

RECLAMATION

Managing Water in the West

Advanced Water Treatment Prize Competitions

Turning Clean Water Innovation into a Global Sporting Event

Research and Development Office
Science and Technology Program
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U.S. Department of the Interior
Bureau of Reclamation

What are Prize Competitions?

Prize Competitions is a Tool That Enables Joy's Law

Joy's Law:

"No Matter who you are, most of the smartest people work for someone else"

"It is better to create an ecosystem that gets all the world's smartest people toiling in your garden for your goals"

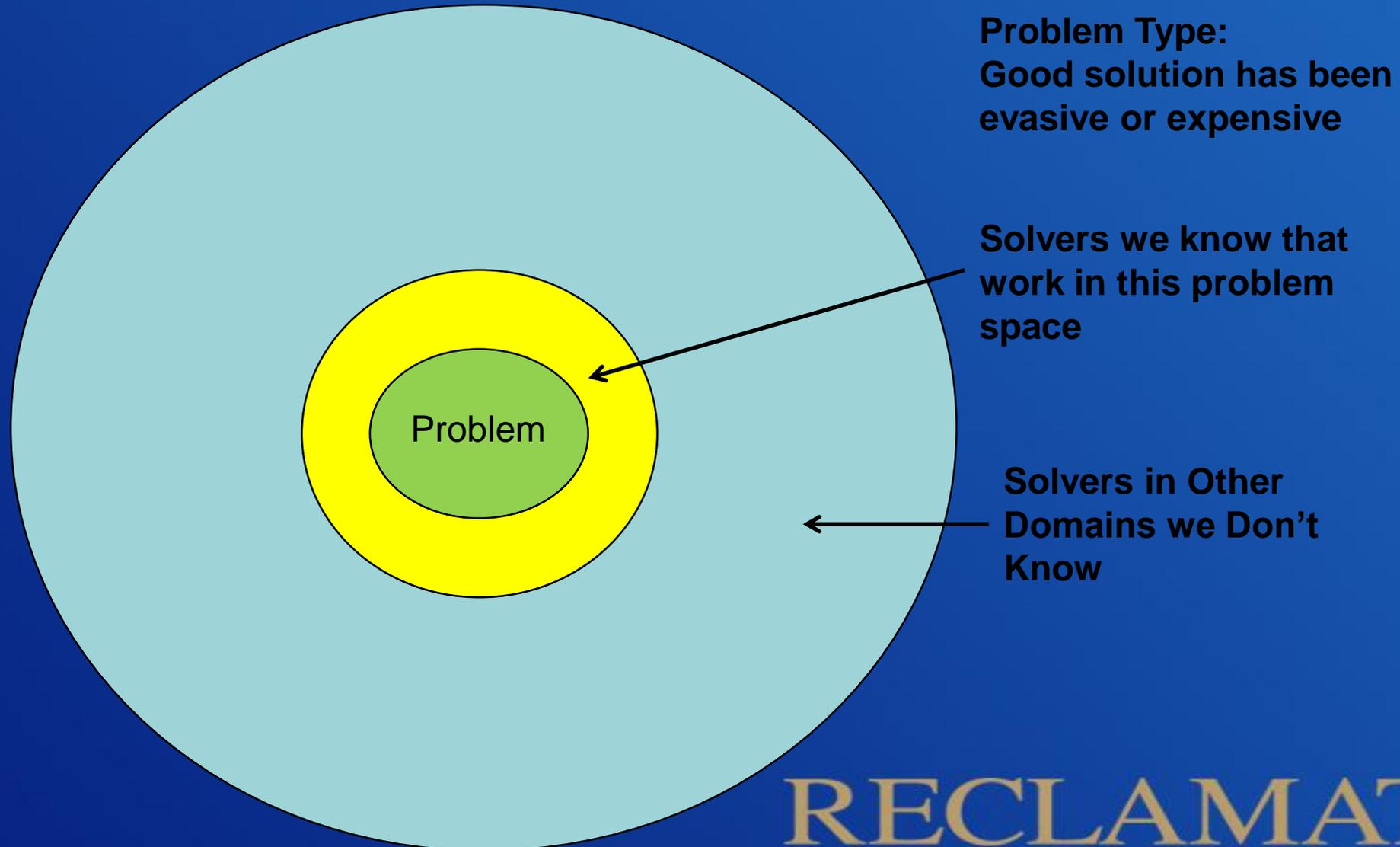
Bill Joy, Sun Microsystems co-founder

How does a prize competition (aka challenge) work?

