Building the Bridge from Your Research Results to Public Understanding and Pollution Prevention

Contaminants of Emerging Concern in Water Resources II: Research, Engineering and Community Action

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Agenda

1. Introduction and Overview
2. The CEC challenge
3. Why do we need a bridge?
4. Community-based social marketing
5. Strategies to reduce CECs
6. Evaluation
7. Conclusions and next steps

Introduction and Overview

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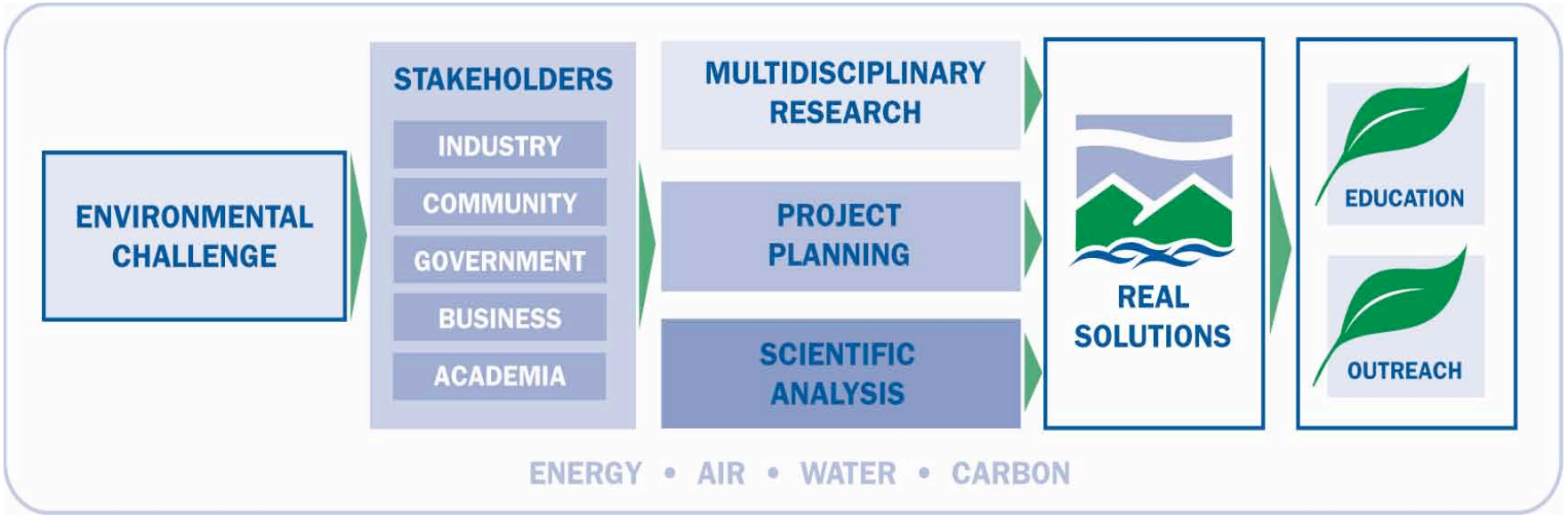
IES Mission

- The Institute for Environmental Solutions is an independent non-profit organization that engages stakeholders to deliver technically sound solutions to complex environmental and health problems -- without unwanted side effects.



Contaminants of Emerging Concern (CEC) Project

Project Mission:

Reduce CEC concentrations entering wastewater and reduce human exposure to these contaminants.

