### Lessons Learned from Israel

Shellie R. Chard Water Quality Division Director, DEQ Trustee, WEF Treasurer, GWPC

### Background on Mission to Israel

### US PARTNERS

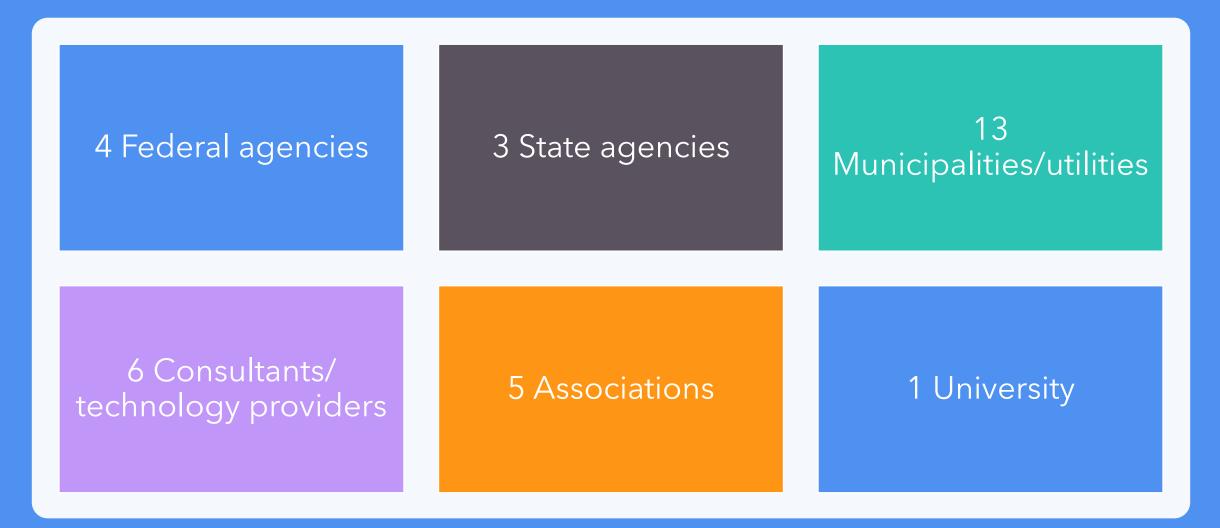








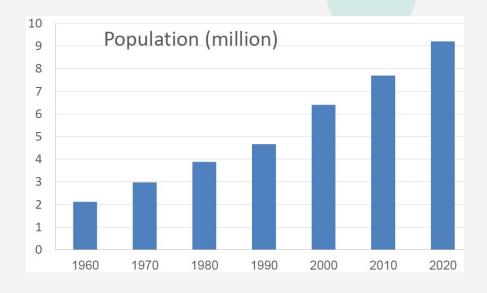
#### 40 Attendees













Water Demand - ~50% higher than the natural supply



01997 MAGELLAN GeographixSM

### Comparison

#### • Oklahoma

- ~ 4M people
- 69,898 square miles
- Israel
  - ~ 9M people
  - 8550 square miles
- US
  - ~ 334M people
  - ~ 3.4 M square miles

