



# *Land and Water Conservation Summit*

*March 9, 2013*

# **Do we have enough water?**

Answer: it depends.....



# Today's Presentation

- WRB's Strategic Planning Initiative
- Results of Water Supply and Demand analysis
- Importance of Water Availability Estimates



# WRB Strategic Planning Initiative

## Dynamic Strategic Planning Process

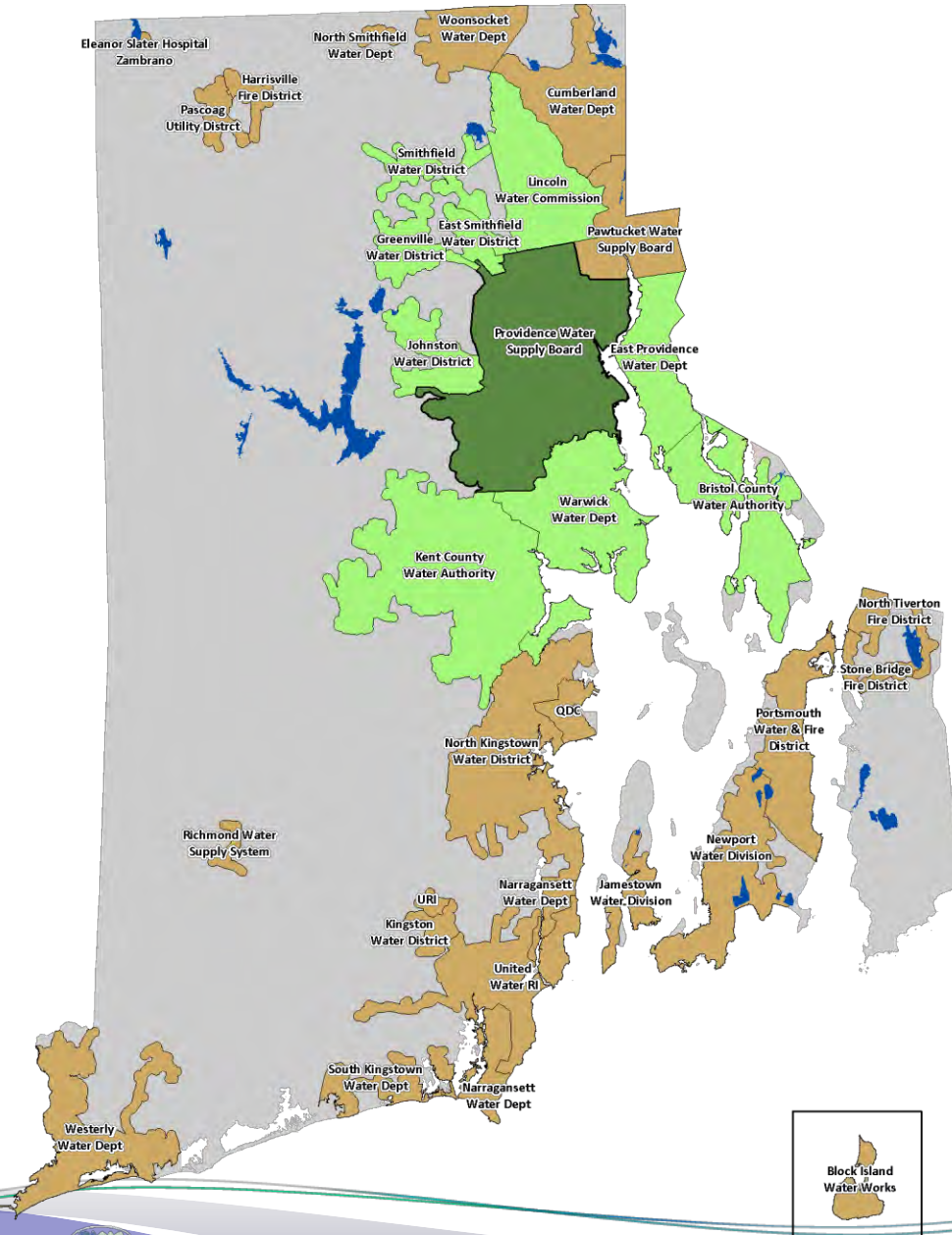
Innovative - Solution Oriented - New Ideas

