Credible Data Pilot Program Report
Ohio State University Extension Watershed Team
March 27, 2006

Introduction

The Credible Data law also known as House Bill 43 was signed into law in 2003. The law requires Ohio EPA to develop a new surface water quality monitoring system and adopt rules that establish criteria for three levels of "credible data" related to surface water monitoring and assessment. The rules were adopted March 10, 2006 and specifically cover chemical, physical and biological water quality monitoring data concerning surface waters. The statute and the rules do not address ground water or finished drinking water.

The overall objective of the Credible Data Program is to promote a systematic use or application of data collected by other State agencies, local water pollution control agencies, and volunteer groups in an organized fashion that fits these basic purposes:

Level 3 data – highest degree of scientific rigor and used for regulatory functions
Level 2 data – intermediate degree of rigor, used to track water quality trends and the effectiveness of pollution control projects
Level 1 data – lower degree of rigor, suitable for educations purposes.

The goals of the Credible Data Program are to promote scientific understanding, help make sound decisions, and increase public involvement in watershed protection and restoration.

Credible Data Pilot Program

Dan Dudley and Jeff Reynolds from Ohio EPA and Anne Baird, Joe Bonnell, and Jerry Illes from OSU Extension met in Jan. and Feb. of 2006 to discuss collaboration on education and outreach for the Credible Data Program. A pilot study including a listening session with potential applicants was designed. The goals of the Credible Data Pilot program were to design a integrated and efficient program to certify data collectors and to provide data collectors with high quality educational materials and opportunities.

Pilot program objectives included:

1. Test and obtain feedback on the Ohio EPA credible data certification for data collectors (e.g., form for certification, instructions for creating study plan, and instructions and information on web site, feedback process).
2. Explore with potential participants educational needs that will assist them in designing study plans to plan data collection and use.
3. Obtain feedback on how to market the program and integrate with other programs funded by Ohio EPA and those that pilot participants work on.

Pilot program activities

On Feb. 24, 2006 an invitation (Appendix I) to participate was sent to 20 individuals who had either participated in Ohio EPA stream monitoring training or had expressed interest in the credible data program either to Ohio EPA or OSU Extension. From those 20 individuals 10 agreed to participate in a listening session held on March 9, 2006 at the Ohio State University Waterman Farm.

Participants

Participants had extensive experience in professional data collection, volunteer monitoring coordination, education, nonprofit administration, conservation, and project administration. Participants included:

Stephanie Suter, Franklin County Soil and Water Conservation District
Anne Lyon, Greenacres Foundation
Suzann Moeller, Friends of Big Walnut Creek
Gwynne Rife, University of Findlay
Julie McIntosh, University of Findlay
Jen Bowman, IlGARD
Matthew Smith, Wayne County Soil and Water Conservation District
Donna Childs, Cuyahoga County Board of Health
Ken Krieger, Heidelberg College
Josie, Setzler, Heidelberg College

Participation was voluntary. Participants were asked to visit the Credible Data web site http://www.epa.state.oh.us/dsw/credibledata/pilot_program.html and contact Jeff if they were interested. At that time there were asked to either fill out a mock application for becoming a certified data collector or an application that they wanted Jeff to review.

Listening Session

An interview guide was developed for the listening session. (Appendix 2)
The listening session was held on March 9, 2006 from 2-4 PM at the Waterman Farm on the Ohio State University campus. Three participants joined the discussion by phone the rest met at the farm. Anne Baird moderated the discussion. Joe Bonnell and Mary Slyby, OSU Extension took notes. Immediately following the session the notes were read and coded. A draft report with interpretations was sent to participants for their review and additional comments.

Credible Data Listening Session Report

3/9/06 – Waterman Farm (2-4 p.m.)
Moderator: Anne Baird, OSU Extension
Note takers: Joe Bonnell and Mary Slyby, OSU Extension

Format: Listening session. Established interview guide prepared in advance. No transcription made; however extensive notes taken. Compiled and interpreted by Anne Baird. Member check conducted by participants.

Participants: Ten participants from Health departments, Universities and university laboratories, SWCDs, and nonprofits. Participants had extensive experience in professional data collection, volunteer monitoring coordination, education, nonprofit administration, conservation, and project administration.

