SC State Water Planning Framework Revisions

Scott Harder
Hydrology Section Chief
S.C. Department of Natural Resources
Land, Water and Conservation Division

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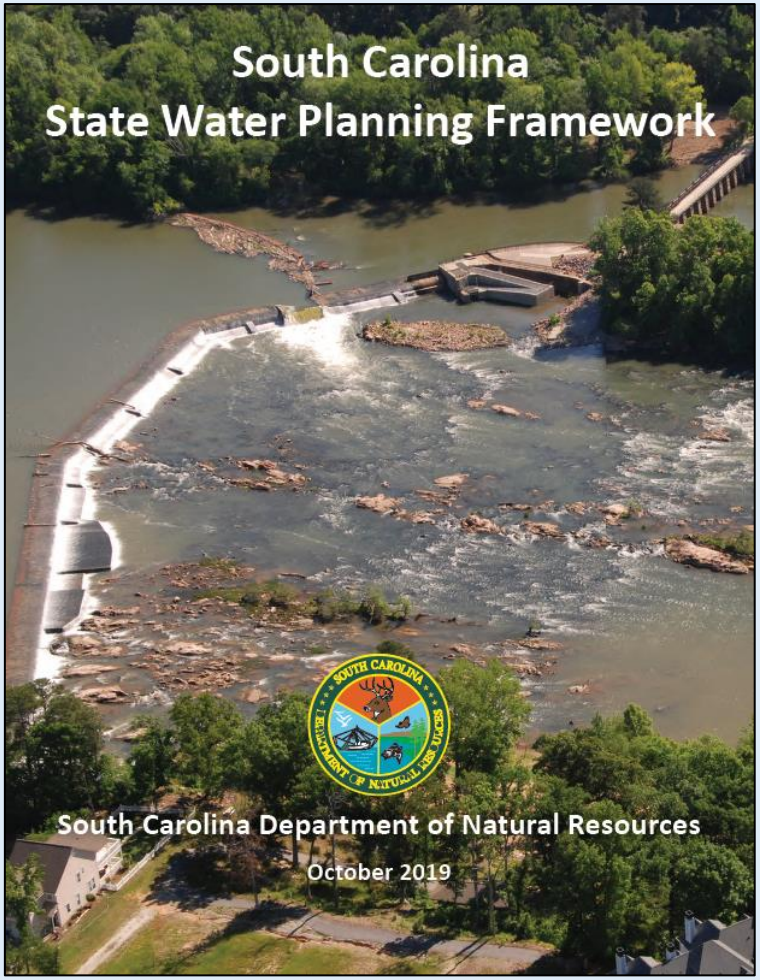
What is a River Basin Plan?

A **River Basin Plan** is *a collection of water management strategies supported by a summary of data and analyses designed to ensure the surface water and groundwater resources of a river basin will be available* ***for all uses for years to come****, even under drought conditions (Section 2.3.1).*

Guiding Principle (Section 2.6): River Basin Plans should strive for the equitable use of water resources with the goal of ensuring water is available **for all uses, when and where needed, throughout the Planning Horizon** and under drought conditions.

Surface Water Demand Scenarios

- Planning Framework requires four scenarios to be reviewed by each River Basin Council (Section 4.3):
  1. Current Surface Water Use
  2. Permitted and Registered Water Use
  3. Business-as-Usual Water-Demand Projection
  4. High Water-Demand Projection
- Scenarios focus on “water demand” side as opposed to “water supply” side.



Surface Water Demand Scenarios

1. Current Surface Water Use Scenario

- Water demand based on "current" water use defined as recent 10-year average (2009-2018) of reported water use (in most cases).
- Simulates Surface Water Supply and identifies Shortages resulting from a repeat of historic droughts.
- **Shortages would highlight the need for *short-term planning*.**

2. Permitted and Registered Water Use Scenario

- Water demand based on maximum legally allowable water use for surface water permits and registrations.
- Identifies Shortages that would occur under a repeat of historic droughts under full legally-allowable withdrawals.
- Addresses whether surface water source is currently over-allocated.

Surface Water Demand Scenarios

3. Business-as-Usual Water-Demand Projection Scenario

- Water demand based on projection of water use assuming normal climate and moderate population and economic growth.

4. High Water-Demand Projection Scenario

- Water demand based on projection of water use assuming drier conditions and high population and economic growth.

