



ismar₁₀

INTERNATIONAL SYMPOSIUM ON MANAGED AQUIFER RECHARGE

Madrid, 2019 May



Implementing Incentivized Managed Aquifer Recharge on a Basin Scale



Presented by: Keith Esplin
Paper Written by:
Dave Tuthill and Ron Carlson
May 21, 2019



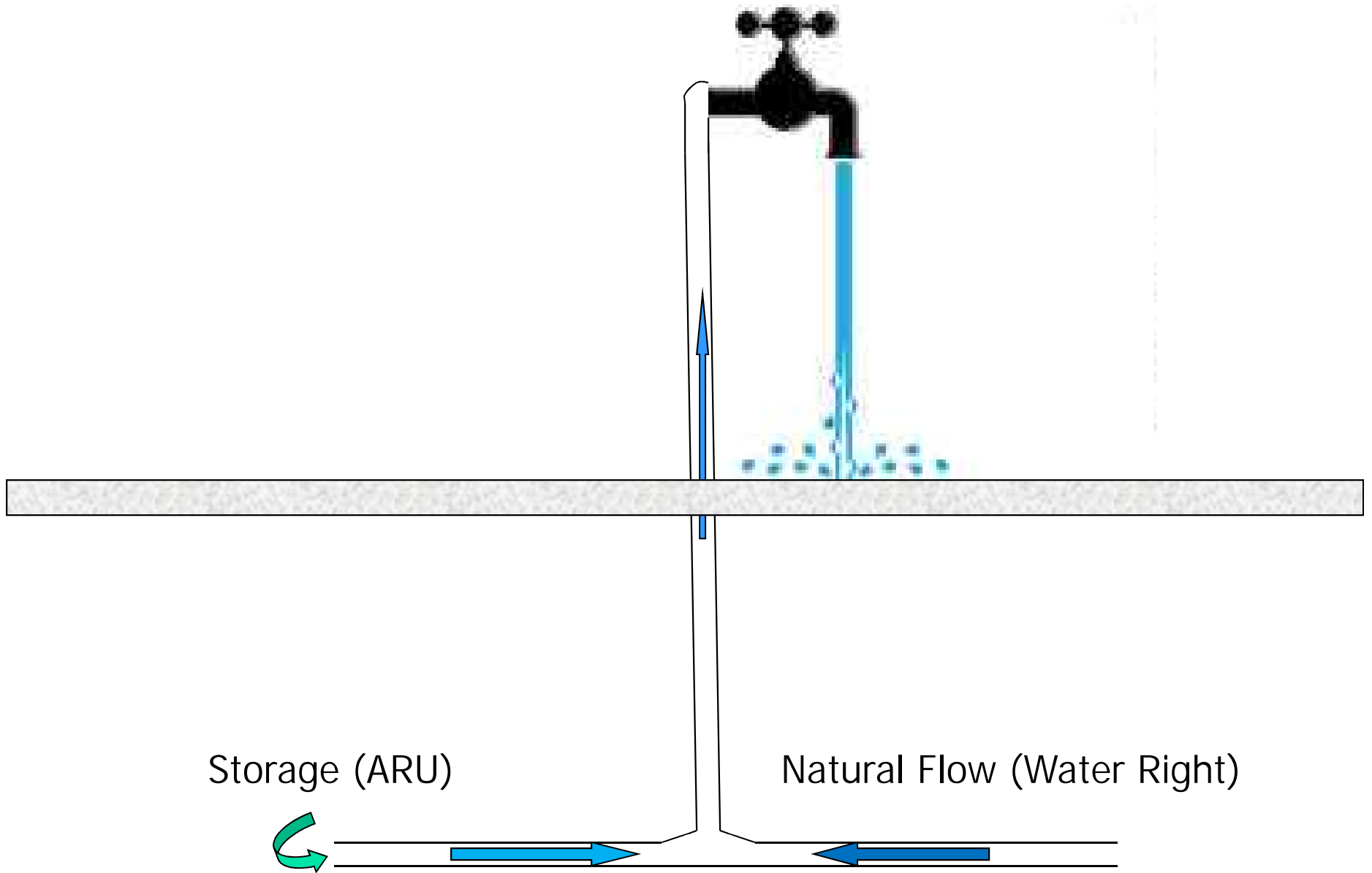
Topics

1. Why Privately Develop Managed Aquifer Recharge?
2. What are:
 - Recharge Development Corporation
 - An Aquifer Recharge Unit (ARU)?
3. How
 - Does this work?
 - Is this legal?
4. Where are eligible basins?
5. When can this happen?





