Proceedings Summary Report

National Symposium

Designating Attainable Uses for the Nation's Waters

June 3-4, 2002

Marriott Wardman Park Hotel, Washington, DC

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DISCLAIMER

This report provides a basic overview of the EPA-sponsored national symposium entitled "Designating Attainable Uses for the Nation's Waters" held on June 3-4, 2002 at the Marriott Wardman Park Hotel in Washington, DC. The information presented reflects summary notes taken during the meeting by the contractor, Great Lakes Environmental Center, and is not intended to quote any speaker/participant at the symposium.

Draft Summary Report

National Symposium: Designating Attainable Uses for the Nation's Waters
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Marriott Wardman Park Hotel, Washington, DC

EPA's Office of Science and Technology (OST) is responsible for overseeing the national water quality standards (WQS) program. As part of their water quality standards programs, states and authorized tribes must establish appropriate protection levels or "designated uses" for each of the waterbodies in their jurisdiction. Many interested parties have expressed to EPA the need for additional guidance on designating uses for waterbodies (e.g., aquatic life, recreation, navigation) and the process to follow when making designated uses more or less protective.

In order to hear stakeholder views on this subject and to examine the possibility for development of guidance for use designation, EPA sponsored a national symposium entitled "Designating Attainable Uses for the Nation's Waters" on June 3-4, 2002 at the Marriott Wardman Park Hotel in Washington, DC. Approximately 200 interested citizens, government officials, and regulated parties attended this open meeting. (The attendee list is available on EPA's web site at: http://www.epa.gov/waterscience/standards/symposium/registlist.pdf.) EPA assembled an expert panel representing different viewpoints to share their perspectives, and invited stakeholders to submit abstracts on a variety of topics concerning designated uses. Based on these abstracts, the Agency selected speakers who gave brief presentations at the symposium.

The format for the symposium was as follows:
Day 1- Expert panel presentations with comments and questions in the morning followed by stakeholder presentations in the afternoon.
Day 2- Small group discussions in the morning with additional stakeholder presentations in the afternoon.

This report summarizes the presentations and discussions at the symposium.

Monday June 3, 2002

The symposium opened with a statement by Geoffrey Grubbs, Director of OST. Mr. Grubbs explained that the Clean Water Act (CWA) requires states and authorized tribes to establish water quality standards, of which designating the use of the waterbody is a critical component. He also explained that the symposium was designed to be a listening opportunity for EPA, and that EPA does not plan to introduce new policies or propose new initiatives for regulatory change. Mr. Grubbs also stated that EPA recognizes the complexity of issues surrounding designating attainable uses, and that EPA appreciates the views and opinions received from the stakeholders.

Opening remarks continued with an overview statement from the meeting organizer, Cara Lalley of OST's Water Quality Standards Branch, describing the purpose of the symposium. Ms. Lalley explained that the goals of the meeting were to enable information exchange among stakeholders that might help resolve key questions concerning use designations, and to help EPA understand the diversity of views concerning use designations. She also stated that EPA is considering developing guidance for states and tribes addressing those key questions.

The schedule and ground rules for the symposium were then explained by the symposium facilitator, Jan Connery of Eastern Research Group (ERG).

1.0 EXPERT PANEL PRESENTATIONS

Each of seven expert panel presenters was asked to speak for approximately 5-8 minutes about the one or two actions that they would most like to see EPA take in the near future regarding designated uses, and why. Their comments are summarized below.

1.1 Leonard Shabman, Director, Virginia Water Resources Research Center at Virginia Tech and Committee Member of the June 2001 National Research Council Total Maximum Daily Load (TMDL) Study

- Monitoring data should be compared to designated uses (There needs to be a better connection between monitoring and the design of water quality standards; don't design a standard that includes criteria that cannot be measured using current monitoring techniques).
- A Use Attainability Analysis (UAA) is used to define water conditions, not to degrade water quality requirements. UAAs are not always for designated use downgrades.
- EPA must better communicate with interested parties, and water quality goals should be subject to revision. (The need for a UAA is a "social determination" that involves the public. Long-term use attainment decisions are not always possible. Therefore, we must take short-term steps toward water quality improvements and they must involve educating the public about what water quality standards are desirable *and* achievable.)
- EPA should seek out advice from experts in the academic arena when developing water quality guidance, particularly from economists when giving guidance on CFR 131.10(g)(6).

1.2 Mary Buzby, Director of Environmental Technology at Merck, representing the American Chemistry Council

- Use designation is a good concept, but there are flaws.
- National designated uses (fishable/swimmable, recreation, etc.) are not differentiated sufficiently for regulatory purposes. (National EPA policies don't allow for enough local specificity).
- There is a need to further refine use designations to reflect highest attainable uses. We should strive for the highest attainable water quality, not an unrealistic pristine condition.
- When waterbodies are segmented for water quality standards, the different segments should reflect different uses.
- There is a lack of clarity from EPA about how use designations should be established, and there are too many delays in the regulatory process regarding UAAs and use changes.
- A weight of evidence approach is needed when evaluating use attainment, rather than independent applicability (i.e., independent evaluation of chemical, biological, or physical data).
- Something must be done to solve conflicting public mandates between ensuring high water quality and protecting other aspects of public health and safety (e.g., swails beside roads drain snowmelt after salting, but the high levels of salt in the water prevent fishable uses).

