Can Stakeholder Engagement Be A Solution to Water Challenges?
The Water for Agriculture Project
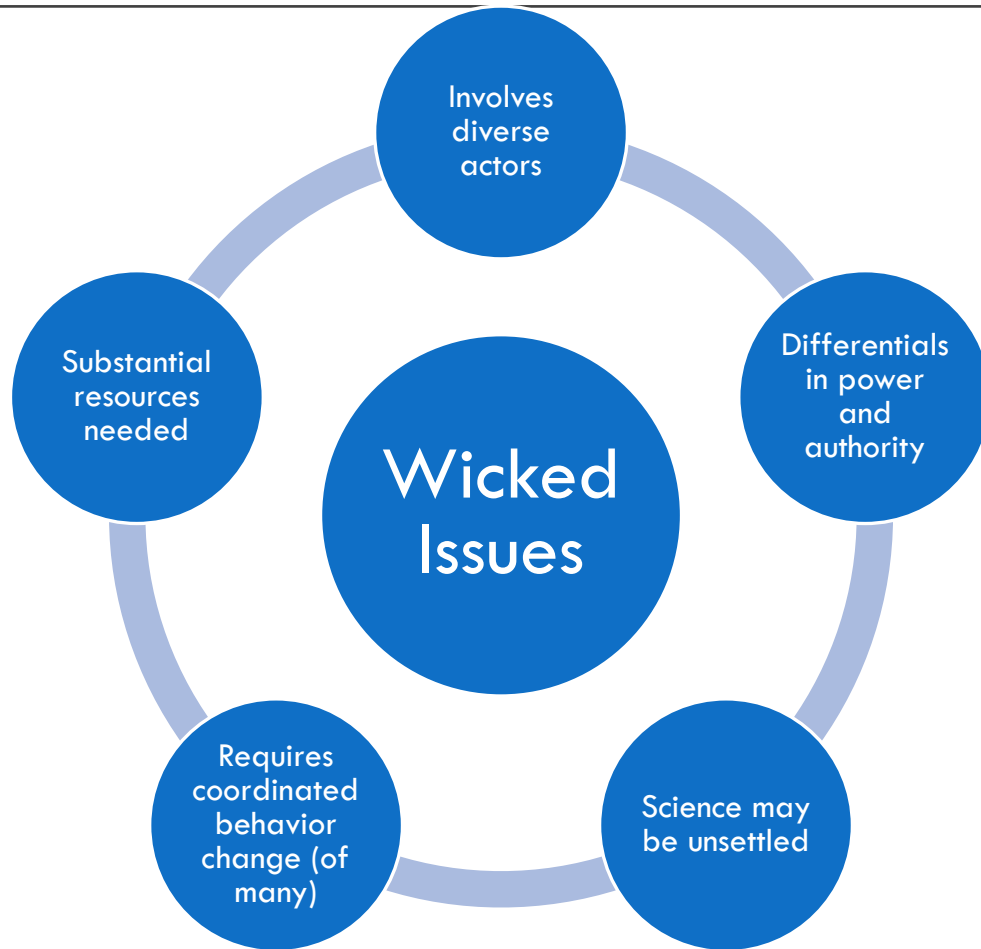
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Stakeholder Engagement as Solution?

WATER for AGRICULTURE

Wicked Issues
- Involves diverse actors
- Differentials in power and authority
- Science may be unsettled
- Requires coordinated behavior change (of many)
- Substantial resources needed

Stakeholder engagement as option to learn together, coordinate action, leverage resources
- Better outcomes (efficacy reasons)
- Voice and empowerment (moral reasons)
- Equalize power differentials (justice reasons)

Water for Agriculture Project

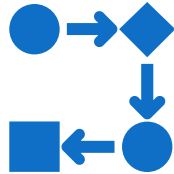**Purpose:** Build Science of Stakeholder Engagement

Water for Agriculture Project: A USDA NIFA funded multi-disciplinary, five-year collaborative research and engagement project that:

- Formed new local groups of water and ag stakeholders in 5 sites
- Facilitated community-led stakeholder engagement to address water & ag issues that mattered most to them
- Supported those teams with biophysical and social science research
- Studied changes with individuals, groups, communities, and the environment through the engagement processes

RQ: Does Stakeholder Engagement Work?

What is stakeholder engagement (SE)?

What happens within SE that leads to change? & What kinds of Change?

How do we know changes have occurred?

