

**Peer-reviewed Papers to Podcasts and
Beyond:
Disseminating the Findings from a Long-
term Monitoring Study**

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Background

- Pulp & paper mill effluent (PPME) is among the most studied industrial effluents



- Most PMME research focuses on short-term laboratory or mesocosm studies typically limited to a single biotic group
- A variety of effluent-related effects have been noted, with alterations in fish reproductive indicators receiving the most attention
- NCASI initiated a Long-term Receiving Water Study (LTRWS) in 1998 to examine receiving water community-level patterns related to PPME

Background cont'd

- Study designed to last >10 years, conducted in **four** representative receiving streams at multiple sites, in multiple seasons

- Multi-faceted approach:

- laboratory bioassays (n=4),

- in-stream biotic communities (fish, invertebrates, algae)

- Community endpoints (n=14)

- Biological metrics (n=79)

- Community-environment relationships (n=14)

- environmental assessments (water and habitat quality) (n=36)

- relative risk assessments (n=4)

Measured seasonally

- Study scope (multiple rivers, seasons, endpoints) and duration is:

- rare for in-stream studies,
- unprecedented in examining PPME

- As such, LTRWS and findings are of interest to:

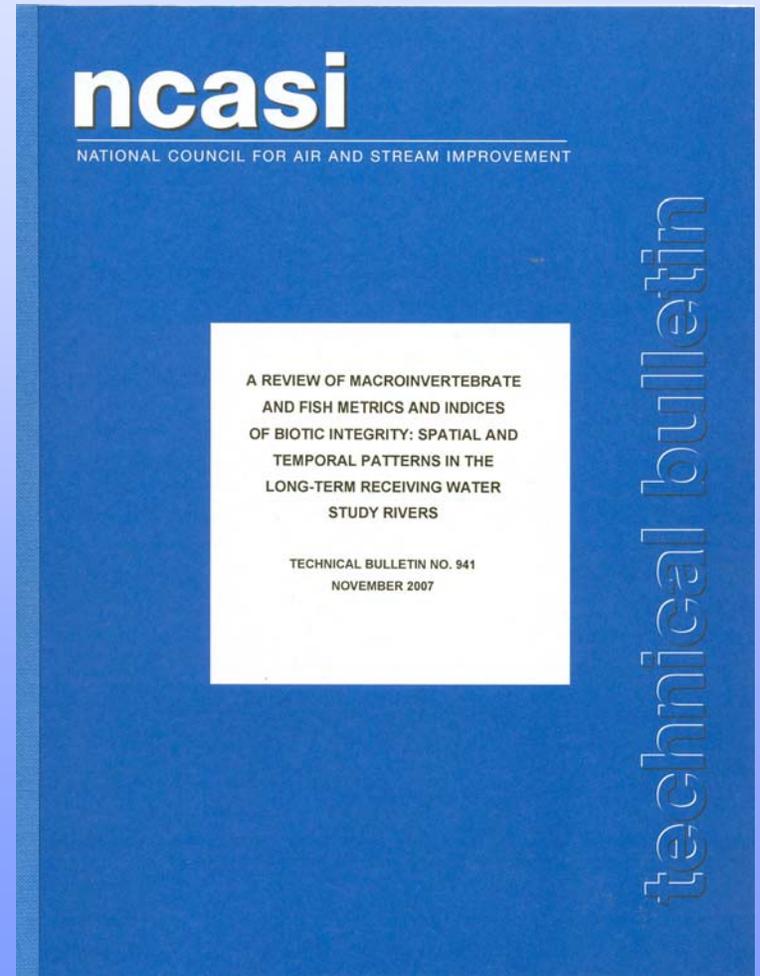
- industry personnel,
- stream researchers,
- stakeholders,
- regulators, and
- policy-makers

**How to reach
such a varied set
of audiences??**

Undertake a multifaceted, and in some cases, unconventional, approach to disseminate objectives, framework, methods, and results to varied audiences with an appropriate level of technical language and detail

Industry Personnel

- Information disseminated in Technical Bulletins
- Technical reports summarizing background, relevant literature, methods, results and discussion
- Unlimited words/document size (i.e. 20 to >200 pages)
- Focuses on industry relevance, as well as broader scope
- Limited distribution (NCASI members only)
- 41 LTRWS Technical Bulletins to date



Industry Personnel (cont'd)

- Broader-based information dissemination through industry-focused meetings and publications

