

Common Measures Project Initial Meeting, June 23, 2006

Location: EPA Lab, Chelmsford, Massachusetts

In attendance:

Tara Acker, NEWMOA
Thomas E. Armstrong, RI DEM
Ky Asral, NJ DEP
Rudolph Cartier, NH DES
Bill Cass, NEWMOA
Julie Marie Churchill, ME DEP
James Colman, MA DEP
Michael Crow, The Cadmus Group
Tom D'Avanzo, EPA New England
Steve DeGabriele, MA DEP
Ron Gagnon, RI DEM
Terri Goldberg, NEWMOA
Robert Isner, CT DEP
Thomas Killeen NYS DEC
Ira Leighton, EPA New England
Paul Lockwood, NH DES
Larry Matz, CA EPA
Marge Miranda, EPA New England
Suzi Peck, MA DEP
Brent Ranalli, The Cadmus Group
Victoria Schmitt, NYS DEC
Kathryn Stewart, CO DPHE
Beth Termini, EPA New England
Joyce Williams, CO DPHE
Susan Zampaglione, CT DEP

Welcome and Project Goals

Bill Cass:

Introduce NEWMOA, Terri, Tara

Ira Leighton:

EPA New England excited about this project.

Importance of:

- metrics,
- interstate collaboration,
- accountability & efficient use of resources,
- work that matters, motivates, inspires.

Introductions around the table.

Session 1

The Future State

Presentation by Steve DeGabriele

Phases of Project:

Phase 1: Organization and Development (June - Oct 2006)

- Kick-off meeting
- Summer Homework
- September Training

Phase 2: Decisions on Groups, Indicators, and Data (Jan 2007)

- Measurement and Statistical Check-in
- NEWMOA Directors Check-in

Phase 3: Data Collection and Transfer (2007-2008)

Phase 4: Data Analysis and Reporting

Goals for today's meeting: Orientation

- Understand short, intermediate and long-term goals of project
- Understand choices for data, indicators, and groups (no decisions yet)

Introduction of the day's agenda

Tom D'Avanzo: how does this project fit into larger measurement systems and initiatives

Steve: this is a demonstration project, to show that states can make a common measures program work. Possibility of input from EPA on how to make compatible with other programs, but that is not the focus.

Julie Churchill: Importance of always communicating that

Beth Termini: Value of "speaking the same language" as programs in larger community, EPA's role to facilitate that

"Future Vision" animating MA's proposal:

- ERP-type performance measures broadly and routinely used to make environmental program priority and resource allocation decisions.
- ERP-type measurement used to identify and adopt the most efficient environmental performance improvement strategies (states learning from other states)

Participating states should think about their own vision

Feedback:

Julie Churchill: importance of getting operations/enforcement folk on board

Expected Outcomes:

Short-term:

- Agreement on groups to be measured and performance indicators by which they will be measured
- Increased knowledge of measurement options data collection issues and results presentation

Intermediate-term:

- Presentation of participating states' performance indicator data
- Comparison of performance levels of groups and differing strategies

Long-term:

- Increased use of ERP
- States will use the information gained in the project going forward in their work

Beth Termini: value of the logic model development process

Potential Misconceptions:

- Not creating a grand, common ERP
- Focus on ERP-type measurement only

Clarifications:

- Challenge of comparing ERP and semi- or non-ERP data
- Sharing of ERP materials is useful, but not a goal of the project

Commitments to EPA:

- Routine progress reports
- Final project report

Victoria Schmitt: possibility of performance credit?

Steve: reduced inspections granted by EPA based not only on presence of ERP but also history of good performance

Ira Leighton: EPA values efforts to reach small sources that do not show up on EPA's own regulatory radar.

Understanding Data Choices, Characteristics, Limitations

Presentation by Suzi Peck

Four Questions to Answer in Phase II:

- Groups
- Indicators
- Data
- Sources of Data

The last two issues (data and sources of data) are focus of current presentation

Quality of data needs determined by intended use of data

Environmental Quality Data v. Performance Data

Tom D'Avanzo: OMB also interested in human health data. Will that play a role here?

Suzi: Human health data are valuable, but unlikely to be used in this project.

Michael Crow: Ok to use performance data to estimate environmental quality data, similar to Massachusetts DEP tools that do so?

Suzi: Yes, that could be done in this project.

Primary v. Secondary Data

Distinction between your data and someone else's data

Michael Crow: in discussion with EPA regarding SIG projects, the following distinction was settled on: whether data were collected for the purposes of this project (primary) or for some other purpose (secondary).

Suzi Peck: Key is how much control you have and choose to exert over the quality of the data, whether primary or secondary, and how much quality is necessary for each type of data to make the decisions necessary.

