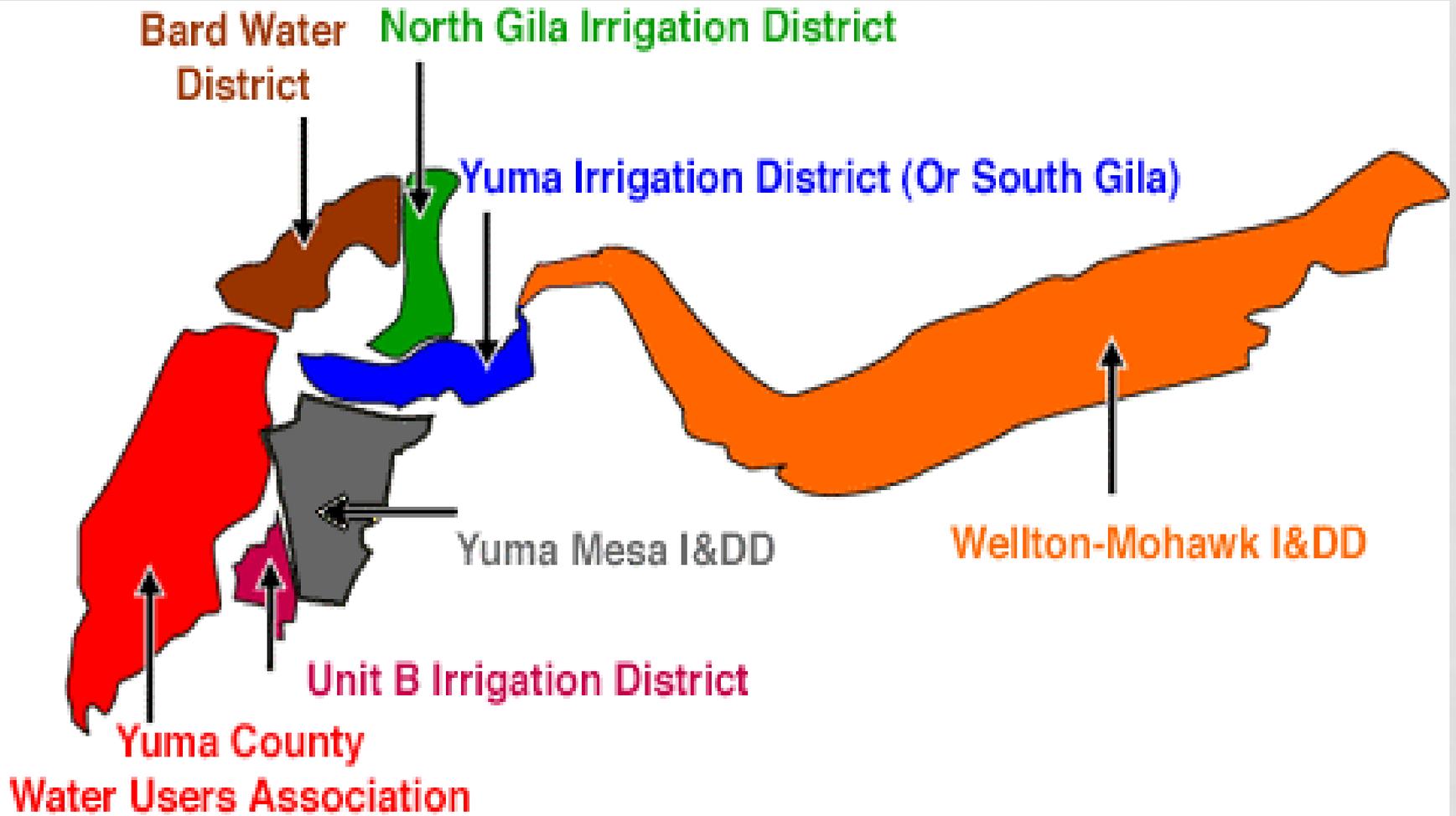
- Colorado River
 - Must have contract, present perfected, reservation or decreed rights.
- Groundwater
 - Must own land above aquifer.
 - Most groundwater in the Yuma area has been deemed Colorado River water.
- Effluent or Reuse
 - Must have been the entity to treat the water or purchase it from entity that treated the water.