How are does this differ across contexts?

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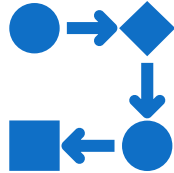How do we know changes have occurred?

How are does this differ across contexts?

What **IS** Stakeholder Engagement?

Defining "Stakeholders"

Those with a "stake" – who affect or are affected by a decision
- Normative approach: to whom are decision-makers responsible?
- Instrumental or performance-based approach: how can decision-makers identify, explain, or manage behavior of actors?

In natural resources, movement from 'decide and defend' toward engagement and empowerment of stakeholders

Differentiate stakeholder from rights-holder

Multiple methods of identifying stakeholders
- Movement toward inclusivity and empowerment
- Need to understand inter-relationships among stakeholders, recognize shifts over time
- Always subject to power and hidden agendas
- Some form of research required to identify who, what categories they fit into, and what their relationships/connections are

(Reed et al 2009)

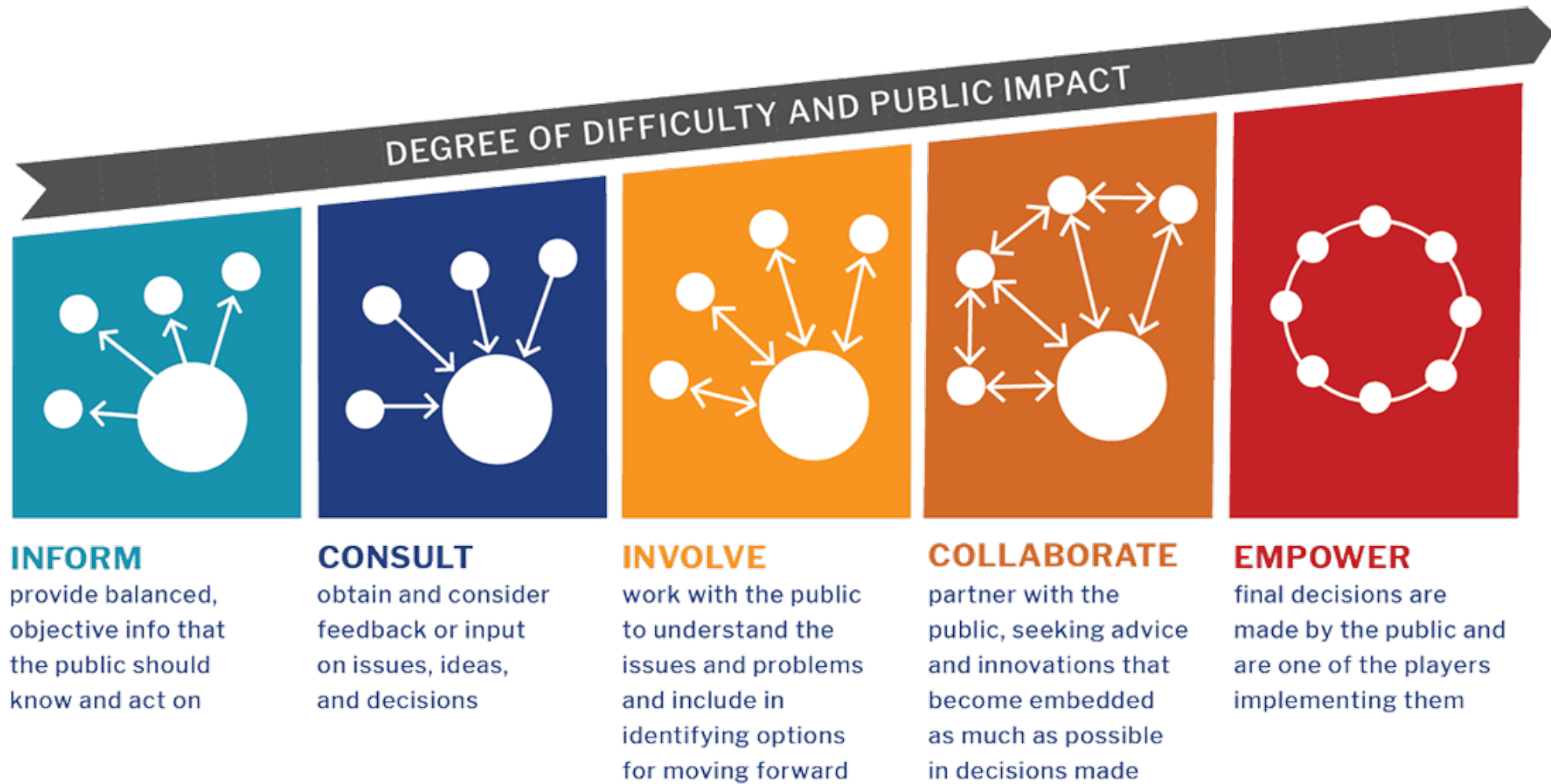# What is Engagement?

