

**9<sup>th</sup> Annual Groundwater Forum Conference**  
**Groundwater Resource Planning: the next 25**  
**years**

**Water Resource Planning:**  
**Regulatory Requirements**

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**13<sup>th</sup> May 2008**



## **Water Resource Planning: Regulatory Requirements**

- **Why do we need to plan**
- **How do we plan**
- **Water Resources Plans: The bigger picture**
- **The process and what happens next**

## Water Resource Planning: Regulatory Requirements

### Why do we need to plan?

- **Water Act 2003**
  - **Statutory process**
  - **Climate change**
  - **Consultation**
  - **Ministerial Direction**

## Water Resource Planning: Regulatory Requirements

### Why do we need to plan?

- **Today: Social cohesion and the health of the nation (economic, social and environmental)**
- **Tomorrow: Sustainable future (economic, social and environmental)**



## Water Resource Planning: Regulatory Requirements

### How do we plan?

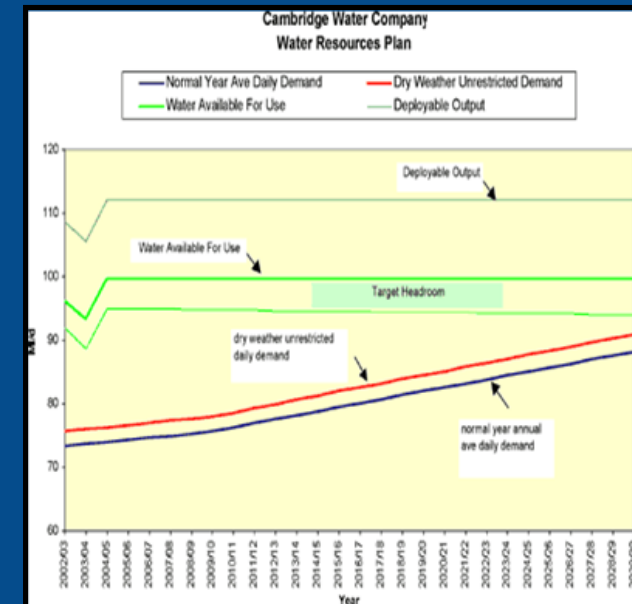
- **Draft and Final**
- **25 years**
- **Consensus guidance**
- **Auditing and Reporting**
- **Linkage to funding and legislation**