Planning process was driven by a ***See-Think-Do*** process to develop alternatives: Used information of known supply infrastructure, hydrologic conditions, and growth patterns to develop reasonably available alternatives

**Result: A palette of over 20 supply and demand initiatives**

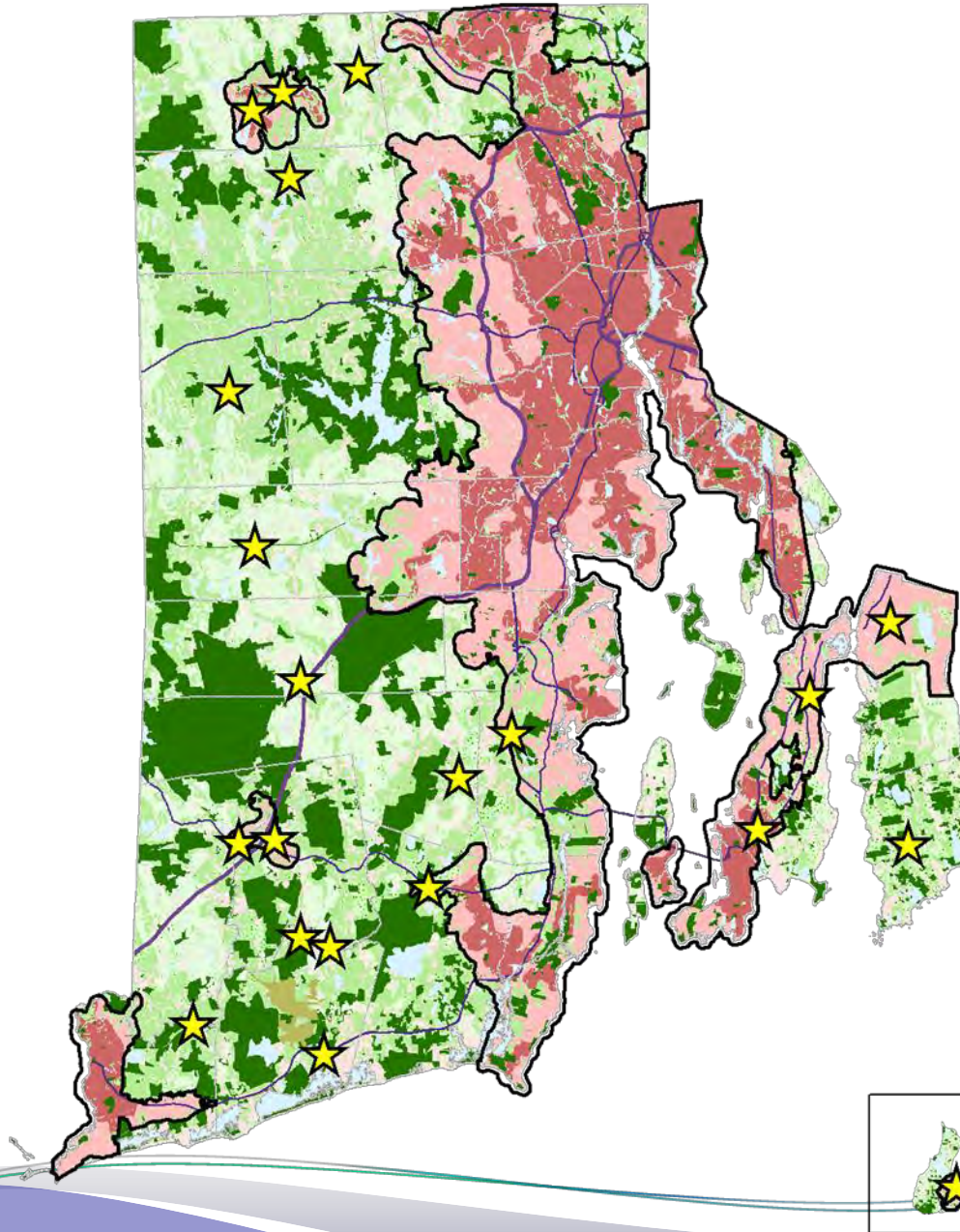