1.3 David Katz, Deputy Water Commissioner of the Philadelphia Water Department, representing the Association of Metropolitan Sewer Agencies (AMSA)

- Designated uses, monitoring, TMDLs, etc. are all interlinked (but TMDL calculations are often not well developed). Designated use reviews should be formally incorporated into the TMDL process.
- Use designations often get lost in the water quality standards program. Statewide "blanket"designations of 101(a)(2) uses have a different regulatory significance today than they did when they were established in the 1970s. CFR 131.10(g) is too stringent to remove these improper designations.
- States say that they need flexibility and that designated uses need revisions.

1.4 Nina Bell, Executive Director, Northwest Environmental Advocates

- EPA's emphasis on downgrading use designations is not responsible.
- The Bush administration focuses on attainability ("almost there") rather than on attainment ("there") of water quality standards.
- The inadequate broad use designations currently applied across the country are sufficiently vague so as to avoid applying the most protective criteria (especially for protecting endangered species).
- EPA should persuade states to upgrade rather than downgrade use designations. When states do not complete triennial reviews on time, EPA should use the opportunity to promulgate use upgrades.
- Antidegradation guidance is needed more than use designation guidance, and should be EPA's top priority.

1.5 Tony Shaw, Water Pollution Biologist, Pennsylvania Department of Environmental Resources

- Pennsylvania traditionally focused on chemical and point-source pollution, but has recently switched its focus to non-point sources of pollution and using biological assessments when determining water quality standards.
- Most of Pennsylvania's use reviews have been for aquatic life uses, and 95 percent of them have resulted in no change or an upgrade in use.
- Original designated uses from the 1970s are not particularly accurate; there are now some localized discrepancies with the blanket designations. Some streams have never attained their designated use (e.g., cold water fishery).
- Pennsylvania needs EPA guidance on how to designate recreational and human contact uses.
- States need guidance and flexibility. They are caught between EPA mandates and satisfying the public.

1.6 Robert Moore, Executive Director, Prairie Rivers Network

- Use designations drive water quality standards.

- UAAs are not a form of regulatory relief.
- EPA guidance should be on how to properly document uses of waterbodies and how to meet CWA goals, not on how to downgrade uses.
- States should seek the advice of EPA through guidance that already exists, such as technical support and antidegradation documents.
- Wishes to see upgrades rather than downgrades in designated uses.

1.7 Rick Moore, President of Rizzo Associates, representing the Water Environment Federation

- The Clean Water Act is a premier legislative act, and no one wants to compromise Section 101(a)(2) uses. But interpreting the "where attainable" clause is the key.
- Attainment of a designated use 30 years ago is not the same as attainment now.
- There is a disconnect between the costs and benefits of wet weather programs; the public and politicians don't understand how cost-benefit analysis works.
- There is a need for temporary standards during rain events because water quality standards are violated during almost every wet weather event.
- We should remove the existing use concept and focus on designated uses.

1.8 Questions and Responses Concerning the Expert Panel Presentations

After the panel presentations, symposium participants were given the opportunity to ask questions of the expert panel members. The questions and panel responses are summarized below.

Question 1: **"Dischargers" have made arguments to gut the CWA and 131 regulation, yet we can't get rid of the Clean Water Act. CFR 131.10(h) has been forgotten. Triennial reviews must assess downgraded waters, and the CWA calls for restoration of waters. What is the polluters' argument for downgrading water quality standards?**

***Response*:** Practicality motivates dischargers to look for use changes. Dischargers haven't been able to make all water quality improvements, but they've made incremental improvements and would like to make more, rather than staying at zero improvements (i.e., an unattained use) due to semantics in the regulatory language.

***Response*:** Industry invests in clean water, relies on it, and has no intention to destroy it. But we want to get the use right. That doesn't mean downgrading or upgrading, until the science is done to determine which is appropriate.

***Response*:** A change in a use designation is not necessarily a downgrade.

***Question 2*: What data are needed to remove a designated use?**

***Response*:** Perhaps the question that should be asked is: how do we make uses more precise, not downgrade or remove uses. So first refine uses to some extent (e.g., as simple as cold vs. warm water fishery).

***Response*:** We need the same data and models utilized for TMDL calculations.

***Response*:** Social issues need to be included as well.

***Response*:** We need the existing use concept to motivate us to upgrade use designations. Giving up on that concept would be giving in to the status quo of allowing water to be degraded.

***Question 3*: How do we reconcile when existing uses are greater than designated uses?**

***Response*:** We need to involve more lay people in watershed decisions.

***Response*:** We can't always rely on the public to give accurate answers.

***Question 4*: It's not true that all use designations apply everywhere, because some streams are not that easy to characterize. To resolve this, should EPA come up with a checklist approach for use attainability?**

***Response*:** There is a value to a checklist approach, however a watershed approach is more desirable.

***Response*:** Checklists can be good, but if they lead to restrictions, then they are bad.

***Response*:** A "cookie-cutter" approach is not a good idea for use attainability.

***Question 5*: How would it be helpful to balance regulatory requirements (i.e., provide more flexibility)?**

***Response*:** There is a need to balance water quality improvements with costs and benefits.

***Response*:** If we can't meet the use, is it proper to begin with?

***Response*:** If standards and uses are not met, then it's difficult to be flexible [under the CWA and its implementing regulations].

