CRITICAL ISSUES FORUM:
ACHIEVING A TOXICS FREE BAY- THE ROLE OF POINT SOURCES

FORUM PROCEEDINGS

A Support Document for the 1999 Toxics Reduction and Prevention Strategy

U.S. Army Garrison
Aberdeen Proving Ground, Maryland

Chesapeake Bay Program

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Introduction

The Chesapeake Bay Program is currently reviewing and revising the *1994 Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy* and, through critical issue forums, is seeking stakeholder input on new directions the Bay Program should take on toxics-related issues. As specified in the 1994 strategy, pollution prevention by industrial and government point sources plays a key role in helping the Chesapeake Bay Program achieve its goal of a "Bay free of toxics". The Bay Program is committed to working in partnership with industry, government, and environmental groups to achieve a series of pollution prevention-related commitments. Leading up these voluntary initiatives is the Bay Program's Toxics Subcommittee and its Pollution Prevention Workgroup. The Subcommittee is responsible for providing an overall direction on how to achieve its goal of a bay free of toxics, while the Pollution Prevention Workgroup, whose membership consists of representatives from industry and federal, state, and local governments, helps to define specific pollution prevention activities that should be taken to achieve that goal.

The first in the series of critical issues forums: *Achieving a Toxics Free Bay-the Role of Point Sources* was held on June 22, 1999 at the Top of the Bay Officer's Club in Aberdeen Proving Ground, Maryland. The purpose of the forum was to give stakeholders an opportunity to provide input on the direction the Chesapeake Bay Program will take on issues related to the prevention and reduction of toxics from point sources. This document summarizes proceedings of the forum: *Achieving a Toxics Free Bay-the Role of Point Sources*. Recommendations and results of this forum will be taken into consideration by the Chesapeake Bay Program for development of the new toxics strategy.

Pervasive Themes of Potential Use to a New Strategy or Agreement

As is evident upon review of the following information in this proceedings document, 7 themes emerged throughout the Forum that may be appropriate for consideration in a new toxics reduction strategy. These are listed below:

1) The need to establish and maintain partnerships;
2) Closing the Loop on Recycled products. This includes both creating a "green" market and the concept of Industrial Symbiosis (see text for explanation);
3) The need to determine and then prioritize to fill data gaps;
4) Continue and enhance education outreach programs; and
5) The need to engage Pretreatment Programs.

Two other concepts that were explored throughout the forum, but possibly need more stakeholder input before their inclusion into a new strategy or a new agreement are:

6) Continual improvement toward zero, and
7) Geographical targeting and basin specific toxic reduction strategies.

Overall Impressions

- Participants understand the need and benefits of pollution prevention - particularly source reduction

- A lot of interaction by all participants asking questions during the morning presentations and during the breakout sessions indicates the level of importance participants place on this topic

- A build-up of energy and momentum for point source reductions resulted from this watershed-wide forum

- Many participants were inspired by the presentations on what states, local governments and industry can do in terms of toxics reductions

- The forum went a long way toward educating the participants on toxic reduction programs, what is being done and to look outside of the box at what more can be done.

- **The concept of Industrial Symbiosis** (industries using other industries' waste as raw materials for products) came up during a presentation question and answer session, which got strong interest and support from the participants. The idea that we may want to hold a Chesapeake Bay Symposium on Industrial Symbiosis also emerged.

- A theme throughout the day included **Zero Release**. Participants began to reflect on the concept of zero emissions, and none was openly in disagreement with it.

- Consensus that existed regarding the idea and the goal of a" Bay free of toxics" is a goal to keep.

- Ideas presented in a variety of group discussions concerned the toxics characterization results and the need to develop watershed programs for Areas of Emphasis (areas with significant potential for adverse effects on living resources) identified by the characterization. The idea of **specific strategies for toxics by Basin** was also present in a number of discussions.