# Major Water Supplies





# Urban Services Boundary





# How do you start a Strategic Planning Initiative?

## Answer Three Questions:

1- How much Water is there? (May 5, 2011)

**2,000 MGD** (average)

2- How much Water are we using? (June 2, 2011)

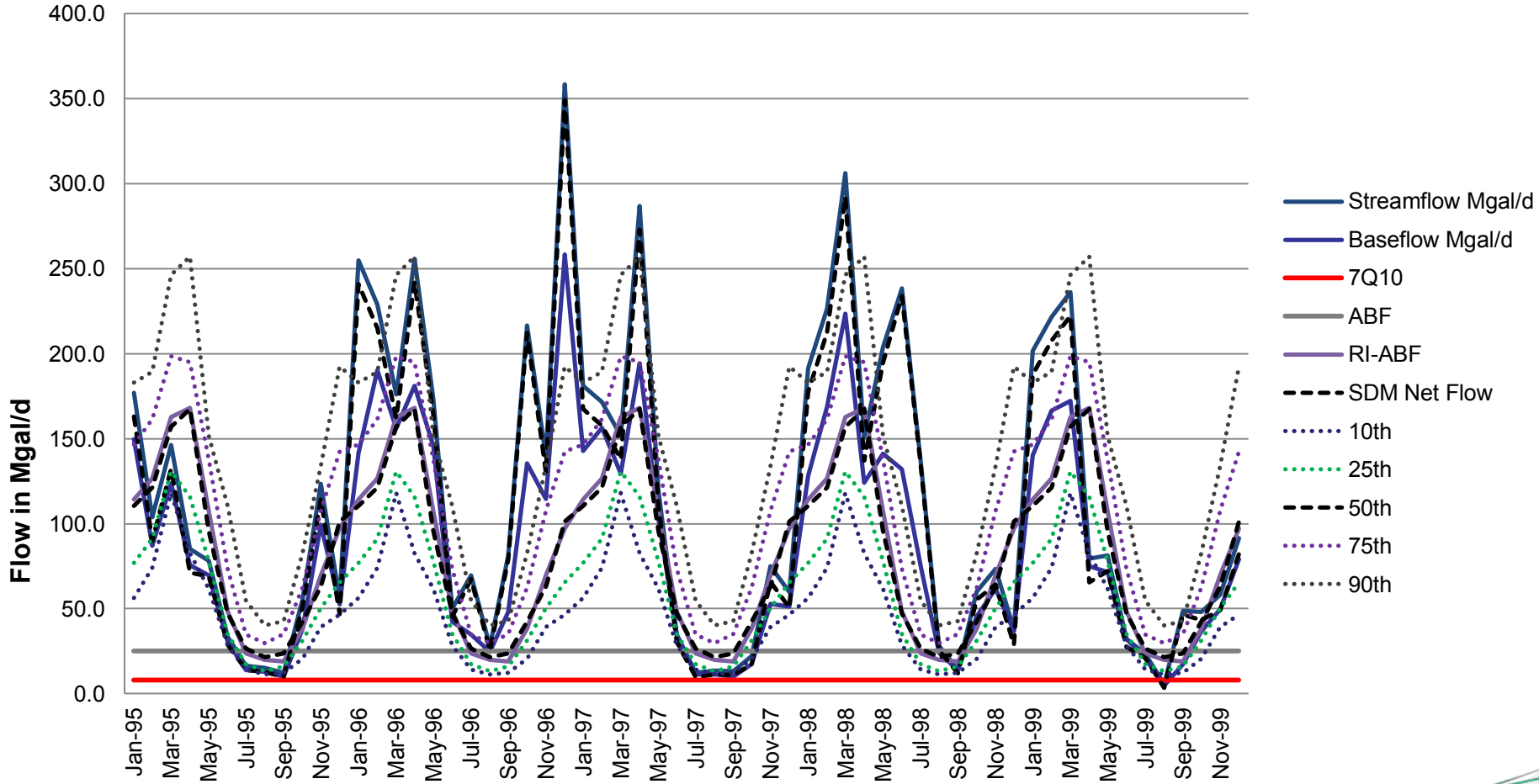
**134 MGD** (average), **180 MGD** (peak)

