

WaterReuse Research Foundation: History, Status, Vision, & Opportunities

Presented to:

**Girona Forum for Collaborative Water Research
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Overview

- Mission & Vision
- Brief History of Foundation
- Current Status
- Looking into the Future
- Challenges & Opportunities



Foundation Mission

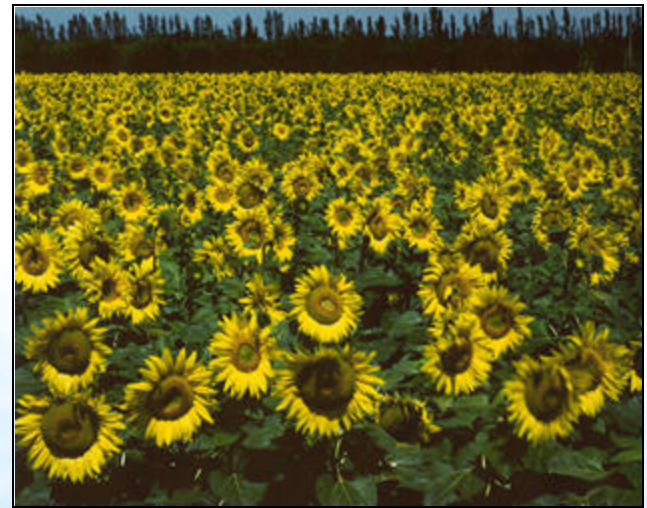
To conduct and promote applied research on the reclamation, recycling, reuse and desalination of water.



The Foundation's Vision

2011- 2020

- Annual Budget of \$5-10 Million
- Funding Partners
 - Bureau of Reclamation
 - CA SWRCB/DWR/CEC
 - Pentair Foundation
 - Subscribers
 - Partners: AWRCE/Singapore PUB
 - Multinational Corporations
 - Charitable Foundations
- A Global Presence and Reach
- The Respected Voice for Research on Water Reuse and Desalination



WaterReuse Research Foundation : History

- Incorporated on **September 13, 1993** to:
 - Develop the Science & Technology Necessary to Support the Water Recycling Needs of the 21st Century
- Foundation Specializes in Conducting “Leading Edge” Applied Research
- Address Following: Chemical & Microbiological Agents, Treatment Technology, Economics, Marketing, Public Perception
- Push Forward the Frontiers in Technology



