CATAWBA
RIVERKEEPER®

Water Supply Master Plan

Sam Perkins

Catawba **RIVERKEEPER®**

sam@catawbariverkeeper.org

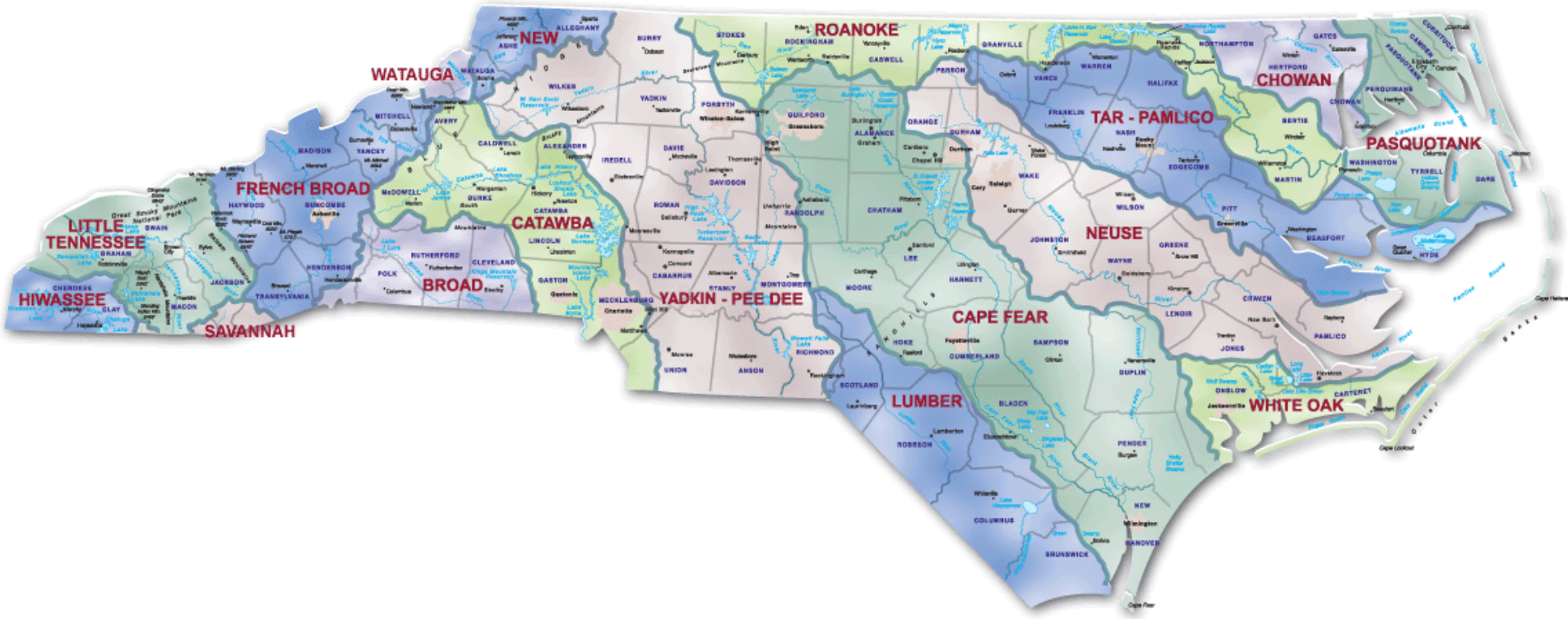
(704) 679-9494

WSMP/CWWMG

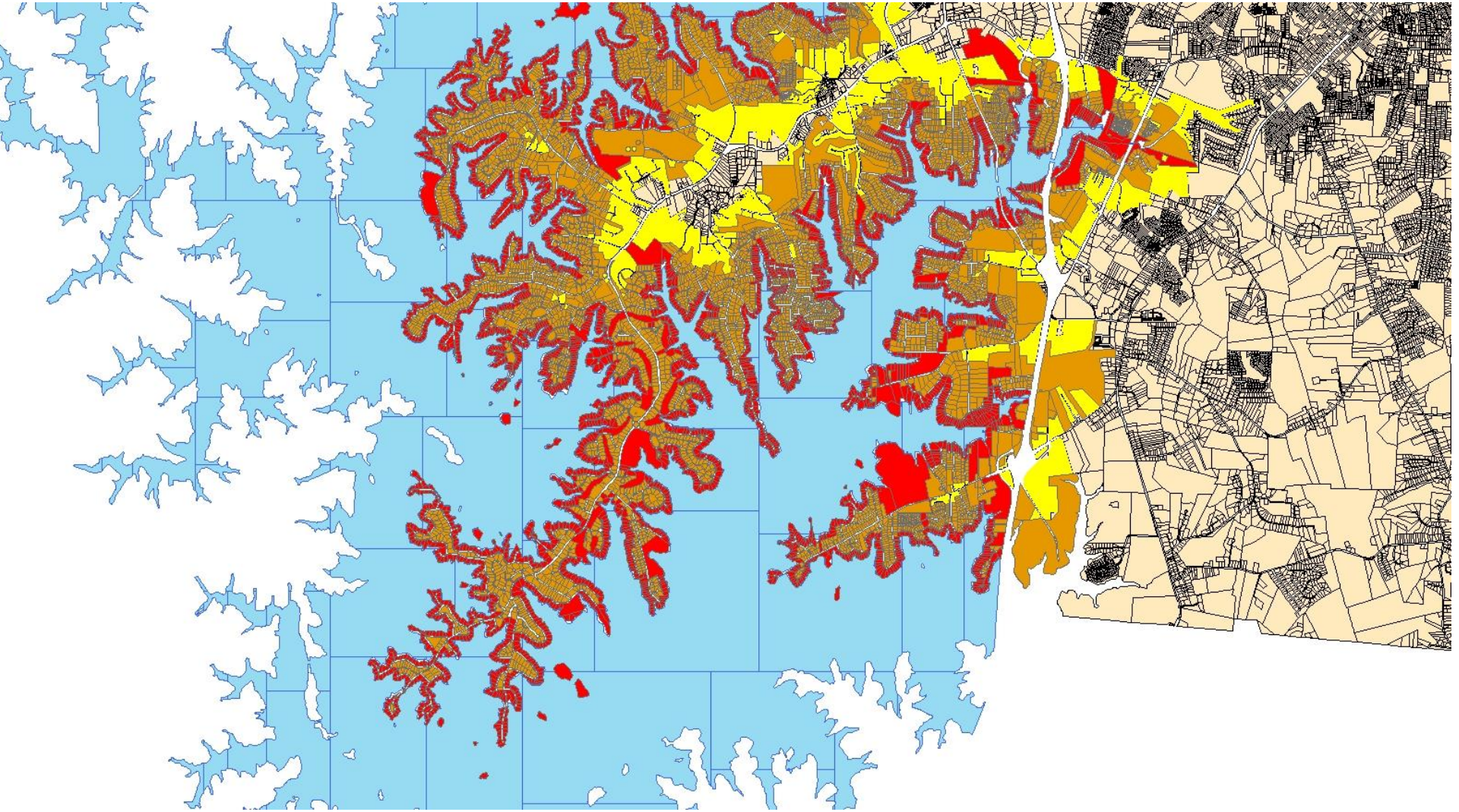
- Brought key players (water users/consumers) to table
- Ahead of other basins in planning
- Working toward water conservation
- Devoting resources for densely populated basin and a difficult problem

