
# Hudson River Reapportionment Study

Progress Briefing for

## Hudson River – Black River Regulating District

May 11, 2010


Washington, DC Office 202-328-1515

ERSGroup
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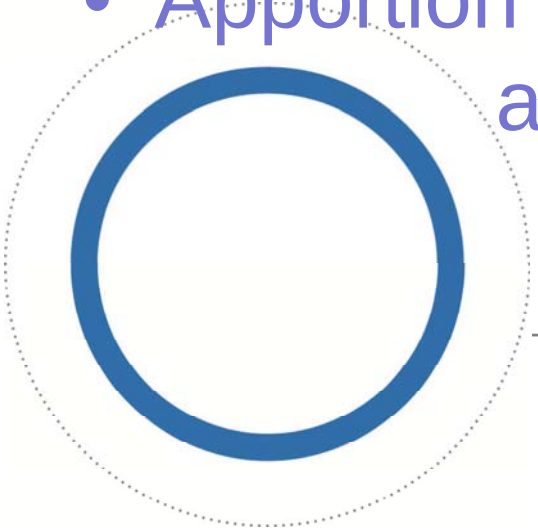
# Main Issue Addressed

- Apportion operating & maintenance costs among the GSL beneficiaries of:



- **Flood Protection**
- **Waste Assimilation**
- **White Water Recreation**

# *Related Issues*

- **Whom to Bill each Year**
- **How to Update Apportionments**

# *2010 Approach by Regulating District*

- Single factor allocator (property Values) used as proxy for apportionment factor
  - **Counts flood protection benefit only**
  - **But easy to calculate & update**
  - **Although may be vulnerable to challenge**

# *Consequences of Multi-Factor Apportionment Formula*

- More Complicated but more equitable

  - **SGL Costs Paid in Proportion by ALL Beneficiaries**
  - **More difficult to calculate & update**
  - **More likely to to avoid/win challanges**

# *Relative v. Absolute Factors*

- This is what adds complexity to bringing other beneficiaries into the allocation formula

  - **Difficult to compare benefits**
  - **Apples & oranges must be added together**
  - **Updating is costly and complex**

# *A Digression into a Similar NY State Tax Problem*

- NYS's Corporation Franchise Tax apportions the income of multi-state businesses.
  - **Three relative allocation factors used**
  - **Viewed as proxy measures of NYS benefits**
  - **Formula combines them into apportionment factor**

## Example of Allocation Factor in NY Tax Law (Corp. Franchise Tax)

| | N.Y. Share of U.S. Total | | | Apportionment | |
|---|---|---|---|---|---|
| | Employment | Property | Sales | Equal weight | Double sales |
| **Company A** | 50% | 45% | 8% | **34%** | **28%** |
| **Company B** | 95% | 80% | 5% | **60%** | **46%** |
| **Company C** | 8% | 5% | 5% | **6%** | **6%** |
| • | | | | | |
| • | | | | | |
| • | | | | | |
| **Company X** | 63% | 70% | 35% | **56%** | **51%** |
| **Company Y** | 5% | 9% | 7% | **7%** | **7%** |
| **Company Z** | 22% | 15% | 2% | **13%** | **10%** |

# Demonstration of Allocation & Apportionment Issues
## SIMPLE AVERAGE OF FACTORS

| | Distribution of Benefits | | | Apportionment | |
|---|---|---|---|---|---|
| | Flood control | Waste assimilation | Recreation | By flood control | By equal weight |
| **Albany** | 38.38% | 0.01% | 13.27% | **38.38%** | **17.22%** |
| **Rensselaer** | 17.55% | 0.00% | 5.10% | **17.55%** | **7.55%** |
| **Saratoga** | 33.69% | 55.93% | 22.62% | **33.69%** | **37.41%** |
| **Washington** | 3.85% | 20.37% | 3.06% | **3.85%** | **9.09%** |
| **Warren** | 6.53% | 23.69% | 55.95% | **6.53%** | **28.72%** |
| **Total** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** |

*NOTES: Numbers are for illustration only and are NOT study recommendations.*
*Flood control shown is actual 2010 apportionment.*