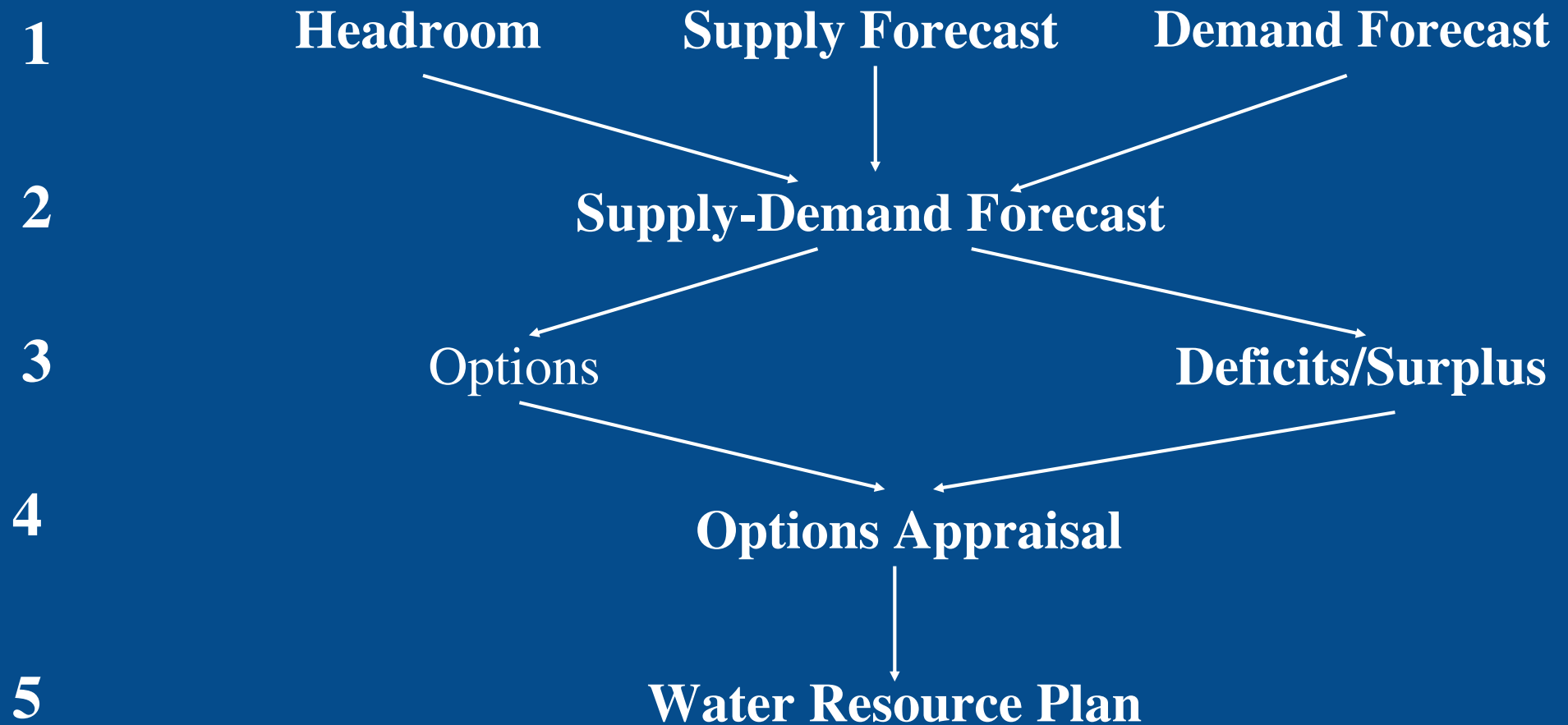
## Water Resource Planning: Regulatory Requirements

### How do we plan?

- **Water Resource Planning Zones**
- **Least cost just in time economics**
- **Planning scenarios**
  - **Dry year annual average**
  - **Normal year annual average**
  - **Critical period**



# Water Resource Planning: Regulatory Requirements



## Water Resource Planning: Regulatory Requirements

### Water Resource Plans: The Bigger Picture

- **Government: Future Water, Statement of Obligations, Social and Environmental Guidance**
- **Other Regulators: Ofwat and PR09, CC Water, Natural England**
- **Water Industry: Strategic Direction Statements**
- **Customers: Consolation Responses**



## Water Resource Planning: Regulatory Requirements

### What are tomorrows challenges?

- **Climate Change Mitigation (Carbon)**
- **Climate Change Adaptation**
- **Population and housing growth**
- **Environmental obligations**
- **Externalities (energy, finance etc.)**