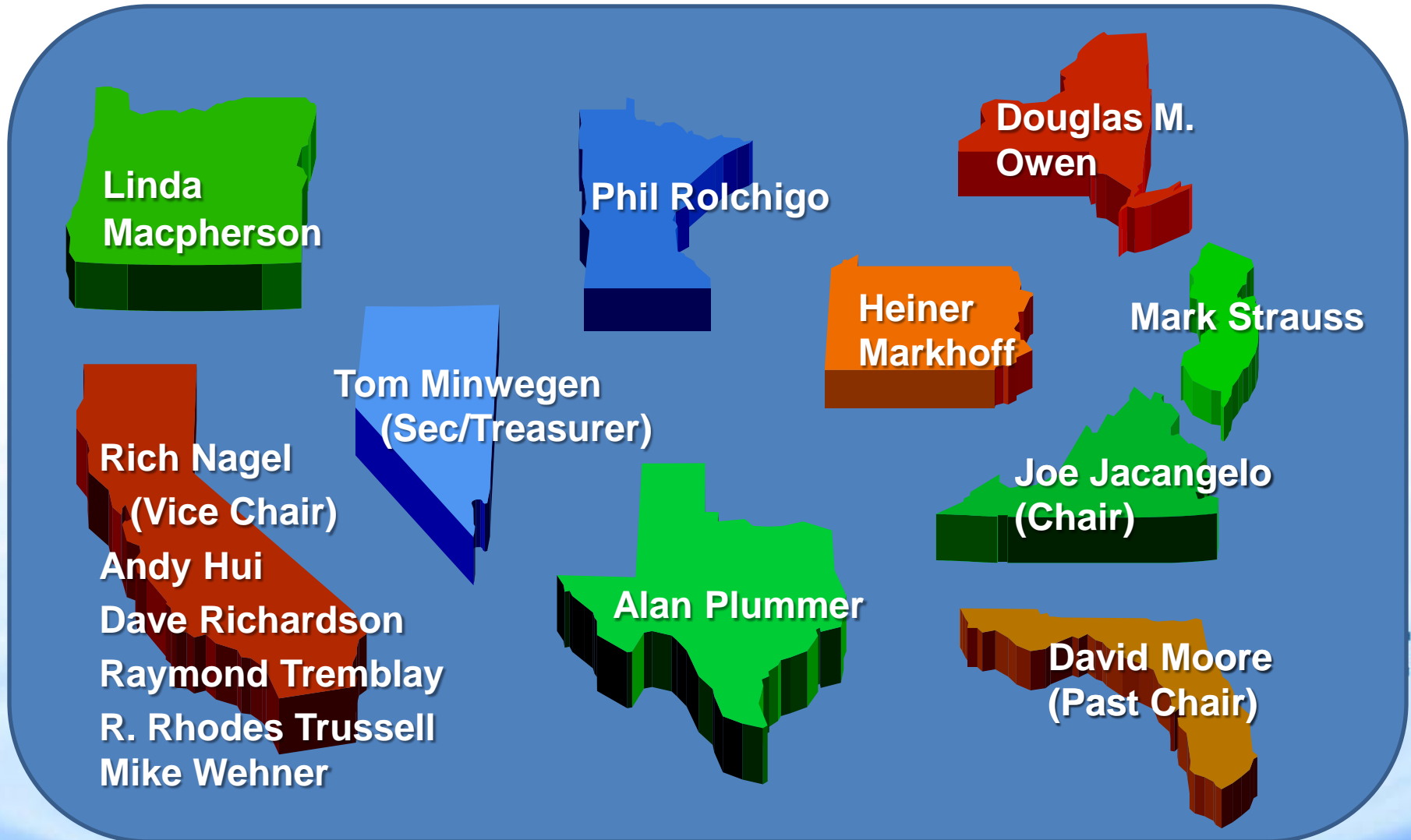
Significant Events

- Hired Full-Time Executive Director on August 1, 2000
- Secured \$180,000 in Funding from US Bureau of Reclamation in September, 2000
- Secured Additional US Funding of \$1MM in FY 2001
- Received Matching Funding of \$1MM from California State in 2002
- Expanded Mission to Include Desalination in 2003
- Strengthened Research Advisory Committee in 2004
- Developed Equitable Sustainable Funding Model in 2007
- Changed Name in 2010