Collaboration

Participation

Two-way learning

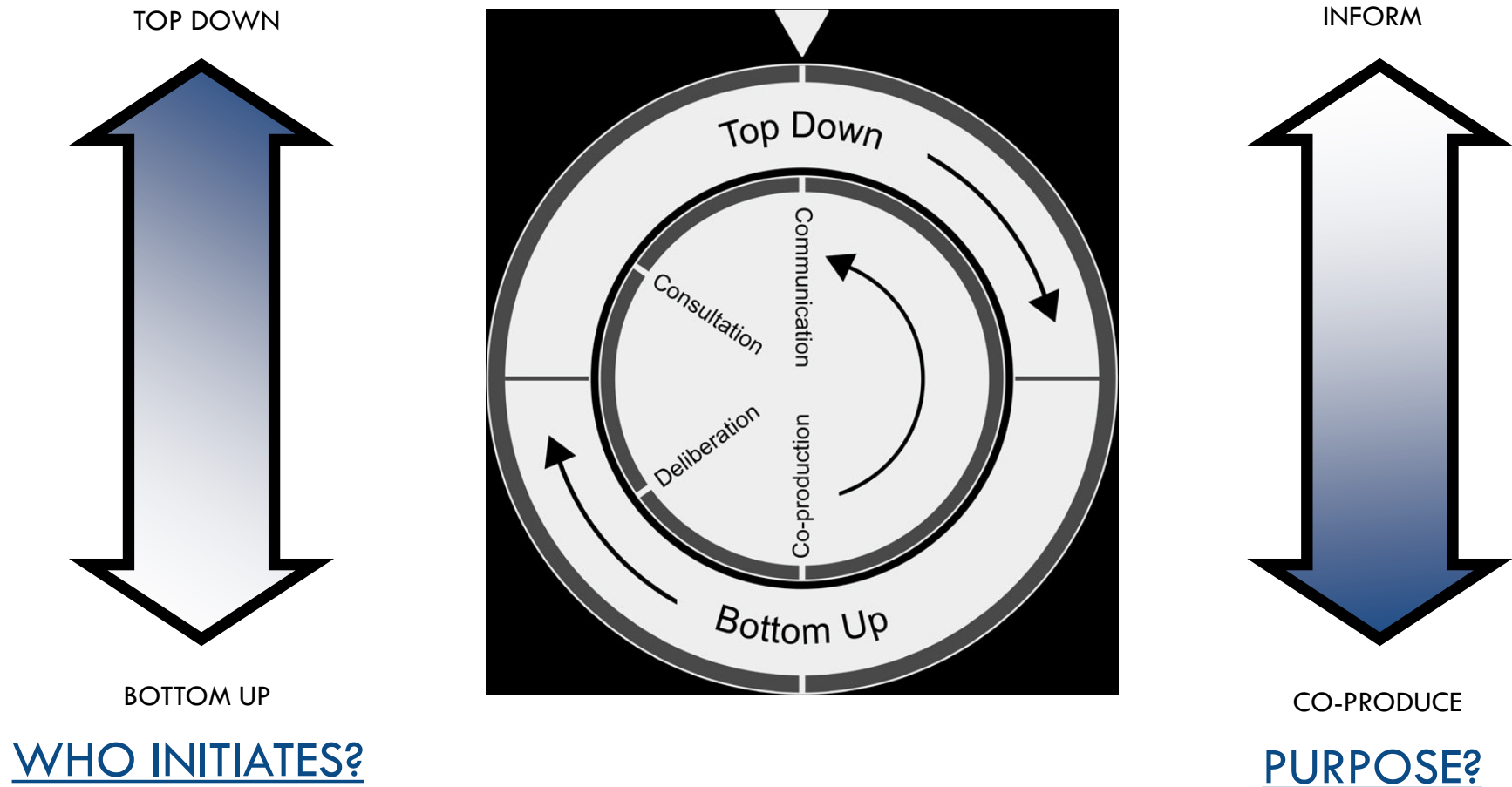"Opening up" decision-making

Collaborative governance

Knowledge co-production

"a process where public or stakeholder individuals, groups… organizations are <u>involved</u> in <u>making decisions that affect them</u>, whether passively via consultation or actively via two-way engagement…" (Reed et al. 2018)

Definitions of Engagement

Stakeholder involvement in decision-making?