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Questions are in italics, followed by interpretative comments by moderator, and then sample participant comments as recorded during the listening session.

a. *What led you to want to participate?*

Participant interests included: Recognition and use of data (Will Ohio EPA use it as their reference site data? Will OEPA incorporate it into existing doc's 303d?), evaluation of project effectiveness (e.g., best management practices), recognition of established data collection programs, volunteer monitoring programs, and existing data, credibility and remaining competitive, professional development, enforcement, providing training and education. Concerns: Clarification on uses of data submitted both by OEPA and Qualified Data Collector (QDC) and program goals.

Participant comments:
Already collect data. We do sewage nuisances and stream monitoring. Would like data to be counted and recognized by Ohio EPA and other regulatory agencies. Trust our judgment if samples exceed standards.
Use water quality to evaluate the success of projects. Water quality collection and characterization of water quality long term monitoring and changes in restoration. Training watershed groups to collect data. Want to be a qualified data collector and provide useful data.

Wants to keep expertise going use it so not to lose it.
We want to be listed as a credible data collector…

Like having an extra credential on resume when desiring grants, etc.

b. *Describe any significant experiences with the pilot including completing the application. What questions did you have? Confusions? What was helpful? Not so helpful?*

Significant experiences: Documenting experience, listing classes and transcripts, finding transcripts, deciding who within an organization should apply, 1:5 ratio (Qualified data collector to volunteer), difference between levels, certification for QHEI.

Listing classes taken…coursework, biology, attaching transcripts was redundant. Rest was self-explanatory. Content: one of the parameters in the credible data listings did not see any questions re: collecting discharges specifically.

Hard to pick which courses [for example would biostatistics be useful course for a particular certification] would be helpful to have pop down for each designation for that particular level would streamline to score. Different ways to get bio-certified. Some blanks were too small. {Experience section not sure if should include 2 years or 4 years}

I can't be with all the people who are collecting samples. Contradicts how OEPA works with their interns. Always being present is an issue.

Why ask us to dig up transcripts, etc. Most of my experiences were in life training and how can we show these experiences and put them toward our resume.

Chemical water testing, change the wording to include biological testing not limit to "chemical" testing. Should she apply for Lev 2 or Lev 3 and what were the differences?

How many employees do you want to be designated as QDCs? Should we be having lab mgrs, everyone filling out QDCs? Explain the difference bet QDCO & QDC.

Being able to send a CV along instead of filling out all the questions on the application was good.

c. *Are you familiar with the Study Plans requirement*?

What's the difference between study plans and Quality Assurance Project Plans (QAPP)? QAPP seems to cover what's in study plan, could be easier to find study plan requirement on web site, overall program introduction needed, template useful for efficiency.

[4 people did not see information on study plan requirement easily]

Difference between a study plan & a QAPP?

After you get approved for each project do you submit a study plan?

Having just written a QAPP, it seems it encompasses everything a study plan would encompass. What would be the difference?

Do one big QAPP a year, a study plan for more qualitative, a QAPP for more quantitative.

d. What would be most useful to include in such a plan?

Consistency important, specifically participants felt the template to be useful and they had specific suggestions: specify units, include GPS points, have a standard template for each level and more than one template could be needed. A few people suggested including in the plans how the data will be used, watershed maps including areas of concern.

We have a 319 grant re: septic system monitoring and we had to dev a QAPP for those but it seems it is not always the same, you have to have a lab blank every time or every 4th time not always the same – a template for quality control would be helpful.

Not clear how data will be reported. Need to establish standards for reporting (e.g., units). Have one data form for each level. Data collection points should have global position system location points may need QDC's able to collect GPS pts.

Map of watershed, areas of concern, and long term plans.

End point. Study plan could address what is to become of the data. Where would it be stored?

A study plan that could be more readily approved would be good.

Don't think we need to hone in on just one template.

Like template study plan. Shorten the time down on what it takes to get an application in. Have a template for tracking purposes would be beneficial.

Reporting and how information would be laid out. Having a standard will be important.

e. How do you see yourself (or your organization) using a Study Plan?