3- How much Water do we need? (July 14, 2011)

***Need Supply and Demand data...***



# Supply Analysis





# Demand Analysis







# Build-out Availability Results

## NORTHERN REGION

Average Demand: 129 MGD  
Summer Demand: 168 MGD

Total Available: 132 MGD  
Average: + 3 MGD  
Summer: - 36 MGD

## SOUTHERN REGION

Average Demand: 34 MGD  
Summer Demand: 52 MGD

Total Available: 22 MGD  
Average: - 12 MGD  
Summer: - 30 MGD

## AQUIDNECK REGION

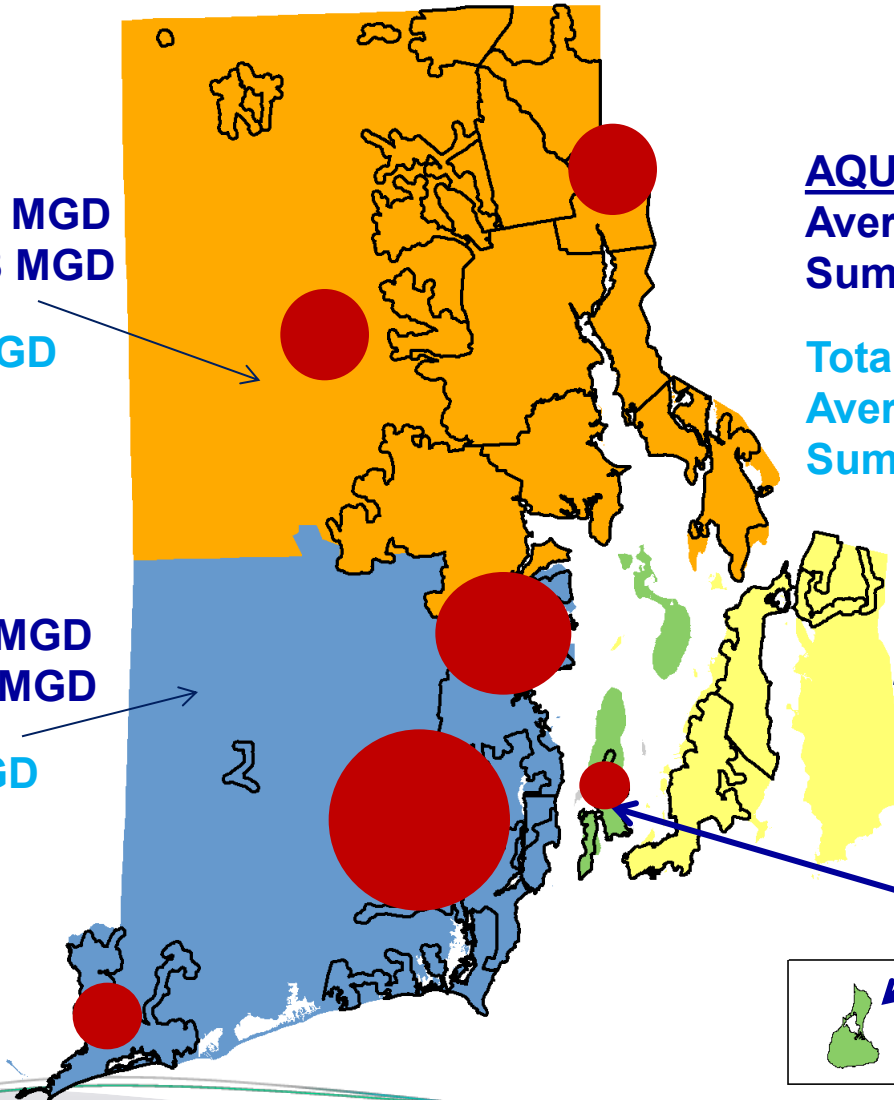
Average Demand: 15 MGD  
Summer Demand: 19 MGD