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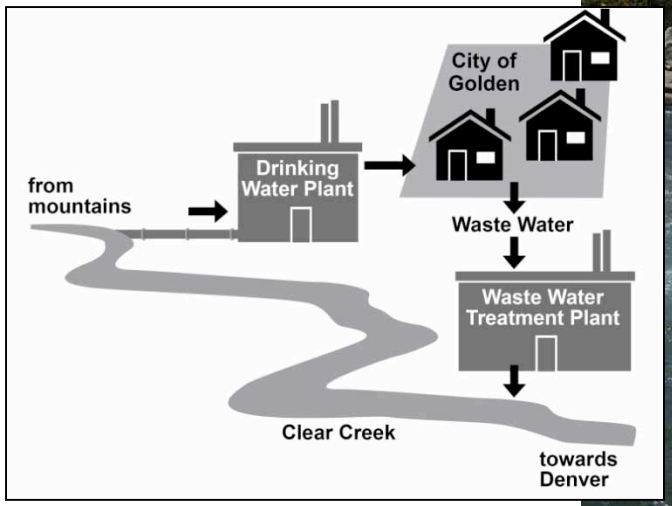
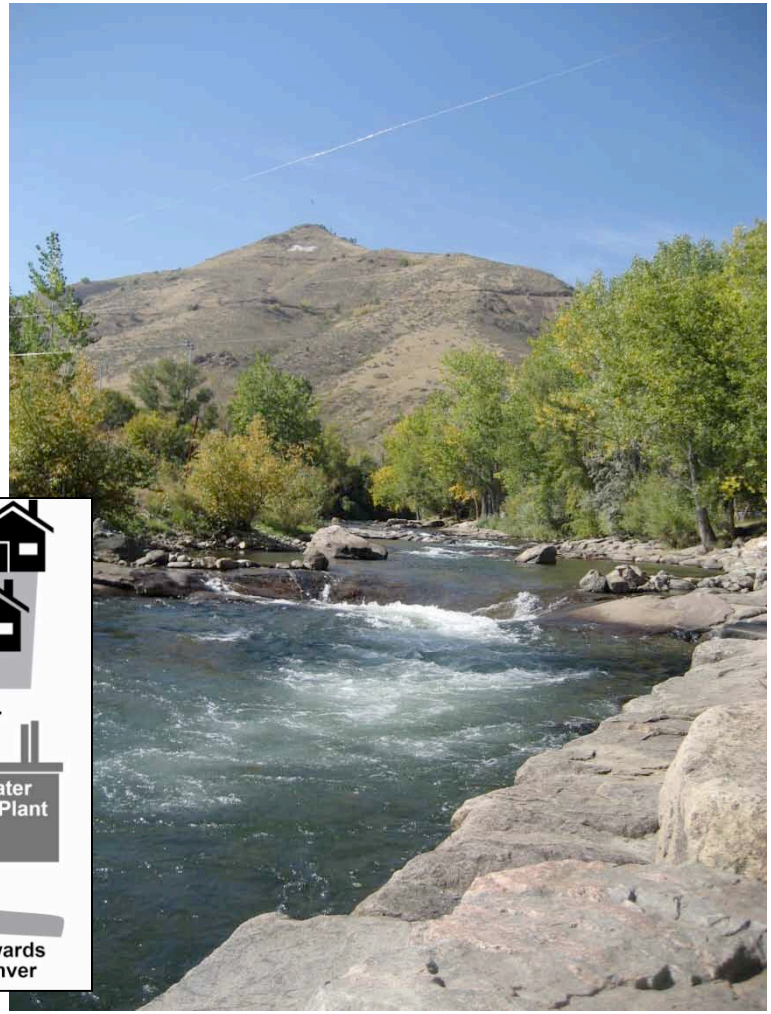
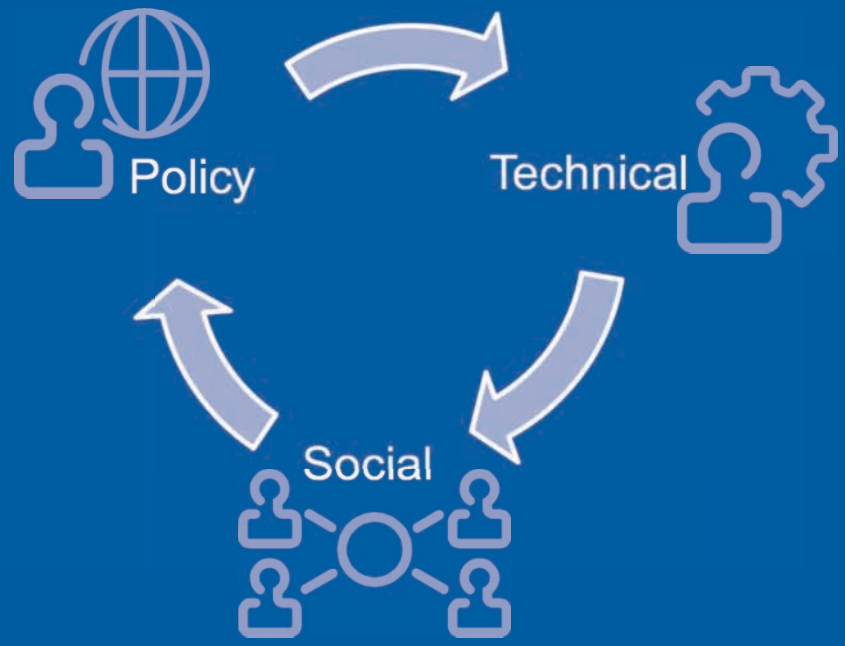