There wasn't a lot of response to this question. Data collection and data sharing was mentioned. It may be something that will need to be considered further to make these plans worthwhile the answer may lie partly in how these data collection efforts fit in with other programs (TMDL, watershed plans, local decisions, etc.)

f. What would be helpful to you as QDC?

Easy access to secure data, information on databases and people involved in collecting data, well trained qualified data collectors (QDC), QDC program continuity, consistently formatted data that can be used in other reporting efforts.

Data base entry part – very helpful to have that on-line interface that can be retrieved from anywhere. That data should be readily accepted and downloaded.

You only get a password once you are certified as a qualified data collector. There is a concern of entering dummy data.

Some sort of a statewide database of people involved? Lists serve?

Are these finite or on-going studies? What happens once I get qualified and I cannot continue due to injury. I would like to see trainer requirements be part of this now and the community get involved immediately. How easy is it going to be for someone to be certified? There may be interest but not enough background experience.

Want to see what database looks like (e.g., a standard database including how the results were compiled).

A provision to get historical data approved.

How we are going to collect, look at, and format the data and drop into watershed reports, TMDL's etc.

There is a lot of need to do education, even level one has to have the proper training.

g. What would constitute proper training?

Participants mentioned specific educational requirements for levels, programs that may be useful for training and education, the importance of continued professional development for QDC's. Specific workshops, reference materials, graduate credit, and techniques (e.g., discharge measurement) as well as information on how to use data were suggested.

Comprehensive training in chemistry one-day of issue (e.g., when you collect the data, what does it mean? How to use your GPS, reading topographic and aerial photo and understands how it works. Gave 4 hours of grad credit.

I think it should be essential to pass a training that teaches discharge collection methods in order to be a QDC for water quality collection. As someone who will need to rely and trust on Level II data that others are collecting throughout the state, I would like to know they have passed a training to collect discharge measurements using standard methods rather than just have 2 years of experience (e.g., they may have only collected flows three times during that 2 year period).

- Noted from the chemistry side is* "what is the difference between Level 2 and Level 3"* - I would add that same comment from the bio side, but also suggest this as what I would perceive the difference no matter what the focus -- a level 3 data collector for macros/fish (or other data area) should have some if not all of the following qualifications:

Graduate degree in related area for Level 2 and for Level 3 PhD and/or have a peer reviewed published work list on their CV (again in the area).

OR - just being published in a peer reviewed journal should mean level 3, for level 2 it seems that published reports or successful grant projects might be more to the point. Or, for level 2 demonstrated success in educational outreach/training/ or administration of successful related programs or grants.

- And on the topic of *transcripts* - If this data is ever to be used in policy decisions at any level I think that transcripts should be strongly encouraged as part of the application process. - A demonstrated record of quality should always be a possible qualifier for paraprofessionals

Anyone who wishes to be "certified" should not mind a periodic attendance of some kind of "updating" sessions maybe once a year or every 2 years - this could even be a virtual meeting of short duration, but it seems that for reasons suggested in our listening session some kind of way to keep an active versus inactive list not just a stagnant group that gets certified and just uses it as a credential builder for individuals.

h. *How would you market the credible data program? Who do you think would find it helpful?*

Participants expressed caution over marketing until goals for program are developed and specific questions addressed (e.g., Who is exempt? How can data be used and for what final purpose?) and the possibility of target marketing in areas of state needing QDC's and the importance of keeping QDC's active and in touch with each other.

Credible Data program needs marketed or required to all 319 NPS grant participants.

Wait until EPA develops its goals and how it will use information before marketing this program.

Question of who is exempt if very important?

Confusion over what "credible" means?

Would not market this widely because people are still confused about what makes the data legal (e.g., Can they take data to township and make them stop what they are doing).

Multiple agencies and many K-12 school districts.

Another idea I had was to use regions and target a set number of entities at each level (say a 2 - 3 persons for each level from each region determined whether it be by watershed groupings or state region otherwise determined by OEPA) and use a "quota" type system where if one of the identified QDC's becomes "inactive" over a period like 3 or 5 years others are sought - I don't think anyone should ever be "uncertified" unless they do something unethical of course, but they could drop for an active to inactive status. The advantage to this would be an infrastructure of active QDC's that would have a "membership" (for lack of better term) and would be those who are anxious to use and share data.