Total Available: 19 MGD  
Average: + 4 MGD  
Summer: + 0 MGD

## ISLANDS REGION

Avg. Demand: 1 MGD

Total Avail: 1 MGD  
Average: + 1 MGD  
Summer: + 1 MGD



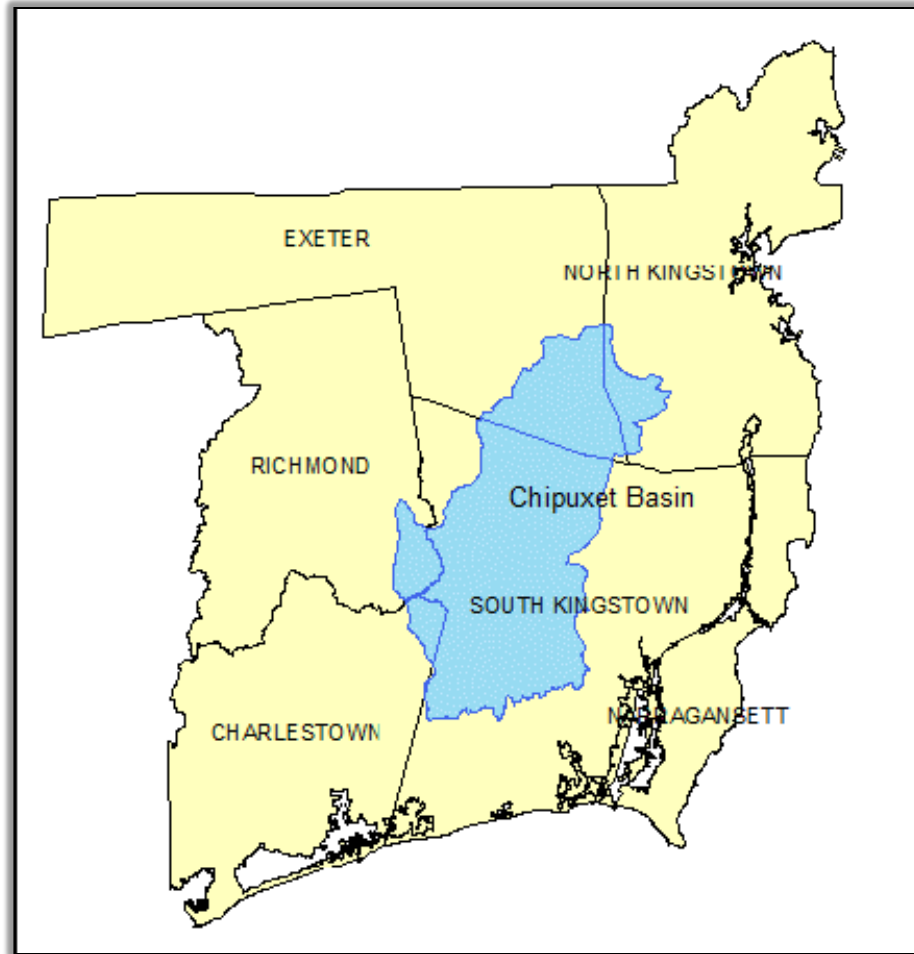


# Developing Water Availability Estimates

- Preliminary focus on the ***Chipuxet Basin***
  - Develop Short Term Management Options
  - Continue to develop new sources of supply
- Develop Water Availability Estimates for all basins
- Develop Policies and Procedures for Implementation
  - Municipalities\*\*
  - Water Suppliers
  - Agriculture