***Question 6*: What are the national trends in upgrading use designations, and why should there be more flexibility by EPA?**

***Response*:** National trends are difficult to comment on, but in Pennsylvania most uses are upgraded.

***Response*:** There should be more flexibility because the states are attempting to refine use designations, and this takes time.

***Response*:** Communities do need to follow the rules, but some flexibility is needed.

***Response*:** Flexibility allows for a shift from regulatory issues to other important issues.

***Question 7*: What are the problems associated with the use of biological data and reference sites?**

***Response*:** Least disturbed sites become the standard when they are not necessarily comparable to other sites.

***Response*:** There are other issues with protocol, statistics, etc. that are of concern.

***Response*:** There are problems with excessively "strict" or "loose" reference sites.

***Question 8*: What can we do when cost/benefit analyses don't favor the benefits and how do we involve the public?**

***Response*:** The public generally wants to spend money for pollution control, so we need to explain the benefits that would be obtained.

***Question 9*: How much do we really need an existing use, and how can we define biological and human uses?**

***Response*:** We need to protect existing uses.

***Response*:** If we don't have an existing use, then we don't know the restoration benchmark.

***Response*:** We don't have complete toxicity data for protecting existing uses.

***Response*:** There are different processes for designating human and biological uses, and it's not "one size fits all."

2.0 ABSTRACT PRESENTATIONS

Prior to the symposium, participants interested in being presenters submitted abstracts describing case studies or new approaches addressing specific topics regarding use designations. Of those abstracts submitted, a representative number were selected to present different perspectives on a variety of issues. A brief summary highlighting the key points of each presentation is provided below, and a copy of each abstract is available on EPA's web site at:
http://www.epa.gov/waterscience/standards/symposium/abstracts/
(EPA received a large number of abstract submissions, and was not able to select them all for presentation at the symposium due to time constraints. However, EPA has posted many of the abstracts that were not selected on the above web site.)

2.1 Jodi Perras, City of Indianapolis Department of Public Works

Reconciling Policy with Reality: Applying a Common Sense Interpretation of "Existing Use" for Recreation in a CSO-Impacted Urban Watershed

Ms. Perras introduced her presentation by stating that the City of Indianapolis supports and upholds the principles underlying the Clean Water Act, including the antidegradation principle and the need to provide the greatest protection to existing uses of the nation's waterways. As part of this effort, Indianapolis is preparing a long-term control plan to address long-standing combined sewer overflow (CSO) problems, and an accompanying UAA. The UAA will seek to demonstrate that any remaining CSO discharges will contribute to violations of water quality standards for bacteria, and that complete elimination of those discharges will cause widespread

economic and social impacts on the community. Through the UAA, they will be proposing a temporary suspension of the designated full-body contact recreational use on CSO-impacted streams during and after wet weather events. When trying to determine an existing use, EPA policy says "a state may remove a designated use from its water quality standards only if the designated use is not an existing use." An existing use is a use actually attained in the water body on or after November 28, 1975, whether or not they are included in the state's water quality standards. However, the term "actually attained" is not defined. Therefore, how should the city of Indianapolis and the State of Indiana determine whether a use has been "actually attained?" In an urban watershed, they believe the following factors should be considered in making this determination:

- Is the water quality and hydrology of the streams conducive to full-body contact recreation?
- Are there physical barriers making it difficult for people to access the stream?
- Is swimming or other full-body contact recreation specifically authorized or enabled by the city (e.g., does the waterway contain public beaches with lifeguards)?
- Does the city discourage contact with sewage-contaminated waterways through warning signs or other public education programs?
- How frequent and widespread are any unauthorized recreational uses of an urban stream?

Thus, EPA, states and CSO communities must meet on common ground to be most efficient. Everyone must strive for full protection of an existing use. Finally, there must be a national, common sense definition of "existing use" and "actually attained".

2.2 James Woodworth, Urban Water Specialist, Natural Resources Defense Council

Balancing Bathers and Bacteria: Managing Recreation, Wet-Weather Flows and the Legacy of a Combined Sewer System in the Nation's Capital.

Mr. Woodworth first gave a brief historical account of the Washington, DC combined sewer system which is outdated and overflows approximately 75 times in an average year, discharging over 3 billion gallons of untreated combined sewer effluent and storm water during rain events. In an attempt to address this issue, a Long Term Control Plan (LTCP) for CSOs has been drafted that proposes to reduce by a very large percentage both the frequency and volume of overflows occurring in District waters. Yet, in striving to balance economic realities, engineering constraints, and climatological uncertainties, the proposed plan will not meet existing water quality standards all of the time. The plan instead proposes to modify water quality standards so that the standards can be met or relaxed during wet-weather events. All of the waters of the District of Columbia are classified for *designated uses* of Class A waters, fit for primary contact recreation, but none of those waters are now classified for *current uses* of Class A waters. However, the Washington, DC CSO system is designed to overflow, and separation will not address storm water runoff. CSO controls alone won't fix an inter-jurisdictional watershed

problem. He recommended that a well-intentioned and balanced use attainability analysis should engage and address the recreational needs, desires and visions of the local community. It should consider the limits of technology with the realities of recreation, which, in the context of wet-weather high flows and elevated bacteria levels, do not necessarily consider the weather report. In summary, water quality standards should be reevaluated only after a comprehensive long term control plan has been designed, approved and implemented. Provisions should be made to monitor progress and upgrade the plan as necessary. Any remaining discharge of combined sewer overflow should receive at least a minimum level of treatment. Short-term measures should include the institution of a single-sample maximum numeric standard, real-time water quality monitoring and public notification analogous to the now common-place hazardous air quality ozone alerts.