- Some themes that arose at all three breakout sessions included:
    1) The need to continue and improve education about the importance of pollution prevention and pollution prevention technologies;
    2) Move up the pollution prevention hierarchy described in the 1994 toxics strategy to encourage source reduction;
    3) The need to continue to develop incentive programs and to maintain flexibility;
    4) The need to determine data gaps and a plan to fill them;
    5) The need for political involvement; and
    6) The need to establish and sustain partnerships

- It was originally intended that the breakout sessions be conducted to obtain goal and objective type statements that could not only be transferred to the new strategy and possibly the new Bay Agreement, but could be used as a launching pad for discussions at the point source roundtables. All breakout groups instead aired concerns and generated ideas which will be used, as possible focus areas for future directives and also as guidelines for discussions in subsequent stakeholder-specific rountables.

Presentations

WELCOME/INTRODUCTION – ***Tim McNamara, Director, Safety, Health & Environment, U.S. Army Grarrison, APG***

Mr. McNamara welcomed everyone to Aberdeen Proving Ground (APG) and provided some history of the Army post. APG spends over 50 million dollars each year on environmental protection, and in recent years, pollution prevention has become its preferred approach to environmental management. It is the policy at APG that every employee strive to incorporate pollution prevention practices into daily operations through the reduction or elimination of pollutants at the source of generation as well as through recycling, treatment, and disposal. Mr. McNamara highlighted the progress and many programs that have been implemented at APG to reduce chemical releases.

PROGRESS ON TOXICS REDUCTION AND PREVENTION - ***Bill Matuszeski, Director, Chesapeake Bay Program Office***

Bill Matuseski discussed the answers to two questions: (1) Why should we care about toxics? and (2) Why should we care about point sources of toxics? Releases of toxics are relatively lower than they have been in the past (particularly for point sources), however there is still public concern about these lower levels of toxics in the Bay. Toxics loadings to the Bay come from many sources: upstream (above the fall line), nonpoint sources such as urban runoff, the automobile which brought us here today, and point sources. Point sources are regulated, but that doesn't mean that they are fully controlled. Chemical releases from point sources are allowed, or permitted. Regulations come at the "end of the line" at which point opportunities for pollution prevention and source reduction are missed. The Bay Program can supplement regulations through source reduction and pollution prevention.

Mr. Matuszeski's thoughts to Consider when drafting the new strategy:

- Toxics conditions in all of the tidal portions of the Bay - look at tidal rivers and status of toxic effects on living resources
- Continue *Businesses for the Bay* – currently 250 members are in the Program (most of the larger corporations). Ninety mentors are working with smaller businesses to help them work with source reduction.
- The Bay Program needs to lead the country by establishing goals that are very aggressive, and build on our success to date. A zero release goal is worthy of discussion today as we move into the 21st century.

Questions & Answers:

- What is the potential membership *Businesses for the Bay?* What is the target audience for this voluntary pollution prevention program?

Answer: *Businesses for the Bay* currently targeted those businesses, industry, and government facilities that release chemical contaminants within the watershed. The target audience initially included facilities with a Standard Industrial Classification (SIC) code of 20-39, as well as others such as dry cleaners and autobody shops. The Chesapeake Bay Program and *Businesses for the Bay* are willing to expand this focus to include other types of facilities.

Recommendation: Better publicize the list of participants. Might move the non-participants into the spotlight.

- Are toxics problem in the Bay from presently released chemicals or are they legacy problems?

Answer: The Regions of Concern suffer from legacy issues related to historic activities on the watershed or chemicals that are currently banned. Many of the impacts we see outside of the Regions of Concern appear to be from chemicals that are presently release into the Bay from both point and nonpoint sources.

THE IMPORTANCE OF "THE GOAL IS '0'" TO DUPONT - *Paul Tebo, Vice President of Safety, Health and Envrironment, DuPont*

Dr. Tebo commended the Bay Program for:

1) Bringing all the stakeholders together in this forum. Multi-stakeholder involvement is critical for success of a new strategy.
2) Businesses for the Bay activities– 250 members is actually a large amount of participation.
3) Using a voluntary approach.