# Demonstration of Allocation & Apportionment Issues
# IF FLOOD/WASTE/REC BENEFITS ARE EQUAL

| | Distribution of Benefits | | | Apportionment | |
|---|---|---|---|---|---|
| | Flood control | Waste assimilation | Recreation | By simple average | By benefits weights |
| **Albany** | 38.38% | 0.01% | 13.27% | **17.22%** | **17.22%** |
| **Rensselaer** | 17.55% | 0.00% | 5.10% | **7.55%** | **7.55%** |
| **Saratoga** | 33.69% | 55.93% | 22.62% | **37.41%** | **37.41%** |
| **Washington** | 3.85% | 20.37% | 3.06% | **9.09%** | **9.09%** |
| **Warren** | 6.53% | 23.69% | 55.95% | **28.72%** | **28.72%** |
| **Total Val. Of Benefit ($1,000)** | **$5,000.0** | **$5,000.0** | **$5,000.0** | **100.00%** | **100.00%** |

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*Flood control distribution is actual 2010 apportionment.*

# *An approach to reduce complexity yet include three benefits*

- The tax formula works combining only relative allocation factors into an apportionment factor

- **Requires similar size of each component**

- **This is problematic for GSL, unless……**

# A Middle Ground for Apportioning GSL Benefits

- Combine relative allocators for each benefit by using special weights

  - **Annual easy update of relative allocators**
  - **Less frequent update of weights (5 yrs ?)**
  - **Formula converts relative to absolute equivalent**

# Demonstration of Allocation & Apportionment Issues
# IF FLOOD/WASTE/REC BENEFITS ARE UNEQUAL

| | Distribution of Benefits | | | Apportionment | |
|---|---|---|---|---|---|
| | Flood control | Waste assimilation | Recreation | By simple average | By benefits weights |
| **Albany** | 38.38% | 0.01% | 13.27% | **17.22%** | **19.58%** |
| **Rensselaer** | 17.55% | 0.00% | 5.10% | **7.55%** | **8.92%** |
| **Saratoga** | 33.69% | 55.93% | 22.62% | **37.41%** | **43.63%** |
| **Washington** | 3.85% | 20.37% | 3.06% | **9.09%** | **11.51%** |
| **Warren** | 6.53% | 23.69% | 55.95% | **28.72%** | **16.37%** |
| **Total Val. Of Benefit ($1,000)** | **$14,622.0** | **$13,688.0** | **$1,100.0** | **100.00%** | **100.00%** |

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*Flood control distribution is actual 2010 apportionment.*

# Demonstration of Allocation & Apportionment Issues
# IF RECREATION OMITTED

| | Distribution of Benefits | | | Apportionment | |
|---|---|---|---|---|---|
| | Flood control | Waste assimilation | Recreation | Without recreation | benefits weights |
| **Albany** | 38.38% | 0.01% | 13.27% | **19.83%** | **19.58%** |
| **Rensselaer** | 17.55% | 0.00% | 5.10% | **9.06%** | **8.92%** |
| **Saratoga** | 33.69% | 55.93% | 22.62% | **44.44%** | **43.63%** |
| **Washington** | 3.85% | 20.37% | 3.06% | **11.84%** | **11.51%** |
| **Warren** | 6.53% | 23.69% | 55.95% | **14.83%** | **16.37%** |
| **Total Val. Of Benefit ($1,000)** | **$14,622.0** | **$13,688.0** | **$1,100.0** | **100.00%** | **100.00%** |