2.3 Warren Kurtz, New York City Department of Environmental Protection and John St. John, HydroQual, Inc.

New York City's Use and Standards Attainment Project

Mr. St. John summarized New York City's Use and Standards Attainment (USA) project, which is a $13 million multi-year watershed planning project designed to evaluate all of the causes of non-attainment of water quality standards and opportunities and requirements for maximizing beneficial uses. This approach involves conducting waterbody/watershed assessments of more than 20 waterbodies in the New York Harbor complex. In addition, the New York City Department of Environmental Protection (DEP) is implementing a multi-phase program to address the impacts of CSOs and water pollution control plants on these waterbodies. However, even with very large capital expenditures on major CSO projects and some improvement in numerical values of key water quality parameters, full attainment of beneficial uses may not be achievable in many cases. Thus, should CSO facilities be expected to attain "fishable/ swimmable" water quality in all tributaries if elimination of CSOs by sewer separation would not? In summary, New York City is committed to the goals of the CWA and abatement of CSOs and other polluting dischargers. However, "fishable" and "swimmable" everywhere, all the time, may not be necessary to achieve these goals. Pollution controls should be considered satisfactory in some cases if basic water uses are protected.

2.4 David Yaussy, Robinson and McElwee LLP

Protecting What Doesn't Exist: West Virginia's Statewide Public Water Supply Use Designation

As presented by Mr. Yaussy, the West Virginia Environmental Quality Board (WVEQB), the agency that sets West Virginia's water quality standards, applies the public water supply use in

all state streams, regardless of whether the stream is used as a drinking water supply (to protect those individuals that consume water directly from streams). Implementation of this policy could lead to significant differences in some cases between the criteria for the public water supply use and the mandatory Clean Water Act fishable/swimmable uses. Rather than identifying public water intakes and setting upstream controls as appropriate to protect them, WVEQB is proposing to remove the public water supply use where it would interfere with industrial or municipal operations. The WVEQB understands that its current strategy for designating the public water supply use is limiting and has concerns regarding the time frame for approval of use re-designations (the EQB is working on a procedural rule that will expedite methods for removing the public water supply use designation). Mr. Yaussy recommends that EPA allow states flexibility to remove of use designations in areas where it does not exist or will not exist in the foreseeable future. More specifically, he proposes that states may remove, without a use attainability analysis, a designated use that is not an existing use and that is not a use designated to protect fish, shellfish and wildlife, or recreation in and on the water (Section 101(a)(2) CWA).

2.5 Robert C. Wieland, Main Street Economics

Does a UAA Require "Least-Cost" Attainment?

When dealing with cost issues, UAAs have traditionally held polluting entities to a least cost standard, focused on a single polluter or a single, well-defined group of polluters. However, in an expanded UAA, the range of pollution sources, abatement technologies and payment options is significantly broadened. Assessing the costs of attainment for an expanded UAA is, consequently, more complicated. Thus, should those costs and practices be optimized with respect to cost-efficiency? If they are not, then the least cost option for attainment is not likely to be met. Cost curves and cost-effectiveness should be incorporated into UAAs more often. Least-cost attainment can be useful for large municipal systems, but more refinement needs to be completed. Finally, funding for abatement should be addressed to evaluate affordability.

2.6 Chris Yoder, Midwest Biodiversity Institute and Committee Member of the June 2001 National Research Council TMDL Study

The Importance of Tiered Aquatic Life Uses and Adequate Monitoring and Assessment to the Routine Performance of the Use Attainability Analyses

Based upon standard monitoring and assessment techniques, the Ohio Environmental Protection Agency (OEPA) determines the extent to which use designations assigned in the Ohio WQS are either attained or not attained for a given water body. Since 1990, the OEPA has utilized a tiered aquatic life use approach to adopt biological criteria. The implementation of biological criteria

introduces a process in which the UAA is a fundamental component. The data and information to support aquatic life UAAs is produced by the systematic monitoring and assessment of biological, chemical, and physical indicators via a rotating basin approach. This approach employs an adequate set of standardized and calibrated biological assessment tools supported by appropriate chemical and physical indicators. An integrated analysis of resource quality and attainment status, delineation of causes and sources of threats and impairment, and recommendations for management actions are produced for each assessment. This includes recommendations for any changes to use designations that might be appropriate, which is then followed by a WQS rulemaking process. Thus, by including tiered uses linked to biological criteria and supporting chemical and physical indicators, the UAA process becomes a matter of comparative routine rather than a resource intensive endeavor.