Why Privately Develop Managed Aquifer Recharge?



Storage (ARU)

Natural Flow (Water Right)





What are:

- Recharge Development Corporation
- An Aquifer Recharge Unit (ARU)?





Recharge Development Corporation Mission

Establish self-perpetuating
Incentivized Managed Aquifer Recharge
in basins throughout the world



Chris Pratt

President

Eastern Idaho Farmer

Dave Tuthill

Vice-President

Former IDWR Director

Ernest Carlsen

Secretary

Former Supervisor for Water Rights and Adjudication in Eastern Idaho for IDWR

Ron Carlson

Treasurer

Former Watermaster of Water District 1

Hal Anderson

Director

Former Administrator of IDWR Planning and Technical Services Division

Keith Esplin

Director of Industry Outreach

Community Outreach

Kent Foster

Advisor

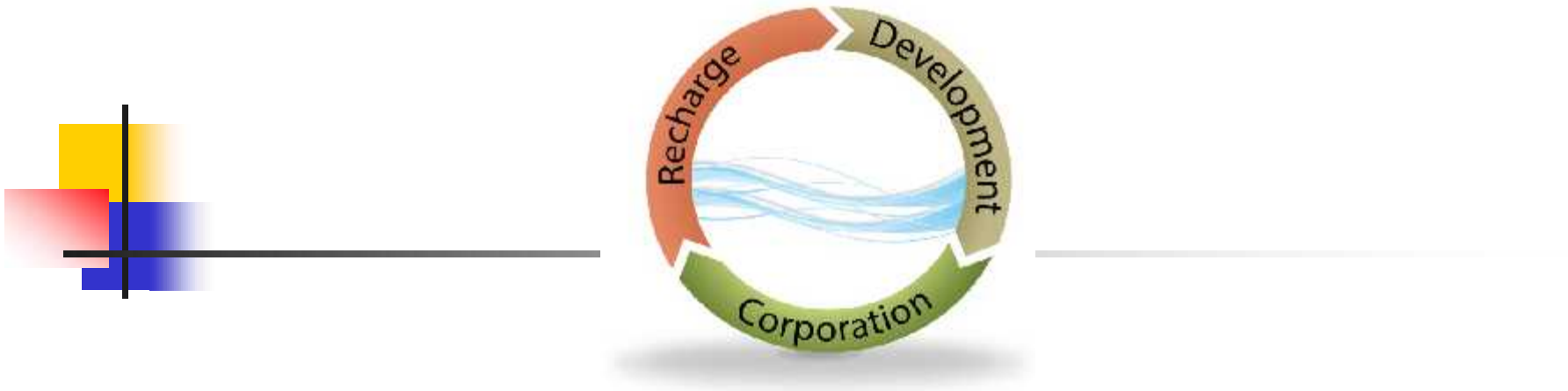
Former water attorney in Eastern Idaho

Phil Rassier

Director

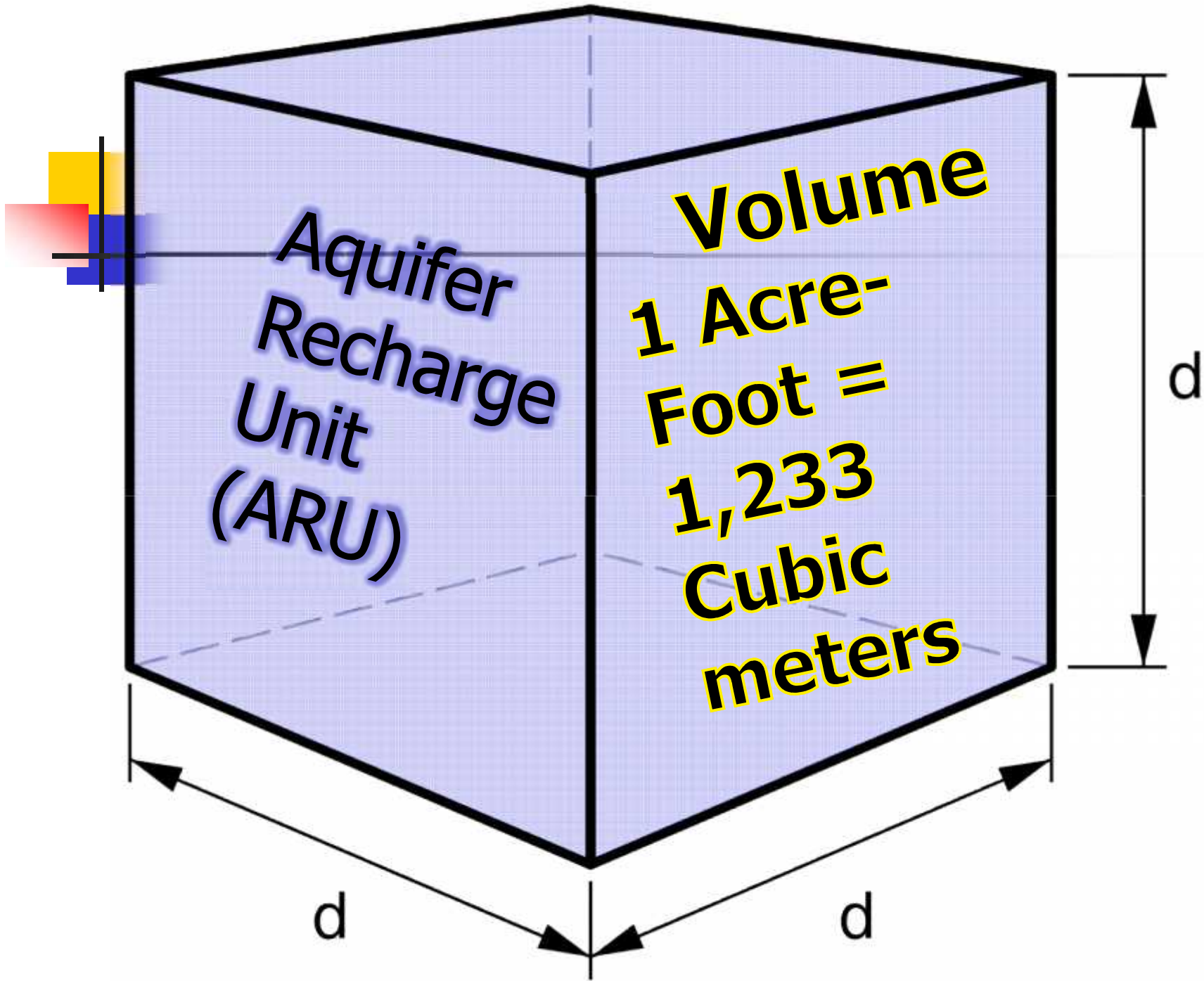
More than thirty years as lead attorney for IDWR





Aquifer Recharge Unit (ARU)

An ARU represents one acre-foot of space in the aquifer equivalent to one acre-foot (1,233 cubic meters) of space in a surface reservoir.