WSMP/CWWMG

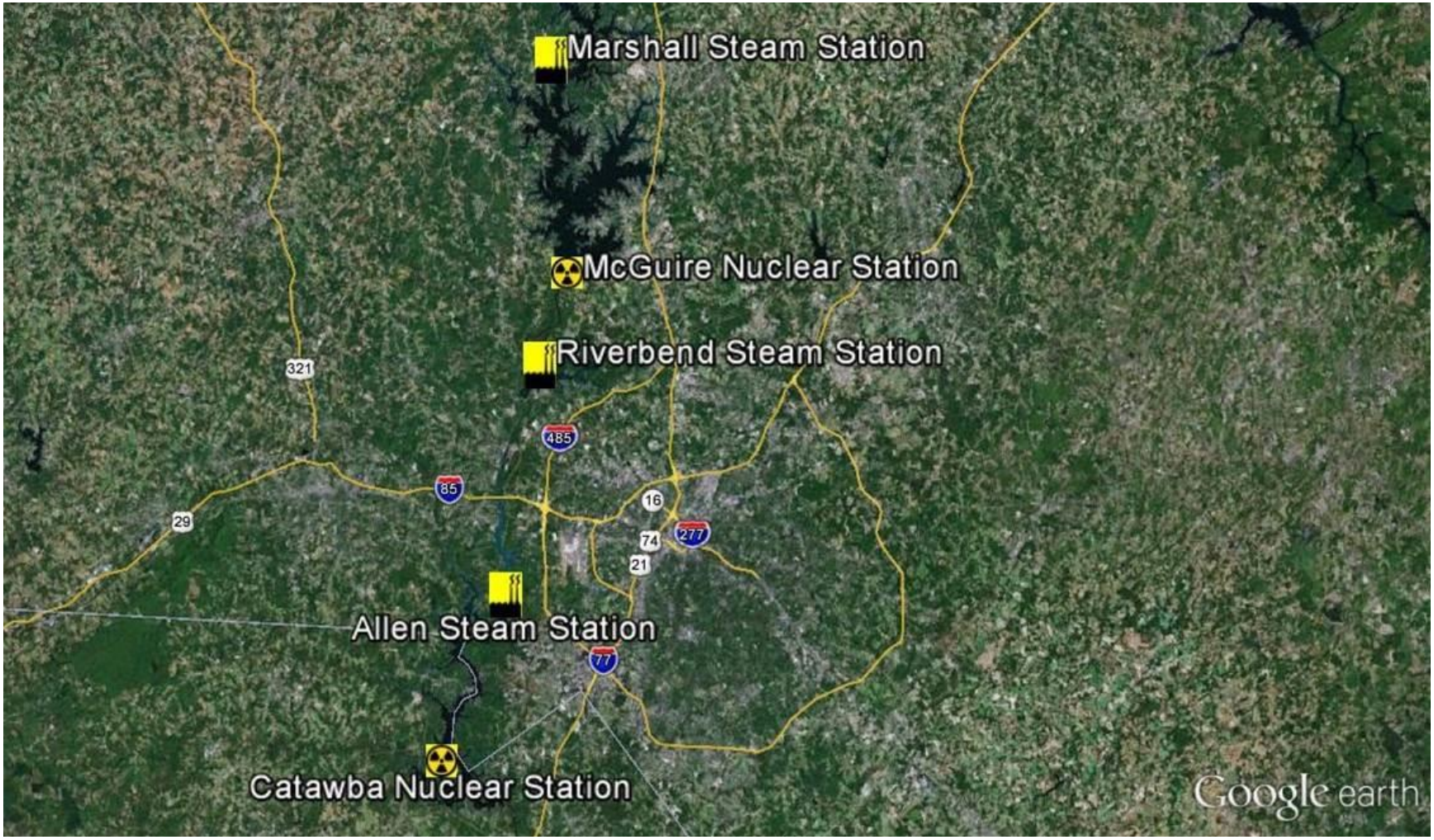
- A complicated task



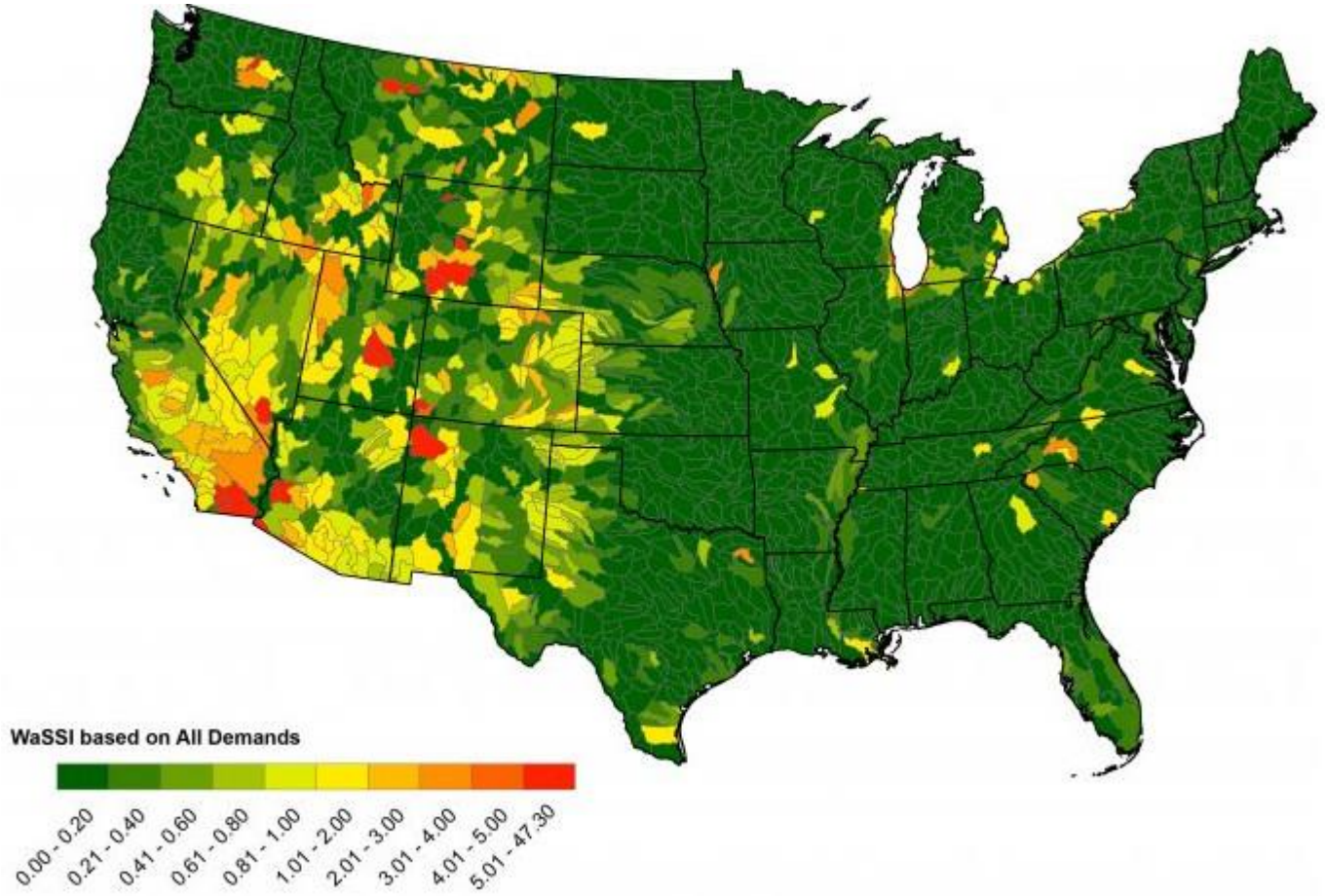
Development, Tax Base



Water Quantity



Water Quantity

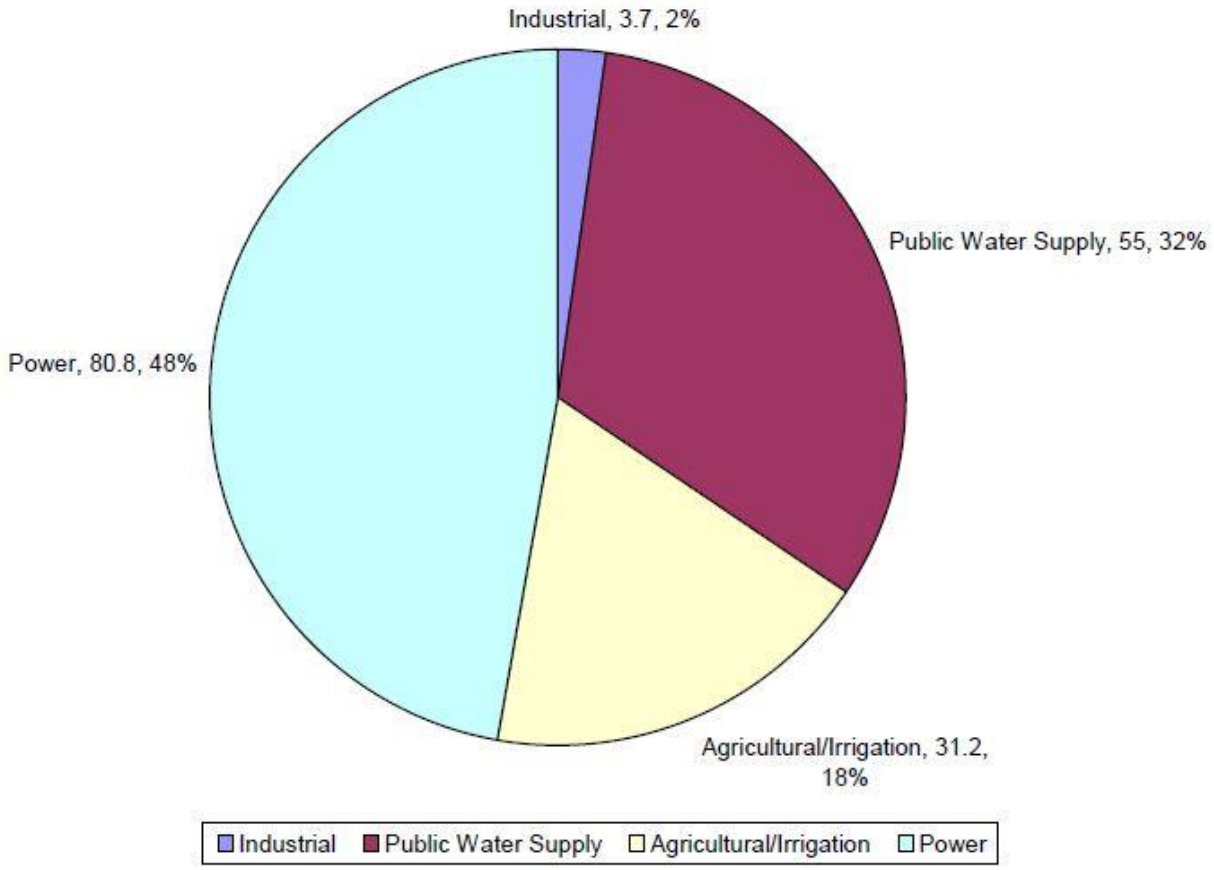


Key Distinction

- Water Use (gross)
  - Withdrawn water (includes returned)
  - Available downstream
- Water Consumption (net)
  - Difference between withdrawn and returned water volumes
  - NOT available downstream
  - Primarily evaporation, inter-basin transfers (IBTs)

Water Consumption (Current)

Figure ES.3 - Current Net Outflows for the Catawba-Wateree River Basin (in MGD) and % of Total



Water Consumption (2065)

