ADWR 4th Management Plan Assumptions

General Assumptions: 4MP Projections
Active Management Areas within the Central Arizona Project Service Area

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LSC Basin Study Meeting, April 27, 2016
MUNICIPAL PROJECTION ASSUMPTIONS

* Traffic Analysis Zone (TAZ) population projections from Associations of Government (MAG, PAG, CAG)
* ADOA population projections (other counties)
* Disaggregated to individual providers (large and small) based on:
  * Current service area boundaries
  * CC&N boundaries
  * Incorporated area boundaries
  * Municipal Planning Area (MPA) boundaries (Maricopa County)
  * Adjacent growth
  * Exempt pop/wells in TAZ – limited growth (no provider in TAZ/provider not growing/und DAWS)
Demand Assumptions

Large Providers
- Examined GPCD trends through 2013
- Considered service area characteristics
- Did not go below 200 GPHUD

Small Providers
- Projected as a whole
- Trend line of GPCD

Exempt well users
- Updated interior GPCD/exterior GPHUD
- Assessment pphu
* Supply Assumptions
  * Exempt wells 100% GWTR
  * Small providers 100% GWTR unless knew of specific case of other supply
  * Large providers
    * Individual assumptions for each provider based on service area characteristics
  * Untreated providers
    * Phoenix AMA – 2013 demand/supplies held constant
    * Pinal AMA
      * Two smaller providers held constant at their 2013 demand
      * SCIDD grows based on urbanization assumption from agricultural projections; proportion of supplies used maintained at 2013 proportions
* MLs
  * Divided projected pop/GWTR demand into four categories for analysis:
    * 1995 and prior
    * Post-1995 to 2013 (known replenishment activity and pop/demand)
    * Post-2013 to 2025 (projected pop/demand that will receive a GWTR allowance)
    * Post 2025 (projected pop/demand with ZERO GWTR allowance)
  * If/when GWTR allowance is exhausted future GWTR use is excess

* MSAs
  * DAWS tracking sheet
  * GWTR allowance generally used first, unless historical pattern showed otherwise or minimum excess obligation in MSA agreement
  * If when GWTR allowance is exhausted, future GWTR minus Incidental Recharge (IR) factor is excess
AWBA Assumptions

* PHXAMA and PAMA firming goals met before 2025
* TAMA firming at 92% of goal by 2031
* Funding affects projected storage in all three AMAs
* Any unused CAP supply is assumed to be stored
* Unused (“excess”) CAP supply is distributed amongst the three AMAs based on the 1990-2013 trendline of the proportion of CAP stored in the AMAs
  * PHXAMA proportion decreases
  * TAMA proportion increases
  * PAMA proportion remains about the same
* GSF/USF split is the lesser of:
  * The volume of “known” GSF to be stored each year
  * The volume of GSF water the districts can take based on agricultural sector projections
* Any unused CAP water that is not stored at GSF is stored at USF
Each AMA, and each district in each AMA has different demand/supply assumptions, tailored to each district/situation.

Factors:
- Current district infrastructure capacity and ability to install new wells
- GSF permit limits
- Variability in surface water supply (repeat historical “normal” supply)
- CAP pool reductions
- Urbanization based on TAZ projections and average area/lot/person + open space/commercial/transportation space
- Other information obtained from districts/Assessment assumptions (waterlogged area, exempt small rights, etc.)
* Agricultural
  * Individual assumptions for each entity
  * Considered CAP leases
  * Non-CAP surface water is repeated historical “normal” deliveries
  * Reclaimed based on historical deliveries and exchange agreements
  * Other sources generally historical averages held constant

* Municipal
  * Calculated difference in tribal population between 2000 – 2010 to develop trend to project tribal land population
  * 57 GPCD
  * 100% GWTR
Generally each industrial subsector in each AMA based on historical trends

Resolution begins in 2019

TAMA used PUG estimate

Golf courses do not grow but other types of turf facilities grow slightly

Supplies generally remain at historical proportions

NIA CAP becomes available in 2017
* Calculated a reclaimed GPCD rate based on ratio of reclaimed use to total use
* Applied to projected population/demand
* Subtracted from total reclaimed generated contractual volumes
* Subtracted direct use reclaimed water in the four water use sectors
* Remainder assumed available to store
  * Divided between managed/constructed facilities based on historical trends and permit limits