



Education Into Action Collaborations: A Lever to Move the World

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Dr. Chris Halle, Nature!Tech Program Developer

Dr. Claudia Luke, Director

Ms. Kerry Winger, Outreach & Communications Lead

Dr. Chris Halle

- 35 years providing technical advice and guiding large-scale projects in industry and academia
- Leading engagement with non-academic agencies
- Education Into Action Program Developer



“At this moment in time, we are called to lead and act with courage. We are called to embrace change. Change in our societies. Change in the management of our economies. Change in our relationship with our one and only planet.”

United Nations 2014, p. 3



Transformational Goal

An Environmentally Ready Society

...one where everyone has the skills to find solutions to challenges facing the North Bay.



Center for Environmental Inquiry

Education for a changing planet:

- First-hand understanding of our connection with the environment
- Skill-building experiences
- Innovative solutions



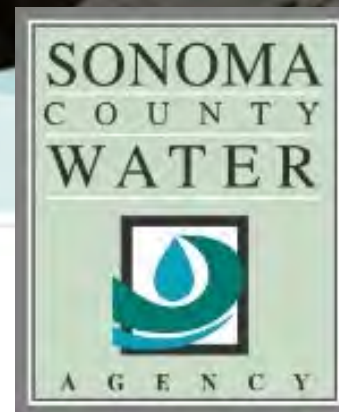
Marrying Two Cultures to Help Find Solutions



The WATERS Collaborative

A collaboration of Sonoma Water and the SSU Center for Environmental Inquiry

www.sonoma.edu/waters



WATERS Accomplishments

- 229 projects
- 2,691 students (118 courses)
- 20+ partners/yr
- 30 faculty/yr; 15+ deparths/yr
- Internships & jobs



Flood

Challenge

Flooding Lichau Road access

Project

Flood modeling of Copeland Creek

Results

Sonoma Water flood control design



Invasive Aquatics

Challenge

Ludwigia invasion in the Laguna

Project

Plant response to channel design

Results

Channel design for invasive species control



Land Use Planning

Challenge

Water integration in land use planning

Project

General Plan assessments

Results

Issues, goals, policies, actions, success indicators



Rising Waters Initiative

- Complex high-priority issues surrounding water
- Neutral meeting ground for diverse partners
- Cross-disciplinary engagement to address cultural, economic and environmental issues
- Facilitated process targeting innovative and practical solutions



Rising Waters Process

- Rising Waters Working Group identifies issue(s)
- Multi-disciplinary faculty-student teams collect and summarize data
- Collaborative brainstorm for solutions and cost-benefit analysis by teams
- Presentations and reports



Rising Waters supported by:



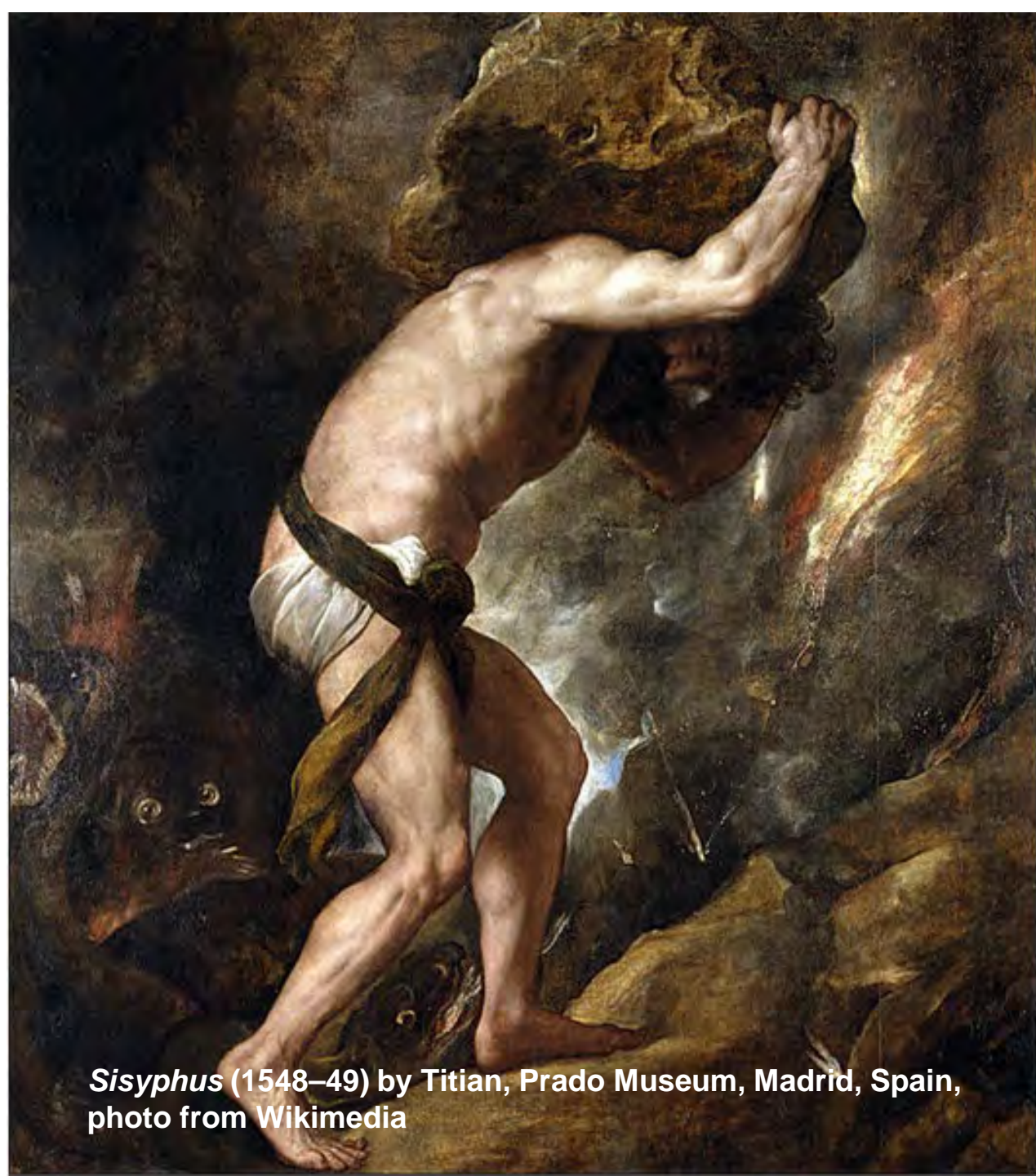
Alexander Leff

Year 3 Steering Committee:

- Michael Thompson, Assistant General Manager, Sonoma Water
- Andy Rogers, Executive Director, Russian River Watershed Association
- Emily Quig, Homeless Services Coordinator, City of Rohnert Park
- Lynea Seiberlich-Wheeler, Associate Director of Behavioral Health, West County Health Centers
- Sean McNeil, Deputy Director of Environmental Services, City of Santa Rosa
- Matt St. John, Executive Officer, North Coast Regional Water Quality Control Board
- Don McEnhill, Executive Director, Russian Riverkeeper
- Ludmilla Bade, Statewide Advocate for Homeless Individuals

Rising Waters Timeline

- Fall 2018, Spring 2019 - Discussions Begin
- Fall / Spring 2020 - Funding Allocated
- Spring / Summer 2020 - Public Workshops To Hone Questions
- Fall 2020 - Identification of Steering Committee, Further Meetings to Hone Questions
- Fall 2020, - Faculty / Student Research Grants Awarded (including help with “bite sized pieces”)
- May 2021 - Initial Public Workshop Led by Students
- Sept 2021 - Formal Public Workshop (Year 1 Results)



Sisyphus (1548–49) by Titian, Prado Museum, Madrid, Spain,
photo from Wikimedia

Homelessness and Watersheds

- flood protection
- water quality
- sanitation/health
- habitat conservation



**SONOMA
STATE**
UNIVERSITY

CENTER FOR
ENVIRONMENTAL
INQUIRY



Rising Waters: Where are We Now ?