AGRICULTURE WATER

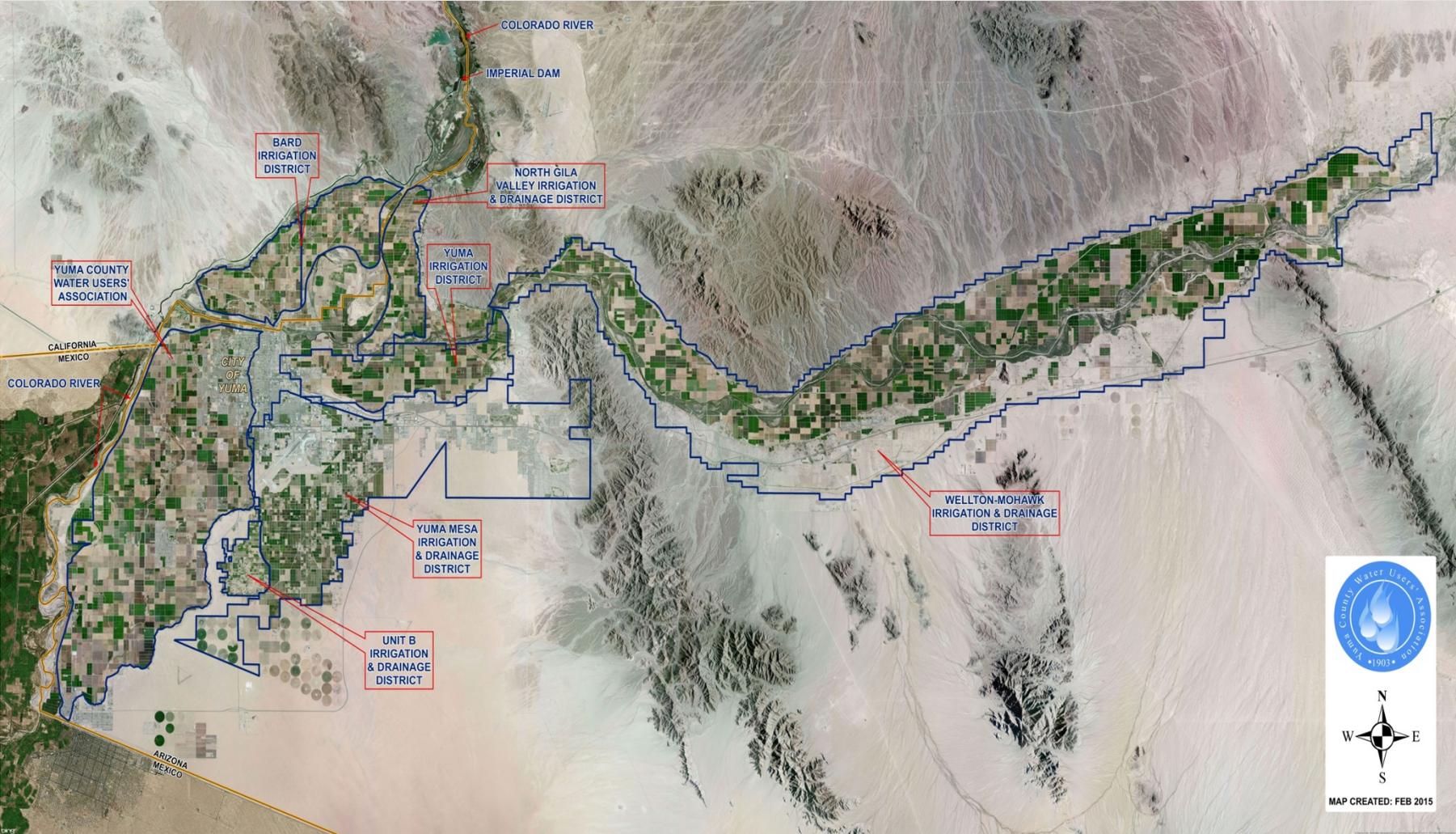
- Colorado River Water
 - Managed by Districts and an Association
 - Some separate Present Perfected Rights
 - But usually wheeled through District infrastructure.
- Some Groundwater



YUMA AREA DISTRICTS



YUMA AREA DISTRICTS



MAP CREATED: FEB 2015

WATER RIGHTS

- Present Perfected Rights
 - Most senior rights, with highest priority. Established rights that predate Colorado River compacts and are not impacted by the same.
 - A water right acquired in accordance with State law, which right has been exercised by actual division or a specific quantity of water that has been applied to a defined area of land or to definite municipal or industrial works. Includes water rights created by reservation for the use of Federal establishments under Federal law whether or not the water has been applied to beneficial use.
- Reserved or Decreed Rights
 - Based on Court action or Federal legislation.
- Contract Entitlements
 - Entitlements granted by Contract with the Bureau of Reclamation, usually based on consumptive use or beneficial use diversion rights.

