Water Contingency Task Force – One of the Governor's 4 Prongs of Response

- Appeal
- Congressional
- Negotiations

Contingency
Geographic scope: focus on ACF watershed

- Focus on upper ACF watershed - key area impacted by ruling
- Impact on downstream communities in scope

All of GA in scope for Task Force.
Focus defined by impact of Judge Magnuson’s Ruling
Supplementary supply of 34% between permitted withdrawal and projected demand by 2012

**Impact of ruling**

1. **Conserve**
   - Reduce water demand by end users

2. **Capture**
   - Enhance future water supply through new sources or by expanding existing sources

3. **Control**
   - Optimize management of supply through policy and/or process changes
Where is shortfall?

<table>
<thead>
<tr>
<th>Deficit within</th>
<th>Surplus</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>~280 MGD)</td>
<td>~280 MGD)</td>
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<tr>
<td>&lt;20%</td>
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<td>20-50%</td>
<td>20-50%</td>
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<tr>
<td>50-95%</td>
<td>50-95%</td>
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<tr>
<td>95+%</td>
<td>95+%</td>
<td>95+%</td>
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</table>

1. Bartow (1)
2. Cherokee (8)
3. Paulding + Cobb (14)
4. Douglas (2)
5. Fulton (73)
6. Clayton (6)
7. Coweta (0)
8. Fayette (10)
9. Henry (4)
10. Rockdale (3)
11. DeKalb (42)
12. Forsyth (28)
13. Gwinnett (104)
14. Hall (18)

Map showing the distribution of deficit within counties in the Metro Area.
Water usage in Metro Atlanta lower than many metro cities

Per capita water usage (GPD)
Lower economic output of existing businesses implies a potential 10-15% reduction in output, which translates into reduced investment for future growth, reduced quality of life, and property value decline. The result is a cost of inaction of $26-$39B per year.
Contingency Planning

- Governor’s Charge: Best business minds in Georgia:
  - Analyze as a threat to your business
    $$$ Costs and benefits
  - Prioritize
  - Recommendations
TASK FORCE

Governor Perdue

Task Force Members
- Conservation
- Community
- Elected
- Business

Co Chairs
- John Brock
- Tim Lowe

Support staff
- State
- GA Chamber
- Metro Atlanta Chamber
- BCG Atlanta

Technical Advisory Panel
MAPTEC
PBS&J
Schnabel Engineering
Tanner and Associates
Tommy Craig
University of North Carolina
Boston Consulting Group
AECOM
ARCADIS
B & E Jackson
Brown & Caldwell
CH2M Hill
Golder
Jacobs/JJG
Three-step process

Inputs
Full set of potential measures

Define
Consolidate all potentially applicable options for evaluation

Evaluate
Estimate high-level cost and water savings for subset

Prioritize
Prioritize solutions

Recommended Solutions

- No regret moves
- Contingency options
By 2015, shortfall can be addressed largely through indirect potable reuse, at ~890 $/MG

Unit cost of savings ($/MG)

- Water transfer (Control)
- Supply expansion outside basin (Capture)
- Supply expansion within basin (Capture)
- Demand reduction (Conserve)

Estimated 2015 shortfall
~310MGD

- 890 $/MG wtd avg for 2015 portfolio
- 410 (2020 wtd avg)

Conservation programs, pricing

MGD saved/created
2020 options, ranked by cost efficiency

Capital required to address ~ $2.3B
Wtd average cost efficiency ($/MG) ~ 410

Unit cost of savings ($/MG)

Conservation programs
Reservoir expansion, groundwater
Lake Burton transfer
Reservoirs
Lake Hartwell transfer
Tennessee basin transfer
Indirect potable reuse
South GA GW system
Savannah desalination plant

MGD saved/created

Findings 2020
Incentive-based conservation generally viewed "no regret"

Source: Water Contingency Planning Task Force Survey results, n=64
Important to distinguish between "do now" recommendations and "contingency" options