- Information limited to specific time period/pages

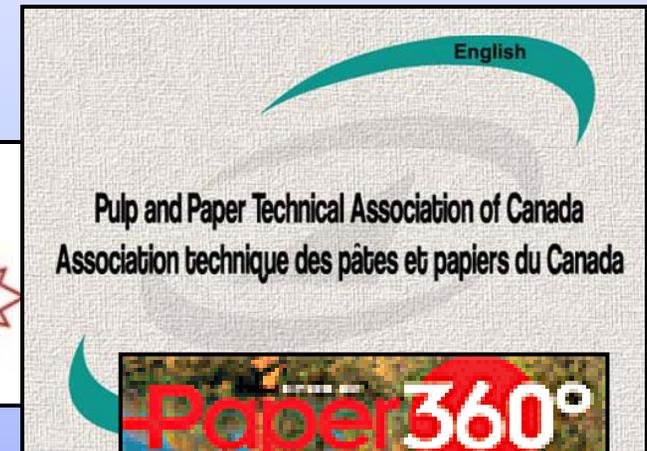


- Fewer details provided

- Focus remains on industry relevance, but may cover broader scope

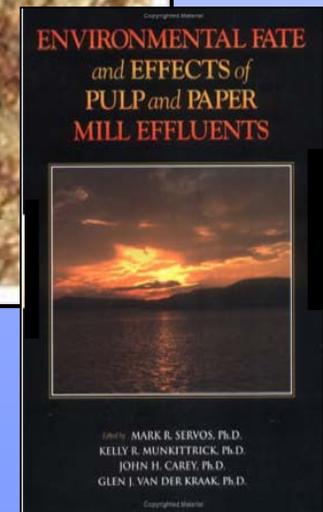
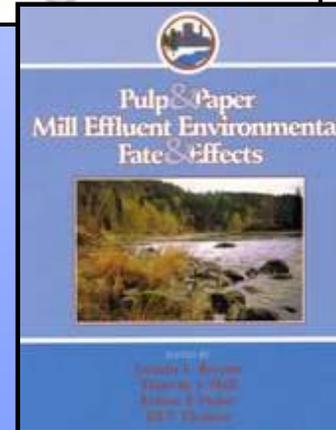
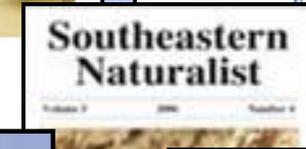
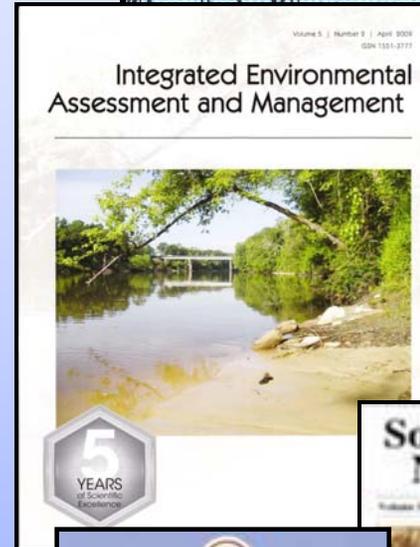
- Broader distribution (industry reps and subscribers)

- >40 LTRWS presentations, 3 industry journal articles



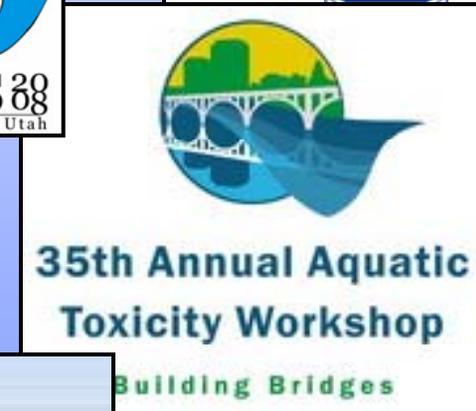
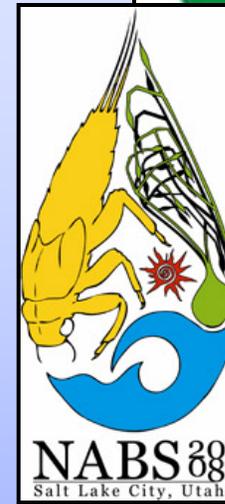
Stream Researchers

- Information summarized and published in the peer-reviewed literature
- Specific number of pages limits details provided
- Focus on broader scope rather than industry relevance
- Broader distribution, but generally limited to "academics"
- 23 LTRWS peer-reviewed journal articles and books



Stream Researchers (cont'd)

- Presentations at professional meetings
- Information limited to specific time period so fewer details provided
- Focus on broader ecological scope
- Broader distribution (professionals/"academics")
- >32 LTRWS presentations



- Information dissemination to industry personnel and researchers are fairly conventional, and may be appropriate for some stakeholders, policy makers, and regulators
- However, **unconventional methods** used to reach these groups (as well as industry personnel and regulators)

Podcasts

- downloadable recordings of researchers discussing aspects of the study



- generally ~5 minutes long, but can be longer, if necessary
- available to members, but distributed to others as appropriate

Webcasts

- Interactive internet-based presentations/discussions
- Greater scope and detail than most industry and professional meeting presentations
- Jumping-off point for other methods of communication

Informational Pamphlet

- Currently being developed
- Layperson summary of study objectives and findings
- Limited scope and detail, but broadly distributable
- Intended audiences: industry personnel not familiar with study, stakeholders, local regulators, policy makers.

LTRWS Documentary

- Documentary-style video presenting the study objectives, methods, and results
- Footage includes rivers, mills, and sampling; discussion from experts/participants of patterns and results
- Intended for all audiences, but in particular: stakeholders, regulators, and policy makers (i.e. those not likely to have access to or understand more technical/scientific documents).
- DVDs to be distributed to mill managers, fishing/naturalist clubs near mills, state agencies, and public access TV stations near study mills

Summary

- Multifaceted approach that utilizes traditional and unconventional methods of sharing information:
 - Technical reports
 - Peer-reviewed literature
 - Conference presentations (industry and professional)
 - Podcasts
 - Webcasts
 - Informational pamphlet (layperson)
 - Documentary video
- Ensures that the knowledge gained from the study is accessible to all interested groups
- Messages conveyed to audiences with an appropriate level of technical language and detail

