

Eloy And Maricopa-Stanfield Basin Study



— BUREAU OF —
RECLAMATION



PINAL
PARTNERSHIP

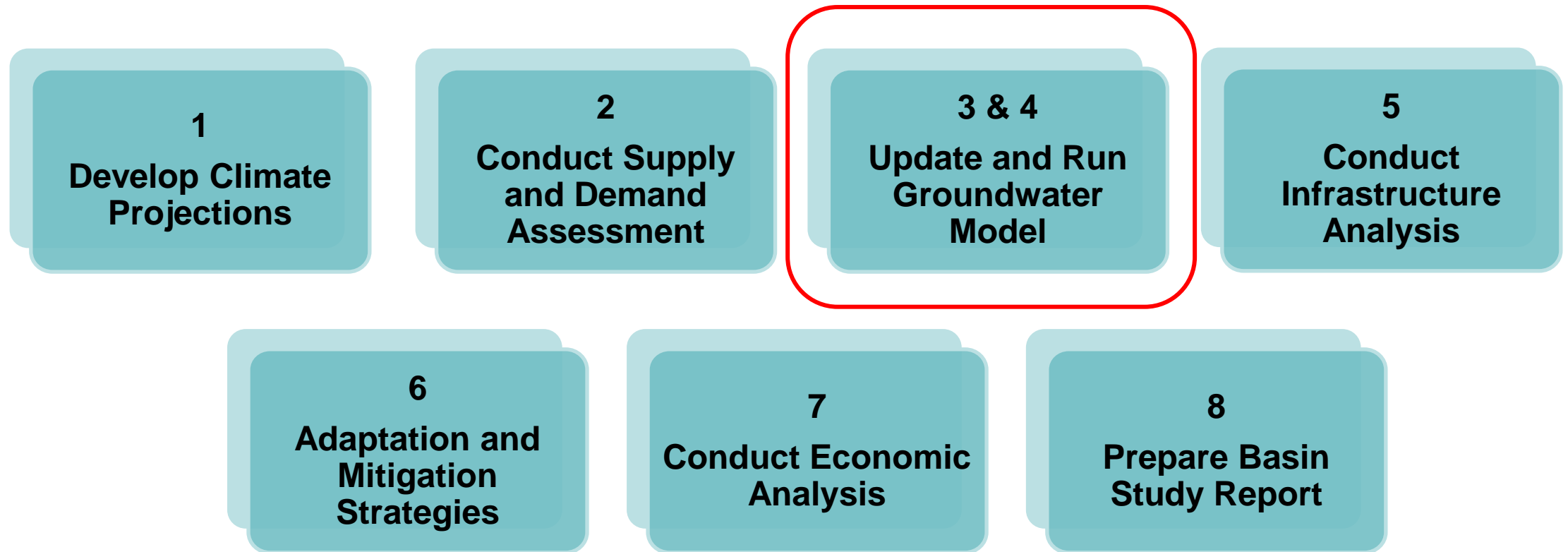
Project Team
&
Groundwater Meeting

October 13, 2020, 8:30 AM to 10:00 AM

Agenda

1. Welcome and Introductions
2. Groundwater Model Update and Decisions
3. Adaptation and Mitigation Strategies
 1. Brainstorming session
4. Infrastructure
 1. Discussion on approach
 2. Future infrastructure needs
5. Report Writing
6. Budget
7. Next Project Meeting
 1. November 10, 2020 8:30 am – 10 am
 2. Topics:
 1. Groundwater modeling decisions
 2. Adaptation and Mitigation strategies
 3. Infrastructure

Groundwater Model



Groundwater Model

- Groundwater model review and update is complete; no issues that warranted substantial model modification but made a few adjustments; Technical Memo documenting changes – October 2020
- Model review has not identified concerns about model's ability to meet study objectives
- Ready to begin predictive model simulations (5) using Reclamation climate projections and CAP:SAM supply/demand scenarios
- Predictive model run results and mitigation model runs – first quarter 2021

Scenarios & Stakeholder Engagement

- Supply and demand committee has met nine times since the 2018 kickoff meeting
- Data review
- Group exercises to identify & prioritize factors
- Developed & evaluated individual scenarios