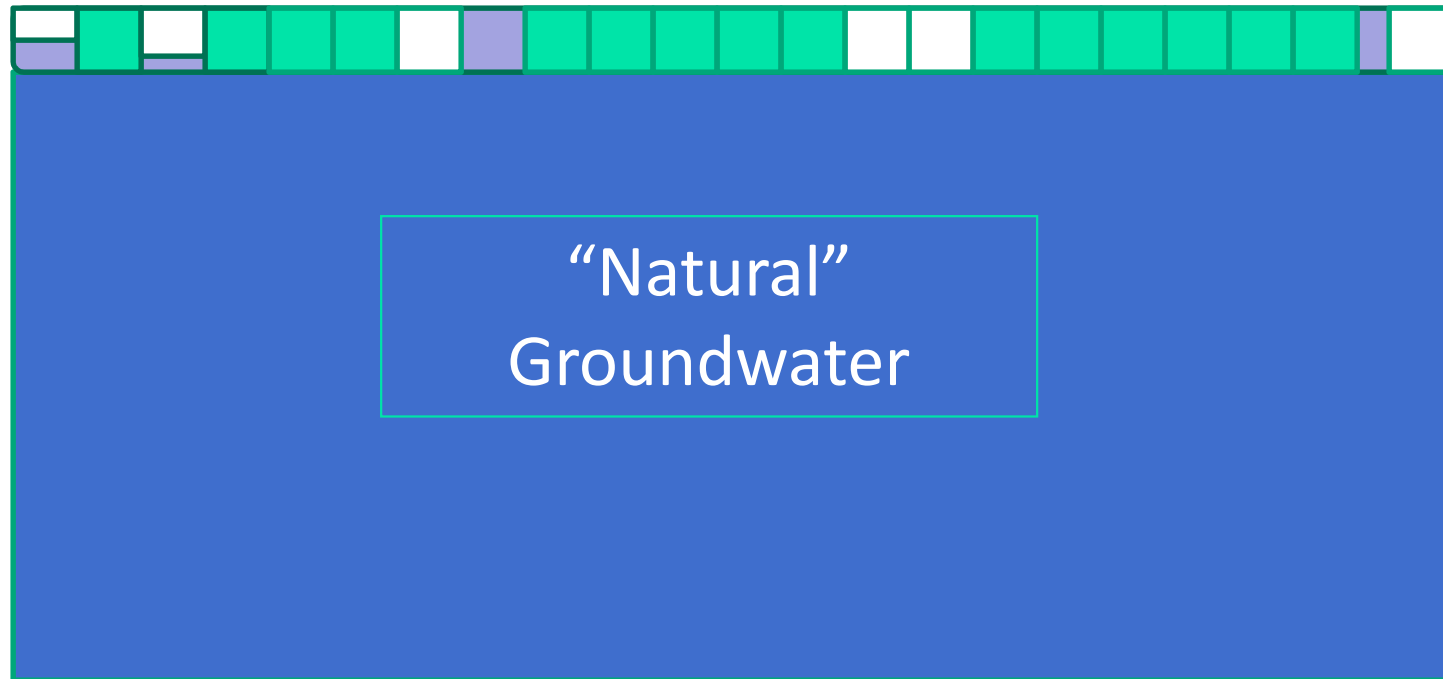


Land Surface

MAR Site



ARUs Filled



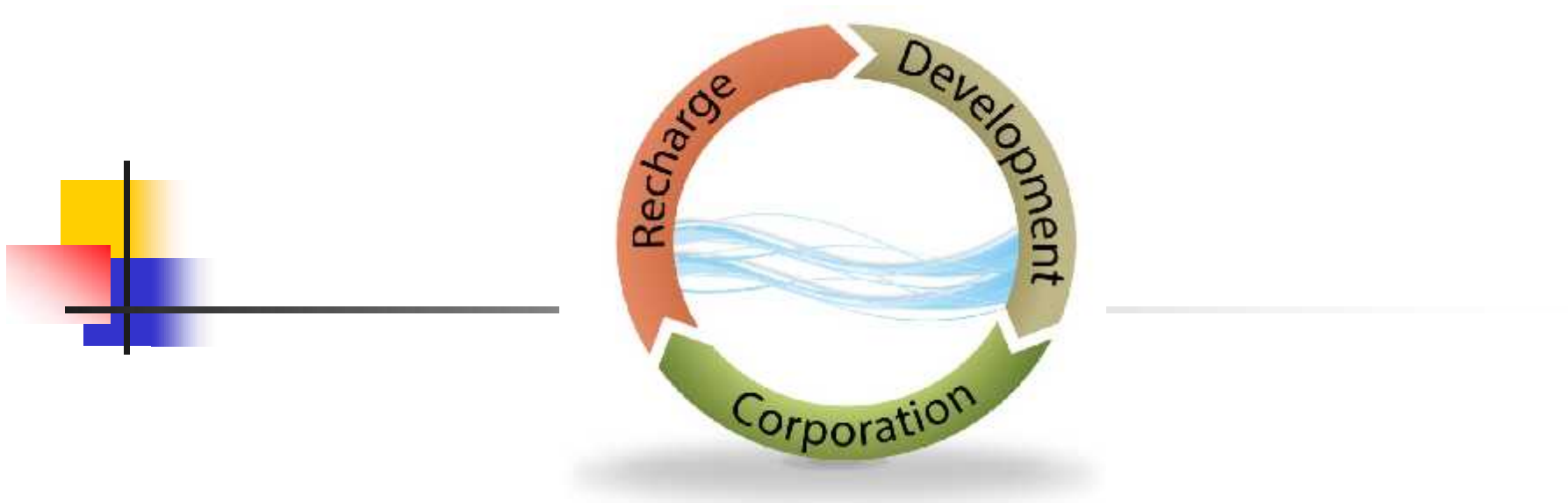