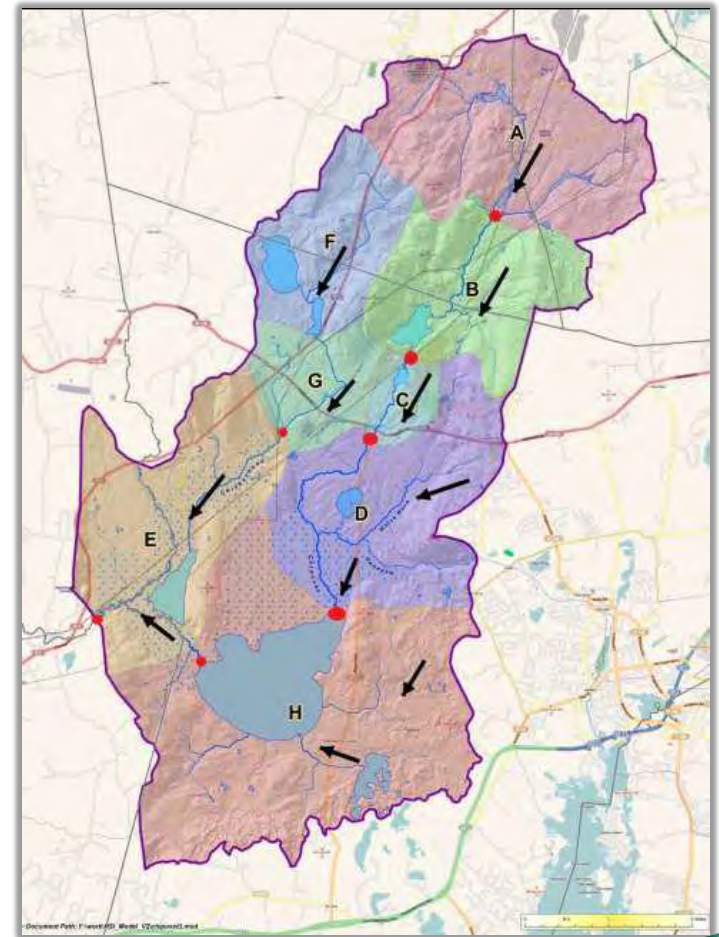
# Water Availability in the Chipuxet Basin





# Water Availability in the Chipuxet Basin

Reach	Cumulative Withdrawal	Exceedance over SDM	Exceedance over SDM %
A	1.1	<b>0.3</b>	<b>34%</b>
B	1.3	<b>0.45</b>	<b>53%</b>
C	2.1	<b>1.1</b>	<b>210%</b>
D	2.7	<b>1.3</b>	<b>190%</b>
E	7.2	<b>5.1</b>	<b>313%</b>
F Chichasheen	0.5	<b>0.3</b>	<b>250%</b>
G Chickasheen	0.8	<b>0.47</b>	<b>240%</b>
E Entire Basin	8.7	<b>5.7*</b>	<b>290%*</b>





# That's Great! Now what?

- Develop **Short Term** Management Options
  - Develop **agricultural efficiency programs**
  - Develop **appliance and fixture rebate program**
  - Develop peak use **education program**
- Develop **Long Term** Management Options
  - Develop new sources of supply
  - Develop Water Management Plan for region
- For both Short and Long Term
  - Develop Declaration for exceedance of Safe Yield
  - Develop appropriate management tools for State agencies, Municipalities, Water Suppliers and farmers



# Questions?

Kenneth J. Burke, P.E., MBA  
General Manager  
RI Water Resources Board  
[ken.burke@wrb.ri.gov](mailto:ken.burke@wrb.ri.gov)

Kathleen Crawley  
Staff Director  
[kathleen.crawley@wrb.ri.gov](mailto:kathleen.crawley@wrb.ri.gov)