Project Goals

- Establish scientific base of understanding about CECs
- Establish an objective science-based education resource for CECs
- Engage community stakeholders to address reduction and prevention of CECs
- Affect personal behavior to purchase or make less hazardous personal care and household products

The CEC Challenge:



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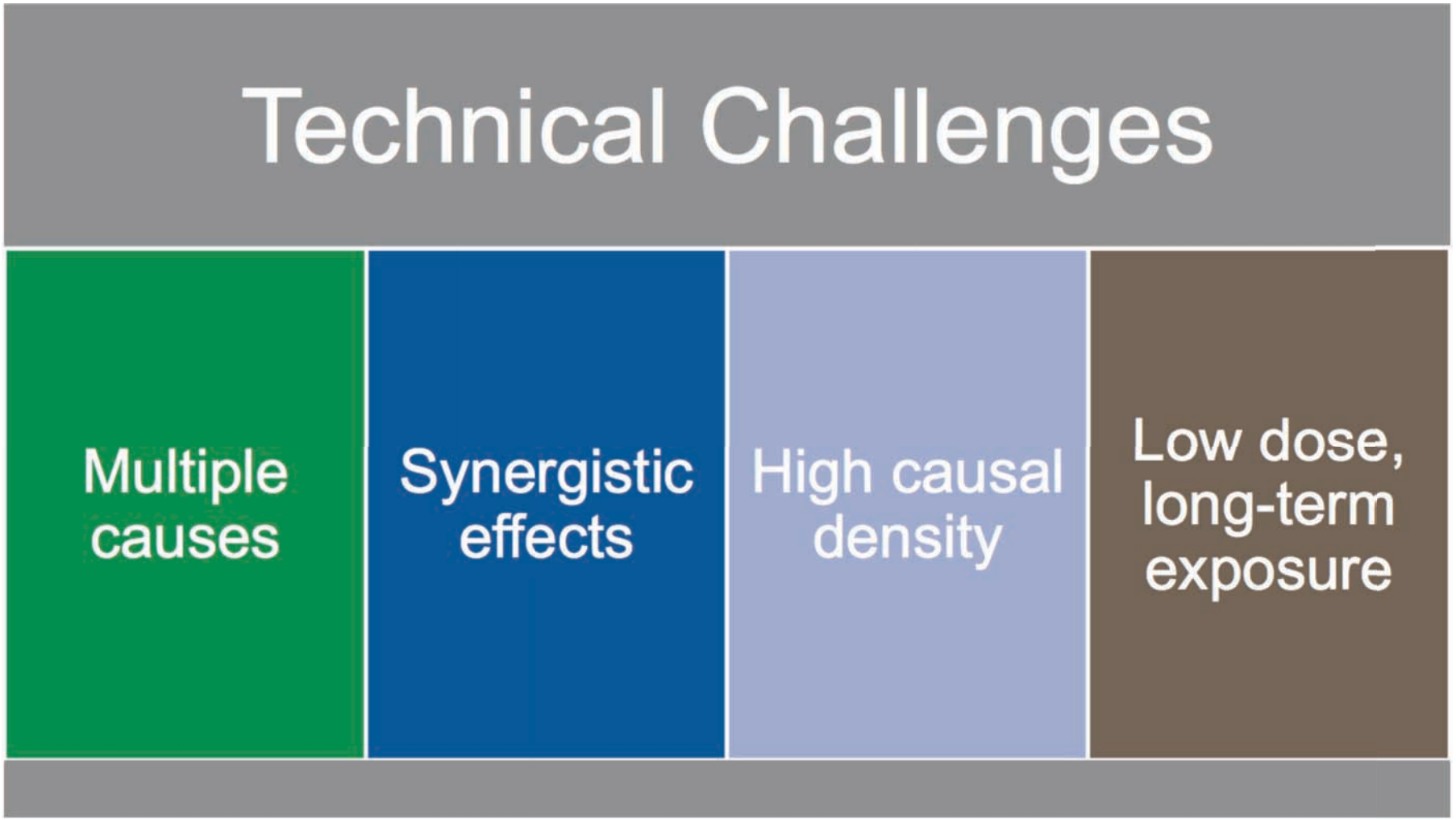
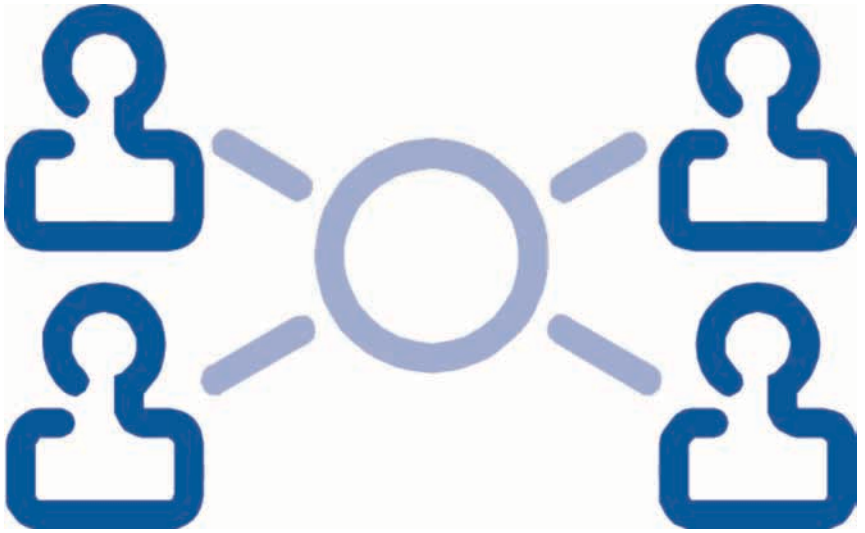
The CEC Challenge - Technical