Appendix I: Letter of Invitation

Hello:

We would like to invite you to participate in a pilot study to test and refine a program to certify data collectors as part of the Credible Data law also known as House Bill 43.

In 2003, Governor Taft signed into law House Bill 43. The law requires Ohio EPA to develop a new surface water quality monitoring system and adopt rules that establish criteria for three levels of "credible data" related to surface water monitoring and assessment. The rules are to be adopted in the very near future and specifically cover chemical, physical and biological water quality monitoring data concerning surface waters. The statute and the rules do not address ground water or finished drinking water.

The overall objective of the Credible Data Program is to promote a systematic use or application of data collected by other State agencies, local water pollution control agencies, and volunteer groups in an organized fashion that fits these basic purposes:

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Within each level of data collection the goals are to promote scientific understanding, to make sound decisions, and to increase public involvement in watershed protection and restoration.

You have been identified as a candidate for this pilot program because of your expertise and involvement in stream monitoring in Ohio. As participants of this pilot you will provide feedback for the refinement process for Ohio EPA to screen applicants seeking to collect credible data. The Qualified Data Collector (QDC) requirements are in the rules and we are striving to develop a well integrated and effective process to evaluate the applicants.

Participation in the program and the pilot study is voluntary. It will involve completing an application to become a qualified data collector at the level of your choice and then answering questions about your experience and providing suggestions for improving the process and developing educational programs to meet the needs of data collectors.

You'll have the option to submit the application for use in the pilot evaluation only (do not sign the application and instead write "mock application" if that is your intent), or to simultaneously request that Ohio EPA review and act upon the completed application. If you choose to fill out a mock application it will not be submitted for official review but will be used for the focus group discussion only.

Should you decide to submit your application for review you will be contacted by Ohio EPA to discuss the completeness of the application and given the opportunity to amend the application as necessary. Thus, participants in the this pilot program will have the opportunity to become the

first individuals in the state to become qualified data collectors; however we cannot guarantee that participation in the pilot study will lead to you becoming certified.

The first step is to visit http://www.epa.state.oh.us/dsw/credibledata/pilot_program.html and decide if you would be interested in becoming a certified data collector and/or participating in the pilot study. The next step is to contact Jeff Reynolds (jeff.reynolds@epa.state.oh.us or 614-644-3635) stating that you are interested. You will then be contacted by phone to confirm your participation and answer any questions you might have. Make sure to include your address and telephone number in your email.

The listening session will be moderated by a professional facilitator with Ohio State University Extension. A report of the listen session will be prepared and given to you and the Ohio EPA. The listening session will be held on Thursday March 9 at the Waterman Farm on Lane Avenue in Columbus Ohio from 2-4 PM. http://www.osu.edu/map/linkbuildings/dairyscience.html

If you cannot attend the listening session in person you will be asked to participate in a phone interview.

You may fill out any QDC application(s) that you think is appropriate for your education and/or experience level. We anticipate that the application for Level 2 certification will take at least one hour to complete. You will need to have information such a resume` handy (and may choose to attach such documentation to the application) in order to document your experiences and education.

Should you choose to participate in the Pilot Program, you should let Jeff know by March 1 and plan on completing your application by March 3. The focus group will meet at 2:00 PM on Thursday March 9 at Waterman Farm (Lane Avenue in Columbus). Ohio EPA will give you feedback on the completeness of your application. We expect the rules will become effective in late March and no official action (*i.e.*, approval or disapproval of applications) can take place before that time.

If you have any questions please do not hesitate to contact Ohio EPA (Jeff Reynolds at jeff.reynolds!@epa.state.oh.us or 614-644-3635) or OSU Extension (Anne Baird at baird.41@osu.edu or 614-292-8603).

Sincerely,

Anne Baird , Joe Bonnell, Jerry Iles - OSU Extension
Dan Dudley, Jeff Reynolds – Ohio EPA, Division of Surface Water