Question 1: Where Are Services Needed to Reduce Water Quality Impacts?

Refined Goal: Resource Mapping, instead of Impact / Location mapping.

Field Data for Mapping Resources (and maybe impacts)

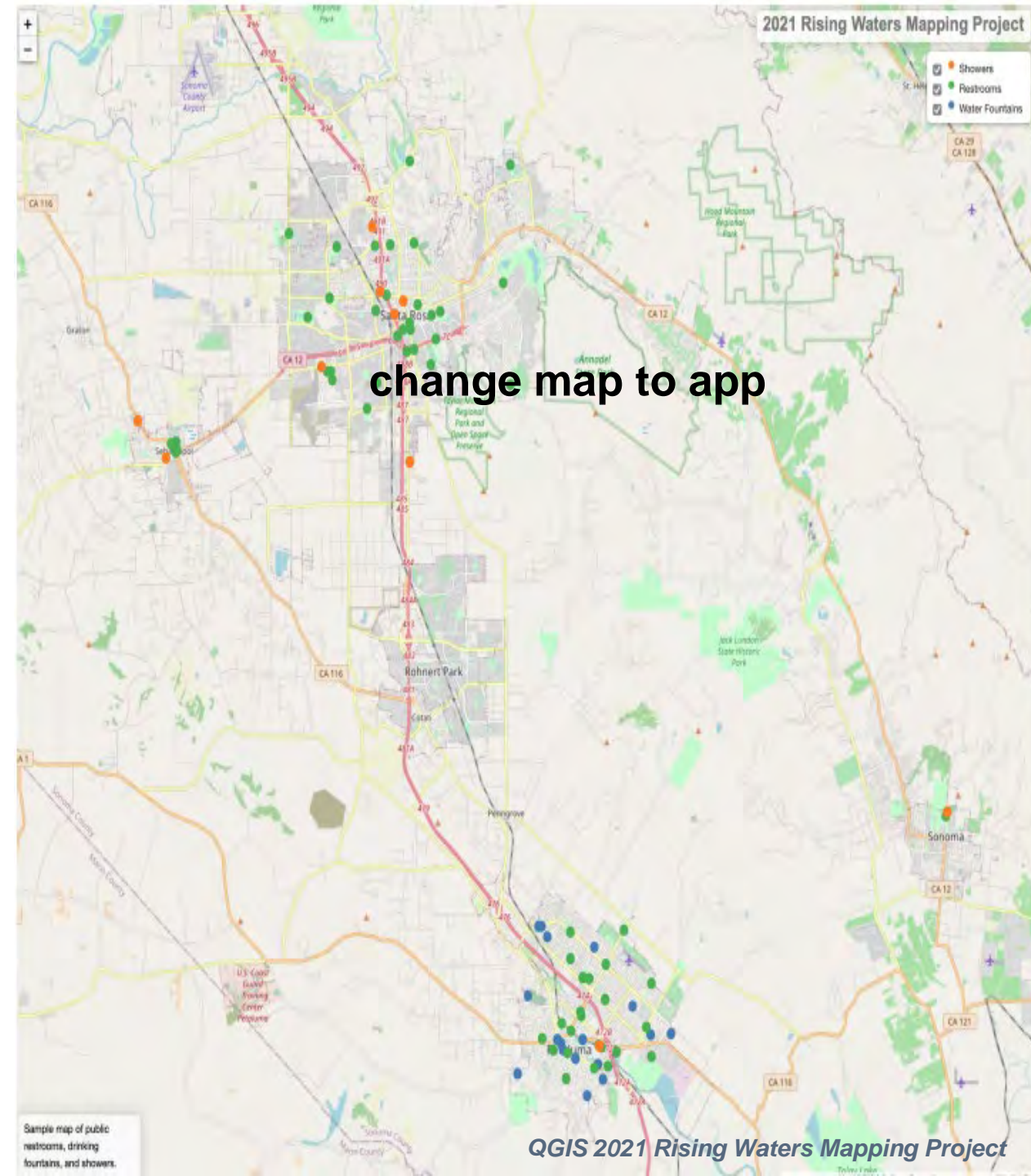
Security

Collaborative Online Tool



Question 1 - Resource Mapping: Methods / Results

- Mapping tool app identified
- Field data includes restrooms (85 locations), water fountains (36 locations), and public showers (13 locations).
- Identifying costs and searching for an agency to hold the license.