2017 Portfolio for Municipal Water Providers in the Pinal AMA

Entity	Substation	Water Use (MGD)	Annual Storage (MG)	Storage	Delivered to Customers	Produced (MGD)	Used for MISC (MGD)	Returned to Water Control District	Pumped	Used for MISC (MGD)	Returned to Water Control District	Other (MGD)	Total Water Used (MGD)
AG Water Company - Royal Valley System	10,884	1,833	8,937		121				6,252	6,155	76		17,762
Delta Cruz Water Co.					2,821	187		2,456	7,513	4,465	1,008		4,572
Town of Paradise	2,045		2,045		3,504	18		3,504	3,751	3,751			7,506
Palmer Utilities - Royal					821	557		363	860	860			1,417
City of Elgin	2,171	65	1,600		674			674	8,925	8,925			9,999
Picacho Water Company					95	68	27	1,014	1,014	1,014			1,101
Total	18,207	1,968	6,810	2,852	121	4,572	769	4,859	22,526	20,723	1,084		42,000

Rank Each by How Interesting/Useful/Important (1 = High)

First rank the categories, then rank within the categories

- Development on Ag Land
 - Incentives to develop on Ag Land
 - Disincentives to develop on Ag Land
- Irrigation District pumping
 - Pumping constrained to current levels
 - Pumping constrained to 150% of current levels
 - Pumping unconstrained
- Ag Water Use Factors
 - Substitution from higher to lower water use crops
 - Extensive adoption of new irrigation technology
 - Higher leaching due to WQ
- Growth Rate
 - High population growth
 - Medium population growth
 - Low population growth
- Growth Pattern
 - Official growth pattern
 - Outward growth pattern
 - Infill/redevelopment
 - Local industrial growth
 - Constrained local development
- Muni Conservation Ethic
 - Stronger muni conservation ethic
 - Current muni conservation ethic
- Future Climate
 - Hotter & drier
 - Warmer & wetter
 - Historic climate
- Other
 -
 -
 -

Scenario A: Highest Demand

Pumping

- Fully replaces
- Partially replaces
- Limited to current/planned

Irrigation Efficiency

- Rapid
- Steady (i.e. current)
- Slow

Development

- Preference for on Ag
- No preference
- Preserve Ag (bare desert)