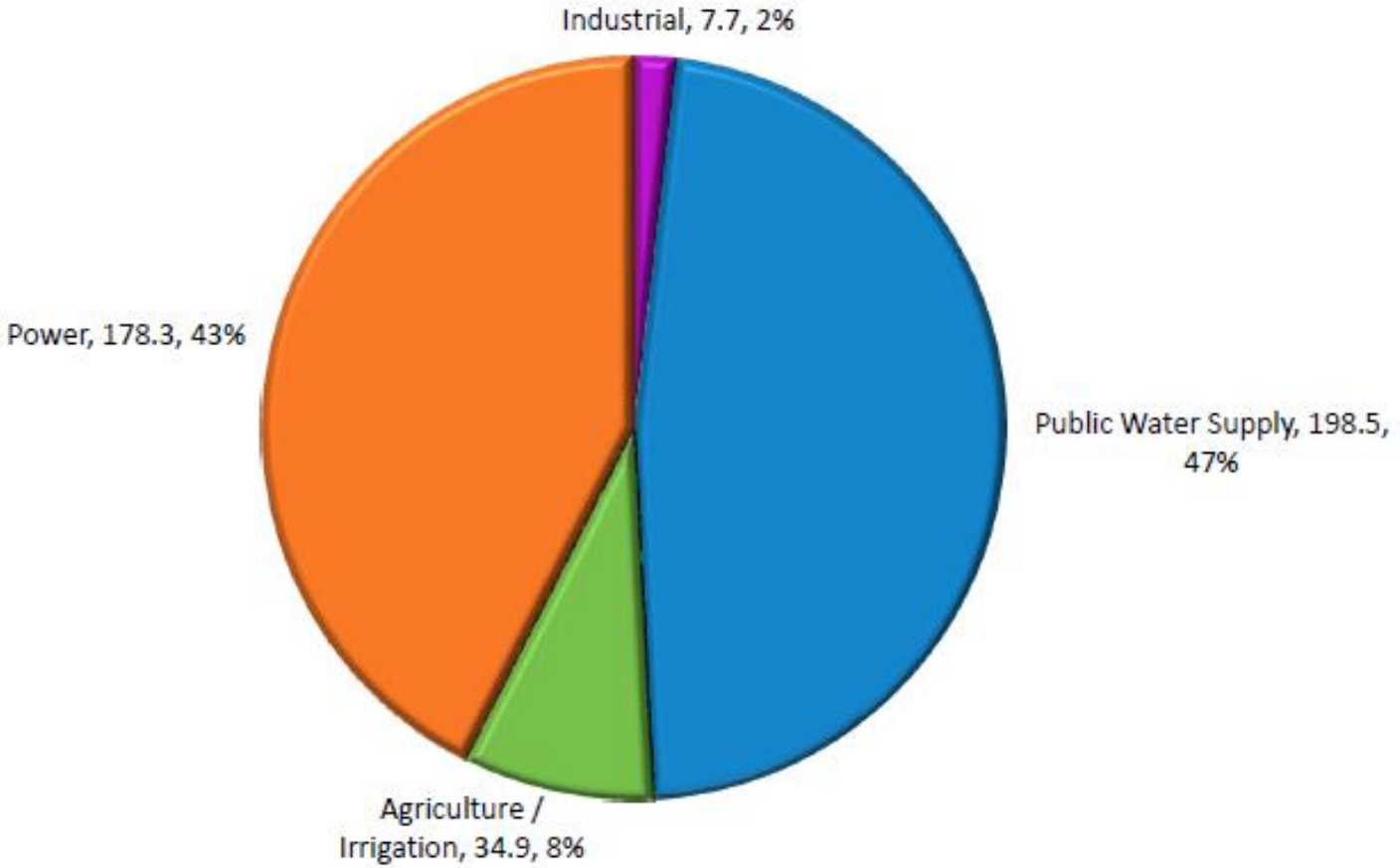
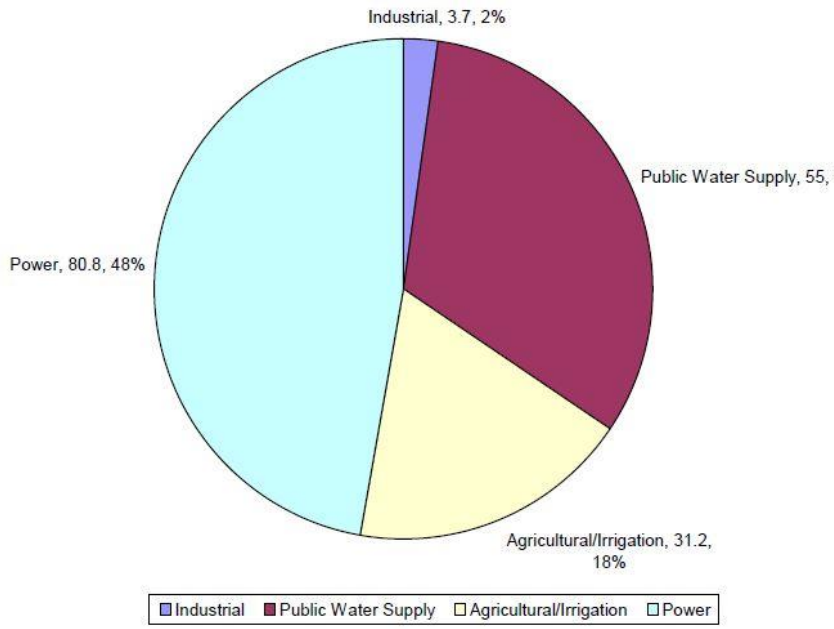