TOP DOWN

BOTTOM UP

WHO INITIATES?

INFORM

CO-PRODUCE

PURPOSE?

Top Down

Communication

Consultation

Deliberation

Co-production

Bottom Up

Water4Ag Engagement

Collaborative, community-led approach that:

- Builds relationships and trust

- Surfaces and incorporates views of multiple stakeholders

- Co-creates group knowledge and learning

- Proactively identifies issues, opportunities; sets priorities

- Develops common frames, directions, and actions

- Leverages and grows local resources

Characteristics of Engagement Processes

Steps of strategic planning

1. Identify key **partners and programs**

2. Assess existing **information and data**;

3. Assess effectiveness of **current programs;** identify gaps

4. Identify and prioritize **critical issues** at the nexus of water and agriculture

5. Develop **action plan for** outreach and implementation

6. **Evaluate** actions

7. Prioritize actions to **work beyond current time horizon**

At the same time (process features)….

1. Foster **trust** and **build relationships**

2. Manage **power inequities**

3. Build **individual capacity** to participate in engagement

4. Facilitate **dialogue** and **co-learning**

5. Incorporate voices of **diverse participants**

6. Employ **democratic decision-making** and **fair procedures**

7. Create space for **emergent thinking** and **informal relationship building**

Engagements Initiated in 5 Sites
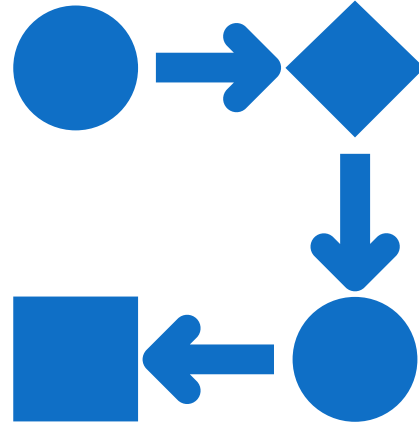

Verde Valley, AZ

North Platte Valley, NE

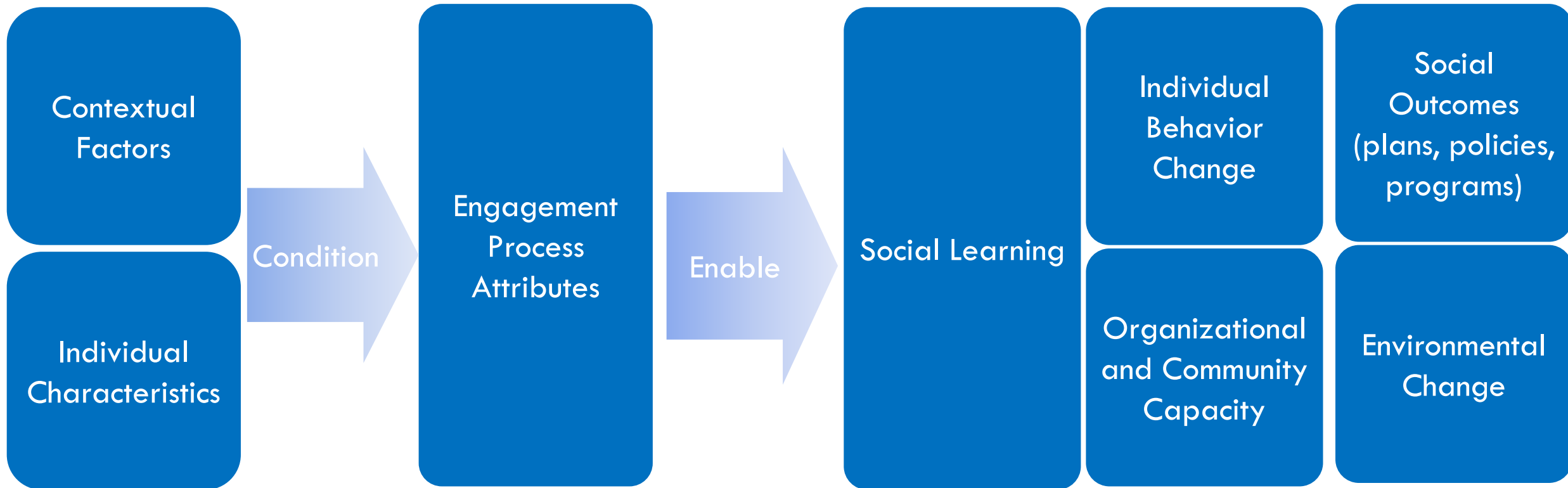Central Platte Valley, NE

Mifflin County, PA

Potter/Tioga Counties, PA

What Happens within SE to Create Change?
& What Kinds of Change?

Framework for W4Ag Project

WATER for AGRICULTURE

Contextual Factors

Individual Characteristics

Condition →

Engagement Process Attributes

Enable →

Social Learning

Individual Behavior Change

Organizational and Community Capacity

Social Outcomes (plans, policies, programs)