The "Goal is '0'"

DuPont was founded in 1802. Gunpowder was it's first product and in 1811 there was a very serious explosion that killed 40 people. Since then, DuPont has been very safety conscious.

In the late 1980's, DuPont was number one on the Toxics Release Inentory (TRI). In 1990 they adopted the "goal is '0'". Since then, DuPont has made incremental improvements, and is getting closer to achieving that goal. With a variety of innovative programs and employee recognition, DuPont continues to strive toward a zero release goal.

Important concept: You need to tell others what "can" be done and need to put this in terms of economics (translate into solid shareholder value). Waste you need to throw away or process costs money!

Examples of approaches to zero discharge:

- A paint plant site just north of Mexico City is very close to having zero toxic air emissions. When other plants need to shut down on days with poor air quality, this plant continues to operate – this translates into higher profits. They also recycle all their waste water.

- Another division produces plastic paint sticks with their waste and gives these back to customers, resulting in zero waste. DuPont could potentially sell the paint sticks to further increase its profit.

- DuPont is moving to stop painting cars and is moving toward the use of molded paints which do not need to be repainted.

- DuPont also realizes that shareholder value increases with increased safety and reduced injuries. One pound less in waste is worth several million dollars in value.

Questions (*major points that were discussed during Q&A period*):

- **Industrial symbiosis** – cluster industries and find ways to use each other's waste. Get companies to talk about wastes and see what can be exchanged. You can also design communities that way.

- Develop cradle to cradle products? Examples: waste carpet yarn – reuse and put into new carpet, take back and re-melt and put into cars (bumpers) or make new nylon carpets.

- Consumer education is critical to increase consumer awareness of industry's tactics to reduce toxics.

- Mine landfills. We will probably get to that point eventually.

- Can't control non-point sources as easily. New areas of technology (i.e., biotechnology) might bring about improvements. For example, if you increase the uptake of phosphorus in feed for animals their manure will contain less phosphorus.

- It is more beneficial to reduce the source than to clean up later.

PANEL DISCUSSION:

Local Government Perspective - *Mayor Phil Barker, Mayor of Havre de Grace*

Havre de Grace is concerned about the quality of the Susquehanna River. As lands are developed, Havre de Grace zoning must abide by the critical areas laws. Mayor Barker encourages recycling on a voluntary basis in the city, but he would like to see more being done in the future.

Environmental programs being implemented in Havre de Grace:

- Several sewage treatment plants are being upgraded with Biological Nutrient Removal (BNR) technology

- They are separating storm drains from sewer systems. (Treat effluent before releasing into the Bay) Invested $1 million in sewer treatment.

- Havre de Grace recently received a grant from Maryland Department of the Environment ($380,000) to build a botanical garden that is also a stormwater management system.

State Government Perspective - *Harry Gregori, Director, Pollution Prevention & Compliance Assitance, VA Department of Environmental Quality*

Virginia's pollution prevention program started in 1988.

Virginia has a voluntary zero discharge goal. In order to achieve this goal VA needs a complete cultural change. Businesses respond to money – use tax cuts as an incentives for reducing toxics. Mr. Gregori feels that regulations might not be adequate. You must spend millions of dollars on enforcement. Some of this money could instead be used as financial incentives for reducing toxic emmissions/discharges.

Understanding how companies operate (in financial terms) is critical. Three critical components government needs to work on: 1) speaking their language, 2) commitments from top management, 3) establishing partnerships. Government must go beyond compliance - compliance is not enough.