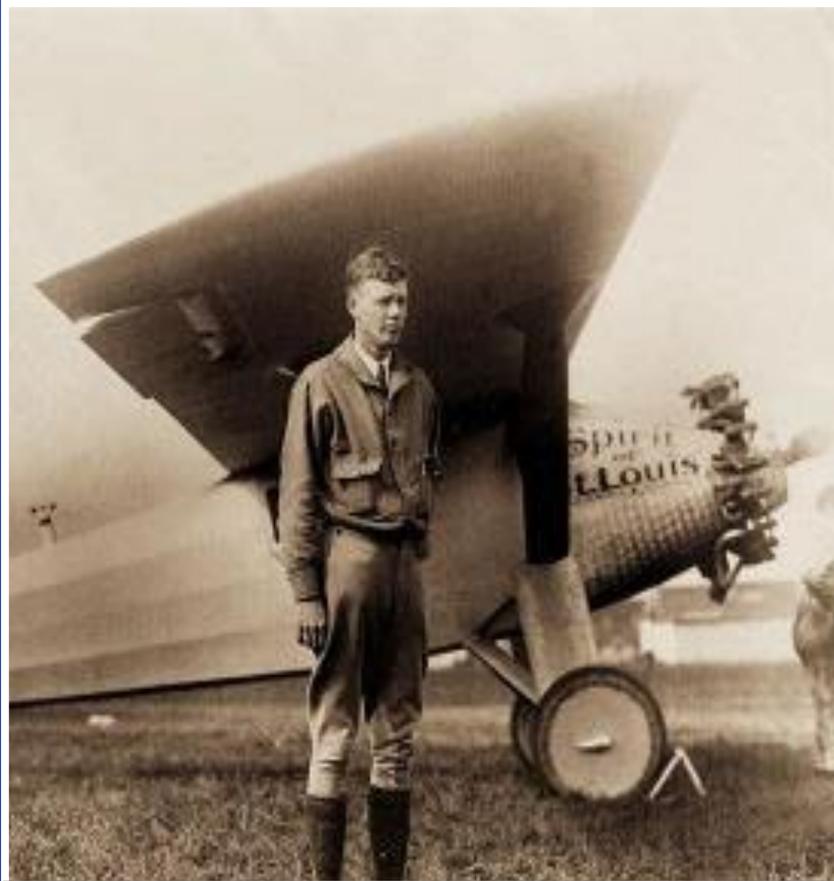
Got a problem?

- Tell the world about it and the what a winning solution would have to do,
- Challenge anybody in the world to bring you that winning solution,
- Add a monetary and/or non-monetary prize to incentivize the competition,
- Launch the competition ,see what you get and make awards accordingly.

Prize Competition Objective and Target Audience



Prize Competitions Not New in the Private Sector



1919 Orteig Prize

Charles Lindbergh: Non-Stop Flight NY-Paris

“[T]otal funds from large prizes have more than tripled over the last decade to surpass \$375 million.”

- “And the winner is...”
McKinsey, 2009



A Sampling of Private Sector Prize Competition Platforms and Service Providers

INNOCENTIVE[®]

NINESIGMA[®]

XPRIZE[®]

 **Common Pool**

 **[topcoder]**[™]
Challenge yourself. Get paid.
\$69,316,885.00 in cash awarded to date.

S E N S I S
Challenges

RECLAMATION

Water Prize Competition Center

Share your expertise and ideas!

You can help solve some of the most critical water and water-related resource problems facing our Nation!

Water Availability



Ecosystem Restoration



Infrastructure Sustainability



Learn more at www.usbr.gov/research/challenges

Authorized by the America COMPETES Act of 2010 (15 USC 3719)

[See White House Blog about the Water Prize Competition Center](#)

NEWS

Reclamation is Seeking Non-Federal Partners to Help Launch Prize Competitions

★ FEDBIZOPPS.GOV

(July 7, 2016) The Bureau of Reclamation is seeking non-federal partners to join with Reclamation and other federal agencies on prize competitions to solve critical water and water-related issues.

Visit FedBizOpps.gov to download the Partner Opportunity Notice and submit the partner interest form. [Read More](#) →

<http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=55427>

Partners can Contribute...