2.7 Jeroen Gerritsen, Tetra Tech, Inc.

Using Watershed Ecological Risk Assessment to Improve Use Attainability Analyses

As explained by Mr. Gerritsen, designated uses are often assigned by regulatory agencies without complete knowledge of a given waterbody due to resource constraints. In many cases it is not clear whether the designated use is appropriate because there is a lack of data and/or ambiguities in the way some uses are defined. However, the use of EPA's recently developed watershed ecological risk assessments can be used to address these deficiencies in the UAA process in a systematic and scientifically defensible manner by involving watershed-specific stakeholders in defining the assessment process and considering potential multiple stressors. The attributes of the watershed ecological risk assessment lend themselves to the process of defining designated uses. Using the EPA sponsored Clinch-Powell River basin (Virginia) watershed ecological risk assessment as an example, several methods for improving the UAA process and designation of uses were presented.

2.8 Albert Ettinger, Environmental Law and Policy Center of the Midwest

An Environmentalist Perspective on Use Attainability Analysis and the Lower Des Plaines UAA

The portion of the Des Plaines River below its confluence with the Chicago Sanitary and Ship Canal historically has had very poor water quality as a result of various wastewater dischargers and channel modifications, and has been classified as "Secondary Contact and Indigenous Aquatic Life." The great improvement in water quality that has occurred in the last three decades makes it possible now to consider upgrading the designation of the Lower Des Plaines to "General Use." The UAA being performed on the Des Plaines River is unique because it is attempting to determine whether the current classification (lower than

fishable and swimmable use) should be upgraded due to the increased value placed on the water body in recent years. Clearly there is a need for public participation in the UAA process and there should be a strong bias under the Clean Water Act against designations that are less than fishable and swimmable. It is important to consider the uses that could be hoped for, based on the modifications present within the system and the legal and economic standards set forth by 40 CFR 131.10(g).

2.9 Charles Potts, Oklahoma Water Resources Board

The Public and the Use Attainability Analysis

As described by Mr. Potts, the UAA procedure in Oklahoma has evolved over the past 20 years from a one dominated by "sensory" determinations (sights and smells), to one that is highly quantitative with distinct data objectives and measurements. Determining what questions need to be answered and what measurements are needed to answer those questions is a major step in determining which beneficial uses are appropriate for any given stream. The current assessment methodology that is reproducible and quantitative makes three assumptions with regards to beneficial uses. First, not every stream will be capable of supporting the same type of biota. Second, if the habitat is there, the climax community will find a way to colonize it. Finally, lack of a certain water depth eliminates the need for a primary body contact designation. Thus, the use of the methodology (detailed transect descriptions along streams, flow charts and equations) has significantly reduced the subjectivity involved in the UAA process.

2.10 Gayle Killam, River Network

Public Involvement Challenges from Around the Country

River Network is a national support organization to watershed groups throughout the country. Their interaction with groups working in many different states offers them a window into the successes and failures of public involvement. Based on four cases presented by Ms. Killam, the River Network is concerned that existing processes for the involvement of stakeholders in use designation decisions are inadequate. They concluded that existing uses are not adequately protected by designated uses, there have been inconsistent triennial reviews (some with inadequate public notice), UAAs were seldom complete (if available at all), and there has been inadequate response by EPA to public comments. Thus, they are concerned that these problems are weakening the Clean Water Act and its programs.

3.0 DAY 1 SUMMARY OF KEY ISSUES RAISED IN DISCUSSION

Betsy Southerland, Director, Standards and Health Protection Division, EPA Office of Science and Technology

At the end of the first day of the symposium, Ms. Southerland provided summary observations of the panel discussions and abstract presentations.

3.1 Panel Discussion Summary

Ms. Southerland felt that the panel session generated important discussion regarding establishing and implementing designated uses. She noted some important areas of agreement and disagreement among the panel members and the audience members who asked questions.

3.1.1 Issues Where There Was Agreement Among Participants

Everyone agreed that use designation is the driver for monitoring, assessments, TMDLs and permits. Therefore, it is important to assign the correct use for each waterbody segment. Everyone also agreed that better refined use designations are needed, with differentiated criteria to protect those uses. Broad uses are not accurate enough to determine attainment.

3.1.2 Issues Where There Was Disagreement Among Participants

There was considerable disagreement about the concept of existing use (i.e., how and whether existing uses should be determined and protected). Ms. Southerland pointed out that this is an especially important issue for EPA to address because once an existing use is defined, it becomes the lowest allowable use for a waterbody. The second disagreement observed was the importance of reconciling national policy with the opinions and social decisions that local watershed residents would make regarding the uses of their waterbodies.

3.2 Main Themes of Abstract Presentations

The following is a summary of the important issues/main themes presented by the ten different abstract speakers as perceived by Ms. Southerland.

There were some interesting ideas about prioritization. Indianapolis prioritizes sensitive use areas, New York prioritizes open waters versus urban tributaries, and West Virginia prioritizes those waters that have existing drinking water intakes over those that could potentially be used as drinking water intakes. In each case they were looking for a way to do things differently in the high priority areas than the low priority areas. Thus, there is a need to prioritize uses and waterbodies, and tackle the biggest problems first.

Timing issues are also of concern. For example, TMDL changes have been made both before and after changes in water quality standards. Environmental justice issues were also mentioned. For example, children playing in urban streams, rural residents drinking untreated water, and anglers consuming fish from polluted waters are great concerns.