Growth Pattern

- Spillover
- Official
- Dense urbanization
- Local growth

Conservation

- Rapid
- Steady (i.e. current)
- Slow

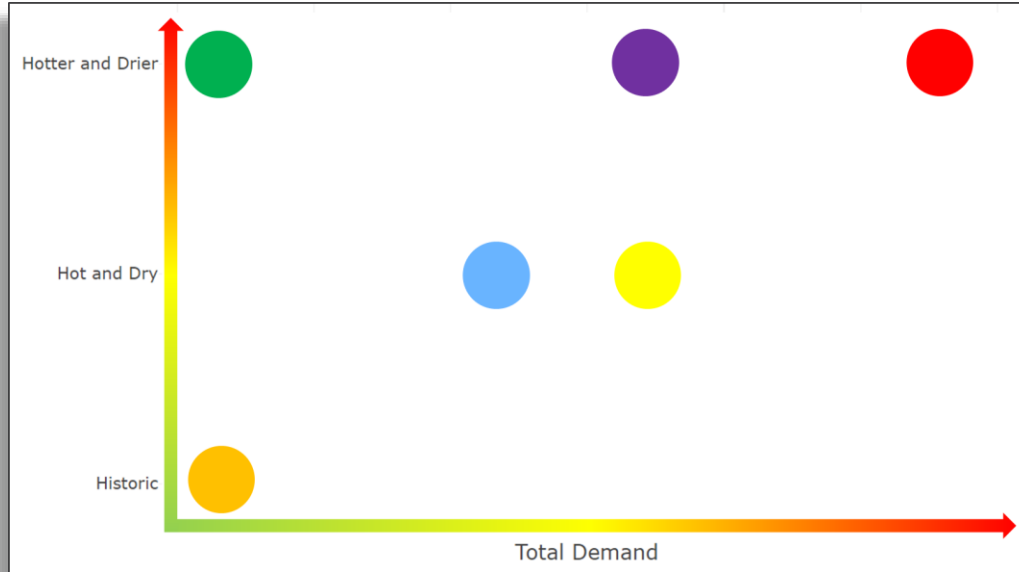
Growth Rate

- High
- Official
- Low

Climate

- Hotter and drier
- Hot and dry
- Historic

Scenarios & Stakeholder Engagement



Eloy and Maricopa-Stanfield Basin Study – Official Modeling Scenarios

Scenario ID	Climate	Growth Rate	Growth Spatial Pattern	Ag Pumping Capacity
A	Hotter and Drier (Higher Emission Future)	High	Spillover	Increased – 150% ¹
B	Hotter and Drier (Higher Emission Future)	Official	Local	Increased – 150% ¹
C	Hot and Dry (Lower Emission Future)	Official	Official	Increased – 150% ¹
D	Hot and Dry (Lower Emission Future)	Official	Official	Increased - 125% ²
E	Hotter and Drier (Higher Emission Future)	Slow	Dense Urbanization	Current ³
F	Historic (Current Climate)	Slow	Dense Urbanization	Current ³

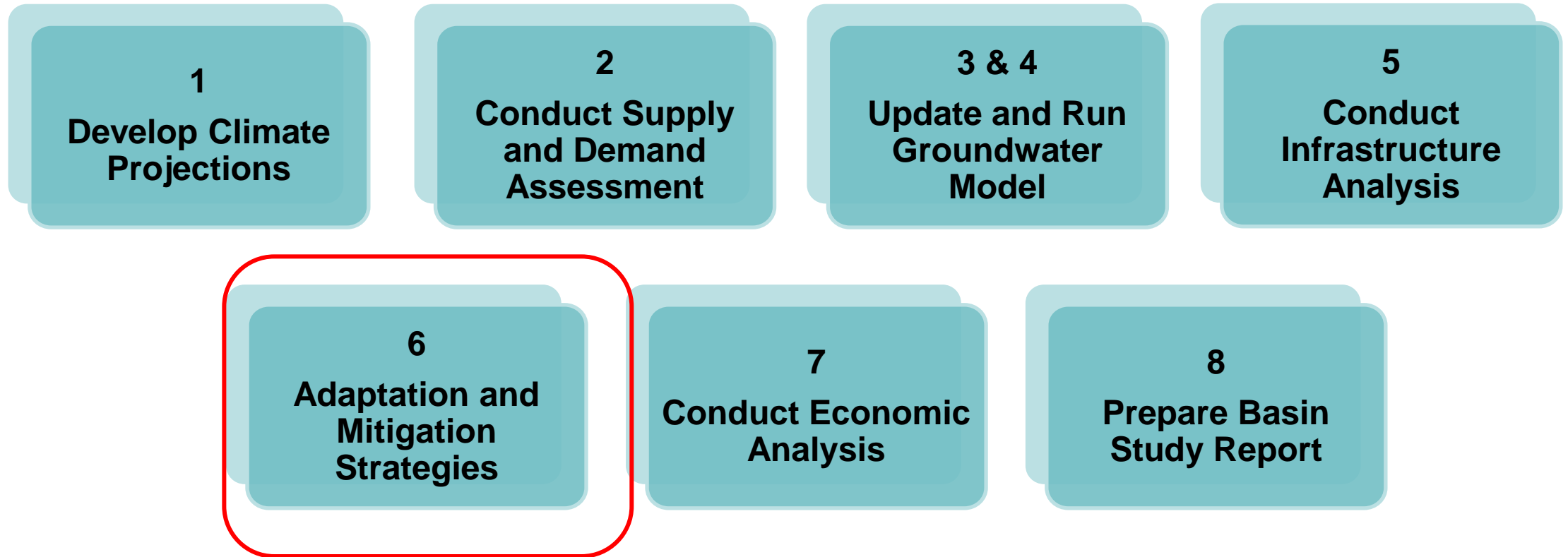
¹ Pumping capacity set to 150% of the maximum historical use (2010 – 2015)

² Pumping capacity set to 125% of the maximum historical use (2010 – 2015)