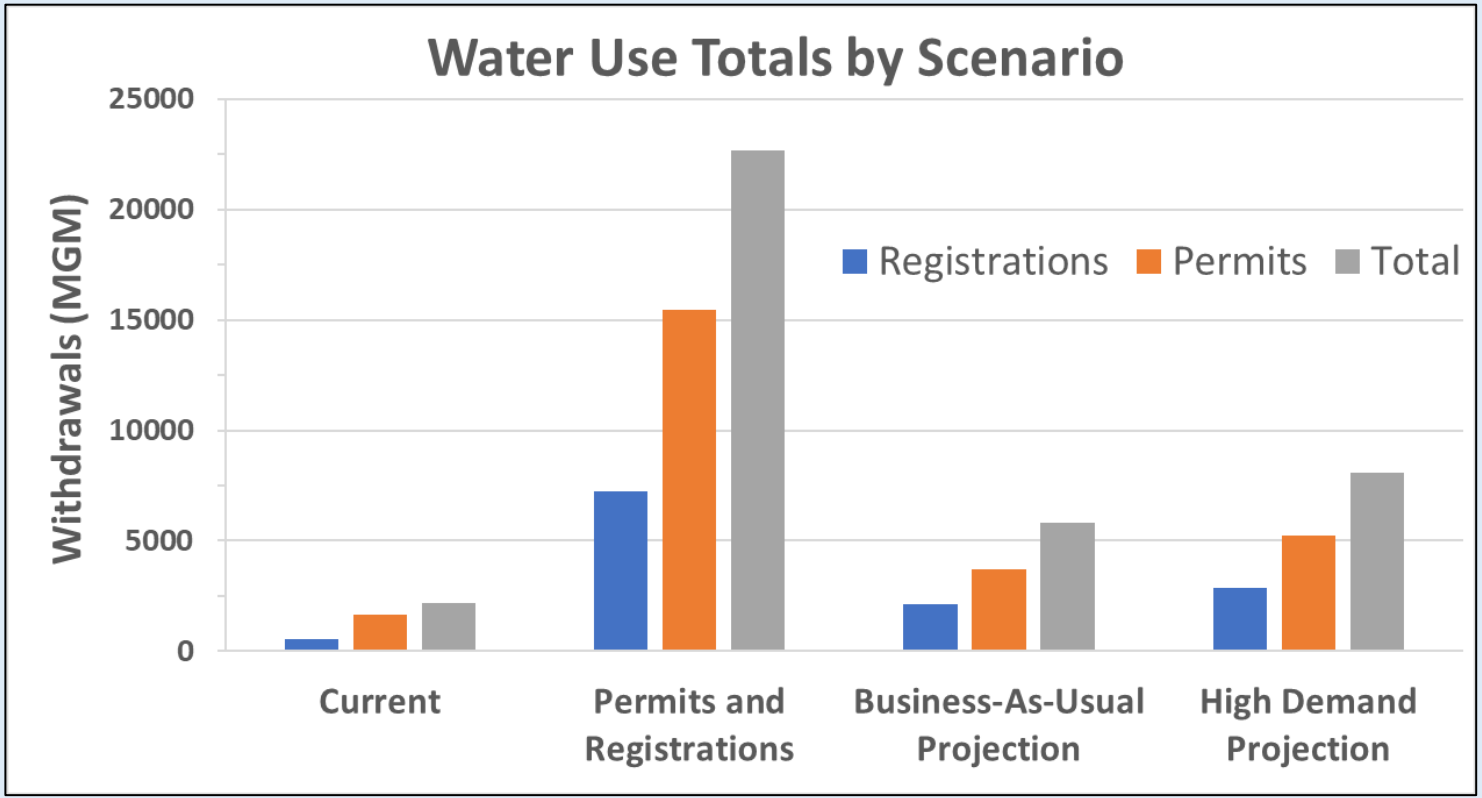
Provide information on when and where shortages are likely to occur over the ***50-year Planning Horizon***

Baseline Scenario

- **Baseline Scenario** designated as the Permitted and Registered Water Use Scenario in the Planning Framework (Section 4.2):
  - Formally defines Surface Water Supply and Surface Water Shortages.
  - Surface Water Supply estimated under this scenario denotes unallocated, legally available water.
  - RBC *must* consider shortages under this scenario when developing Surface Water Management Strategies.
  - Used as basis for evaluating Performance Metrics.

Baseline Scenario Issues

- Current average water use represents only **10%** of total permitted and registered withdrawals.
- Business-As-Usual projection totals represent **26%** of total permitted and registered withdrawals.
- High Demand projection totals represent **36%** of total permitted and registered withdrawals.



Baseline Scenario Issues

- Permitted and registered basin-wide totals *represent a Planning Horizon exceeding 50 years* (perhaps much greater).
- Unrealistic to focus plan on such large water withdrawals that would not likely be realized over Planning Horizon.
  - Would require extreme Water Management Strategies that are unfeasible and unwarranted.

Instead, RBCs should develop River Basin Plans based on a more ***realistic case of future water use****.*

Planning Scenario

- Remove “Baseline Scenario” terminology and replace with “**Planning Scenario**”.
- **Planning Scenario**:
  - Definition: *the set of surface water and groundwater use data for the Planning Horizon that will be used by the RBC to develop its Water Management Strategies*.
  - **High Water-Demand Projection Scenario designated as Planning Scenario.**
    - Defines the Surface Water and Groundwater Supply and Surface Water and Groundwater Shortages.
    - Scenario primarily used by RBC to develop, evaluate, and recommend Water Management Strategies.

Other Water-Demand Scenarios

- RBC will evaluate other scenarios and document Water Supply and Water Shortages identified in those scenarios, but *Water Management Strategies are focused on those shortages or water supply issues identified in the Planning Scenario*.

- Permitted and Registered Water Use Scenario may still be used by the RBC to inform or develop recommendations regarding changes to water legislation.

Performance Measure Redefined

- Original definition - a quantitative measure of change in a user-defined condition from an established baseline used to assess the performance of a proposed water management strategy or combination of strategies.

- New Definition: *a quantitative measure of change in a user-defined condition, used to assess the performance of a proposed management strategy or combination of strategies.*
  - Removed reference to Baseline Scenario.
  - More general definition – independent of water use scenario.
  - Comparing simulation results between a water use scenario that incorporates one or more strategies with the same scenario without the strategies incorporated.