The CEC Challenge - Social

- Problem is unique: “Intentional pollution”
- Pollution that we choose
- Marketing
- Individual actions can make a difference



The CEC Challenge - Policy

Gap between scientific research and general application

Why?

- Not the mission of the scientists
- Corporate perception: not enough proof
- Public understanding limited
- “Easy” “feel-good” strategies may have limited or no environmental or health benefit

Why do we need a bridge?

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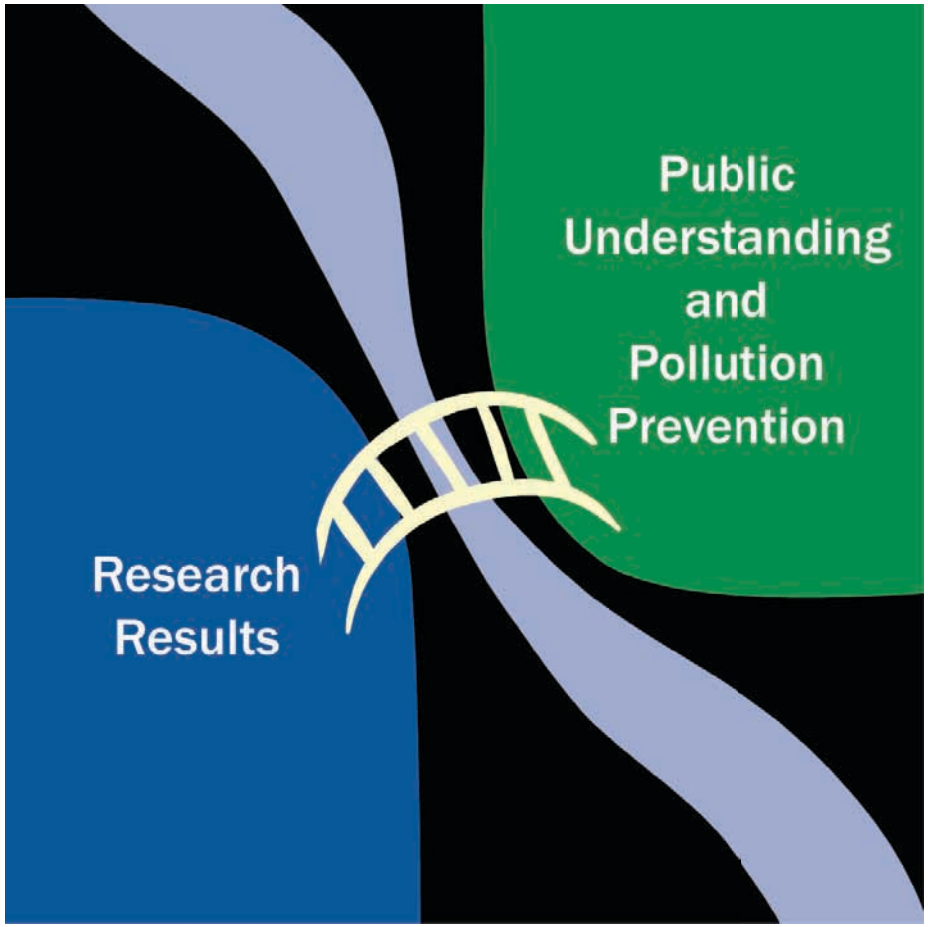
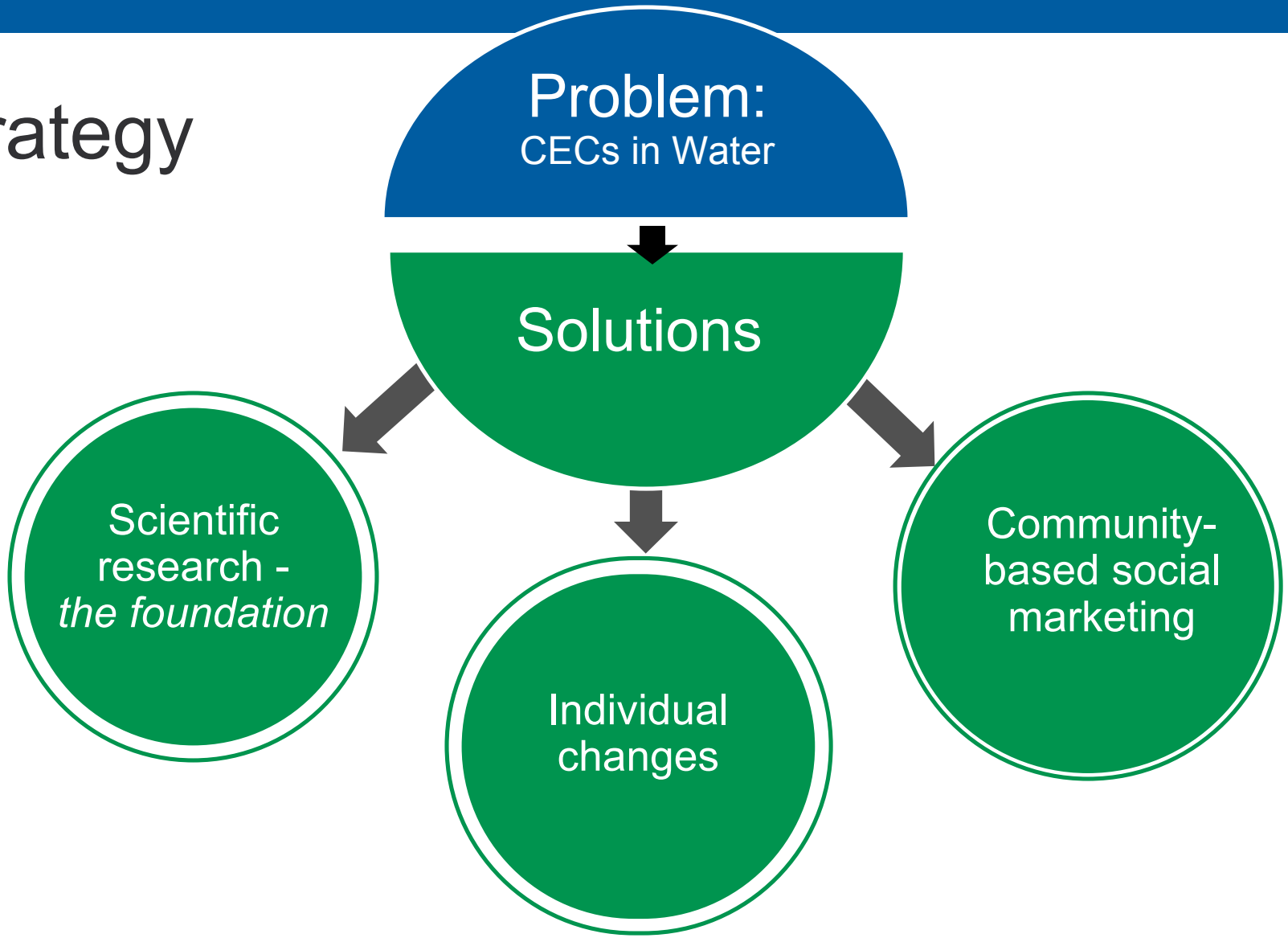
Building the Bridge