"Natural"
Groundwater



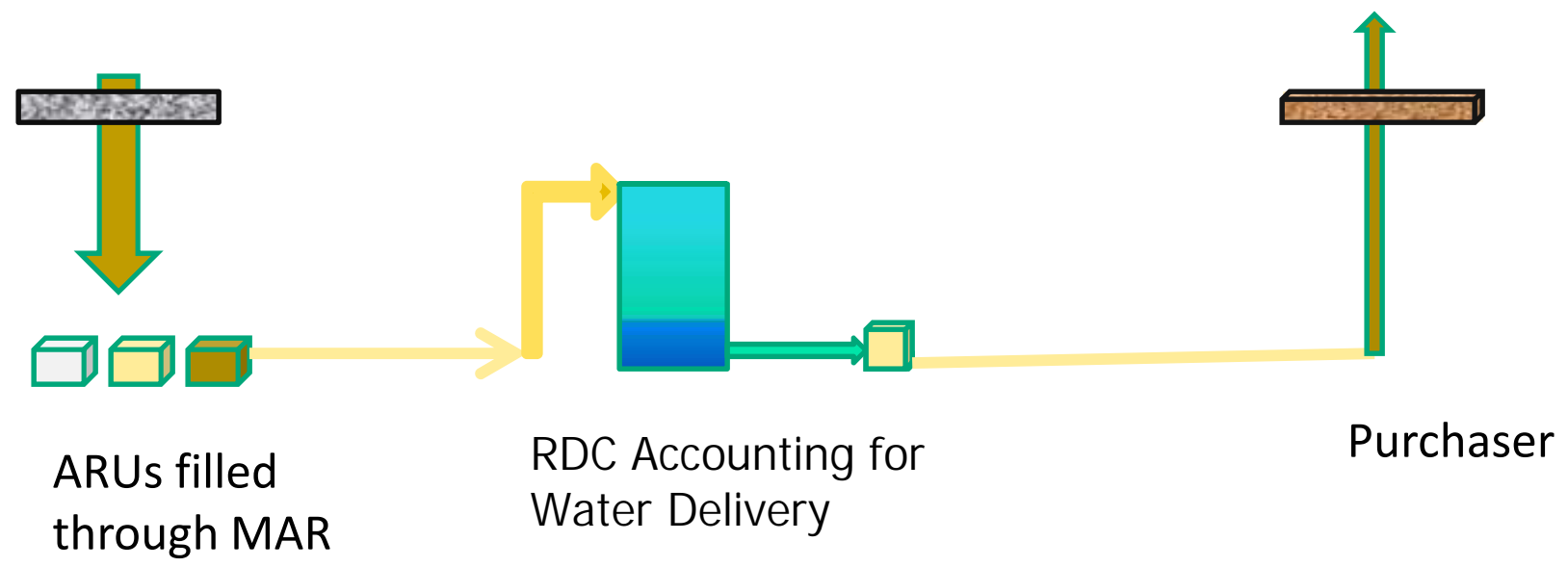
How

- Does the process work?
- Is this legal?