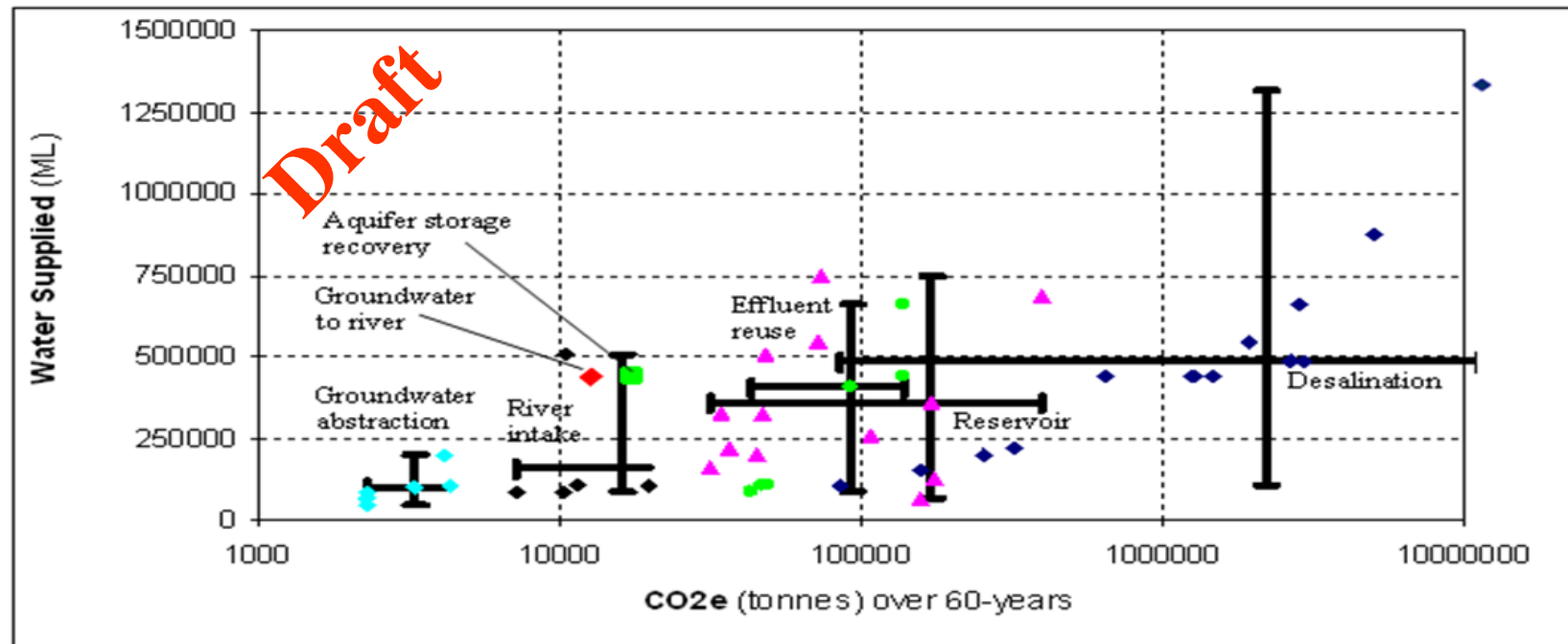
## Water Resource Planning: Regulatory Requirements

### Water Resources: What can we do?

- UK Water Industry emitted over 5 MtCO<sub>2</sub>e (2006/07)
- Hot water in the home equivalent of 35 MtCO<sub>2</sub>e
- Account for c 5% of UK total GHG emissions

Life Cycle Element	tCO <sub>2</sub> e/ML
Abstraction	0.03
Treatment	0.14
Distribution	0.11
Use in the Home	6.22
Wastewater	0.48

# Water Resource Planning: Regulatory Requirements



- ▲ Reservoir
- ◆ River Intake
- ◆ Groundwater Abstraction
- A quifer Storage Recovery
- ◆ Desalination
- Effluent Re-Use
- ◆ Groundwater to River



Note: The plotted water supply results based on scheme specific proposals cannot be directly compared with water demand results based only on uptake by 1000 households.

**Figure 6.1 Carbon Cost Model Results - Water Supply Options**

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## Water Resource Planning: Regulatory Requirements

### The Process and What Happens Next?

- Publish draft plans and representation on plans  
Mar 08 – Sep 08
- Amendments to Plans (SoS/WAG)  
Sep 08 – Jan 09
- Preparation and submission of Final plans  
Jan 09 – July 09



## Water Resource Planning: Regulatory Requirements

### The Process and What Happens Next?

- Plans and Guidance (the mechanics)
- Plans and Strategic Direction (the proper use of water resources)
  - Climate change
  - Twin Track
  - Metering and PCC
  - Sustainability Reductions

## Water Resource Planning: Regulatory Requirements

### Summary

- **New Statutory Process**
- **Critical Plans for Strategic Direction**
- **Groundwater as important as ever**