#### **Integrated Water Resources Approach**

#### Water "Production"



#### **Reclaimed Water Use**



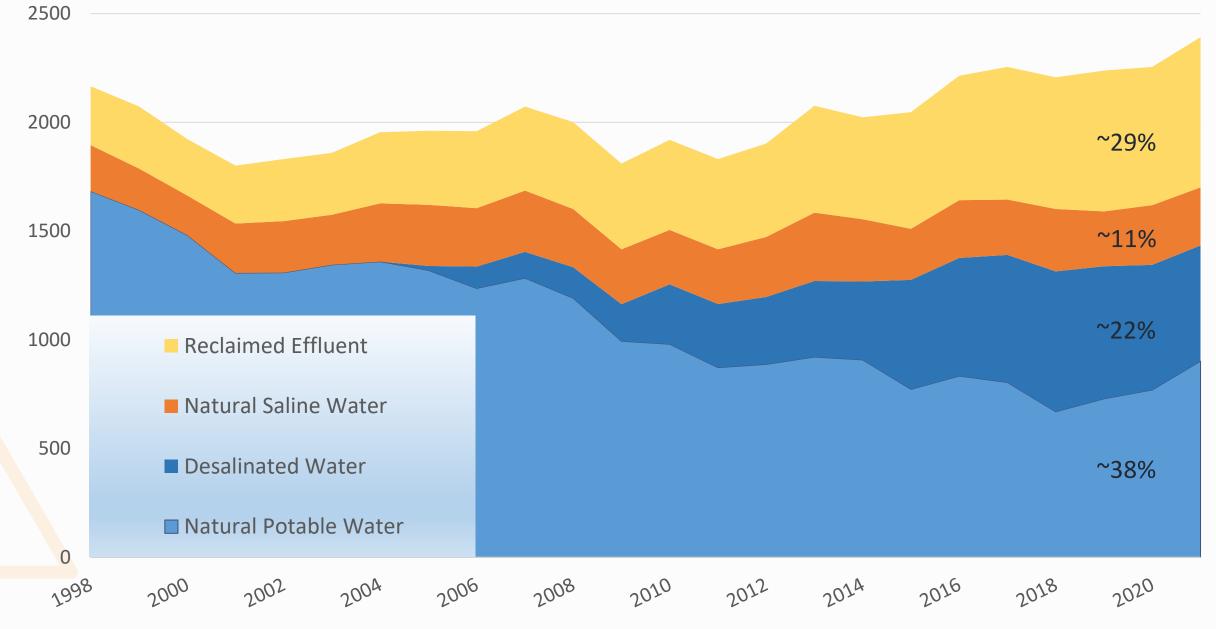
#### **Domestic Use**





#### Israel's Water Supply (MCM)

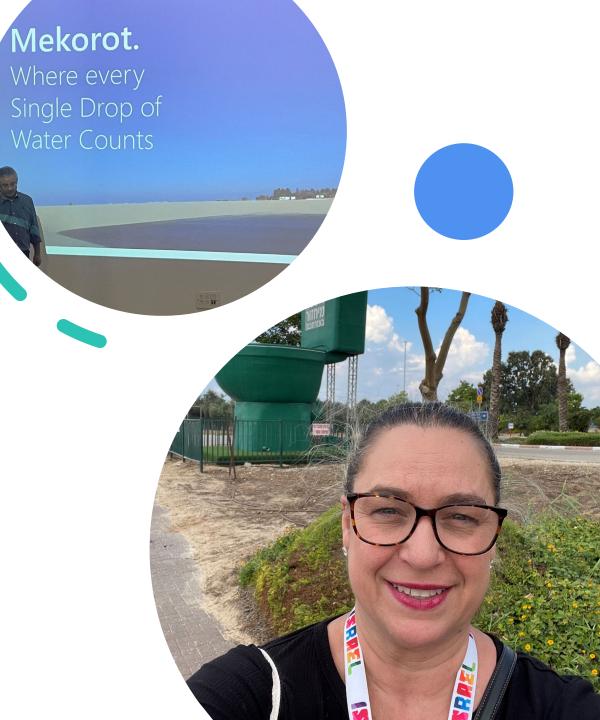
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### Key Water Policy Law

# • **All** water is property of the State (of Israel)

National Water
Corporation – Mekorot



### Regulatory Scheme

10-15 years to receive permits

Discharge is a last resort and extremely limited

Ministry of Health can overrule:

- Ministry of Environmental Protection
- Ministry of Agriculture and Rural Development

## Drinking Water



- ~75-80% of drinking water is Mediterranean Sea Water
  - RO reject water can be discharged
  - 5 plants online
  - 1 under construction
  - 3 in planning stage
- Maximum water loss of 5%

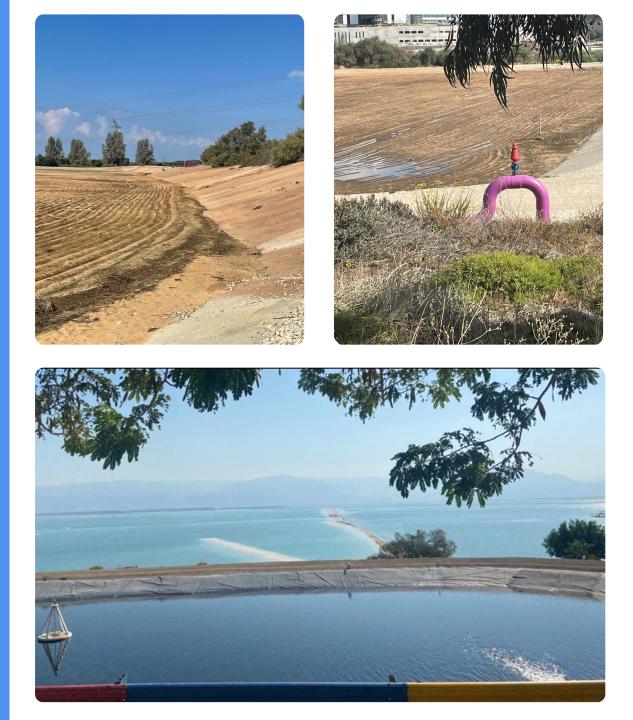
### Water Recycling

### Fit for Purpose treatment

85% of municipal wastewater treated used for agriculture purposes



## ASR/MAR



## Technology, Research, and Innovation

## Peres Center for Peace and Innovation





Volcani Institute for Research Maintains "gene bank"

Focus on food safety and security, climate change, and environment protection

Research focus

- Marginal soils
- Saline water usage
- Recycled water impact on agriculture

### **RO** Membranes

1.00







Meniv Rishon, Rishon Levion Water Corporation

- •100 "grab and go" kits
- •20 minute set up
- •100 liters of water
- •100 1 liter store flat containers
- Misc. supplies





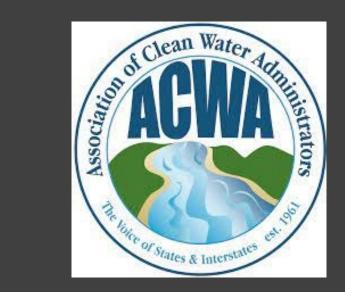
### •Value Water

- Policy
- Comprehensive Water Planning
- Attitude
- Research
- Innovation
- Pricing













Drinking Water Administrators





### Thank you

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