- Communicate science and reach a large audience
- Provide basis for intelligent policy
- Foster sustainable behavior
- Achieve goal of reduced pollution and human exposure

Strategy



Result: Reduce pollution and exposure

Community-Based Social Marketing (CBSM)

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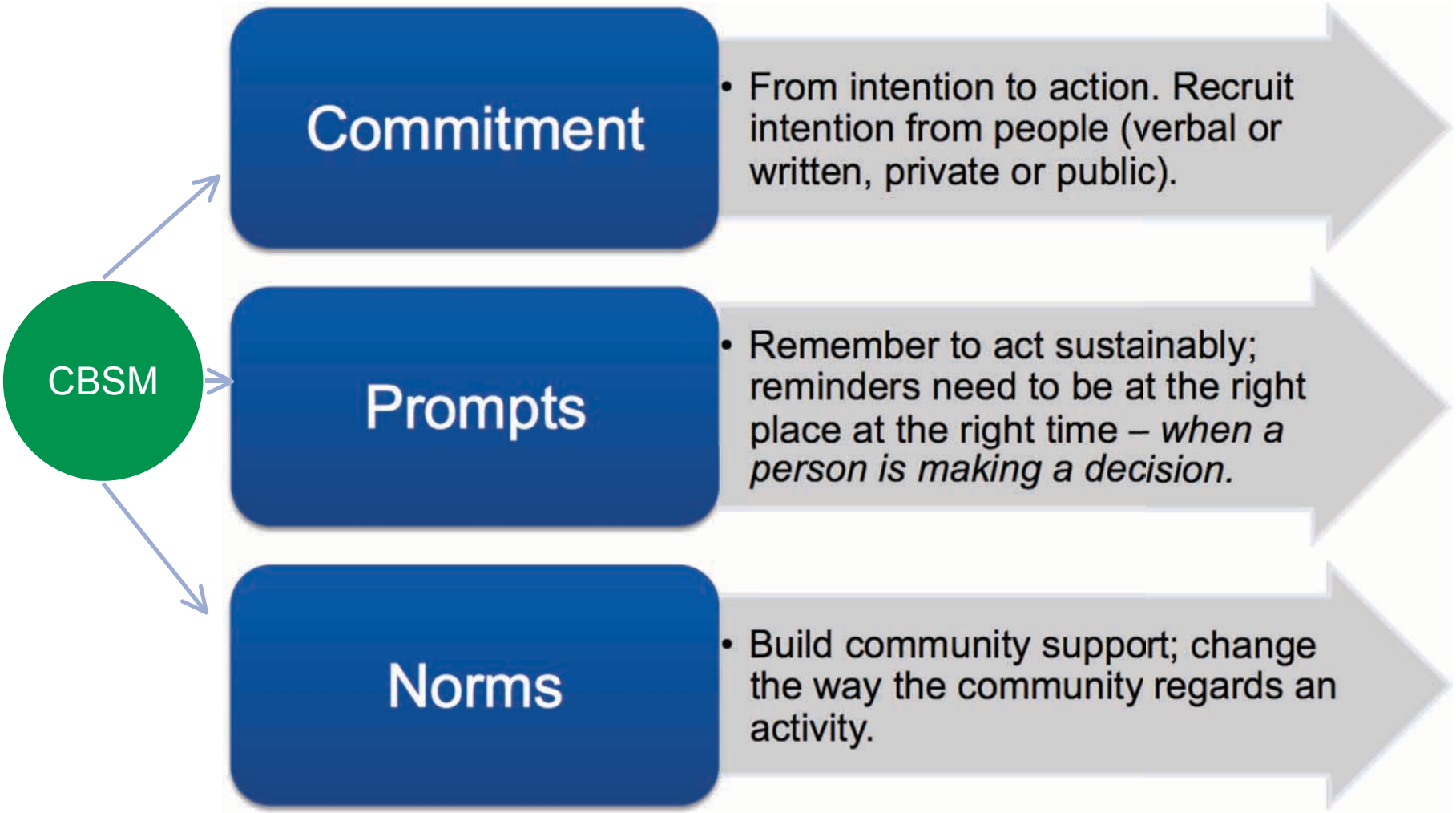
Reduce Use (Source) of Contaminants



