CATAWBA RIVERKEEPER UPDATE

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Charlotte-area Power Plants
Coal Ash

- SCE&G powerplant on Wateree River (Eastover, SC)
- Groundwater contamination (arsenic)
- CRF filed suit May 2012
- Settled August 2012, agreeing to:
  - Completely remove ash in unlined ponds and move away from river
  - Switch to dry ash handling with lined basins
- Ahead of schedule!!!
Coal Ash Pond Diagram

- Water and Coal Ash
- Unlined Dam
- Dam Face
- Seepage Diverted into French Drain
- Groundwater Seepage
- Mountain Island Lake
  - Drinking water reservoir for 860,000 people
- Original Ground
- Alternative (Front) View of Dam
  - Face Seepage
  - Dam Toe
  - French Drain
  - Channel Fed by French Drain (to Lake)
Interactive Map (Lake Wylie)

- [http://goo.gl/maps/XUMtI](http://goo.gl/maps/XUMtI)
- Pictures, locations, descriptions
What Needs to Be Done

• Clean up site
  • ‘Leave it as you found it’
  • Place material in lined landfill
  • SCE&G precedent
    • Continues to operate on Wateree River, but ended wet handling

• Document library

• Why?
  • Groundwater contamination
  • Seeps have proved unpredictable
  • Potential for failure
    • Water supply threat
  • Maximum contamination will peak decades from now
  • ‘Other’ material buried
CAFOs

- Concentrated Animal Feeding Operations
  - 1 swine, ~15 cow, ~600 poultry houses
- Discovering extent of poultry
  - Poultry have exception from public record; difficult to investigate
- Waste piles: nutrient, bacteria and even a metal problem
  - May be stored uncovered for up to 15 days
- Major water users (2,000 gallons/house/day)
CAFOs

- 6 flyovers
- 15 sites reported to DENR
Sludge

• Byproduct of wastewater and drinking water treatments
  • AKA ‘residuals’ or ‘biosolids’
• Spread on fields, and farmers get free nutrients!...
  • …But too many nutrients…
  • …and metals, pharmaceuticals… and PCBs?
• Extreme odor and ensuing health issues

**Up to 1,700% Phosphorous increase in soil over 4 years**
• Class B: <2,000,000 bacteria/gram
• Class A: <1,000 bacteria/gram
• Rock Hill ended its spreading program earlier this year
Ok, so I wasn’t done with coal ash…

- Coal ash, meet sludge
- If arsenic prefers oxygenated environments and sorbs (sticks) to particles efficiently, will it show up in the drinking water treatment sludge?
- Legal limit of 75 mg/kg arsenic for any sludge sample that is to be spread
- Data review in Raleigh
- Every drinking water treatment plant that separately tests its sludge

A fraction of one year’s reports…
Sediment

170 mg/kg Arsenic

84 mg/kg Arsenic
Ok, so I wasn’t done with coal ash…
Economic Impact

• The Value of Good Water
  • Property tax value/base near waterways
  • Performing for each lake in basin
  • Coordinate with Realtors
  • Emphasize importance of good environmental regulations to local governments
    • [Assume they still have that authority]
• GIS analysis
  • Properties waterfront, ¼ mile from lake/river, ½ mile from lake/river
Economic Impact
Economic Impact

- Disproportionate representation of tax base to acreage

Lincon County Lakefront

<table>
<thead>
<tr>
<th>Tax</th>
<th>Parcels</th>
<th>Acres</th>
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<tbody>
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<td>15%</td>
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<td>1%</td>
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Iredell County Lakefront

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<thead>
<tr>
<th>Tax</th>
<th>Parcels</th>
<th>Acres</th>
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</thead>
<tbody>
<tr>
<td>20%</td>
<td>7%</td>
<td>3%</td>
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</table>
Water Quantity

- **Good**: Union-Norwood tie-in

- **Bad**: Concern with Lake James being able to be dropped 50 ft

- **Ugly**: Need for MIL/LW notification
  - Some Riverside residents not notified of flooding in May
  - Marine Commission and HOA Support
  - “Watch the weather”?!?
  - At least $10,000s of damage
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Contact to get e-updates, links, documents