Question 2: What are the economic, social and political barriers to providing services to people experiencing homelessness?

Refined Goal: Investigate the barriers and cost of providing sanitation services, including the “do nothing” option. Focus on real world case studies for background.

Subgoal: How to involve business?



ADA compliant toilet / handwashing station placed next to the Santa Rosa Veterans Memorial Building during COVID. Phot by Lauren Hart.

Question 2: Sanitation Case Studies Methods / Results

- Evaluated 5 Options
- Choice of Option Depends Upon Situation
- **“Do Nothing” Option Can Have Significant Costs**
- SWOT Analysis (Strengths, Weaknesses, Opportunities) of Rising Waters
- PESTEL Analysis of Homelessness in Sonoma County
- **Shared with Continuum of Care**



Portable Toilets

Mobile Shower / Restroom
Trailer

Portland Loo

Expanded Hours at Existing
Facilities

Doing Nothing

Question 2: Sanitation Case Studies: “Doing Nothing”

- Hazardous Waste: up to \$60,000 per clean up event.
- Law Suits (e.g. violation of the Clean Water Act): up to \$100M
- Public Health Risks: The 2016-2018 California Hepatitis A outbreak was attributed to lack of handwashing and restroom facilities for persons experiencing homelessness.
- Costs that were not quantified in the study: social, environmental, recreation, tourism.



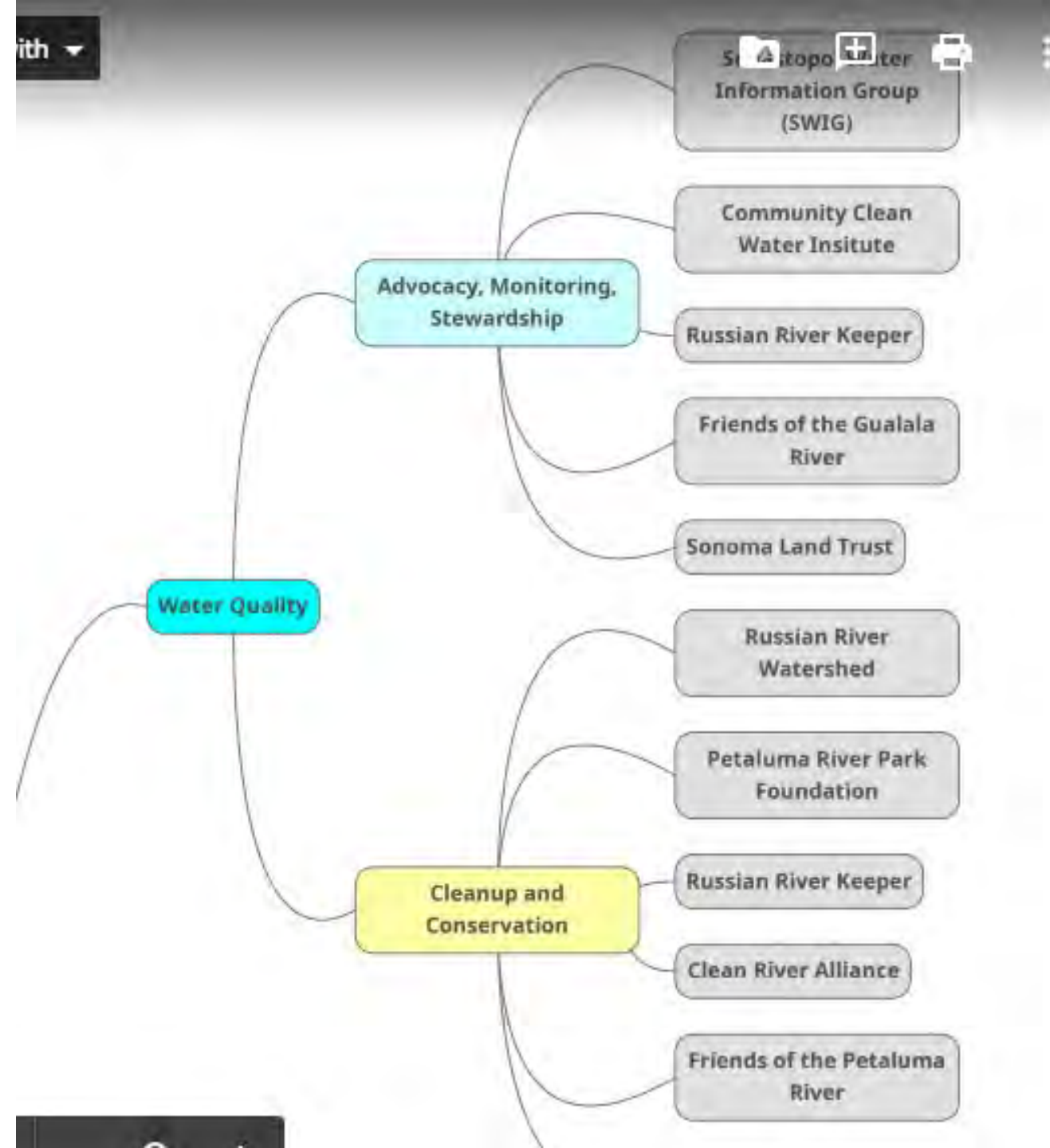
Question 3: How Can we better align investments across all sectors?