New v. Existing data

Data Quality Indicators:

- Precision (e.g., problems with measuring a child's height twice in one day). Trade-off with sensitivity--measuring tons v. measuring pounds. Better precision when environmental indicators are measured in large increments, when business indicators are concrete & well-defined.
- Sensitivity (e.g., problems with using a bathroom scale to measure postage, to measure newborn baby). Better sensitivity when environmental indicators are measured in large amounts in small increments, when business indicators are measured as discrete values (e.g., "Y/N").
- Representativeness. Better representativeness when collecting new environmental indicator data, when using primary business indicator data.
- Comparability. Important for this project. Better comparability when data are new, collected over a short period of time, by fewer people at fewer agencies.
- Completeness. Also very important for this project.
- Bias.

Quality of data collection and analysis

- Validation
- Verification
- Integrity

Beth Termini: what is the difference between validation and verification?

Suzi: validation is things like taking control samples, verification is things like checking lab results

Michael Crow: validation takes place more in the field, verification takes place more in data processing phase

Brent Ranalli: validation checks process, verification checks data

Rudolf Cartier and Julie Churchill and Steve DeGabriele: challenge of deciding what is adequate in terms of data quality for this project.

Beth Termini: MA went through this process and challenge already

Tom D'Avanzo: how to handle the issue of new data v existing data

Suzi: This project has to be integrated into existing programs, so it is not expected that every state will collect entirely new data. Might be enough to tweak existing programs, might need to do something new.

Terri Goldberg: what about transparency issues?

Suzi: details will be laid out in QAPP

Steve DeGabriele: overriding concern, when evaluating data goals, is the credibility of the project. Data should be available for third-party review.

Julie Churchill: Importance of working with operations folk to develop indicators that work.

Suzi: Also important to learn from mistakes, if something doesn't work.

Michael Crow: Benchmarking between states and aggregating across states might require data of different quality, e.g., comparing new and old data might be ok for benchmarking, but not for aggregating.

Suzi: Even if states use old data initially, they might collect new data going forward.

Challenge of voluntary programs v. mandatory programs

Beth Termini: Collecting data from participants and non-participants in voluntary can provide picture of whole sector

Julie Churchill: ME does that, but thinks mandatory would be preferable. Quality may be better that way.

Beth Termini: there's voluntary, and there's "voluntary with incentives" like RI does

Michael Crow: this question, trade-offs between mandatory and voluntary programs, is something that will have to be addressed in concrete instances during project

Tom D'Avanzo: don't discount usefulness of secondary data, e.g., solvent purchases, energy use.

Session 2

Understanding Indicators

Presentation by Steve DeGabriele

Project will select a set of indicators to measure environmental performance of group(s)
(easier than trying to measure everything)

Measurement of performance at a point in time v. measurement of changes in performance over time

Types of Indicators:

- Activity measures (does facility have x procedure in place?)
- Outcome measures (how much effluent?) not necessary to use an "ultimate" measure, like lives saved

- Regulatory measures. Easy to measure, but limited in scope. Leaves out P2, beyond-compliance.
- Beyond compliance measures

Key considerations:

1) Value of measure v. feasibility

2) Who should pick measure? Input from regulated community? From public? That provides more transparency, but is more resource-intensive

Julie Churchill: some agencies have done this.

Steve: MA didn't, but there was no problem with public acceptance of measures.

Terri Goldberg: is it a bad idea to ask regulated community to help pick measures?

Steve: Theoretically, risk is that industry may change their behavior if they know in advance what the indicators are, and neglect areas of performance that are not measured. MA found that performance on tracked indicators matched environmental performance generally.

Michael Crow: if you've picked the right indicators to represent the most important aspects of performance, maybe you shouldn't be worried about other aspects of performance?

3) Just regulatory indicators v. mixed regulatory and beyond compliance indicators. Some people are uncomfortable with mixing.

4) How many indicators? Too much data can be counterproductive.

Michael Crow: states can use additional indicators beyond what their group agrees on, if they want.

Steve: with automation, MA is considering adding additional indicators to historical list of indicators

5) Data availability and quality considerations. Pick indicators first, or look at data availability first?

6) New data required?

7) Key question: Would these indicators adequately reflect professional judgment about a facility's performance?

Additional considerations:

- What do the indicators leave out?
- Are practices by indicators not covered less important? unimportant?
- What if indicator performance and compliance rates don't jive?
- ERP allows agency to identify and focus resources on areas with poor performance
- Design indicators to allow the computation of group performance measures

Julie Churchill: MA and other states with ERP experience may have indicator expertise that newer programs can draw on, MA shouldn't be shy about leading.