PRIORITY

- Priority 1
 - Satisfaction of Present Perfected Rights (PPRs) as defined and provided for in the Arizona v. California Decree (2006 Consolidated).
- Priority 2
 - Satisfaction of Federal Reservations and PPRs established or effective prior to September 30, 1968.
- Priority 3
 - Satisfaction of Entitlements pursuant to contracts between the United States and water users in Arizona executed on or before September 30, 1968.
- Priority 4
 - Satisfaction of Entitlements pursuant to:
 - Contracts, Secretarial Reservations, and Other Arrangements between the United States and water users in the State of Arizona entered into or established subsequent to September 30, 1968, for use on Federal, State or privately owned lands in the State of Arizona
 - Contract No. 14-06-W-245 dated December 15, 1972, as amended, between the United States and Central Arizona Water Conservation District for delivery of Mainstream Water for the Central Arizona Project, including delivery to Indian lands.
- Priority 5 – Satisfaction of Entitlements to Unused Water Entitlement
- Priority 6 – Satisfaction of Entitlements to Surplus Apportionment Water

DISTRICT RIGHTS

District	Contract Entitlement	Quantity	Priority
WMIDD	Consumptive Use	278,000	3 rd
YCWUA	Beneficial Use – Diversion Right	254,200	1 st
YMIDD	Consumptive Use	Shared 250,000	3 rd
YID	Consumptive Use	Shared 250,000	3 rd
NGVIDD	Consumptive Use	Shared 250,000	3 rd
	Beneficial Use – Diversion Right	24,500	1 st
Unit B	Beneficial Use – Diversion Right	6,800	1 st
BWD (CA)	Beneficial Use – Diversion Right	Shared 3,850,000	1 st

ENTITLEMENTS

- Consumptive Use
 - Based on consumptive use within a district's boundaries.
 - How much water is needed to irrigate the district's farmed acreage.
- Beneficial Use
 - Not limited to consumptive used based on acreage.
 - Any water that can be beneficially used within the district or association.
 - If they can beneficially use the water, it can be diverted.
- Districts also deliver pursuant to PPRs in most cases.

IRRIGATION AND EFFICIENCY METHODS

- Irrigation
 - Flood and Furrow Irrigation (GPS laser leveled)
 - Sprinklers
 - Center Pivot or Linear Move Sprinkler Systems (limited)
 - Drip Irrigation (limited)
- Efficiency Methods
 - Transplants
 - Crop Varieties
 - Weeding and Thinning
 - On-Farm Conservation
 - System Maintenance
 - Infrastructure Improvements
 - Research

WATER USE EFFICIENCY

- A Case Study in Efficiency (2015)
 - 85-90% Efficient
 - By some estimates, 75% more efficient than other agriculture users in the Basin.
 - Decreased water use by 18% since 1975, while almost doubling production.
 - Yuma is to Agriculture what Detroit is to Vehicle Manufacturing, what Silicon Valley is to Computers. . .
 - Working on updated report but expect increase in productivity – crop per drop – and value, with same amount of water.
- Salt Balance Study
 - Supports efficiency findings – 85-90% Efficient
 - Must maintain that efficiency to balance salts.
 - If more efficient, will no longer be able to leech salts.

DROUGHT IMPACTS

- The 2007 Interim Guidelines and the Drought Contingency Plan currently guide operations of the River.
- Both require certain reductions or contributions at different levels of Lake Mead by the Lower Basin states.
- Reductions and contributions are made in line with the Priority System with junior users within each state making those cuts.
- Those reductions or contributions do not currently impact Yuma or Yuma agriculture.