Cost trade-offs are also an issue when designating uses. One idea was to provide splash parks and swimming pools instead of cleaning up urban waterways to attain primary contact recreation. Another idea was to change the location of the drinking water intakea instead of cleaning up a contaminated area to meet standards for public water supply.

There is a need for economic analyses in the use designation process. A suggestion for the New York harbor is to continue to use the maximum affordability approach for pollution control for the high priority open waters, but switch to a knee-of-the-curve economic analysis for the low priority urban tributaries. Pollutant trading and least-cost attainment were also discussed.

During the abstract presentations there were some good examples of aquatic life and recreation use assessments. Several speakers also stressed the need for more public involvement in use

designation decisions. Finally, EPA needs to oversee use designation and revision processes more adequately and provide more guidance.

Tuesday, June 4, 2002

4.0 SMALL GROUP DISCUSSIONS AND PLENARY/REPORT OUT

For this session, participants were seated in 16 groups of approximately 10-12 people each. The morning session commenced with an overview statement from Betsy Southerland describing the purpose and goals of the small group discussions. She emphasized the importance of working together to answer the two questions being posed, and asked participants to step away from their normal role as advocates and to participate openly. If anyone had issues of a different nature to discuss with EPA, she and Fred Leutner, Chief of OST's Water Quality Standards Branch, were available at a separate table to answer specific questions.

The schedule and ground rules for the small group discussions were then explained by Jan Connery of ERG. Each group had 90 minutes to discuss both questions. Two volunteers were needed for each table, a note-taker and a presenter. At the end of the session, the note-taker for each table summarized the group's discussion on an EPA comment sheet, and the presenter reported the group's highlights to the other symposium participants.

The two questions (and specific instructions) discussed by each group are listed below, as well as an overall summary of the responses given by all the groups.

4.1 Question 1: What data and analysis should be used to determine an existing use?

Instructions:

- Your answers may be different depending on the type of use (i.e., primary contact recreation, public water supply, etc.), so please specify which use(s) you are thinking of.

- How should current use, current water quality, frequency of use, potential use, historical use, and historical water quality be considered?
- Are there situations where an existing use has been irrevocably lost? How would a state demonstrate this, and what would be the new existing use?

Discussion Highlights:

Comments Specific to Existing Uses

Several groups felt that the existing use concept, especially the 1975 "benchmark" date, is confusing and hard to define, therefore EPA needs to give more guidance in this area. Examples of such comments are as follows:

- Clarification is needed regarding the meaning of certain terms, such as "actually attained" and "occurred."
- EPA should consider a regulatory modification to remove the existing use concept and in its place determine in a formal process the highest and best use of a waterbody.
- Existing uses should be protected at all costs.
- There is no avenue to remove an existing use, which could be temporally or spatially limited.
- With respect to irrevocably lost uses, no one cited a current example. Many groups felt that the reverse is happening; streams and even channelized ditches are being rebuilt and restored.
- Some groups felt that the actual use of a waterbody by humans, and the quality of the water should be considered separately when determining the existing use.
- Two groups felt that data should be collected and analyzed in a watershed management context when identifying existing uses, including site visits, land use, photographs, etc.
- Should a prohibited (illegal) or restricted use should be considered an existing use? For example, when primary contact recreation occurs in an urban area where it is posted as illegal to swim, should this activity drive the criteria?
- There is a need to develop good reference conditions when determining existing uses.
- It is important to notify the public when determining an existing use in order to get the necessary anecdotal information (there needs to be a critical mass of anecdotal information before determining existing uses).
- When looking at historical data, the quality varies widely, but anecdotal data is useful. If data is lacking, then a default condition should be generated.
- In swimmable waters, physical condition should be considered when determining existing uses (e.g., swimming in a barge canal is not practicable).

Related Comments

Because existing uses are so closely tied to designated uses, many of the discussions branched out to other aspects of designated uses, such as the following:

- Several groups recommended that states establish a hierarchy of preferred data using a weight of evidence approach to determine appropriate designated uses (data could be from scientific studies, rigorous surveys, anecdotal data, etc.)
- The naming of a use and the quality of the use should be in agreement (e.g., a healthy trout community, not just trout in the stream).
- The actual use of a waterbody should be protected despite current water quality (e.g., if people swim in a waterbody that does not meet its bacteria standard, it must be brought back into compliance because people will continue to swim there).
- If swimming is not appropriate in one location, but there are alternative swimming locations nearby, the latter should be factored into the use designation of the former.
- Frequency of use was often cited as important to consider when revising recreational uses.
- Inconsistencies were noted between swimming uses and how drinking water standards are implemented.

4.2 Question 2: Changes in use designations described in Clean Water Act Section 101(a)(2) must be justified by satisfying at least one of the six factors at 40 CFR 131.10(g). In your opinion, for which one or two factors does EPA most need to provide further clarification, and why?

Instructions:

- Some factors can be applied to multiple uses, so please specify which use(s) you are thinking of.
- Are there other parts of the UAA process that present particular difficulties (e.g., assessing a waterbody's physical, chemical, or biological characteristics; involving federal, state, and local constituencies in the process, etc.)? How can EPA help?