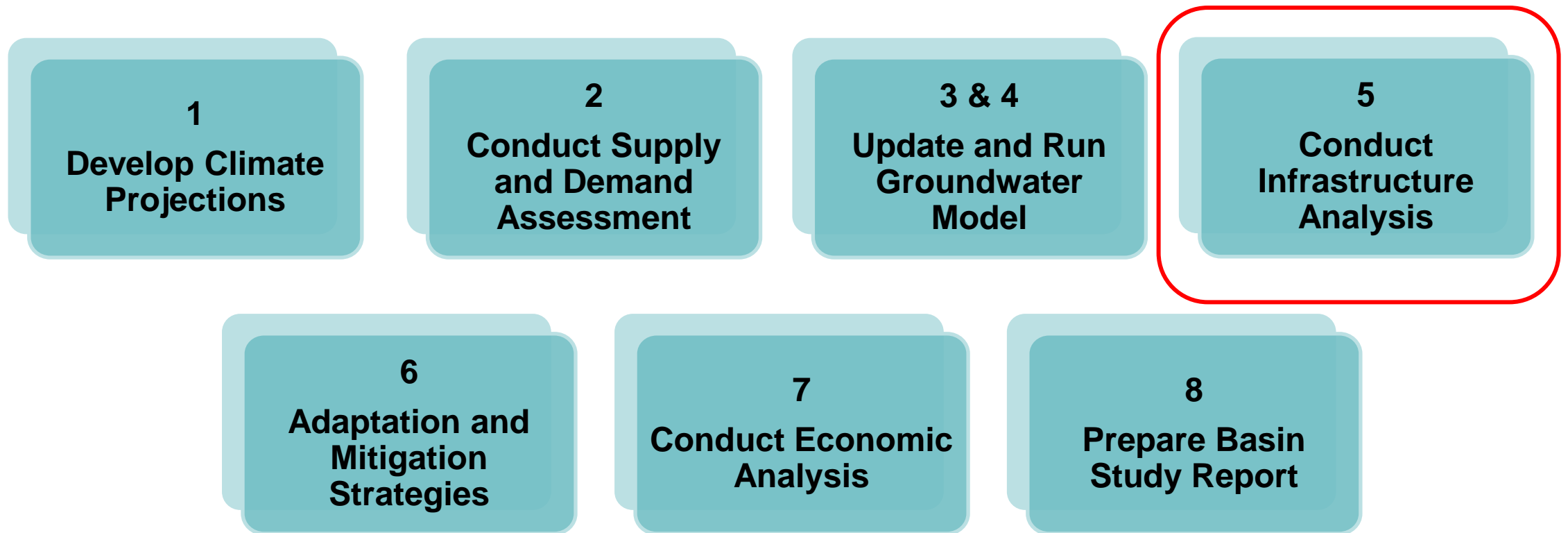
³ Maximum historical pumping (2010 – 2015) plus DCP pumping capacity

- Six scenarios
- Bracketed by highest & lowest demand scenarios
- Pairwise comparisons

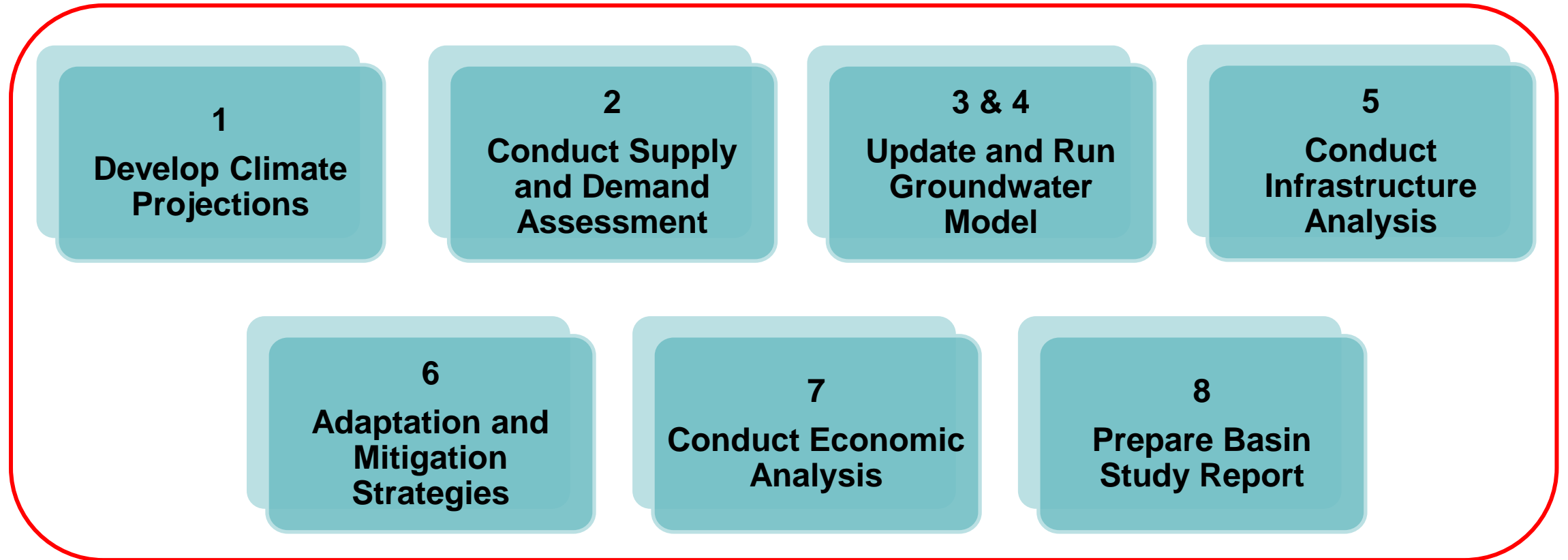
Adaptation and Mitigation Strategies Brainstorming