DROUGHT IMPACTS

2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan, and Binational Water Scarcity Contingency Plan Total Volumes (kaf)

Lake Mead Elevation (feet msl)	2007 Interim Guidelines Shortages		Minute 323 Delivery Reductions	Total Combined Reductions	DCP Water Savings Contributions			Binational Water Scarcity Contingency Plan Savings	Combined Volumes by Country <i>US: (2007 Interim Guidelines Shortages + DCP Contributions)</i> <i>Mexico: (Minute 323 Delivery Reductions + Binational Water Scarcity Contingency Plan Savings)</i>					Total Combined Volumes
	AZ	NV	Mexico	<i>Lower Basin States + Mexico</i>	AZ	NV	CA	Mexico	AZ Total	NV Total	CA Total	<i>Lower Basin States Total</i>	<i>Mexico Total</i>	<i>Lower Basin States + Mexico</i>
1,090 - 1,075	0	0	0	0	192	8	0	41	192	8	0	200	41	241
1,075 - 1050	320	13	50	383	192	8	0	30	512	21	0	533	80	613
1,050 - 1,045	400	17	70	487	192	8	0	34	592	25	0	617	104	721
1,045 - 1,040	400	17	70	487	240	10	200	76	640	27	200	867	146	1,013
1,040 - 1,035	400	17	70	487	240	10	250	84	640	27	250	917	154	1,071
1,035 - 1,030	400	17	70	487	240	10	300	92	640	27	300	967	162	1,129
1,030 - 1,025	400	17	70	487	240	10	350	101	640	27	350	1,017	171	1,188
<1,025	480	20	125	625	240	10	350	150	720	30	350	1,100	275	1,375

DROUGHT IMPACTS

- The Bureau of Reclamation is in real time going through the process to change or modify current drought operations.
- Because this process is a federal action, it requires the Bureau to comply with the National Environmental Policy Act or NEPA.
- This process will result in new operational guidelines for the River in both the Upper and Lower Basin.
- This will end up being a Bureau decision but could be based on a consensus agreement between the Colorado River Basin states.

SEIS PROCESS

- Supplemental Environmental Impact Statement (SEIS)
 - Announcement made in November of 2022. Condensed Schedule.
 - Delayed as a result of 6 States Consensus, reaction to draft SEIS.
 - To inform operations in 2023 and 2024 and may also inform 2025 and 2026.
 - Revised Draft SEIS included operations through 2026.
 - Alternatives – No Action, 6 State Consensus Modeling Alternative
 - Considered by not fully analyzed – Priority, Pro Rata Reductions
 - Final SEIS in late February. Record of Decision shortly after.
 - Largely voluntary, compensated conservation.
 - Conservation activities began in 2023 and are ongoing with expectation States Consensus alternative will be chosen.

FULL EIS PROCESS – POST-2026

- Post-2026 Guidelines
 - 2007 Interim Guidelines and Drought Contingency Plan expire at the end of 2026.
 - Minute 323 also expires in 2026.
 - Post-2026 process will develop new agreements.
 - Pre-Scoping report completed.
 - Bureau has published its Notice of Intent to initiate EIS process for post-2026 operations.
 - Alternatives expected by end of March.
 - Process completed by end of 2024.
- 7 States Alternative unlikely.
- May see several alternatives submitted.

COOPERATION

- “Save the River” Plan – Mid to Late 2022
 - Yuma County Agriculture Water Coalition
 - 1 acre foot of water per acre.
 - Compensated conservation - \$1,500/acre.
 - Reduction of diversion or decreased water order.
- Plans under BOR Bucket 1 and Bucket 2 Programs
 - YMIDD – Year-Round Fallowing Program (1a)
 - BWD – Seasonal Fallowing Program (1a)
 - WMIDD – Unspecified (1b)
 - WMIDD, BWD, and Yuma County Water Users have infrastructure proposals under 2.
 - Why not other districts?

WHAT HAPPENS WITH LESS WATER?

- Room for Improvement?
- Fallowing
- Retirement of Lands
- Reductions in Consumptive Use
 - Uniqueness of Water Accounting in Yuma Area

Ultimately, agriculture in the Yuma area and other efficient agriculture users across the Basin could not continue to produce the same with less water. A reduction in water use very clearly results in less production and direct impacts to the Nation's food supply.

Do we value having a domestic food supply? And if so, isn't agricultural water use a beneficial use?

QUESTIONS?

Meghan C. Scott
Noble Law Office

meghan@noblelaw.com

928-343-9447 (office)

928-246-5940 (cell)