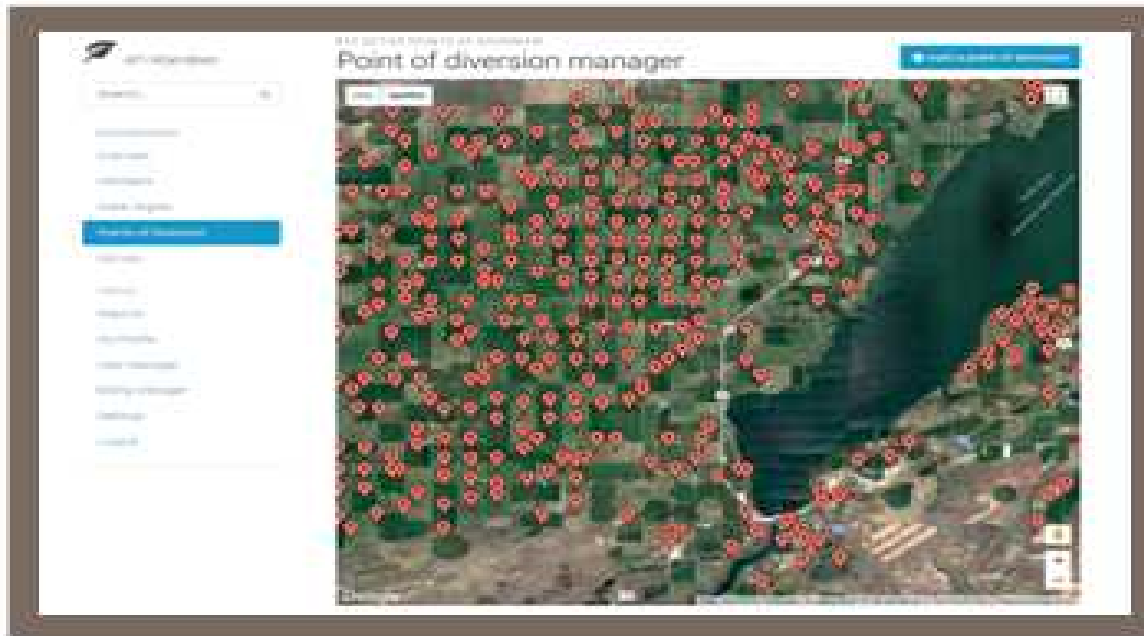


RDC™ Patent Pending Process for Owning Recharged Water





Teton Technology Water Resource Management



Points of Diversion manager shows all active wells within a district.
Hover over the WIMS number of the location.

What can we provide?

Productivity.

- Automated data gathering telemetry.
 - Time and money saved year after year.
 - Realtime water usage and recharge for forecasting and allocation development.
- Calculated Assessments for even complex assessment algorithms that include:
 - Priority Dates
 - Tiered Systems
 - Recharge Credits

Reprinted by D. Tuthill with permission from the Publisher
Reproduction without permission strictly prohibited



In This Issue:

Conjunctive Management 1

Stormwater Regulation & Management

CONJUNCTIVE MANAGEMENT IN IDAHO
PUBLIC-PRIVATE PARTNERSHIPS & CONJUNCTIVE MANAGEMENT OF SURFACE AND GROUND WATER

by David R. Tuthill, Jr., Phillip J. Rassier, and Hal N. Anderson
Idaho Water Engineering, LLC (Boise, Idaho)

Public-Private Partnerships can reduce development risks, provide more cost-effective and timely infrastructure delivery, offer the potential for better ongoing maintenance, and leverage limited public sector resources, all while

Articles available at idahowaterengineering.com and at rechargeddevelopment.com



Where

- Are eligible basins?