As a point of reference, 40 CFR 131.10(g) as provided in the Federal Register states:

(g) States may remove a designated use which is not an existing use, as defined in § 131.3, or establish sub-categories of a use if the State can demonstrate that attaining the designated use is not feasible because:

(1) Naturally occurring pollutant concentrations prevent the attainment of the use; or

(2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

(4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

(5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

(6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

Discussion Highlights:

As with any large group, there was disagreement regarding the adequacy of guidance provided by 40 CFR 131.10 (g). Only one group felt that the six factors were sufficiently detailed yet broad enough to allow states to justify either removing or not removing a use (with additional guidance provided on a case-by-case basis). However, the majority of the groups felt that one or more factors are too broad and need additional clarification from EPA. In particular, factor 3 (human caused conditions) and factor 6 (economic and social impact) require the most clarification from EPA. Examples of specific comments include:

- What does "cannot be remedied" mean (factor 3) and how do you communicate this to the public?
- It is often difficult and time consuming to estimate the economic and social impacts (factor 6) of a designated use, especially for TMDLs.

- What is "naturally occurring" (factor 1)?
- There are concerns and some confusion with conflicting information from EPA on how to protect ephemeral and intermittent streams (factor 2).
- What does "feasible" mean (factor 4)?
- The "physical habitat" aspect of factor 5 needs to be clarified.

Other concerns raised during the small group session include the need for guidance in low and high flow conditions (especially with wet-weather events when recreation can't be supported), and other site-specific conditions. One group raised the question, if the water can't be restored, should we retain the use and change the criteria?

Overall, many groups felt that states need sufficient guidance and the necessary financial resources from EPA to achieve attainment (including monitoring problem areas). Future guidance on UAAs could include Standard Operating Procedures which would detail what needs to be submitted for a UAA. Such streamlined guidance would enable states and authorized tribes to more efficiently utilize their resources.

5.0 ABSTRACT PRESENTATIONS - FOCUS ON CASE STUDIES AND NEW APPROACHES

On the afternoon of the second day, seven speakers gave presentations based on abstracts they had submitted prior to the symposium. A brief summary highlighting the key points of each presentation is provided below, and a copy of each abstract is available on EPA's web site at: http://www.epa.gov/waterscience/standards/symposium/abstracts/

5.1 Richard Meyerhoff, CDM

Evaluating Use Attainment in Effluent-Dependent Waters

Research conducted by Mr. Meyerhoff as part of the Arid West Water Quality Research Project (WQRP) involved development of appropriate uses and water quality standards for effluent-dependent and ephemeral waters. In these arid regions of the United States, a significant number of streams are effluent-dependent and are characterized by constant change and diverse riparian

communities. Under these conditions, it is difficult to evaluate use attainability because of the characteristics of the systems and difficulty in defining reference conditions. The methods used to define use attainment in these systems can include the designation of minimum water quality requirements or the recognition of benefits created in these ecosystems by the characteristic fluctuations in water volume. Finally, a holistic watershed approach should be utilized that includes riparian habitats and terrestrial communities.

5.2 Robert Gensemer, ENSR International

Evaluating Water Quality Criteria for Designated Uses in Ephemeral and Effluent-Dependent Watercourses of the Arid West

As part of the Arid West Water Quality Research Project, four existing and proposed federal Ambient Water Quality Criteria (AWQC) (copper, selenium, diazinon, and copper) were evaluated for their relevance to the attainment of designated uses in these unique effluent-dependent aquatic ecosystems. Results obtained indicate that values for these criteria seem to be generally appropriate for use in effluent-dominated systems in the arid west. However, the unique nature of these systems may call into question the straightforward application of AWQC to effluent-dominated systems. Furthermore, it might be possible that the default frequency of allowed excursions could be reduced (i.e., to less than once every three years) owing to the relatively rapid recovery characteristics of aquatic communities in these ecosystems (models also could be utilized). These approaches could also be extended to a national framework.

5.3 Paul Frohardt, Colorado Water Quality Control Commission

Recreational Use Designations in Colorado

In 2000, the Colorado Water Quality Control Commission adopted significant refinements to the state regulatory provisions regarding adopting recreational use designations for state surface waters. Based on this implementation, the three primary contact recreational existing uses in Colorado are: existing primary contact (the default condition), potential primary contact, and secondary contact. In order to determine these existing uses, citizens are questioned about primary contact uses, and if no use is identified, a UAA is utilized. Other issues still need to be addressed in this process, including current and future access conditions, seasonal and recreational use designations, and assessment of uses under varying flow conditions.

5.4 Heather Lamberson, Los Angeles County Sanitation Districts

The Lower San Gabriel River Watershed: The Need for Use Subcategories

The lower San Gabriel River and its tributaries have been designated with a variety of existing, intermittent and potential beneficial uses, including contact recreation (REC-1) and non-contact recreation (REC-2). The REC-1 use is defined in the Water Quality Control Plan as "uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. The Sanitation Districts of Los Angeles County contend that the REC-1 use is inappropriate in most (if not all) of the waterbodies in the lower San Gabriel River watershed, either due to access restrictions or due to the fact that the waterbodies are dry. Instead, the Regional Board wants to designate the REC-2 use, or else refine the use categories and develop additional subcategories. Barriers to this modification include difficult and unclear EPA requirements, public perceptions, and perception by regulators that UAAs are unlikely to succeed. To resolve these issues, the Sanitation Districts think EPA should support refining and developing site-specific criteria, make the UAA process workable, and approve the refined designated uses once adopted by the Regional Board.