Environmental Change

Outcomes: What can SE accomplish?

Social learning: transfer of knowledge among participants leading to

- cognitive change
- Relationship (network) building
- Normative change
- Trust
- Shared vision/commitment to vision

Dialogue and deliberative skill development

- Our findings so far:
  - Increased awareness of ag/water issues; increased knowledge of who is working on issues
  - Growth in networks related to ag/water issues
  - Increased trust
  - Development of shared group vision for change
  - Increased efficacy and confidence they can make change

Outcomes: What can SE accomplish?

Behavior change
- Individual action

Social Outcomes
- Group level action (e.g., agreements, reports, policies, programs)
- Change occurring through networks

Community capacity change
- Mobilization of capitals (assets)
- Future outcomes of capacity building

Environmental change

Outcomes: What can SE accomplish?

Our findings so far – social outcomes:

- AZ: Coalition formed, developed successful USDA (2) and NSF grants; developed "Grown In Verde Valley" label and "River Friendly Living" program; project reports and presentations; created GIS water estimator tool

- North Platte: coalition was able to transition quickly when irrigation canal tunnel collapsed; organized annual conference; developed relationship with political representatives; developed water sampling protocols; storymap

- Central Platte: coalition transitioned into Platte River Resiliency Fund; created endowment; recently awarded $750,000+ in federal infrastructure funding; storymap

- Mifflin County PA: developed projects on well water testing, double cropping, cover cropping, storymap, WIP3 CAP collaboration

- Potter/Tioga Counties, PA: developed successful funding proposal for USGS stream sampling project, WIP3 CAP collaboration, storymap
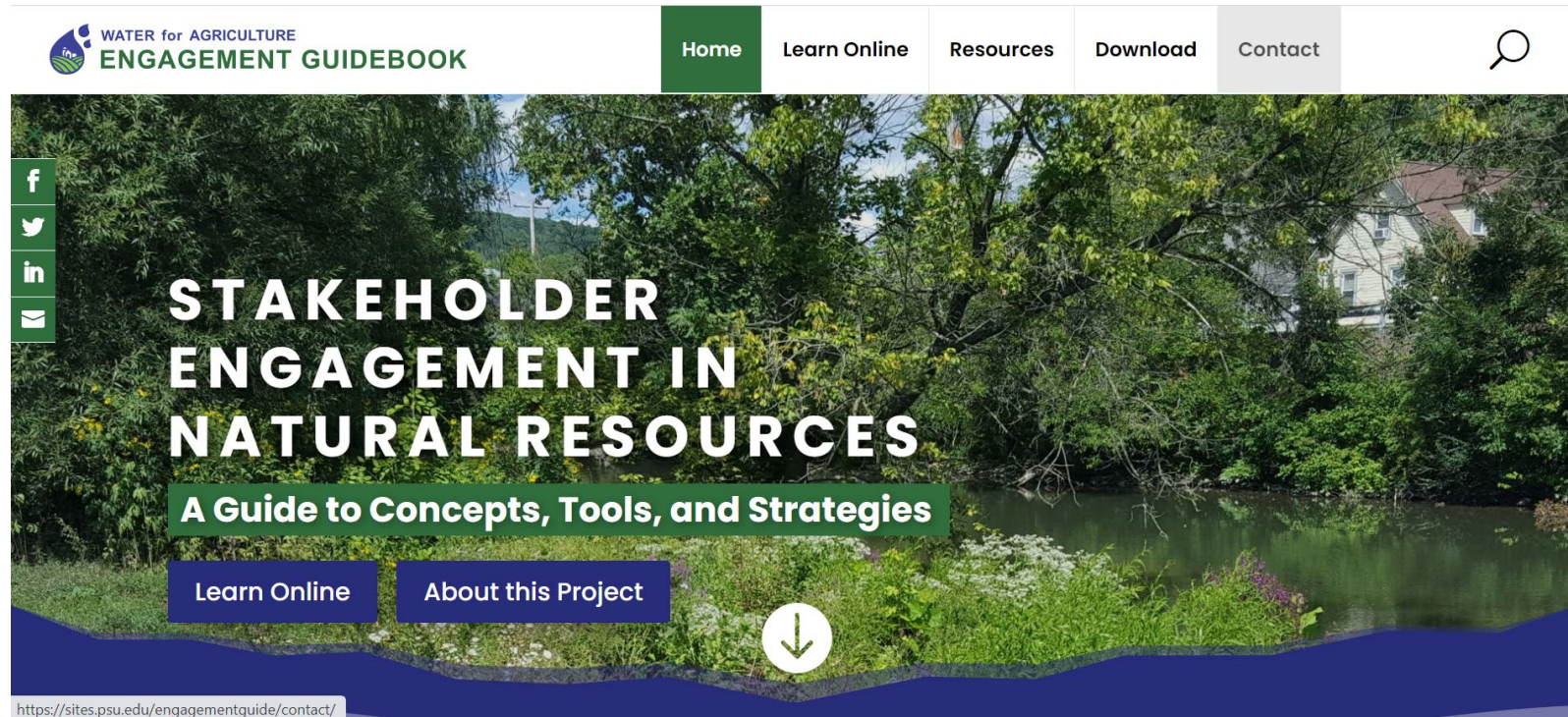
Project Goals and Deliverables: Training Materials