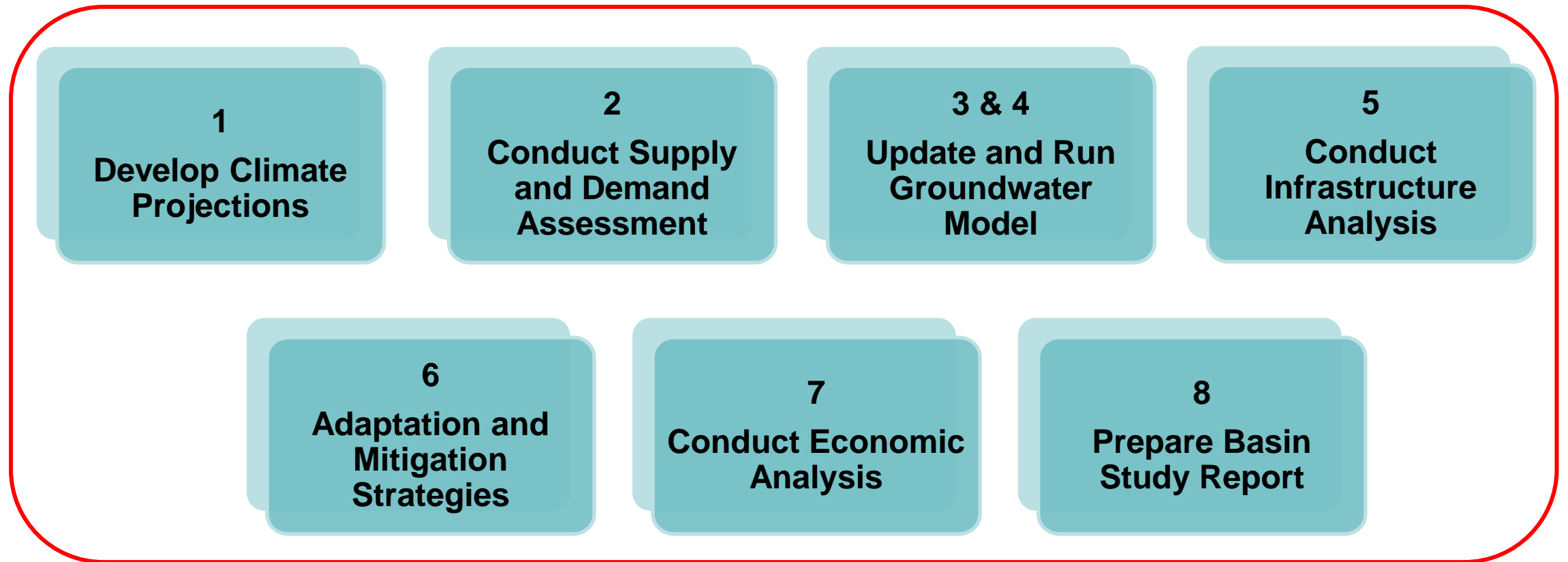
Infrastructure Analysis Discussion



Report Writing



Budget



Next Meetings

- Second Tuesday Mornings
 - 11/10/20
 - 12/8/20
- Additional Groundwater Modeling Meetings
 - Potentially 10/27, 11/3, 12/1