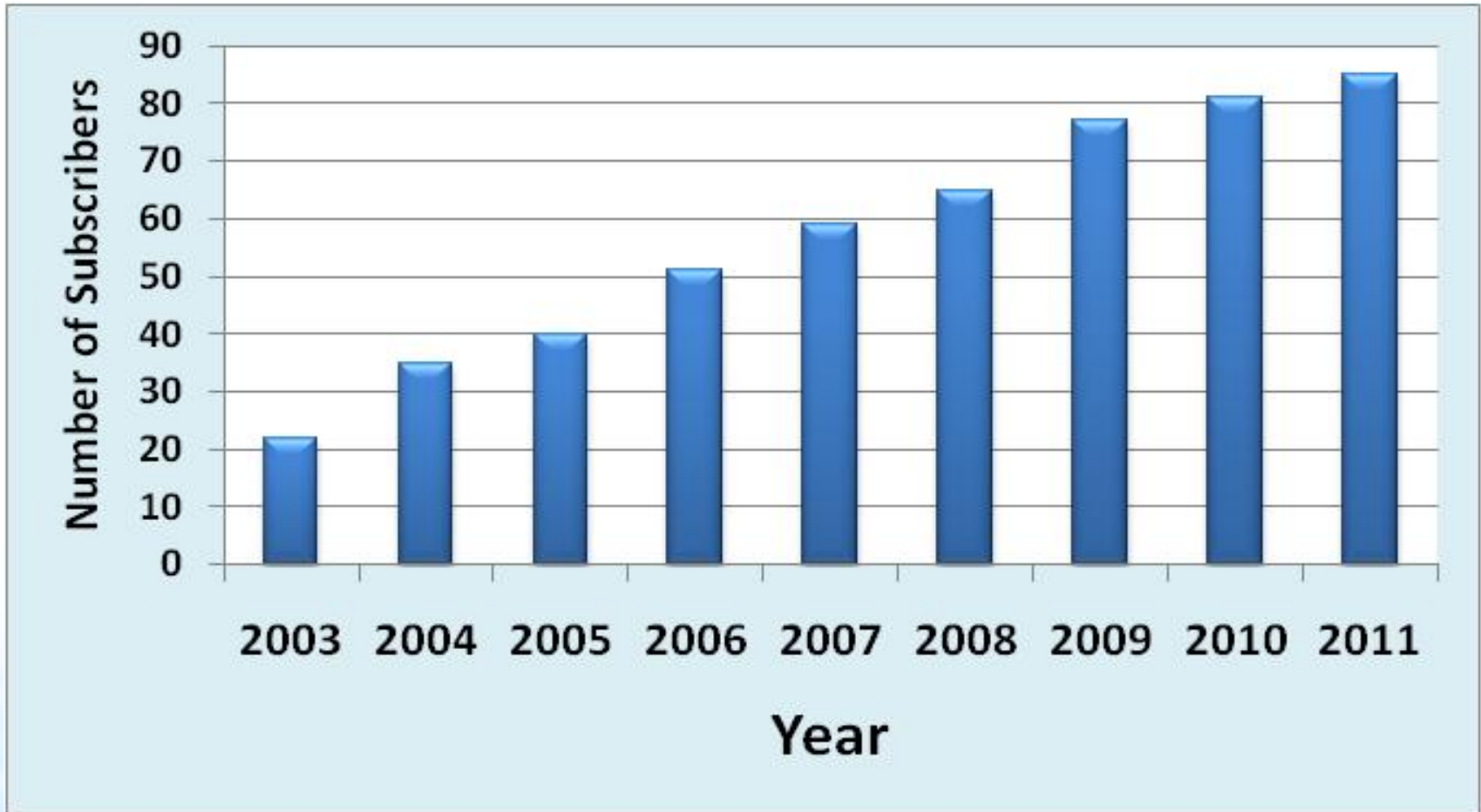


Governance

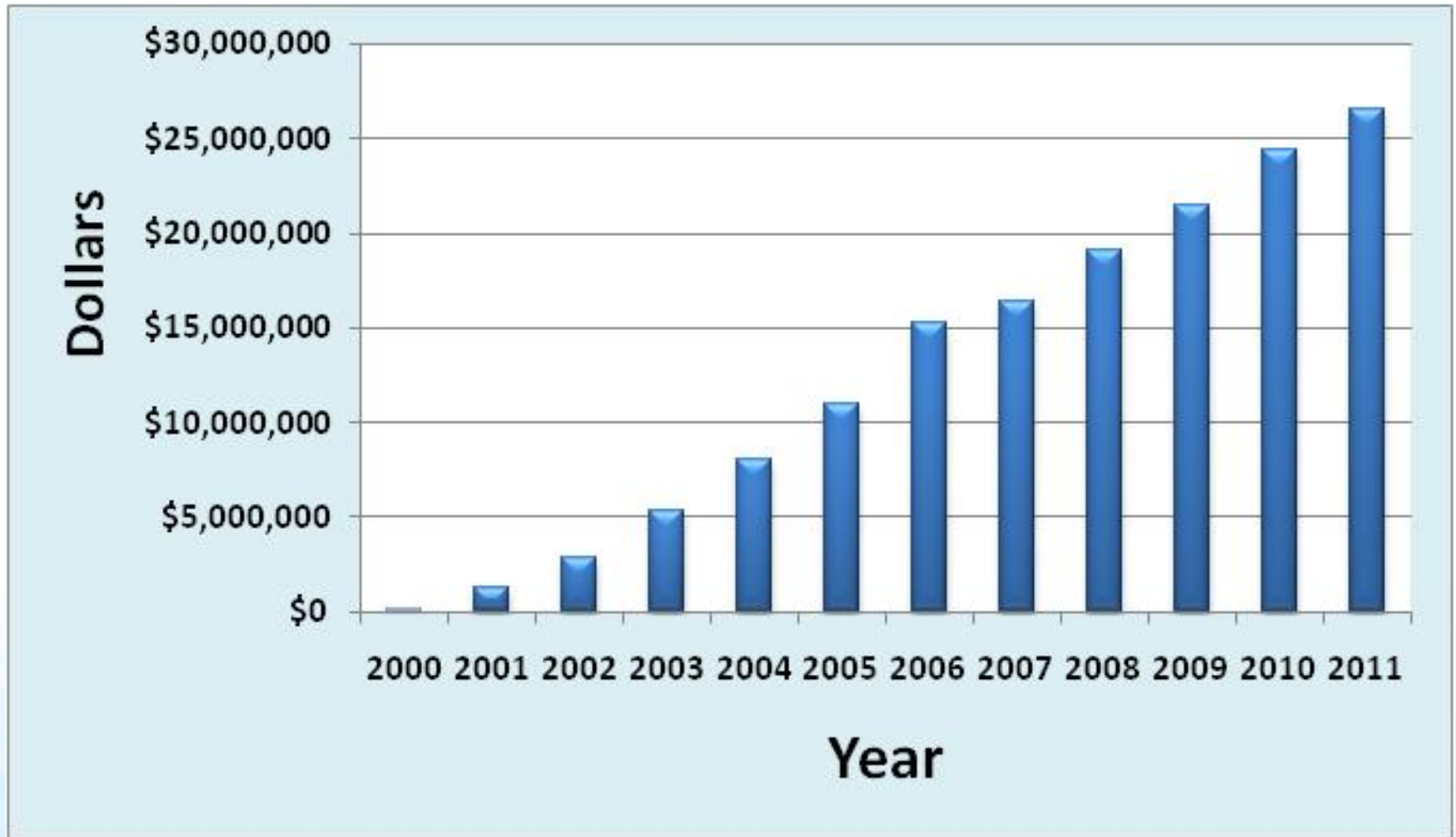
- Board Develops Policy & Provides Guidance to RAC & Staff
- Current Board Exhibits Strength, Geographic Diversity



