Isaiah Otey Laylah Leech

How to get young adults engaged in water conservation?

Why you are interested in topic

Water is essential in our everyday lives and it's important to be aware of the impact of conserving water

Research Question

What ways can we get young adults involved in water conservation?

Summary of Evidence - Review Articles

"

Do Health Risk Perceptions Motivate Water- and Health-Related Behavior?" A Systematic Literature Review

"Perceptions of Drinking Water Quality—A Review of the Literature and Surveys Covering the Topic"

Our review articles collectively show that perception and not just factual water conditions, strongly shape how people engage with water conservation, safety, and environmental programs. Research consistently finds that risk perception, such as believing water is unsafe or harmful, often motivates protective behavior, but the impact varies depending on socioeconomic status, cultural background, and trust in institutions. At the same time, sensory cues (taste, smell, color) and historical distrust in utilities influence whether people believe tap water is safe, often more than actual water-quality data. These perceptions drive choices like bottled-water use, willingness to participate in conservation, and general engagement with water-related initiatives.

Across the reviews, another major theme is that effective engagement, especially among youth, requires programs that build identity, agency, leadership, and community connection. Long-term, youth-led, place-based programs are far more successful than one-off events. Young people stay engaged when programs allow them to contribute meaningfully, reflect their cultural or community realities, and give them visible leadership roles rather than token participation. Overall, the reviews emphasize that sustainable water engagement depends on designing programs that address perceptions, trust, cultural identity, and long-term youth empowerment, not just information delivery.

Summary of Evidence - Research Articles

Water Quality in Sustainable Water Management"

"Indegeious water management"

"Protecting Indigenous Values in Water Management: A challenge to Conventional Environmental Flow Assessments."

Youth Engagement in Water Quality Monitoring: Uncovering Ecosystem Benefits and "Engaging young people in climate change action: A scoping review of sustainability programs."

Research studies show that water management issues are deeply tied to local environmental conditions, cultural values, and governance structures. Studies on water quality demonstrate that surface and groundwater degradation directly limits sustainable supply, and communities respond most when threats feel local and visible. At the same time, Indigenous water-governance research highlights how conventional scientific assessments often ignore cultural and spiritual water values, meaning that policy "inclusion" rarely translates into real power or respect. Protecting community water resources requires approaches that integrate scientific data, cultural indicators, Indigenous knowledge, and shared decision-making.

Youth-focused field research also reveals that hands-on, place-based projects such as water-quality monitoring, GIS mapping, canoe-based sampling, or watershed restoration—greatly increase awareness, competence, and sense of responsibility. These programs produce useful environmental data and give students a tangible role in their local ecosystem, but short-duration or poorly supported programs limit long-term impact. Across the research, the strongest pattern is that real-world, community-embedded, culturally respectful, and youth-driven efforts are the most effective at building consistent engagement and stewardship.

Summary of Evidence - Science Communication Articles

"Understanding the role of youth in Indigenous territorial governance." Team member evaluation:

"Youth for a water-secure world"

Science-communication pieces emphasize the importance of trust, accessibility, and youth-centered messaging in water and environmental engagement. They show that young people are most responsive when communication acknowledges their cultural background, the political reality of their communities, and the barriers they face. Articles detailing youth roles in Indigenous governance note that effective outreach must move beyond token involvement and instead provide clear pathways for leadership, training, and long-term participation.

These sources also highlight the value of storytelling, community networks, and relatable entry points, such as youth movements, local initiatives, and hands-on projects, to motivate sustained engagement. They stress that communication must bridge gaps between scientific information and lived experience by showing how water issues affect students personally, their families, and their local environment. Overall, science-communication research shows that the most successful efforts combine clear messaging, culturally grounded narratives, mentorship, and visible opportunities for youth to lead, transforming information into action.

Proposed Experiment

Our created experiment is that if we hosted bi-weekly events in the goshen lounge where students would come and listen to a discuss following a handout over water conservation and the importance of engagement and which organization would be right for them that over time there would be a consistent audience thereby allowing us to know how effective or ineffective our efforts were

1) independent variables

Attendance at bi-weekly water-conservation events held in the Goshen Lounge.

2) dependent variables

Student interest in water conservation and engagement with local organizations.

3) control

"A traditional control group is not necessary in this study because the purpose of the experiment is a program evaluation rather than a causal determination. The researchers already control the content, environment, and delivery of the intervention, while the participants' attendance naturally reflects their interest. Since the variables measured are direct behavioral indicators (attendance, participation, engagement), the researchers can gauge the effectiveness of the intervention without requiring a no-treatment comparison group."

Summary & Reflections

- It revealed that engaging young adults in water conservation requires more than just telling them why water matters. It requires meeting them where they are. Before doing this research, it seemed like awareness campaigns alone could motivate young adults. However, the evidence showed that engagement depends deeply on trust, cultural understanding, and opportunities for youth leadership.
- It strengthened our understanding of how water conservation connects to identity, culture, and community. It also showed us the importance of designing youth-centered approaches that respect young adults' experiences and allow them to take the lead. This research ultimately encouraged us to think more deeply about how we, both as students and as community members can be part of long-term environmental stewardship.

References

- Anthonj, C., et al. (2022). Do Health Risk Perceptions Motivate Water-and Health-Related Behaviour? A Systematic Literature Review. Science of the Total Environment, 819, 152902. doi:10.1016/j.scitotenv.2021.152902.
 CODE220 Fall 2025; Leech, Otey...
- Sarkar, M. (2022). Perceptions of Drinking Water Quality A Review of the Literature and Surveys Covering the Topic. SP Group LLC / HUD PD&R. CODE220 Fall 2025; Leech, Otey....
- (Scoping review) Engaging Young People in Climate Change Action: A Scoping Review of Sustainability Programs. (Sustainability journal entry, MDPI).
 CODE220 Fall 2025; Leech, Otey....
- Rao, S. M., & Mamatha, P. (2004). Water Quality in Sustainable Water Management. Current Science, 87(7), 942–947.
 CODE220 Fall 2025: Leech. Otev....
- Jackson, S., & Moggridge, B. M. (2019). Indigenous Water Management. Australasian Journal of Environmental Management, 26(3), 193–196.
 CODE220 Fall 2025; Leech, Otey....
- Finn, M., & Jackson, S. Protecting Indigenous Values in Water Management: A Challenge to Conventional Environmental Flow Assessments. CODE220 Fall 2025; Leech, Otey....
- Cho, S. (2024). Youth engagement in water quality monitoring: Uncovering ecosystem benefits and challenges. Oxymora, 2(3), 163–177. doi:10.3390/oxymora2030013.
 CODE220 Fall 2025; Leech, Otey....
- Young, et al. (2025). Engaging Rural High School Students in a Watershed Literacy Program. (Water journal / MDPI). CODE220 Fall 2025; Leech, Otey....
- Sarigumba, R., et al. (2023). Understanding the role of youth in Indigenous territorial governance. Frontiers in Environmental Science. doi:10.3389/fenvs.2023.1200434.
 CODE220 Fall 2025; Leech, Otey....
- IWMI. Youth for a water-secure world (blog / initiative overview).
 CODE220 Fall 2025; Leech, Otey....