"Do now": for immediate consideration

"Contingency": evaluate need for these measures

NO REGRET

Generally three areas of focus
1. Data- mandatory collection, reporting
2. Higher standards/incentives
3. Linking conservation progress to permits, low-interest loans

Measures supported by task force in contingency context; not supported as 'do anyway' measures

Includes mandate-based conservation measures, which could supply greater yield
- Time-of-day watering restrictions
- Retrofit on resale
- Direct installation programs (eg, toilets)
- Mandated submetering of multifamily housing- or demonstrate full retrofitting has occurred

Includes 2015 and 2020 capture and reuse measures
Summary: Task Force Findings

- No Solution to meet gap by 2012-
- Conservation playing a major role for Metro district
- Potential 2015 contingency solution-
  Total 50-yr cost is $~5.0B

1. Ga Association of Water Professions; assumes incremental portfolio costs borne by utilities (directly or indirectly). Analysis assumes ~$5/kgall weighted average retail rate baseline.
Summary: Task Force Findings

2020 solutions

- ~$2.6B over 50 years

Task Force members endorsed "Alternate 2020"

- $2.9B over 50 years

1. Ga Association of Water Professions; assumes incremental portfolio costs borne by utilities (directly or indirectly). Analysis assumes ~$5/kgall weighted average retail rate baseline.
1. Reauthorization of Lake Lanier

2. Aggressive conservation program-
   - Expanded **efficiency programs** (fixture retrofits, sub-metering, cooling tower standards, etc):
   - Aggressive **conservation pricing**:
   - Aggressive utility **leak abatement programs**:
   - Funding for **conservation education program**:
   - Incorporation of **conservation plan and efficiency criteria in permitting**
   - Conservation **efficiency criteria in GEFA loans**
3. Only devote resources towards the 2015 Contingency Solution if outlook on negotiations and reauthorization demands.

4. If we must pursue a contingency plan, pursue a 2020 solution
Costs of funding contingency portfolios were defined in terms of capex, long-run efficiency, and total cash costs.

<table>
<thead>
<tr>
<th></th>
<th>2015 portfolio</th>
<th>&quot;Lowest cost&quot; 2020 portfolio</th>
<th>&quot;Primary&quot; 2020 portfolio</th>
<th>&quot;Alternate&quot; 2020 portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield (MGD)</td>
<td>~340 MGD</td>
<td>~400 MGD</td>
<td>~370 MGD</td>
<td>~360 MGD</td>
</tr>
<tr>
<td>Capital expenditure ($B)</td>
<td>~ $3.1 B</td>
<td>~ $2.3 B</td>
<td>~ $2.0 B</td>
<td>~ $1.7 B</td>
</tr>
<tr>
<td>Cost efficiency ($/MG)</td>
<td>~$890 / MG</td>
<td>~$410 / MG</td>
<td>~$470 / MG</td>
<td>~$460 / MG</td>
</tr>
<tr>
<td>50-year cost ($B)</td>
<td>~ $5.0 B</td>
<td>~ $2.6 B</td>
<td>~ $3.0 B</td>
<td>~ $2.9 B</td>
</tr>
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## Costs of funding contingency portfolios impact on water rates

<table>
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<tr>
<th>Costs to fill gap</th>
<th>... by 2015</th>
<th>... by 2020</th>
</tr>
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<tbody>
<tr>
<td>Capital cost ($M)</td>
<td>~3,000</td>
<td>~2,300</td>
</tr>
<tr>
<td>Annual operating cost ($M)</td>
<td>~80</td>
<td>~12</td>
</tr>
<tr>
<td>Cost efficiency ($/MG)</td>
<td>~890</td>
<td>~410</td>
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</tbody>
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**Potential impact on wholesale water rates**

| Incremental cost ($/MG) | ~2,330 | ~1,200 |
| Percentage price increase\(^1\) | 93% | 48% |

**Potential impact on retail water rates**

| Incremental cost ($/MG) | ~2,680 | ~1,380 |
| Percentage price increase\(^2\) | 54% | 28% |
Questions