Cumulative Number of Subscribers



Cumulative Funding of Foundation Research

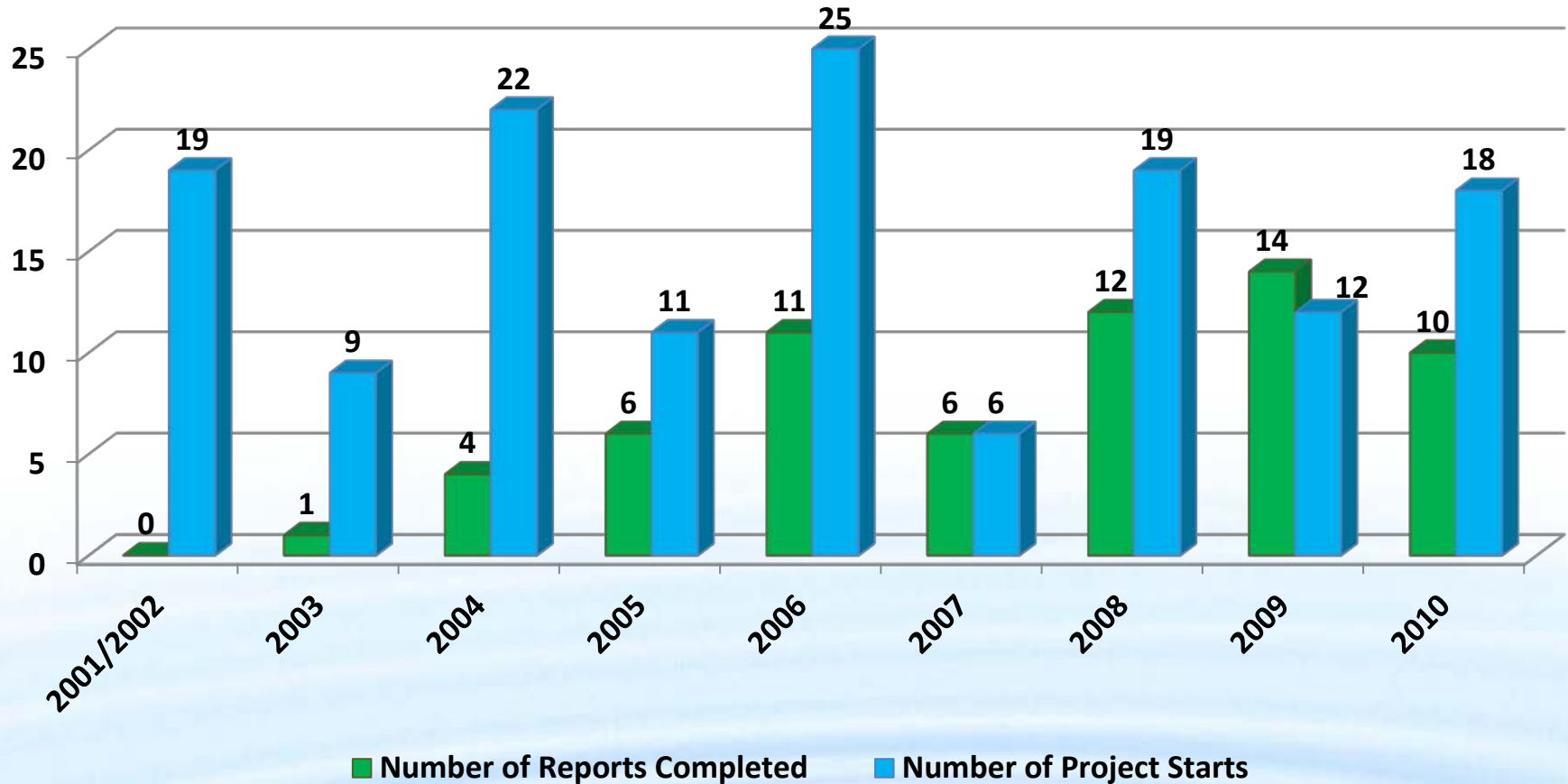


Some Numbers....

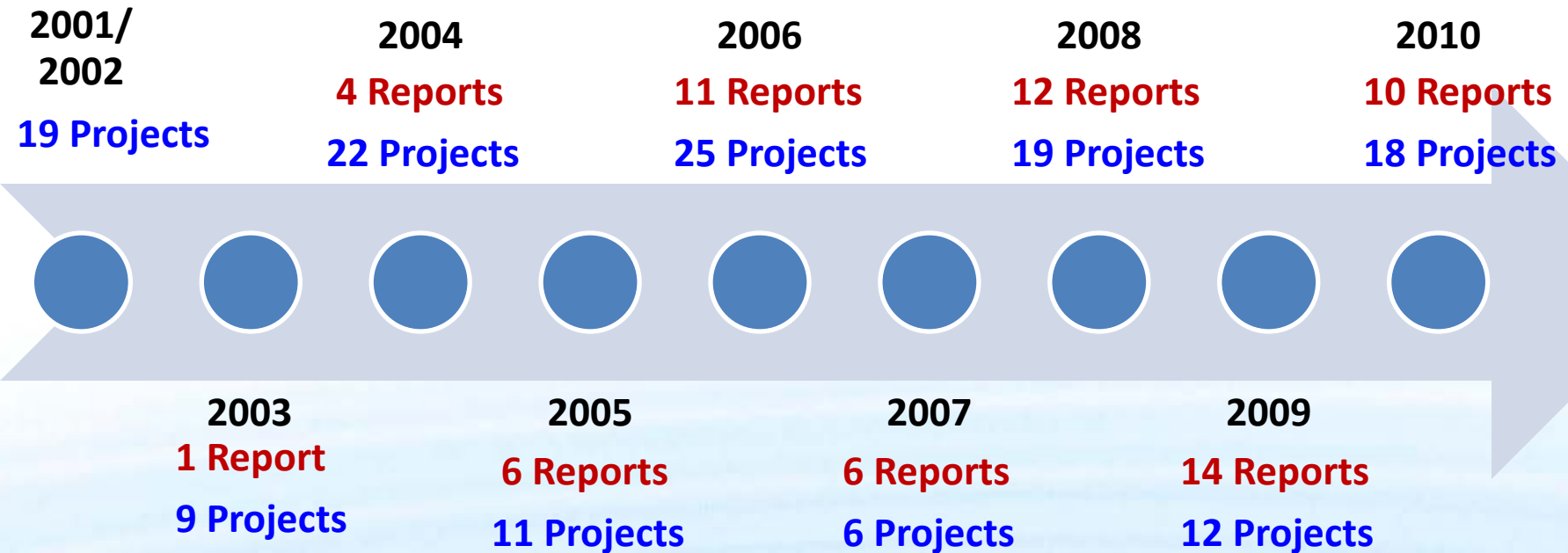
- **Number of Project Awarded to Date: 141**
- **Number of Outreach Pieces to Date: 325**
- **Number of Volunteers on PACs: 351**
- **Volunteers at Research Workshop: 72**



Research Program Reports & Projects



Research Program Reports & Projects



- Number of Reports Completed
- Number of Projects Started

Outreach is an Important Element of Foundation Work

- Number of Outreach Pieces to Date: 325
(reports, presentations, proceedings, peer-reviewed publications)
- New Journal Initiated – *WaterReuse and Desalination*
- New Webinar Program