Online Guidebook(Beta)

https://sites.psu.edu/engagementguide/

Training materials for scientific and academic personnel

Training workshop on engagement models, evaluation, and outcomes
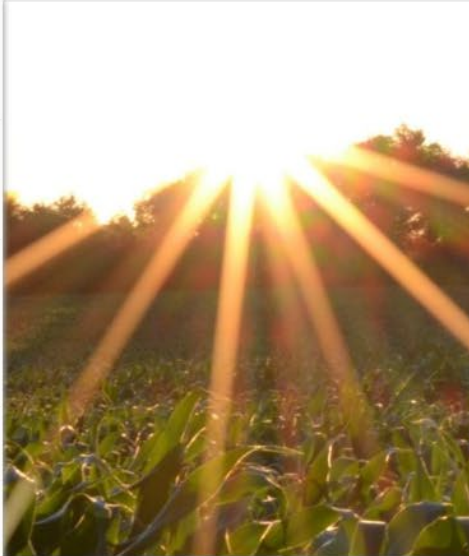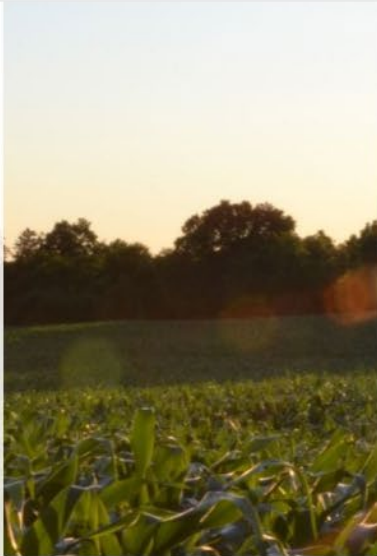
Project Goals and Deliverables: Publications

Publications to document engagement processes and social and environmental outcomes

- Conceptualizing processes and outcomes of engagement

- Designing research on engagement processes and outcomes

- Conducting transdisciplinary research on engagement

- Specific project-related biophysical and social science questions

Lot of outcomes & products from this project!

https://water4ag.psu.edu/

Thank you!

THIS PROJECT – AND PRESENTATION – HAS BEEN A TEAM EFFORT. SPECIAL THANKS TO WES EATON, WALT WHITMER, LARA FOWLER, MARK BURBACH, CLINTON WILLIAMS, SARAH PORTER, NICOLE SANTANGELO, JON LAUGHNER, CHERYL BURKHART-KRIESEL, BARBARA QUIMBY AND MANY MORE!

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