Industry Perspective - *Steve Farkas, Environmental Scientist, Baltimore Gas & Electric Company*

Mr. Farkas reviewed how Baltimore Gas & Electric Company (BGE) is coordinating their pollution prevention program. The company's CEO has included pollution prevention within BGE's policy: "Make Pollution Prevention, Environmental Protection, and Resource Conservation important considerations in locating, designing, building, and operating our facilities". BGE has an Environmental Advisory Committee, consisting of the Executive Vice-President and the Department Managers, that develops guidelines and standards to assure compliance with all the environmental regulations. BGE's Hazardous Materials Control Program, implemented in 1994, has recommended many materials substitutions with environmentally friendly products and has disapproved the use of certain toxic materials within the company. BGE provided a list of the following materials that they must avoid either in material procurement production including: Arsenic, Benzene, chlorinated solvents, CFC products, Chromate compounds, Mercury Compounds. BGE's solid waste program has translated into significant savings in reduced waste disposal costs.

Environmental Perspective - *Peter deFur, Associate Professor, VA Commonwealth University*

Questions about toxic chemicals goes back to 20 years ago with the beginning of the Chesapeake Bay Program. The Bay Program developed a list of toxics of concern, and of potential concern. Then the strategy was established, which identified a series of actions to focus on and reduce toxics. Since then, the amount of releases have gone down significantly.

Currently, researchers are examining the source, exposure pathway, and identifying effects to see what the big picture looks like. Living resources don't tell us such good news – we have fallen short of restoring populations.

What do we know? The US Geological Survey has documented that despite limitations, we still have millions of pounds of toxic chemicals released into the environment. Toxins can be measured in fish tissues, water, and sediment.

"Hot spots" are problems – some populations of fish get cancer and die after reproduction. They are able to reproduce and continue – so we assume they are healthy. But we need to look further than that. For example, 40% of adult catfish in the James River did not have gonads. Researchers have found high levels of PCBs, tributyl tin, and CFCs. In general, people are not doing enough, and are not doing the right things.

We need to take hard look at the Chesapeake Bay Toxics of Concern List. It will take a large change at the top to begin to make a paradigm shift. We need to build coalitions and include people and organizations with whom we normally do not partner.

Questions from the audience (Q& A period):

- How do we review the Toxics of Concern?

We need to be able to understand exposure and effects. We need a renewed database that helps us decide if chemicals should be added or taken off.

- Why is the Toxics Subcommittee considering abandoning the Toxics of Concern list?

As part of the Toxics Strategy Reevaluation and Revision, the Bay Program is reevaluating the utility and purpose of the existing and proposed revised list.

- (Harry Gregori) What type of outreach program will VA use?

VA will use a variety of approaches, including: Internet, K-12 education programs, technological aspects, meetings and hearings. New standards of learning will be established. They are currently working with the Department of Education to have appropriate materials for different levels of education.

- Address the role of regulation vs. voluntary actions to reduce toxics.

Regulation by government levels the playing field for businesses. We also need to have flexibility (voluntary programs) and not over-regulate.

(Peter deFur) Regulations tend to eliminate no action. The Federal Clean Water Act keeps everyone up to par. Currently states are competing with one another by weekening environmental standards – a regulatory program is designed to prevent that.

(Phil Barker) How can government address disincentives for pollution prevention (fees, etc.)? You can only tax people for so much. We need to pay for reduction of waste streams. We need to come up with the necessary funds to be able to enforce regulations.

- Who's helping to get answers to contaminant levels in, and effects on, living resources?

(Peter deFur) Prioritize monitoring programs that are in place. There are investigations that examine the presence of contaminants in sediment, TRI lists, state reporting. All these efforts are not necessarily cohesive. We need a program-wide committee that identifies gaps in these multiple efforts.

Kelly Eisenman, *Toxics Coordinator, Chesapeake Bay Program Office*: The baywide toxics characterization map presented by Bill Matuszeski in the morning is the first attempt at compiling all available data and identifying areas with insufficient or inconclusive data where data gaps need to be filled.

- In a free market system, why does government have to prompt industry to try and find solutions to pollution prevention?

Pollution prevention is a policy that encourages companies to reduce wastes. Incentives – regulations are so prescriptive that you wouldn't have the results you have today with voluntary programs.