Kathryn Stewart: CO adapted MA's indicators approach, for auto body and RCRA SQGs, and found Colorado's chosen indicators to accurately reflect compliance rates.

Ron Gagnon, Beth Termini, Steve: Differences in RI's approach to indicators and data. RI collected lots of data and then looked to see what would be the best indicators (in terms of which ones have the most statistical confidence associated with them), while MA picked indicators first and then collected data.

Michael Crow: suggest thinking about "best indicators" primarily in terms of indicators that are most important from an environmental perspective. Poor statistical confidence does not necessarily mean an indicators that. For instance, UIC wells may be rare in auto body shops, which makes statistical generalities a problem, but they may be significant sources of pollution that could be worthwhile to track.

Suzi Peck: it's often worth tracking environmentally important indicators, even if the data are not statistically significant

Michael Crow: statistical significance may become evident in trends over time, even if it is not apparent in a snapshot of performance in the second sample

Julie Churchill: can some requirements (hazardous waste, OSHA) be correlated with "lives lost" risk?

Suzi Peck: MA did some work on that.

Steve: But crossing boundaries and getting other agencies involved (e.g., for worker safety) multiplies the difficulty of the project

Ky Asral: shouldn't ERPs involve indicators of a variety of types (e.g., regulatory compliance, P2, outcomes, activities), rather than just one type?

Beth Termini and Steve: Often ERPs do use a range of types of indicators.

Michael Crow: Is it worth talking about how many indicators are to be expected?

Steve: Depends on the group. Could be anywhere from 5 to 100.

Beth Termini: Maybe 10.

Michael Crow: Important to consider process of developing indicators, and whether each indicator for a particular sector will require a lot of work.

Choice of Groups and Indicators

Presentation by Suzi Peck

Factors to consider include:

1) Complexity of group: Diverse facilities and a large universe make it harder to collect good data

Steve DeGabriele: also large number of processes (e.g., printers, as opposed to dry cleaners) makes it hard to collect data

2) Experience with group: A new group, a new data system, lack of common definitions, checklists, or historical data all make it harder to collect good data

3) Complexity of indicators: Multi-media indicators, a mix of regulatory and beyond-compliance indicators, indicators that are based on multiple or subjective regulatory requirements all make it harder to collect good data

Other factors to consider for picking indicators in this project?

Terri Goldberg and Robert Isner: differences in requirements from state to state

Julie Churchill: differences in # of facilities in a sector from state to state

Ky Asral: how many groups will there be?

Steve: One or more

Beth Termini: Are states allowed to participate in more than one group if they want? Can they decide to participate in only one group if they are eligible for more than one?

Steve DeGabriele: That's entirely up to the states

Rudolph Cartier: Is it possible to establish a general template for future ERPs as a product of this project?

Steve DeGabriele and Suzi: A general template would be difficult unless it is sector-specific. Certain lessons (like what questions to ask for particular media) might be transferable across sectors.

Michael Crow: can you clarify, why is a project with a large universe harder than a project with a small universe?

Suzi: Because you can do a census of a small universe

Rudolph Cartier: A larger universe of SQGs is easier than a smaller universe in the sense that it allows comparison of total emissions in terms comparable to LQGs

Steve DeGabriele: Including more facilities lowers the per-facility measurement cost

Additional considerations that affect the choice of sectors to study:

- Compliant sectors v. problem sectors
- Language barriers

Brainstorm of sectors

To add to Suzi's list:

- Auto body
- Auto repair
- Dental
- Used oil handlers and recyclers
- Electronics recyclers
- Furniture strippers
- Radiator repair
- Metal fabricators

- Spray booths
- Boat builders
- Portable minor air sources
- Municipal operations
- Etc.

Suzi will distribute the expanded list.

Overview of September training

Presentation by Steve DeGabriele

Content of September training:

- Use of statistics
- Principles of good data collection
- Identification of sampling frame (universe of facilities)
- Data quality indicators
- Quality considerations specific to the use of secondary data

Michael Crow: Will the September training will cover data verification and validation?

Steve DeGabriele: Only in a limited way. The bulk of training on those issues will be provided later in the project, during the data collection phase.

Choice of groups. Organizers envisioned picking groups after September meeting

Paul Lockwood: suggest focusing on sectors and indicators with most easily available data, lowest cost

Susan Zampaglione: challenge of comparing data collected by very different programs

Suzi Peck: we might not be able to compare self-cert and inspection data

Terri Goldberg: suggest drawing on ERP experience in the Region, learning from what others have done.