IES Strategies to Reduce CECs

IES Contaminant Guidebook

Blue Crew Water Stewards Workshops

Chemical Footprint interactive calculator

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CONTAMINANTS OF EMERGING CONCERN

IES Contaminant Guidebook

Reference document accessible by the community

Objectives

1. Provide comprehensive and accurate data on targeted contaminants
2. Provide information in an easily-accessed format without limiting applicability or audience
3. Develop strategy to evaluate the harm of CECs of interest
4. Determine ways to characterize and communicate key information
5. Stay current with what is going on

IES Contaminant Guidebook

Table of Contents

Introduction

Contaminant

- Introduction
- Environment and Exposure
- Environmental and Ecological Fate
- Wildlife Effects
  - Developmental
  - Reproductive
  - Immunotoxic
  - Genotoxic
- Human Health Effects and Exposure
- Regulations

Resources

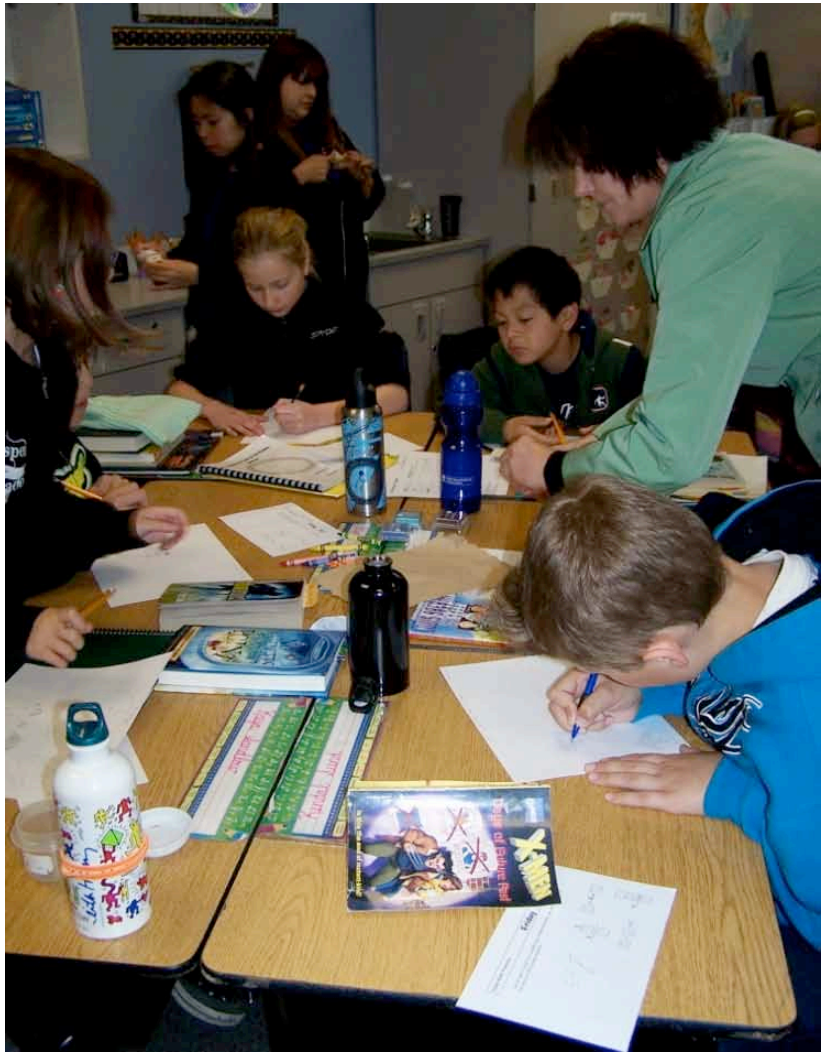
Glossary

Acronyms

Initial contaminants: alkylphenol surfactants (nonylphenol), oxybenzone, avobenzone , benzophenone, parabens, triclosan / triclocarban, DEET, BPA, BHA, caffeine, artificial fragrance

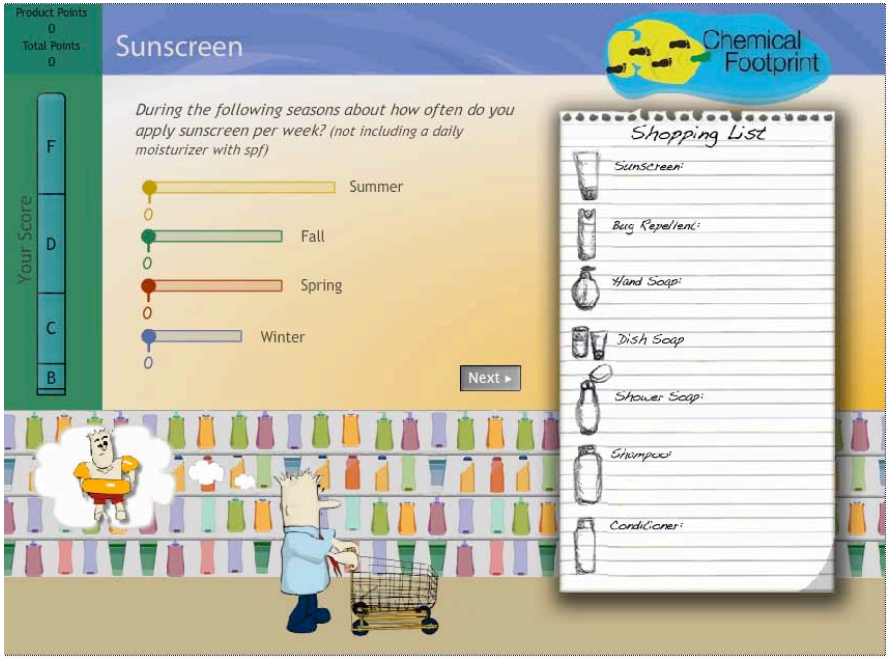
Blue Crew Water Stewards Workshops

- Promote water stewardship through existing social networks
- Establish an environmental ethic
- Reduce and prevent water pollution at the household level
- Educate the public on how to reduce their chemical footprint
  - Community workshops
  - Elementary school age workshops



Chemical Footprint Interactive Calculator

- Online interactive application – series of questions about everyday household product use
- Identify CECs found in products currently used, safe product alternatives, and educational tips to reduce your chemical footprint
- Receive your “chemical footprint” score based on how much CECs used and exposed to
- Help you make better purchasing decisions in the future



Evaluation

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Evaluate Effective Ways to Reduce CECs in Water

Scientifically sound ways to quantify environmental and economic impacts, and other community benefits of strategies to reduce CECs

- _____
- _____

Approach to public / regulatory initiatives

- _____
- _____

Conclusion and Next Steps

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Conclusions - 1

- Community knowledge about CECs and potential harm is very low
- Traditional education / outreach is not effective
- People are willing to change their behavior in response to community-based one-on-one education and outreach
- CEC research is critical to support action to reduce pollution

Conclusions - 2

- Preventing CEC pollution from personal care and household products is feasible.
- CBSM-based outreach and education leads to better water quality and better health
- Traditional education / outreach is not effective
- Cheaper and easier to keep CECs from entering waterways than to treat downstream

Contaminants of Emerging Concern – Linking Science to Effective Action: Next Steps

- _____
- _____
- Looking for collaboration and team opportunities

Questions / comments

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