(Harry Gregori) Let's use an example: during the process of making aluminum, chlorine is used. Companies are resistent to eliminating the use of chlorine, because it is an inexpensive product. If the product becomes regulated, however, there is some real incentive to reduce it.

- One of the problems in developing pollution reduction programs is that there are 800 chemicals, which may tend to reduce focused efforts. For example, the Bay Program's nutrient strategy pertains to only two nutrients (Nitrogen & Phosphorous) and the goal is to reduce them by 40% by the year 2000. Would focusing on a finite list of toxics help?

(Harry Gregori) EPA has two lists Persistent Bioaccumulative Toxics (PBTs) and the Chesapeake Bay Toxics of Concern list. What list do we focus on? Maybe EPA needs a two year review to look at toxics. Each State might have a different problem. We need to agree on a broader list and then states that are in the Bay area need to work together in joint programs.

(Peter deFur) We need to compare the three major Bay States and see which toxins are a problem in each state and focus on these first. Perhaps the Bay Program should put out a request for proposals (RFP) to decide what to do with

toxics in the Bay. It is a good idea to figure out what old and new use toxics are in the Bay. Need to develop new analytical methods for new-use pesticides.

- (Phil Barker) What help do you need to mobilize citizen action for help in your community?

What would inspire a citizen to participate in a recycling program? Public education is critical. We haven't found the right button to push yet. Ultimately recycling will need to become mandatory. One low cost publicity approach might be to bring recycling programs into schools – have students bring home a pledge that their household will recycle.

Breakout Sessions

The following breakout sessions summaries: *Government Perspective, Industry Perspective, and Environmental Perspective* are attached below.

Next Steps - *Kelly Eisenman, Toxics Coordinator, Chesapeake Bay Program Office*

The Chesapeake Bay Program knows we still have toxic inputs in the Bay – we know that there are many programs out there to prevent pollution, but we can do more. Here are some of the steps that will be taken over the next year:

- This is the first of three critical issue forums that will provide input to the new Toxics Strategy and the New Bay Agreement. The next forum be a non-point source Forum (tentative date: August 17th), followed by a science forum.
- Three point source roundtables are also planned to set more specific goals for industries, federal facilities, treatment plants, environmental groups, and governments.
- Results from forum and the roundtables will go into New Bay Agreement. Quantifiable goals will go into the Toxics Strategy.

Government Perspective: Breakout Session Summary

Four major points emerged from the Government Session:

- Education was one of the biggest areas that needed to both continue and be improved upon. Many cited the need to educate our legislatures on pollution prevention programs so that they can remain priorities and be funded. Schools were another area often cited for effective education and outreach. The need to educate producers, users/ consumers and businesses was also strongly emphasized.

- The need to close the loop on recycling - to make sure there are markets for recycled products and that they are bought by consumers.

- A major outcome of the government forum pertained to pretreatment programs. A not so well known fact emerged regarding the existence of pretreatment coordinators at most municipalities whose function it is to coordinate pretreatment requirements and programs relating to their associated indirect dischargers. Many cited the need to enhance these pretreatment programs to accommodate pollution prevention.

- The need to fully implement existing programs before going beyond to additional or more innovative ones. It was cited that many localities do not have curb-side recycling or similar initiatives illustrating the need to fully implement such existing and effective programs we know work.

Other ideas generated at the Government Breakout session included the following:

- The majority of the bulk in recyclables is not in the homeowner but in businesses

- Need to highlight successes via the media

- Target source reduction to a focused list of pollutants

- Vary strategies by watershed

- Access and frequency

- Need for recycling must be improved .

- We need more highly visible campaigns for recycling and source reduction before people pay attention

- Concern was expressed over the use of the term "source" . Municipalities aren't really the source, it is the users or the industrial indirect dischargers.