Webinars Held and Planned

- Assessment of Approaches to Achieve Nationally Consistent Reclaimed Water Standards (April)
- Risk Assessment Study of PPCPs in Recycled Water to Support Public Review (June)
- Talking About Water (August 24)
- Two additional webinars in 2011



Annual WaterReuse Research Foundation Conference

- First Conference held on June 5-6, 1997
 - Theme was "Merging Our Resources"
- Convened 15th Annual Conference
 - May 16-17, 2011 in Las Vegas, NV
- Conference provides opportunity to:
 - Showcase results of WRF research
 - Hear presentations from federal agencies, Researchers from partner organizations
 - Identify future research needs
- US EPA's OR&D and Water Research Foundation have been Conference Sponsors for 11 Consecutive Years



Current Status

- Strong & Steady Growth Since 2000
- >\$42M in Federal & Non-Federal Funding Since 2000
- Currently 85 Subscribers
- Solid Governance & Research Plan
- Diverse Portfolio of Projects & Products
 - Foundation has funded 130+ projects since 2000
 - More than 80 Active Projects
 - 60+ Publications in Circulation
- Applied research focuses on: chemistry; microbiology; salinity management; desalination; public acceptance; economics, pricing, & marketing
- Established Credibility Within Scientific Community
- Established Strategic Alliances in U.S. and Around the World



Key Achievements in 2010

- WaterReuse Foundation Renamed the WaterReuse Research Foundation
- \$2.5MM “earmarks” through Bureau of Reclamation in FY10
- Foundation Signs an Agreement with the Bureau of Reclamation for \$2.07 million through Reclamation's Water Recycling and Reuse Program (Title XVI)
- Received funding commitments and contributions from the Pentair Foundation, Aqua-Aerobic Systems, and ACWA



Five Mechanisms for Funding Research Projects

- Solicited Projects (selected by RAC & procured through RFPs)
- Unsolicited Projects (to mine good ideas)
- Tailored Collaboration (for Subscribers only)
- Partnerships (with WERF, Water Research Foundation, Singapore PUB, etc.)
- Feasibility Studies (\$100K/year, RAC initiatives)



Research Categories

- Policy & Social Sciences
- Microbiology and Disinfection
- Chemistry and Toxicology
- Treatment Technologies
- Desalination



Future Emphasis

- Public Acceptance
- Potable Reuse
- Ensuring Chemical/Microbiological Safety
- Desalination (goal is to allocate 33% of research dollars to desal by 2013)
- Energy/Water Nexus
- Criteria/Standards



An Equitable Sustainable Funding Model

- The Foundation has Developed a Sustainable Funding Model
- Foundation has Traditionally Received \$2-2.5MM Annually through US Congress
- Board Requires Researchers to Provide 25%
- Since Federal Cost Share is Limited to 50%, We Have a 25% Shortfall
- We Need Subscribers to “Step Up” and Fill Gap
- No US Government Funds will be Received in 2011-2012 Cycle



International Committee

- Three Co-Chairs:
 - Shane Snyder (Singapore, the Far East)
 - Tom Pankratz (GCC Countries)
 - Bahman Sheikh (Middle East/North Africa)
- Goals:
 - Focus Initially on Kingdom of Saudi Arabia
 - Sponsor A Conference in the Middle East
 - Participate Actively in Future International Water Forums



What Does the Future Look Like?



Some Salient Facts

- Current World Population is 6.8B People, Going to 9B by Year 2050
- Only two “New” Sources of Water are Recycled Water, Saline/Brackish Water
- BRIC/Emerging Market Countries will Require Substantially More Water: *from whence will it come?*
- Multinational Corporations will also need water to expand and grow



Quotes

- *“The Three Greatest Challenges that will face Humankind in the 21st Century are Food, Energy, and Water”* – Neville Isdell
- *“You Need Energy to Produce Water and Water to Produce Energy”* – Pete Domenici
- *“If the wars of this century were fought over oil, the wars of the next century will be fought over water”* -- Ismail Serageldin
- *“Water Scarcity: The New Paradigm of the 21st Century”* – Wade Miller



A Relevant Quote

“We all know that water reuse and desalination will need to be major components of the water supply equation of the 21st century; if we don’t conduct the research necessary now to allow the widespread use of these resources, we’ll be sorry 10 years from now.”

...David Moore, SWFWMD



Thank you!

Credit:
Wade Miller, Executive
Director, WaterReuse
Research Foundation

www.WaterReuse.org/Foundation



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