Refined Goal: Develop an inventory of organizations and individuals that work on homeless issues in Sonoma County. Interview advocates and summarize pressing issues. Begin exploring presenting this inventory in a “knowledge map”.

B	C	D
Mobile Shower Trailer (Catholic Charities)		
Redwood Gospel Mission		
Community Church of Sebastopol	Hot showers available in Memorial Hall, complete with soap, shampoo & towels. Warm socks, underwear, sweat pants & jackets as available.	S
The Haven (Sonoma Overnight Support)	Showers, laundry, food, bus passes, computers & case management for Sonoma & Sonoma Valley residents in need. Mon, Tue, Wed, Thu 9am-1:30pm. Fri 1:30-4:30pm	CS
St. Paul's Episcopal Church	Daytime showers Tues 2-5pm. Wed 2-4pm. Thu & Fri 10am-4pm. Se habla español.	H
Buckelew Programs	Family Service Coordination, housing, independent living skills, and employment services for adults with mental illness. Family Service Coordinator (FSC): free education, support & assistance with accessing community resources & navigating mental health system for anyone with an adult family member or loved one with a mental illness. For very low income families &	SR

Question 3: Knowledge Mapping Methods / Results

- Initial database of 150 stakeholder organizations developed, with 30 interviewed. Interviewees often preferred to remain anonymous.
- Initial “knowledge map” layouts.
- Philosophical / moral approach.
- Education is key, even among advocates / stakeholders.
- Flexible steady funding approach identified as major stumbling block.



A Common Issue (NIMBY)

- Misconceptions and frustration were encountered by all student teams.
- Misconceptions encountered among public and homeless advocates.
- Education / public media / story campaign advocated by students.



Homeless Shelters at Finley Community Center.
Picture courtesy of Santa Rosa Press Democrat.

Social Media Campaign (NIMBY)

Items Developed:

- Public Relations plan
- Website
- Media product library

Interviews

Social media posts

Poster presentation






Flyers

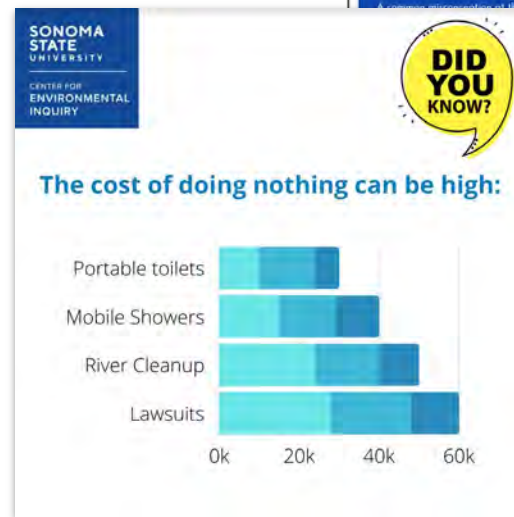
News Release

Week's Worth of Posts with a small description.

Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Sun.
Rising Waters Info	Student Involvement	Rising Waters General Post	Myth vs. Fact: Long Term Residents	Did you know? Water Services	Cost of Doing Nothing	Myth vs. Fact: Cost of Doing Nothing
						

Multi-Slide Post

Slide 1	Slide 2	Slide 3	Slide 4	Slide 5
				



Why is Rising Waters important?

Over the next decade, water agencies and providers will face unprecedented challenges in identifying and implementing sustainable water solutions.

By focusing on homelessness we ask two important and lasting questions:

- How can we reduce quality impacts on Sonoma County's natural sources of water?
- How can we align social, political and economic sectors in order to provide better resources to people experiencing homelessness in our county?

MISCONCEPTIONS ABOUT INDIVIDUALS EXPERIENCING HOMELESSNESS

These myths are widespread, but here's a quick guide to to dispel these myths when they come up.

INDIVIDUALS EXPERIENCING HOMELESSNESS ARE NOT FROM THIS COMMUNITY:

In reality 88% of these individuals are from Sonoma County and 64% of them have been residents of Sonoma County for over 10 years. **These are our community members.**



THE REASON THEY ARE HOMELESS IS DRUG USE:

Unfortunately substance abuse is just as prevalent within 4 walls. Since they are living within public view, behavior outcomes related to substance abuse are more visible. Sadly people also use substances to numb the elements and cope with the stress that comes from living outside. **Substance abuse worsens while homeless rather than causing it.**



INDIVIDUALS EXPERIENCING HOMELESSNESS ARE HOMELESS BY CHOICE:

Barriers exist to entering shelters. Often times curfews don't align with schedules and shelters present an inability to live with opposite sex partners or pets.



NEXT TIME THESE MISCONCEPTIONS COME UP REMEMBER THIS GUIDE TO HELP CHANGE THE NARRATIVE.

Water Quality Sampling

- Field Work Began After Covid
- Professor Jackie Guilford, City of Santa Rosa, NBWQCB discussions and guidance
- Document / establish link between homeless encampments and water quality issues?
- What kind of water are individuals experiencing homelessness exposed to?



CASQUA Award

California Stormwater Quality Association

Award: Outstanding Stormwater Science

Project or Program: Student, 2023

**Analysis of Water Quality Near Areas of
Homeless Activity on Santa Rosa Creek
and Russell Creek – Claudia Mayo,**

Sonoma State University

More Information : https://www.youtube.com/watch?v=_0L_yDwuvyw



pH, total suspended solids, temperature,
ammonia, nitrogen, phosphorus, fecal
bacteria (E. coli, Enterococcus)