Detailed Summary of Government Breakout Session Discussions

Participating: ~35 local, state and federal government representatives

The discussion among the government representatives started by laying out several concerns that should be addressed in the Toxics Strategy. First, there was some concern regarding the language used to identify toxics and their sources. For example, waste water treatment plants are considered one of the larger offenders in discharging toxics. Labeling these facilities as such is misleading. It is not the plants themselves that create pollution but the input from the many individuals and corporations that use the facility. Identifying the real sources of pollution will better educate the public and the business community of the sources of toxics.

There is further confusion in the language used by the federal and state governments with regard to solid waste. Solid waste has two components: hazardous and non-hazardous. The language currently used is not what the public relates to.

The second issue of concern is identifying what chemicals, from a huge list, should be targeted for reduction and elimination. Many felt that assessments needed to take place in order to identify those toxics that adversely affected the Bay. The goal is not just a toxic-free Bay, but one free of those chemicals that affect its health. Source reduction must be targeted on chemicals of concern.

The discussion then turned to the questions identified by the work group. **What actions can state and local governments take to lessen quantity and toxicity of pollutants, and what can the Bay Program do to encourage this?**

Two key issues were prominent in this discussion. First, there is a strong need for education. It is the lack of education and support to promote pollution prevention that is facilitating more and more hazardous wastes finding their way to landfills. For example, if we look at the lifecycle of household hazardous materials, there is no support or incentive for the retailer or the buyer to dispose of waste safely. Therefore:

1. Retailers do not feel they are responsible for guiding buyers on how to use their product;
2. There is no incentive to sellers to educate buyers;
3. If a citizen can buy a product, how would they now there is a limit to disposing of it?
4. Citizens do not know what is toxic, and see no problem in disposing of household hazardous waste in drains;
5. There is no demand for an alternative disposal strategy by the retailer.

Is it the responsibility of the government to regulate sellers? Is there a way to make enforce a minimal amount of information on labels to educate citizens?

The group concluded that if the ultimate goal is to reduce and eliminate point

source, then future strategies must:

- place focus on source reduction not disposal;
- place emphasis on how to use household toxics not how to dispose of them (it is clear that industries are ahead of government and citizens on this issue);
- place emphasis on how we can eliminate the need for such hazardous materials – by design, hazardous products will have a discharge, so there needs to be more research on the design of toxics, eliminating the toxic source. (Cradle to cradle rather than cradle to grave).

So what can local governments do? There are many opportunities for local governments to facilitate the consumer education process. For example:

- information can be available at dumping sites and recycling centers;
- flyers can be mailed encouraging citizens to look for products that do not contain TBT;
- local governments should be able to look to the federal government for support through a national campaign to educate consumers, similar to the national campaign to eliminate litter;
- coordinators of pre-treatment programs have access to small businesses and can use the time to foster partnerships with industries, showing the opportunities for cutting costs by eliminating the use of certain toxics;
- provide education through the sewage use ordinance.

The second question looked at recycling. **Could more be done in the area of recycling?**

The group first identified the problems in recycling:

1. transportation - how to collect it;
2. incentives - there is a lack of incentive for retailers to be responsible for the products they sell. For example: when we buy a new carpet, the retailer takes the old carpet away – what happens to it?
3. education – without education, recycling efforts will not be large enough to be affective. For example, builders could use a bulletin board of green building products, especially of the information included cost savings.

What can we do?

1. provide access - enough is not being done to encourage recycling of the basics: glass, aluminum, plastic;
2. increase pick-up of drop-off availability - rural areas have few available points of collection;
3. provide more opportunities for education, especially in the schools;
   Whether it is residential or commercial, we need to promote ownership of the Bay clean-up.
4. provide incentives for the development of markets for recycled products;
5. provide recycling containers (containers double participation and many communities do not have them.
6. look for opportunities to build outreach to businesses;
7. promote the fact the recycling is a cost avoidance, not a cost savings;

State leaders must take the role in:

1. providing funding for local recycling programs;
2. enforcing requirements on facilities out of local jurisdictions such as hospitals;
3. providing consistency in policies – funding goes to supporting incinerators, however they do not promote recycling.

