

THE ISSUE

Mounting evidence shows accumulating chemicals in waterways are cause for concern.

As a result of everyday household use, trace amounts of chemicals from consumer products are accumulating in downstream water sources. Collectively referred to as “contaminants of emerging concern” (CECs), many of these chemicals are known or suspected toxins or endocrine disruptors, meaning they interfere with the normal functioning of hormones in the body, and may be linked to biological abnormalities and mutations in aquatic life and human health risks. Traditional wastewater treatment does not effectively remove these CECs, allowing release of CECs into the environment even after water has been treated. Scientists have not yet characterized what level of exposure to these suspected toxins and endocrine disruptors is harmful to humans.



CONTAMINANTS OF
EMERGING CONCERN

LINKING SCIENCE TO
EFFECTIVE ACTION

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PROJECT MISSION & GOALS

The Institute for Environmental Solutions (IES) Contaminants of Emerging Concern (CEC) Project mission is to use education and community-based social marketing to mitigate and prevent the introduction of household and personal care contaminants to the downstream water supply. The Pilot Program in Golden, Colorado, includes water analysis, community member surveys, and educational outreach, and is being conducted with collaborative partnerships with regional and local stakeholders and the scientific community.

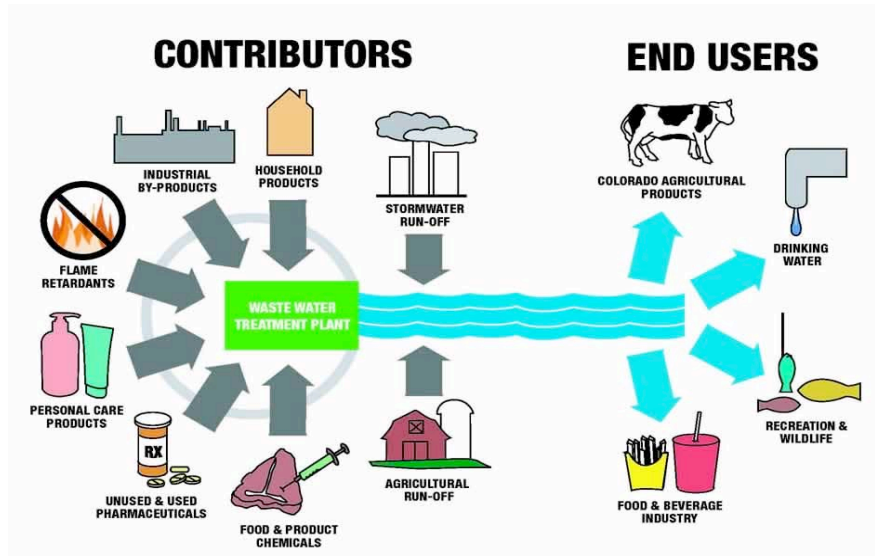
PROJECT OBJECTIVES

ENGAGE STAKEHOLDERS: Engage and maintain a network of interested stakeholders to address reduction and prevention of CECs in local waterways. Stakeholders include water utilities, manufacturers, researchers, local, state, and federal government agencies (see Stakeholder Categories and Project Partners below).

IMPLEMENT PILOT RESEARCH AND EVALUATION PROGRAM: Measure household use of personal care and household products via surveys, and surface water pollutants downstream of sample population.

DEFINE CEC POLLUTION PREVENTION AND MITIGATION STRATEGIES: Research existing and new disposal, mitigation and prevention methods for environmental effectiveness and cost-feasibility.

EDUCATION AND OUTREACH: Educate the pilot community in ways to reduce use, generation and disposal of CECs, such as using less detergent per laundry load and selecting CEC-free hand soap. Increase community awareness of the potential environmental and human health risks of CECs in local waters.



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IES ROLE

1. Stakeholder recruitment, committee formation and partnership development
2. Project management and implementation
3. Scientific program planning and implementation
4. Educational forums and strategy development
5. Community outreach

STAKEHOLDER ROLE

- Assist in the project and offer expertise, ensuring your industry's voice is heard
- Participate in stakeholder feedback opportunities to review the project work, design strategies, and evaluate the project findings
- Identify and provide funding

STAKEHOLDER CATEGORIES

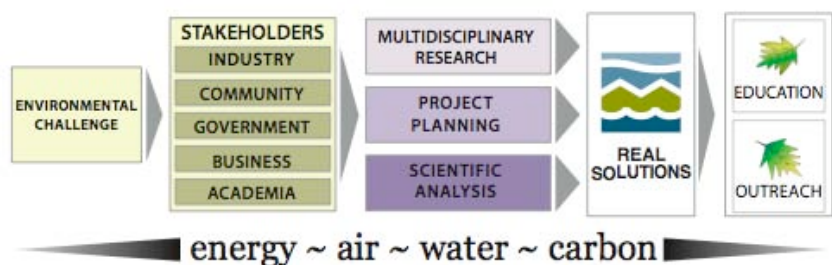
- Household and personal care product manufacturers
- Industrial product manufacturers
- Recreation (fishing)
- Wildlife protection
- Wastewater treatment
- Breweries and beverage producers
- Watershed protection
- Water utilities
- Hospitals/hospices
- Agriculture - traditional and organic farms
- Local, state, and federal government
- Education
- Citizens

Why Get Involved?