Figure 1-3 Year 2065 Net Withdrawal by Water User Category for the Catawba-Wateree River Basin (in units of mgd and % of total)

Water Consumption

Figure ES.3 - Current Net Outflows for the Catawba-Wateree River Basin (in MGD) and % of Total



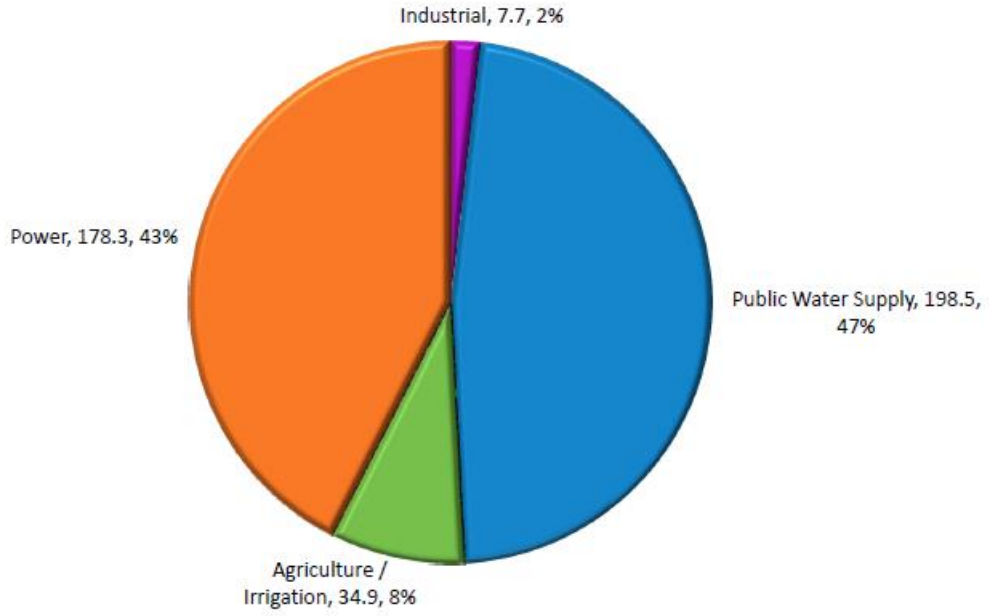


Figure 1-3 Year 2065 Net Withdrawal by Water User Category for the Catawba-Wateree River Basin (in units of mgd and % of total)

WSMP

- Goal of WSMP is to show ability to provide water for 50+ years
- Success = keeping water levels above intake structures
- Failure = falling below intakes
- No direct considerations for recreation, ecology, economy

WSMP

- WSMP hinges on 1) moving water around and 2) reducing water use (and consumption) by increasing water rates
  - Targets Public Water Supply category
- Inter-Basin Transfers pure consumptive loss
  - Need to be considered separately from PWS category
- Duke Energy does nothing to reduce evaporative consumption at its nuclear, coal plants

WSMP

Duke DOES hold back more water behind dams (6”)
Passes less through hydro

Flooding issues
(i.e., Wateree and
Mountain Island Lake)

Spillover (lost recharge)

WSMP Needs

- Technologies to reduce evaporative transport at coal, nuclear plants
  - NOT cooling towers
  - **Need due diligence for alternative technologies**
  - Combined cycle (natural gas)?
    - Big proposal with nine new plants contingent on approval and natural gas prices
    - Supports fracking, which has considerable water demands and in places to our east already receiving IBTs
- Two new nuclear plants operating in 30 years?

WSMP Needs

- Recreation considerations
  - Intermediate failure points at loss of recreation
    - Boat launches
  - In turn considers economic (property tax base) impact
- Detail financial impacts for each action
- Ecological flow considerations
  - Especially with power plants moved downstream

WSMP Summary Recommendation

- CHEOPS needs to be refined, approved
- Additional considerations should be made
  - Recreational, economic, ecological
- Increase emphasis on thermoelectric consumption (at nuclear/coal), IBTs
  - Major sources of consumptive loss