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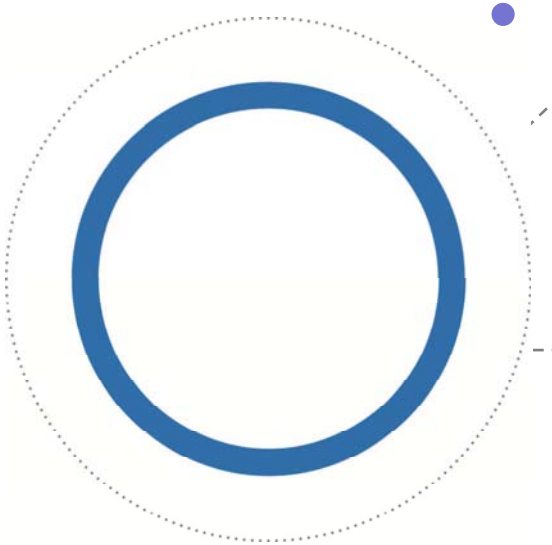
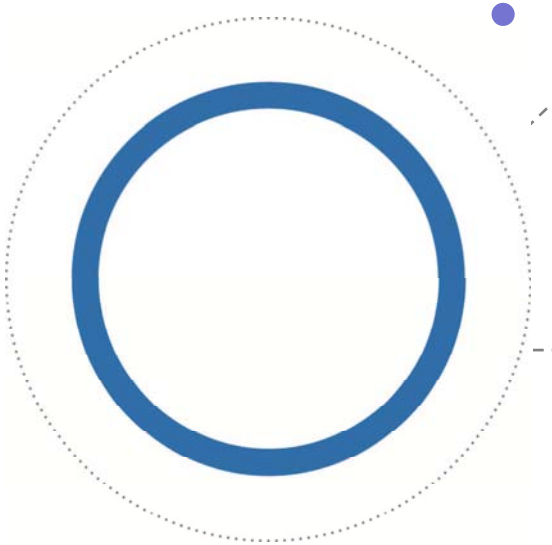
# Flood Protection Benefits



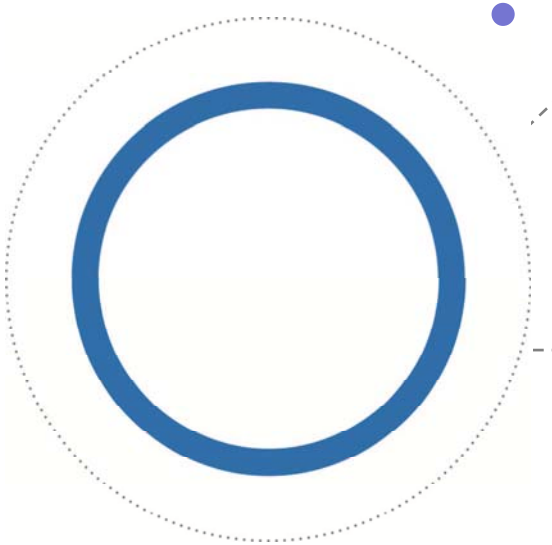
- Benefit measured by change in flood insurance premium with and without GSL
  - **Estimate FEMA-based premiums for all property in flood zones pre & post GSL**
  - **Annual benefit equals total difference in premiums**

# Waste Assimilation Benefits



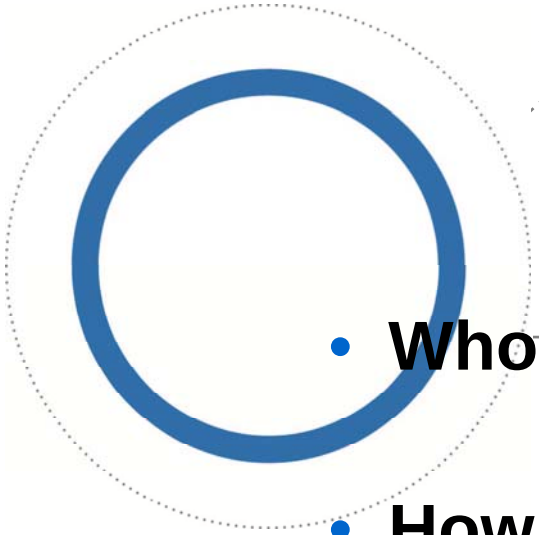
- Benefit measured by cost increment for treatment plants with and without GSL
  - **Estimate re-sized plants absent GSL (based on low river flows)**
  - **Annual benefit equals increase in operating costs plus capital consumption**

# White Water Recreation Benefits



- Benefit measured by change in value of river activity with and without GSL
  - **Estimate value of average daily person trips with and without GSL**
  - **Annual benefit equals difference in economic value**

# Related Issues



- **Whom to Bill each Year**
- **How to Update Apportionments**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