

2008 Annual Conference Abstract Submission Instructions

Abstract Format

Authors are urged to prepare well-written, clear, informative abstracts describing current work. The abstract should include the following:

- Title of the presentation
- Name of author(s)
- Author(s) Information: Minimum needed -- organization and email address.
- Body (statement of purpose, research methodology, results and benefits): **500 word limit preferred**

NOTE: Please see the abstract example on the 3rd page. Since you are submitting this via an online form do not be concerned with font size and format.

Abstract Submission

1. a. Abstracts for Oral Presentation must be received on-line by **5:00 PM, Monday, August 25, 2008.**
b. Abstracts for Organized Sessions must be received on-line by **5:00 PM, August 25, 2008**
c. Abstracts for Poster Presentation must be received on-line by **5:00 PM, Friday, September 19, 2008.**

Note: If you have problems with online submission send the requested information from the online form and attach the abstract as an MS Word document in an email to kelly_porter@ncsu.edu.

2. Submit your form online with all the requested information at:
http://www.ncsu.edu/wrri/events/conference/2008ac/submit_abstract/abstract.html
3. We recommend that you compose your abstract in MS Word, then paste it into the appropriate field boxes in the online form. This should include the presentation title; name of author(s); author(s) information (organization and email); and body of the abstract (recommended 500 word limit).

Note: Remember to keep a copy of your abstract in your own files.

4. Authors of selected oral abstracts and organized session abstracts will be notified on September 4th or 5th. Posters will be accepted as they are submitted. Accepted abstracts will be posted on the WRRI web site: Week of September 7, 2008. If changes or updates are needed to accepted abstracts, WRRI will make the changes and re-post the abstract to the web.

Questions? Contact Kelly Porter at kelly_porter@ncsu.edu or 919-513-1152.

More information on next page

Oral Presentations

- Oral presentation abstracts are due by 5:00pm, Monday, August 25, 2008.
- Abstracts will be selected by WRRI and the Annual Conference Organizing Committee on September 3rd.
- Oral presenters will be notified by email on September 4th and 5th.

Other helpful information to know:

- Each session will be 90 minutes in length.
- Each session will have 3 to 4 speakers each, so allowable speaking times may vary between 20-30 minutes.
- Microsoft PowerPoint is the PREFERRED format for presentation. Each session will be moderated.
- The moderator will briefly introduce each speaker (name, position, organization and presentation title) and will time each presentation to keep everything on schedule.

Organized Technical Sessions

We are accepting abstracts for organized sessions or panel discussions. The sessions are 90 minutes in length. When you submit the information online please include the following:

- Moderator name (list under Comment field)
- Title of Session (list in Presentation Title field)
- Speaker names or panel discussion participants (list in Authors field)
- Abstract describing the content of the session or a series of abstracts for each suggested speaker. (put under Abstract field)

WRRI and the Annual Conference Organizing Committee will make final decisions on proposed sessions on September 3, 2008. Selected organized sessions will be notified by email on September 4th and 5th.

Poster Presentations

- Poster presentation abstracts are due by 5:00pm, Friday, September 19, 2008.
- They will be accepted for the conference upon submission.
- Poster dimensions of 5 feet by 5 feet can be accommodated. If larger than this size please contact Kelly Porter at kelly_porter@ncsu.edu.
- All accepted student posters will automatically be entered into the NCWRA Student Poster Contest.

Undergraduate and graduate students are encouraged to submit abstracts for poster presentations. The North Carolina Water Resources Association (<http://www.ncsu.edu/ncwra/>) is sponsoring a **student poster contest** during the conference. A group of judges will determine outstanding student posters. The student poster winners will be recognized at the NCWRA Symposium Luncheon on October 9th. First place will receive \$300, 2nd place will receive \$200 and 3rd place will receive \$100. More information on student poster judging criteria will be available on the WRRI web site: <http://www.ncsu.edu/wrri/conference/>.

Please Note: All full-time undergraduate and graduate students doing an oral or poster presentation receive free registration. All other speakers and poster presenters will pay the registration fee. The early registration deadline is Friday, September 19, 2008.

Watershed Factors Associated with Enteric Microbe Concentrations in North Carolina Surface Waters

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Fecally contaminated water continues to be a problem in the United States despite regulations intended to protect recreational and drinking waters. However, specific risk factors of waterway contamination are poorly characterized. This study analyzed surface water samples quarterly for three years in Gaston County and Wake County, North Carolina in watersheds having different levels of agricultural, residential, and urban development. Factors influencing the levels of enteric microbes in surface water collected near livestock facilities, a municipal biosolids land application site and an urbanized region were investigated. Geometric mean microbial concentrations varied with land usage, sampling site, season, total suspended solids (TSS) measurements, and rainfall events. The magnitude of these impacts on observed microbial densities were variable, depending on the microbial indicator. Geometric mean concentrations of fecal coliforms, *E. coli*, and somatic coliphages were generally higher at sites impacted by animal and human inputs compared to rural residential and background stations. Urban-impacted sites had significantly ($p < 0.05$) more Group II F+ RNA coliphages than both the livestock-impacted and the rural/background stations, suggesting primarily human fecal contamination. Livestock-impacted sites had more Group I coliphages than the other three F+ RNA coliphage serogroups, but the F+ RNA coliphage densities were lowest at these sites. Fecal coliform levels declined at the Gaston County dairy site after implementing best management practices (BMPs) for animal wastes. Runoff from a cattle pasture and feedlot at Lake Wheeler Road Farm contained high concentrations of microbial indicators; concentrations in feedlot runoff approached those in raw animal wastewater. The levels of all microbial indicators increased significantly during rainfall events at all tested sites, as did TSS. Microbial indicators were positively correlated with TSS, but correlation strengths differed for base flow and storm samples. Compared to the other indicators, the concentrations of enterococci and somatic coliphages were most influenced by season and were highest in the summer. The results of this study suggest that surface water quality in North Carolina can be degraded by human and animal fecal waste sources and that BMPs as well as source water protection programs are needed to minimize waterborne microbe levels and risks to public health.