## Todd Norton Washington State University

Associate Professor and Director of Communication & Society Major, The Edward R. Murrow College of Communication

Former Director, The Center for Environmental Research, Education, and Outreach Affiliate Faculty, School of the Environment, Washington State University

Focal Area: Environmental Communication, Strategic Communication. My focus is public outreach/participation and public information campaigns regarding place-based and especially contentious environmental issues.

## **Ongoing projects**

Lakeshore owner's perceptions of water quality on Coeur d'Alene Lake with Coeur d'Alene Tribe and Idaho Department of Environmental Quality. This includes (1) Random survey mechanism in three bays on CdA Lake and (2) on-the-ground stakeholder interviews focused on concerns among groups.

Comprehensive literature review of social dynamics (individual, social, and contextual) variables which impact people vis-à-vis water contaminants. Developing a standardized survey to assess key social variables across contaminant types (probably nutrient load, heavy metals, and PCBs), ~150 completed surveys in 10 basins across US.

My orientation to work in environmental issues:

- Everyone has a valid perspective worth understanding.
- Progress on environmental issues needs to involve at least as many factors as caused the problem.
- Place matters.
- Social dynamics are at least as complex as biophysical dynamics.
- To be effective, biophysical data/information must be responsive to social data and context.

A very short list of the social variables which impact people's water knowledge and behavior:

**Water**: Flavor & smell, perceptions of quality, perceived severity of contaminant, perceived importance of water body, perceived likelihood of contracting illness from contaminant.

**Personal / Social**: gender, personal negative consequences of contaminant, impact of contaminant on social & economic life, personally impacted including other impacted by contaminant illness, response efficacy, prior experience with water source, reputation of desired alternate behavior, disadvantages of proposed mitigation, opportunity benefits to current behavior and opportunity costs to alternative, frequency of water recreation.

**Institutional:** trust in science institutions or suppliers, perceptions of regulation, media messages about water.

**Societal**: religious/spiritual factors, cultural practices of fishing or other recreation, property orientation.

Given the complexities of water and contaminant management, I propose multiple, complimentary approaches to a public outreach campaign.

- A. Preliminary public engagement: key informants, public feedback meetings, focus groups to develop a working understanding
  - i. biophysical issues facing that area,

- ii. the interaction of those environmental issues with human actions (nutrient loading with agricultural and residential practices), and
- iii. personal, social, contextual, and societal variables which would likely impact outreach efforts at enhancing knowledge and/or changing behavior.
  Preliminary data → survey and interview design
- B. Primary data collection through a standardized survey.
  - Integrating previous research and place-based understanding, develop and implement a standardized survey: analyze basic frequencies and correlation of independent and dependent variables.
- C. Primary data collection through a somewhat standard interview protocol Using both preliminary public engagement efforts and survey contact, identify key stakeholders and informants. These data will provide key insight into the relevant issues, personal and social dynamics, and any barriers to the desired change in knowledge, attitude, or behavior.

Frequencies and correlations + coded interview data  $\rightarrow$  potential message designs

D. Experiments to test message design and their effectiveness to cultivate knowledge / behavior change

## Capacities per and approximation of associated costs

- A. Preliminary public engagement =
  - ~ 1 faculty and 1 graduate RA day per meeting (less of course if multiple meetings on same issue and in same region)
- B. Primary data collection through a standardized survey.
  - ~ 2 faculty weeks for development
  - 1-2 Gradate RAs for 1 year for collection and analysis
- C. Primary data collection through a somewhat standard interview protocol
  - Same graduate RAs as above
- D. Experiments to test message design and their effectiveness
  - ~2 faculty weeks for development of experiment
  - 1 Graduate RA for 1-2 semesters for collection and analysis

Post-data community meetings: ~2 weeks faculty time to model information and bring information back to community to increase consensus.

## Estimate of potential associated costs

- 1 Faculty day = ~ \$400
- 1 Graduate RA day = ~\$200

1 Graduate RA (salary + benefits) = 33K (12 months) or 28K (9 months) \

Survey = difficult to estimate without a specific plan. I recommend randomized, door-to-door using Grad RA with a tablet. Avoids printing and mailing costs.

Assuming ~ 10K homes in this region, we would want about a minimum of 350 (700 would be better) – which means at least 1,000-2,000 contacts for .95 confidence. Drop-off/pick-up is more efficient but requires printing.