Agenda

- What’s the Issue?
- Update Modeling Results
- Discussion/Next Steps
The issue...

*Right Bank (Passaic River side)
Water Supply Intake Evaluation

- **Scenarios:**
  - “Buildout Loads”
    - Current Concentrations + **Permitted** Flows
  - “Current Loads”
    - Upper 95th CL of actual monthly average loads
  - Upgrade Scenario 1: “Uniform Concentration”
    - All WWTPs set equal to 8.7 mg/L (an upgrade at ~14 of the 23 WWTPs)
  - Upgrade Scenario 2: “Upgrade 8”
    - 4 Upper Passaic WWTPs set to 4 mg/L
      - Harrison Brook, Long Hill, Berkeley Heights, Chatham Main/Glen
    - TBSA, Par-Troy, Hanover & Livingston set to 6.5 mg/L
  - Upgrade Scenario 3: “Upgrade 6”
    - 4 Upper Passaic WWTPs set to 4 mg/L
      - Harrison Brook, Long Hill, Berkeley Heights, Chatham Main/Glen
    - TBSA & Par-Troy set to 3 mg/L
“Buildout Loads” Scenario  
(current concentrations + permitted WWTP flow)
“Buildout Loads” Scenario
(current concentrations + permitted WWTP flow & 2002 stream flows)
“Current Load” Scenario
(current concentrations + actual WWTP flows)
“Current Loads” Scenario
(current concentrations + actual WWTP flows + 2002 stream flows)
“Uniform Concentration” Scenario
(uniform concentrations + permitted WWTP flows + 2002 stream flows)

[8.7 mg/l at all WWTPs]
“Upgrade 8 WWTPs” Scenario
(upgraded concentrations + permitted flows + 2002 stream flows)

[4 mg/L at Bernards, Long Hill, Berkeley Heights, & Chatham Main;
6.5 mg/L at Livingston, Hanover, Par-Troy, & TBSA]
[4 mg/L at Bernards, Long Hill, Berkeley Heights, & Chatham Main; 3 mg/L at Par-Troy & TBSA]
HUC14 Evaluations

- Dead River
- Upper Passaic
- Middle Passaic
- Whippany/Rockaway
- Pompton/Wanaque
- Dead River
- Peckman River
Dead River HUC14
(Scenario: Upgrade 6 WWTPs)
Upper Passaic HUC14s
(Scenario: Upgrade 6 WWTPs)
Whippany/Rockaway HUCs
(Scenario: Upgrade 6 WWTPs)
Middle Passaic HUC
(Scenario: Upgrade 6 WWTPs)
Pompton/Wanaque HUCs
(Scenario: Upgrade 6 WWTPs)
Lower Passaic HUCs
(Scenario: Upgrade 6 WWTPs)
Peckman River HUCs
(Scenario: Upgrade 6 WWTPs)
HUC14 Evaluation

- HUCs Significantly over 10 mg/L
  - Peckman River
Summary of Results

- **Options to Meet 7.5 mg/L at Intakes**
  - All WWTPs reduce to ~ 9 mg/L
  - 8 WWTPs Upgrade
    - 4 largest upstream WWTPs reduce to 4 mg/L and 4 largest downstream WWTPs reduce to 6.5 mg/L
    - Bernards, Long Hill, Berkeley Heights, Chatham Main, Livingston, Hanover, Par-Troy, TBSA
  - 6 WWTPs Upgrade
    - 4 largest upstream WWTPs reduce to 4 mg/L and 2 largest downstream WWTPs reduce to 3 mg/L
    - Bernards, Long Hill, Berkeley Heights, Chatham Main, Livingston, Par-Troy, TBSA

- **Evaluation of Nitrate at HUC Outlets**
  - To achieve 10 mg/L everywhere, dischargers in Dead, Upper Passaic, and Peckman Rivers need to upgrade to near 10 mg/l.
Discussion Points

- Can nitrate exceed 10 mg/l at HUC14 boundaries?

- PRBA trading program
  - Trading would be allowed among WWTPs
  - NJDEP would modify permits where necessary
  - Protection for WWTPs that trade

- Next Steps