- Prize Purse Money
- Technical Experts
- Judges
- Testing Facilities
- Promoting the Competition to Public and Solver Communities
- Commercialize Winning Solutions
- Prize Competition Administration

[See Partnership Sources Sought Notice](#)

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Interest areas include:

- **Develop new sources of water supplies through desalination, water recycling, and creative application of traditional and non-traditional methods**
- Conserve existing water supplies
- Monitor and forecast water supplies and demands
- Optimally manage and operate water storage and delivery systems
- Use social and institutional methods to cultivate long-term solutions
- Conjunctively manage ground and surface waters

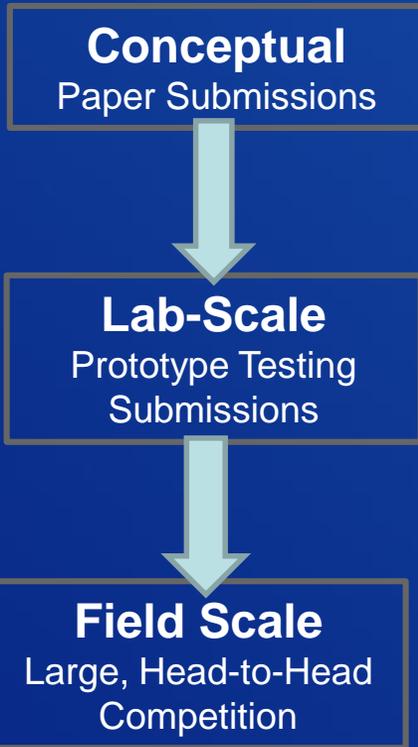
Where Are We at and Where are We Going ?

Advanced Water Treatment Grand Challenge Framework

Starting Late 2016 - Turning Clean Water Innovation into a Global Sporting Event

Blast through Cost, Energy, and Other Barriers With Prize Competitions

Stage Gates



Prize Purse



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Winners



Learn more at
<http://www.usbr.gov/research/challenges/upcoming/index.html>



Advanced Water Treatment Grand Challenge Framework

Expanding Water Supplies by Turning Clean Water Innovation into a Global Sporting Event

Blast through Cost, Energy, and Other Barriers with Prize Competitions

General Topic Garden to Sprout Specific Challenges

New and Improved Processes

New, novel ideas to optimize water treatment systems, reduce cost, and reduce energy consumption

Overcoming Water Reuse Barriers

Advancing technical reliability and social acceptance

Alternative/Renewable Energy-Powered Systems

Directly coupling renewable/alternative energy and water treatment systems

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graph TD; A[General Topic Garden] --> B[Specific Challenge #1]; B --> C[Stage 1 - Concept Proposals]; C --> D[Stage 2 - Lab Scale Prototype Tests]; D --> E[Stage 3 - Field Scale Demonstrations];
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Specific Challenge #1

Stage 1 – Concept Proposals

Stage 2 - Lab Scale Prototype Tests

Stage 3 - Field Scale Demonstrations

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Specific Challenge Topics

More Water Less Concentrate
Stage 1

Beneficial Uses for Concentrate
Stage 1

Water Reuse Contaminant Smart Sensors
Stage 1

TBD #1

TBD #2

TBD # etc

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WATER
PRIZE COMPETITION CENTER

Hundreds of thousands in prize \$\$\$!



DESAL PLANT

Saltwater → Freshwater ↓ Salty Concentrate ↓

Can YOU help Desalination plants make more water and less concentrate?

Follow us at Challenge.gov
(search Reclamation)



RECLAMATION WERF Water Research Foundation

GRAND CHALLENGE

More Water - Less Concentrate: Stage 1

Stage 1 Launch: December 2016

Stage 1 Prize Purse: \$150,000

Stage 2 Prize Purse: ~ \$450,000

Stage 3 Prize Purse: ~ \$500,000

Learn more at

<http://www.usbr.gov/research/challenges/upcoming/index.html>

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What's Next Going Forward ?

Fiscal year 2017 Appropriations will determine scope and level of effort

Fiscal Year 2017 Appropriations for Prize Competitions under Reclamation's Science and Technology Program:

- Currently operating under a continuing resolutions at \$3 million/year for prize competitions
- FY 17 Request before Congress: \$8.5 million which includes scale-up for Advanced Water Treatment Grand Challenges

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What's Next Going Forward ?

Form Topic Selection Advisory Committees

- End users such as municipal water districts
- Water treatment and renewable/alternative energy product manufactures
- State and Federal regulators
- Subject matter technical experts from public, private, and non-profit organizations

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What's Next Going Forward ?

Continue to recruit partners from public, industry, venture capital, and non-profit organizations for specific prize competitions

Partners can Contribute...

- Prize Purse Money
- Technical Experts
- Judges
- Testing Facilities
- Promoting the Competition to Public and Solver Communities
- Commercialize Winning Solutions
- Prize Competition Administration

Questions ?

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