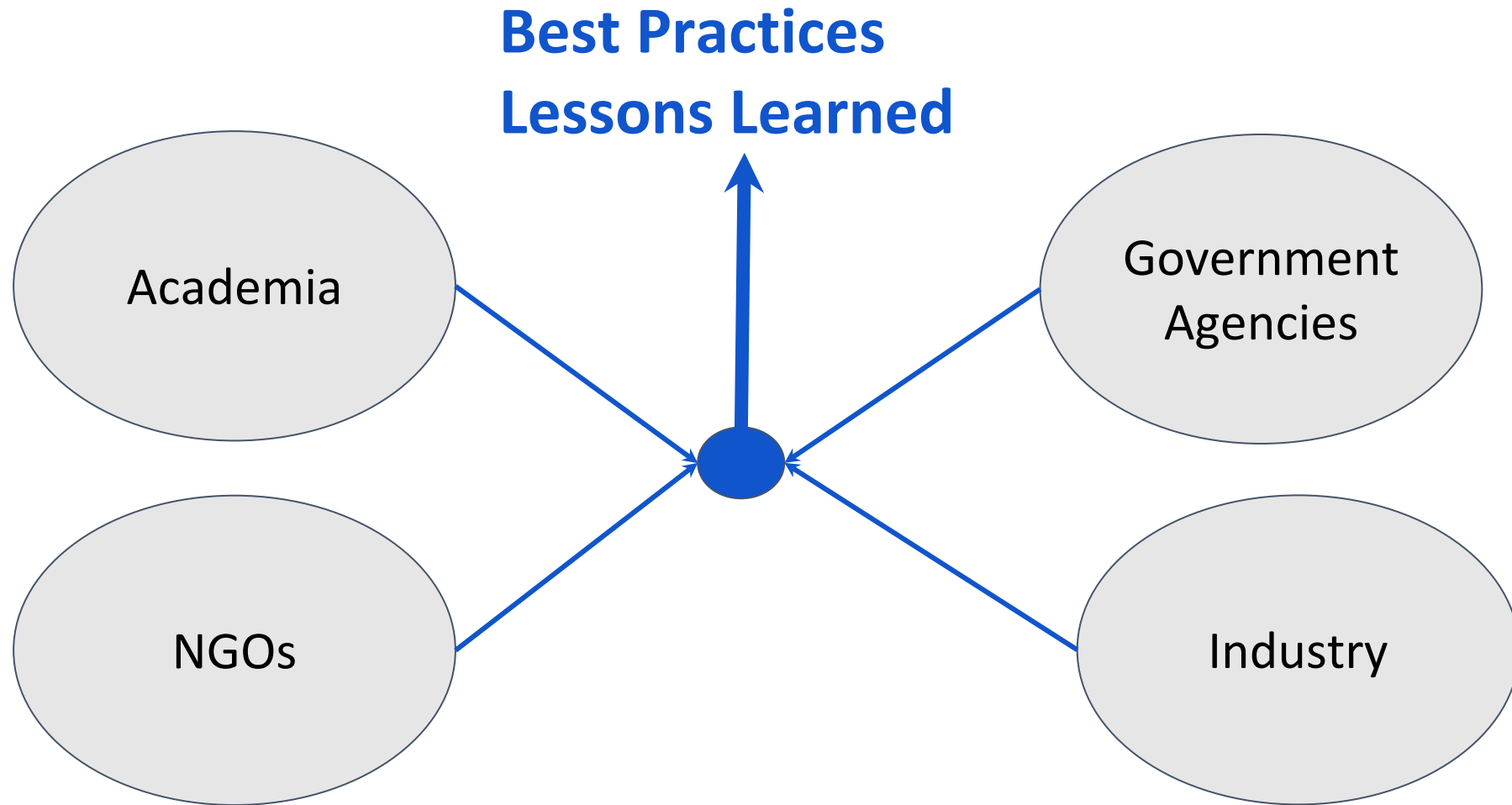
Expanding the Model

CEI has been asked to partner with CSU-WATER to advise the California Sustainable Development Council on effective ways of engaging academia:

Urgent need to find and implement new solutions that benefit California communities (e.g., improving resilience to climate change). Yet research results can take decades to be implemented.

- How can academics, NGOs, and agencies work together to effectively move research results into practice?
- In particular, how can granting agencies ensure that research funding will result in meaningful community outcomes?

Engaging Various Cultures



The Vision

Environmentally Engaged
Society

Give Every Student

the knowledge, skills and opportunity
to contribute to sustainable and
resilient solutions

Give Every Leader

a full-service academic
gateway to support their work on
environmental challenges

Give Every Person

access to virtual and in-person
activities that energize participation

Transformative Impact

“ I am walking away with valuable skills: teamwork, leadership, communication, and creativity. ”

Nicole Manzares



An Environmentally Ready Society

More Waters Information:

<http://cei.sonoma.edu/waters/about>

Chris Halle:

halle@sonoma.edu

Claudia Luke: lukec@sonoma.edu

Kerry Winger: winingek@sonoma.edu