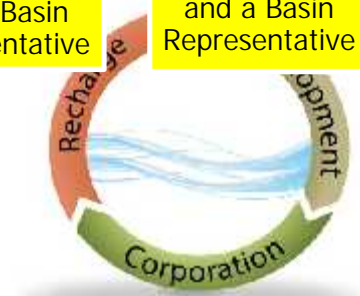
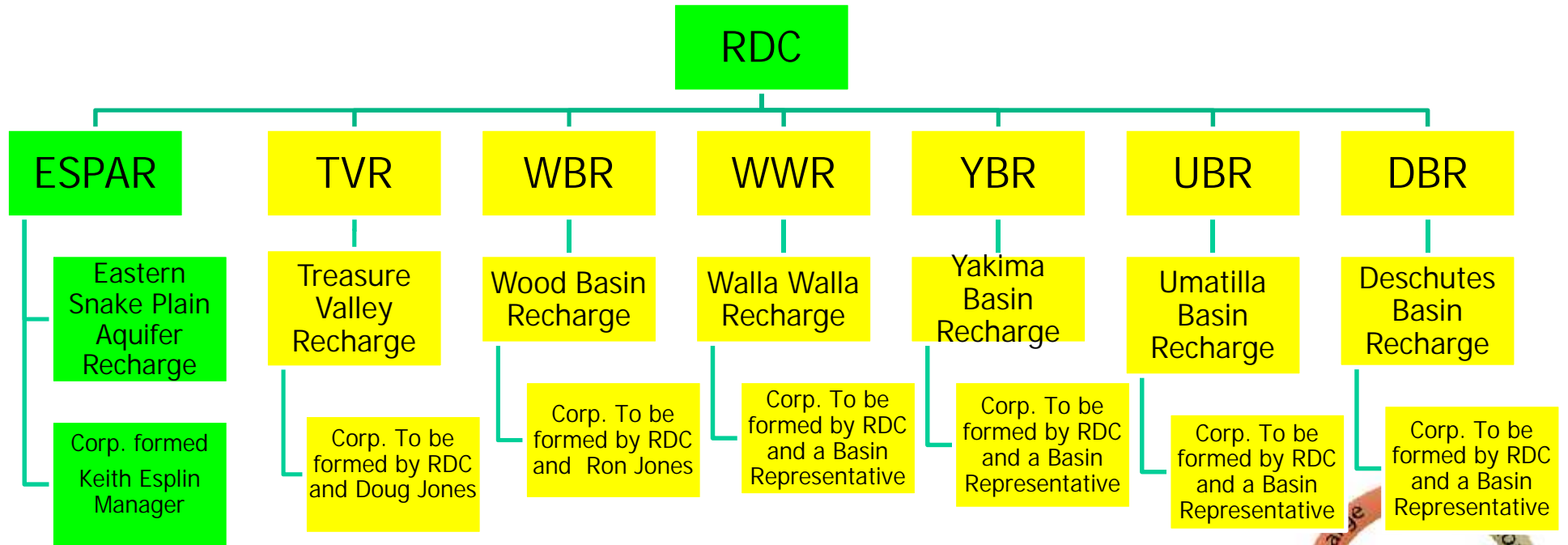


If wells in a groundwater basin:

1. Are now being regulated or are facing curtailment due to insufficient water supply, and
2. Are proximate to a source of supply that during some periods has excess flow (such as during spring runoff), and
3. Divert from an aquifer that is physically amenable to ground water recharge.

Then, we recommend a consultation.