5.5 Lester Stumpe, Northeast Ohio Regional Sewer District

Development of Targets, Indicators and a Management Model for Improving Aquatic Life Uses in Urban Streams – A Work in Progress

In response to EPA's guidance document, "Guidance: Coordinating CSO Long-term Planning with Water Quality Standards Reviews," major municipal management agencies in Ohio have come together to develop a model to provide a basis for developing an Ohio urban stream subcategory for aquatic life uses. The conceptual model seeks to integrate the explanatory variables of land use impacts and load impacts with the dependent variable of biotic integrity. The model suggests a need to separately explore variables related to the watershed scale and those related to stream corridor characteristics. It also suggests there may be a case for urban criteria that vary with the condition of the landscape. This model will be utilized to set a baseline condition of what designated use is attainable in large Ohio urban streams. However, the State of Ohio, with a large biological database, will have a tough task of designating an urban use subcategory. In conclusion, there will still be a need for inquiry into the processes and issues of local watersheds in addition to flexibility by EPA in developing these processes.

5.6 Tamim Younos, Senior Research Scientist and Associate Director, Virginia Water Resources Research Center

Data Needs to Determine Designated Use for Benthic Impairment: A Virginia Case Study

In Virginia, all waters are designated for the following uses: recreational (e.g., swimming and boating); support of aquatic life; and production of edible and marketable natural resources (e.g., fishing and shell fishing). At present, 111 stream segments (455 miles) are included in Virginia's 303(d) list because of benthic impairments. Since all waters in Virginia are designated for multiple uses, it is critical to determine the existing use(s) of a stream before it is listed as impaired, and thus the need for a UAA.

The different components of a benthic UAA were presented (flow chart), including the potential causes of impairment, existing anthropogenic effects, socio-economic analyses, and stakeholder negotiations. The Stroubles Creek watershed was described in great detail as a case study, including sources of impairment. The benthic UAA flow chart was then applied for the Stroubles Creek watershed. Based on the flow chart, TMDL calculations and modification of the use are not practical because of the high uncertainty involved with their determination. An alternative approach involves adaptive management, a procedure in which impaired areas are restored slowly and then monitored. Management strategies can then be adapted to adjust for improvements or relapses in restoration.

5.7 William Kreutzberger and Thomas Dupuis, CH2M HILL

What are We Trying to Protect?: Beneficial Use Changes in Agricultural Watersheds

The Lower Boise River watershed is a complex network of natural drainages and man-made storage facilities and irrigation canals/drains. As part of the TMDL process in this watershed, a beneficial use evaluation was conducted on three tributaries to the River that function to convey irrigation water. These ditches are utilized throughout the irrigation season and were designated as supporting salmonides and primary contact recreation. To determine existing and attainable beneficial uses, physical, biological, and chemical parameters were characterized in this watershed and it was determined that habitat conditions were unable to support salmonid and other cold water species year round. Since these are modified systems, less stringent site-

specific criteria were developed to protect the aquatic community existing in the system when irrigation is a factor. Changes in the beneficial use designation allowed regulators to conclude that the modified aquatic life use was not impaired and that TMDLs were not necessary for protection or restoration.

6.0 CONCLUDING REMARKS

At the conclusion of the symposium, the following summary comments were provided by Betsy Southerland.

The purpose of the symposium was to hear from those individuals who are involved with identifying or acting upon priority issues related to designated uses. Based on the presentations and discussions at the symposium, EPA's first priority will be to develop guidance for states and tribes on recreational use designations. There are several reasons to have this as a top priority. First, everyone agreed that use designations drive TMDLs, and a large percentage of TMDLs are being developed for bacterial violations which are causing nonattainment of primary contact recreational uses. Secondly, everyone agreed on the need for more refined designated uses with more differentiated criteria. Several presentations emphasized the need to look at subcategories of recreational use. Finally, everyone agreed that it is important to all of the water programs to get the designated use correct. Many participants commented on the difficulty of designating doing this, especially with regard to recreation.

In addition, EPA will address the following issues related to recreational uses:

- How many times must swimming occur before it is considered an existing use (frequency issue)?
- How to handle prohibited use issues where swimming is not allowed due to hazardous conditions
- How to deal with recreation in large communities with CSOs and in waters affected by non-human sources of pollution (livestock, avian, etc.)
- How valuable is the use to the community?
- Is the use an environmental justice issue?

When developing the guidance, EPA must not forget CFR 131.10(h) whereby *"States may not remove designated uses if: (1) they are existing uses, unless a use requiring more stringent criteria is added; or (2) such uses will be attained by implementing effluent limits . . . and cost-effective and reasonable best management practices for nonpoint source control."* There is also a need for EPA to ensure that states are fulfilling their obligation to upgrade use designations (CFR 131.20) for waters that do not currently have a fishable/swimmabe designation.

Finally, there is a concern about how to collect good data to support appropriate use designations; specifically how to collect anecdotal or other historical data on existing uses. There is also some confusion about what needs to be submitted for a UAA, to avoid trial and error.

Upon completion of draft guidance on recreational use designations, EPA will begin to develop similar guidance on issues related to other use designations, such as aquatic life.