By participating in the project, you can help and/or support:

- ✓ Evaluation of contaminants
- ✓ Pollution mitigation and prevention strategies
- ✓ Cost effectiveness of solutions to your area of interest
- ✓ Education and outreach methods
- ✓ Recommendations for best management practices (BMPs)
- ✓ Policy development
- ✓ Potential regulatory action

The IES Process



PROJECT PARTNERS

Partners and collaborating organizations:

- City of Golden, Colorado
- Roche Colorado Corporation
- Metro Wastewater Reclamation District
- Boulder County Public Health
- Jefferson County Department of Health & Environment
- Colorado Department of Public Health and Environment
- RBC Blue Water Project
- The Laura Jane Musser Fund
- Elizabeth McGeachin McKee Foundation
- Colorado State University
- U.S. Environmental Protection Agency Region 8
- Consortium for Research and Education on Emerging Contaminants (CREEC)
- The SeaCrest Group
- National Renewable Energy Laboratory (NREL)
- New Belgium Brewing Company
- The Endocrine Disruption Exchange
- Clean Water Network
- Healthy Rivers Fund

PROJECT PLAN SUMMARY

Phase 1: Pilot Project to Determine Effectiveness of Community-Based Social Marketing

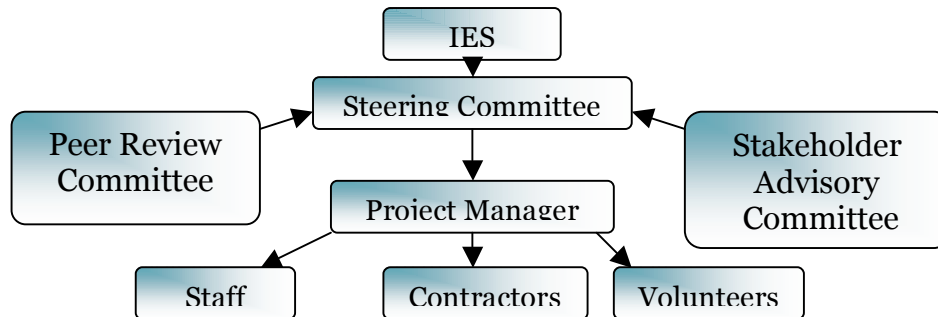
1. Recruit project stakeholders and form steering committee.
2. Conduct background research on sources of CECs; effects of CECs on wildlife, humans, and vegetation; current CEC policies; and existing disposal, prevention, and mitigation methods and regulations.
3. Implement Front Range community pilot project
 - a. **Pre-project water sampling** to determine baseline levels of selected CECs in source and output water.
 - b. **Public surveys and focus groups** of residents to identify motivations and patterns of consumer product use and disposal.
 - c. **Education and outreach** using community-based social marketing to disseminate prevention strategies within the community.
 - d. **Post-project surveys** to determine changes in behavior, knowledge, and/or awareness in the community related to CECs.
 - e. **Post-project water sampling** to determine of the impact of the education and outreach program on levels of CECs released by community.
4. Final Report to assess pilot project strengths and weaknesses

Phase 2: Expansion of Pilot Project

1. Develop recommendations and implementation strategies (Best Management Practices)
 - a. Policies
 - b. Additional pilot projects
 - c. Replicate project on a larger scale
2. Policy implementation
3. Expansion of education/outreach initiatives



PROJECT ORGANIZATION



CEC Project Steering Committee

Key representatives from major stakeholder groups serve as the Board of Directors for the Project to:

- Guide the design of the project
- Provide technical assistance and recommendations
- Attend meetings every other month
- Provide and recruit funding and in-kind support

Stakeholder Advisory Committee

Interested and impacted individuals and groups will:

- Provide feedback on project goals, design, approach
- Review project plans
- Voice their needs and concerns to the steering committee
- Receive project updates via e-mail
- Provide and recruit funding and in-kind support

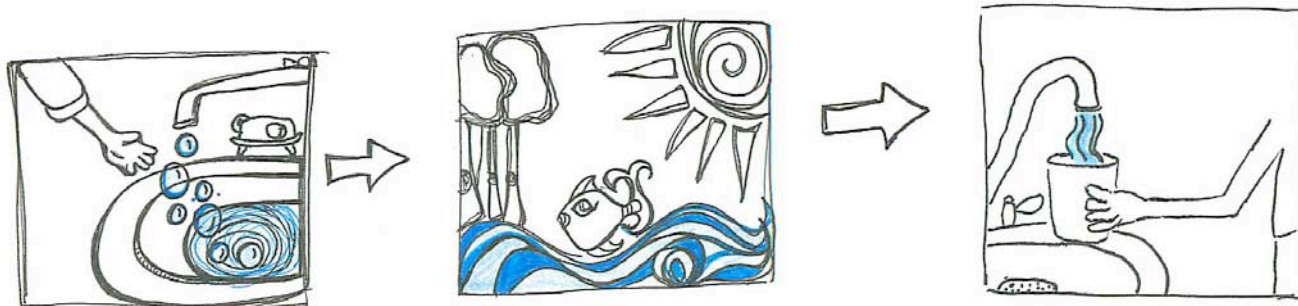
Peer Review Committee

Interested individuals with scientific or technical expertise in a field impacted by CECs will:

- review technical documents related to the process, results, and overall plan of the project for accuracy and relevance

Water sustains us!

It's all the same water - what you use and send down the drain becomes water for others downstream.



You and only you can make a difference!

Your chemical footprint - the personal care and household products and pharmaceuticals you use - contribute to water contaminants. Help IES educate the community on what we can do to reduce our chemical footprints.



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