RDC Organizational Structure



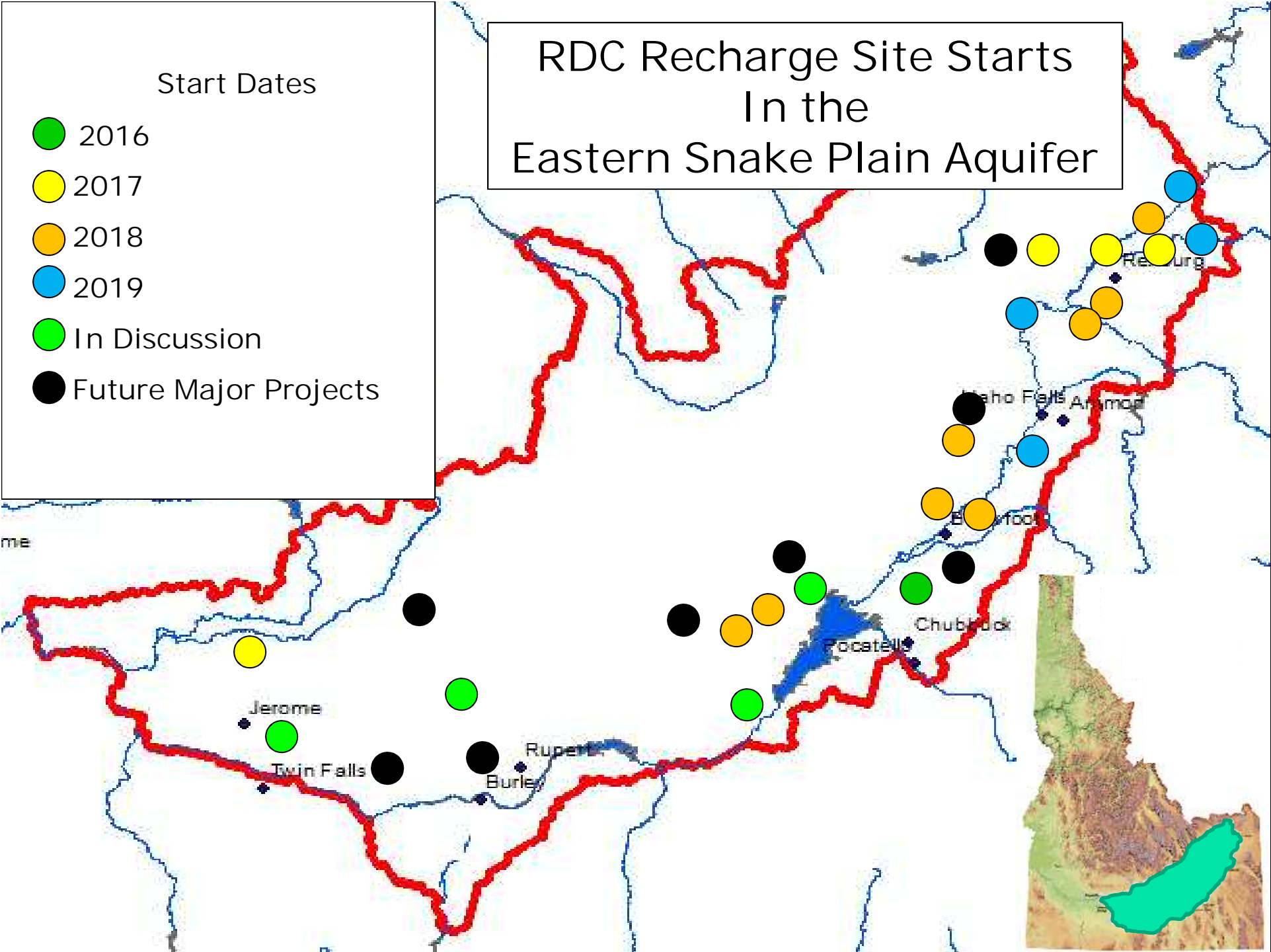


When can this happen?



RDC Recharge Site Starts In the Eastern Snake Plain Aquifer

- Start Dates
- 2016
 - 2017
 - 2018
 - 2019
 - In Discussion
 - Future Major Projects





Summary

- RDC is ready now to assist implementation of Incentivized Managed Aquifer Recharge in basins internationally where groundwater uses are restricted.





Thank you.