James Colman: Focus of the project is on establishing common measures, so it is not necessary to choose sectors with the greatest environmental impact (which might be too challenging for starting out)

Michael Crow: Make some provisional decisions about groups in advance of September training? May make the training more valuable

Suzi Peck: On the other hand, having a large number of possible groups in mind may enable the training to capture more issues

Summer plan. Tara will check in with every state during the summer

Beth Termini: how will DQI discussion in September be different than Suzi's presentation today?

Steve: it will be more concrete, discussed in the context of specific groups and indicators

Michael Crow: One would expect there would be increased depth of discussion, even for the same quality issues, as participants become more familiar with them and think about them in the context of the homework.

[General discussion about whether all states will be able to collect new data, because of resource constraints.]

Michael Crow: would EPA be willing to donate EPA inspector man-hours to project?

Tom D'Avanzo: probably not. Contractor man-hours maybe, but not clear where money would come from

Julie Churchill: state agencies have already set budgets for this year, it will be difficult for the states to find inspector man-hours

Susan Zampaglione: same concern

Beth Termini: true, but funds can be allocated to meet goals of this project in the following two years.

Tom D'Avanzo: in straightforward cases, interns could collect data, even if such data collection is not a formal "inspection"

Steve: that could work, flexibility in thinking about how to meet project goals is important

Ron Gagnon: if states really want EPA to donate resources to project, they should make and justify a concrete proposal

Michael Crow: Benchmarking seems to be the priority for this project, but if aggregating results were the priority instead, inspection burden per state would be reduced because the sample size each state would need to contribute would be less than if state-to-state comparisons were the priority.

Suzi Peck: Goal is more likely to be comparisons among states, not aggregation. Extending the time frame for data collection may help ease burdens by giving more time to do inspections and may not significantly impact quality.

Robert Isner: Interest in lessons learned from MA, and how to sell ERP to traditionalists at agencies

Steve: difficulty increases as you cross organizational lines

Tom D'Avanzo and Suzi Peck: Example of cross-agency communication issue. To Tom, "inspection" is a site visit performed by a trained, credentialed individual to determine compliance. To Suzi, "inspection" is any kind of site visit.

Beth Termini: in early ERPs, having site visits done by trained inspector was an important selling point for EPA

Wrap-up and Next Steps

Suzi Peck introduces homework: two charts to be filled out. Sheet one about sectors for which a state has data or interest in collecting data. Sheet two to help states think about indicators for those sectors.

Terri Goldberg: request electronic copy of sheets, plus list of candidate sectors. Request filling out one as an example. Suggest that these resources may be useful to states even beyond their use for the common project.

Thomas Killeen: suggest states give feedback not only about the sectors they want to do, but also about the ones they simply can't do. Also, EPA has long-running initiatives with some sectors that might bias data.

Joyce Williams: suggest talking today about what sectors people are interested in

Paul Lockwood: some states might not have enough info right now to say, would need to consult with others at their agency.

Beth Termini: timeframe for completing homework?

Suzi Peck: first get info on sector interest and ability to NEWMOA by August 1, then fill out sheets.

Michael Crow: consider postponing September training?

[Group discussion: October-December timeframe presents too many other conflicts, so training needs to be in September.]

Joyce Williams: one month should be plenty of time for preliminary reporting on sector interest

Beth Termini: process dragged out to long? Won't first sheet be needed to make August 1 decisions?

Steve DeGabriele: aim for August 1, NEWMOA/MA will collate and share the info. All sheets should be done in time for training towards the end of September.

Terri Goldberg: Communications strategy. Create a listserv? A bulletin board on NEWMOA website? A webpage with links?

Suzi Peck: what's easiest?

Terri Goldberg: Listserv and webpage are easiest.

Consensus that a webpage and listserv will be needed, plus conference calls.

Preliminary statements of interest:

- CT (R.I.): exterior lead paint removal contractors, used oil handlers & processors
- CO: SQGs, hospitals
- CT (S.Z.): SQGs
- NY: printers, auto body, RCRA (SQG or any other size generators)
- ME: [not recorded]
- NH: RCRA, auto body, auto salvage, municipal waste facilities
- CA: USTs
- RI: Stage II vapor recovery, auto salvage/junkyards
- NJ: dental amalgam, auto body
- MA: SQGs, air minors, stage II vapor recovery, dry cleaners, dental amalgam, other past and present ERPs, LQGs, marinas, boatbuilders, auto dealerships

Susan Zampaglione: we all do RCRA generators--this looks like a common interest.

Victoria Schmitt: any preference from organizers on single media v. multi media?

Suzi Peck: ideally, it would be nice to do one of each.

Steve DeGabriele closes meeting.