

# ***Natural Resource Plan***

Benefits Weighting Exercise Review

RRSC Meeting

January 19-20, 2011





# *Benefits Weighting Exercise Review:* **Exercise Overview**

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## **Background:**

- ◆ As mentioned during the March RRSC meeting, the NRP is using scenario planning to determine the best program mix for TVA's natural resource activities
- ◆ TVA resource specialists have developed a number of proposed programs for consideration
- ◆ As part of the process, TVA retained a natural resource economist to provide a third-party evaluation of the public benefits of each of these programs
- ◆ TVA is evaluating methods to weight these benefits to determine the optimal strategy for the NRP



# Benefits Weighting Exercise Review: Benefits Categories

◆ In review, below are definitions of the six benefit categories:

Attributes	Definition
Recreation/ Visitor Benefit Use	◆ Benefits to recreationists/visitors of experiences on TVA-managed lands.
Water Resource Benefit	◆ Direct benefits of water resource management related to the provisioning of water supplies and stabilization of shoreline areas.
Species/ Habitat Conservation and Abundance	◆ Biological resource benefit of enhancing or preventing degradation of biological resources, including both species and habitat, not including any related recreation benefit (see recreation/visitor benefit)
Cultural Resource Preservation	◆ Cultural resource benefit of preventing degradation of cultural resources, including structures, buildings, and archaeological sites.
Management Data and Scientific Knowledge/ Reduce Compliance Costs	◆ Benefits related to increased knowledge or data availability to TVA resource managers that will enable more informed management decisions regarding resource enhancement or conservation ◆ Benefit to TVA associated with reduced compliance or resource management costs
Public Perception, Partnerships, Outreach	◆ Benefit of increased public knowledge regarding the use or conservation of cultural, biological, recreation, and water resources ◆ Benefits associated with developing partnerships with local and regional entities ◆ Benefits related to enhanced public perception (e.g., recreation, resource stewardship, and public outreach)



# *Benefits Weighting Exercise Review:* **Methodology**

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## **Approach:**

- ◆ The RRSC and Advisory Team were surveyed to determine weightings for each benefit category used in the analysis for defining the optimal NRP strategy
  
- ◆ Each set of responses was put through a regression analysis tool developed by Entrix to measure the relative weight that individuals place on each attribute, which in turn provides us with the appropriate weights for each benefit



# Benefits Weighting Exercise Review: RRSC Results

Below are summary results from the RRSC survey responses:

	Primary Analysis Metrics						Total
	Recreation/ Visitor Benefit Use	Water Resource Benefit	Species/ Habitat Conservation and Abundance	Cultural Resource Preservation	Mgmt Data and Scientific Knowledge/ Reduce Comp. Costs	Public Perception, Partnerships, Outreach	
Average	19%	33%	13%	12%	12%	11%	100%

- ◆ Open discussion
  - What do these results tell us?
  - Are there any surprises?
  - Are they representative of your interests?



# Benefits Weighting Exercise Review: RRSC vs. Advisory Team

## Advisory team results:

	Primary Analysis Metrics						Total
	Recreation/ Visitor Benefit Use	Water Resource Benefit	Species/ Habitat Conservation and Abundance	Cultural Resource Preservation	Mgmt Data and Scientific Knowledge/ Reduce Comp. Costs	Public Perception, Partnerships, Outreach	
Average	24%	18%	19%	12%	10%	17%	100%

## RRSC results:

	Primary Analysis Metrics						Total
	Recreation/ Visitor Benefit Use	Water Resource Benefit	Species/ Habitat Conservation and Abundance	Cultural Resource Preservation	Mgmt Data and Scientific Knowledge/ Reduce Comp. Costs	Public Perception, Partnerships, Outreach	
Average	19%	33%	13%	12%	12%	11%	100%
Delta	5%	(15%)	6%	0%	(2%)	6%	0%

Are these an appropriate representation of TVA's interests?



# Benefits Weighting Exercise Review: Scenario Planning Process

The benefits weighting results will be used to assess the overall benefit provided by each program option as part of scenario planning

## Program Options Table

Program Category	Program	Goal / Activity	Controlled Mgmt	Enhanced Mgmt	Priority Mgmt
Water Resource Improvement	Water Resource Improvement Program	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...

## Program Cost Analysis

Program	Element	Controlled		Enhanced		Priority	
		FTE	Total Cost	FTE	Total Cost	FTE	Total Cost
Water Resource Improvement Programs	Water Resource Improvement Program	6.00	\$ 1,420,000	6.00	\$ 2,100,000	0.00	\$ 0
	Cultural Resource Preservation Program	1.00	\$ 1,024,000	0.00	\$ 0	0.00	\$ 0
	Public Participation Program	1.00	\$ 200,000	0.00	\$ 0	0.00	\$ 0
	Resource Stewardship Program	1.00	\$ 0	0.00	\$ 0	0.00	\$ 0
Total Water Resource Improvement Programs		6.00	\$ 1,944,000	6.00	\$ 2,100,000	0.00	\$ 0
Total QM - All Programs		7.20	\$ 1,833,000	8.20	\$ 1,800,000	14.75	\$ 4,163,000

## Scenario Planning Matrix

Planning Strategies	Scenarios				Total Score (by scenario)
	Economy Recovers Dramatically	Environmental Focus is a National Priority	Prolonged Economic Malaise	Carbon Legislation Creates Economic Downturn	
Resource conservation					
Recreation focus					
Balanced management					

## Program Benefits Assessment

Program Category	Program	Goal / Activity	Controlled Mgmt	Enhanced Mgmt	Priority Mgmt
Cultural Resource Programs	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...
	...	...	...	...	...

## Benefits Weighting Exercise

Environmental Stewardship Metric	Metric Weights		
	Conservation	Recreation	Balanced
Recreation/Visitor Benefit Use	1%	44%	17%
Water Resource Benefit	9%	24%	17%
Species/Habitat Conservation and Abundance	4%	10%	17%
Cultural Resource Preservation	40%	1%	17%
Management Data and Scientific Knowledge/Reduce Compliance Costs	5%	1%	16%
Public Participation, Outreach, Partnerships	5%	20%	16%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>