One incentive State and Federal governments could offer would be a tax incentive for industries to increase recycling / source reduction that could filter down to retailers and users.

Would a Bay recycling goal be helpful?

The group felt a Bay-wide recycling goal would be helpful if it closed the loop – promoting source reduction AND buy recycled. There also needs to be a measure of success -- what would be the accomplishments that citizens and businesses could see to show they made a difference?

In developing a goal for the watershed it must be something that everyone can understand, that they can put their hands on and see. Citizens do not understand the verbage that is used currently when the Bay Program talks about nutrients. There is an opportunity also for Businesses for the Bay to increase the media on those companies that do a good job because it really is a selling point to citizens.

Would a Bay-wide task force be helpful?

The group concluded that a task force would be helpful, and would be especially helpful to rural communities and small businesses. There was some discussion as to where in the Bay Program hierarchy the task force would be placed. Currently there is the P2 Work Group, but some participants felt the task force should be brought to a higher level.

The task force could consider a broader mentoring program for industries and local governments, and serve as a legislative advocate and educator. Te task force could also play a significant role identifying the chemicals of concern. Science plays an extremely important role, and it will focus efforts on what will make the biggest impact. Effort and energy will be important, but meaningless without focus and definition.

As the group identified education as a key element, Gary Allen asked a final question to place some priority on who should be educated. Responses included:

- educate those which are having the largest impact - the primary source (this needs to be identified);
- children are where the answer lies;
- education will have to be geared to the local character;
- a single approach will not work;
- the approach needs to be holistic - education to all.

Industry Perspective Breakout Session Summary

Participants: Bob Dunn (*Moderator*), Dave Bailey, Jud White, Marise Textor, Steve Farkas, Joan LeLacheur, Ernest Hartman, Tom Griffin, Anita Key, Stephen Dyer, Jodye Russell, Tom Griffin, Melvin Knott, Julie Thomas, Kelly Mecum, Katrin O'Connell

Examining toxics on a broader scope should be a goal of the Bay program:
1) Prevention (Businesses for the Bay)
2) Restoration

1st Question
Existing programs. What has worked so far that we want to continue?

- Businesses for the Bay
- Voluntary approach
- Incentives
- Positive publicity
- Funding of things (i.e., reductions being co-funded by government
- Strong scientific basis for action
- Technology guidance & transfer, education is vital

Key points made by participants:

- Each business should approach their strategy based on their toxic reductions (might not be just for toxics). Reduced environmental impact should be the goal.

- Take it to the next level. Keep a broad scope on the strategy and increase public awareness. Forge partnerships in the business community and create a clear message on environmental goals.

- Industry needs strong scientific information and proof to back up multi-million dollar reasons for changing their approaches or taking action.

- Bay Program needs to examine economics that drive industry and business – if rate of return isn't high enough industry won't consider it. Need to demonstrate long-term economic benefits – the bottom line impact.

- The advantage of a voluntary program is that you can try something new that has not yet been proven to work.

- We want to see technical evidence before tax payers buy-in. Technical solutions are not going to get buy-in until technical evidence is there.

- Analyses are becoming much more precise and can measure very small amounts of toxins. We don't know as much about low-level effects on wildlife, however. Toxins might be present at low levels, but have no impact. Need more research to decide at what concentration a toxin is a problem, although it can be difficult to quantify the cumulative effects of chemicals.

2nd & 3rd Question (combined):

What are opportunities yet to be tapped? What do we need to do to address these untapped opportunities?

- Fill data gaps
- Technology improvements
- Industrial symbioses – one company's waste becomes another's raw material
  - Statewide materials exchange programs
  - Should corporations take the lead?
  - Improve economic of scale for small businesses
  - Establish a pollution credit buy/sell program
  - Partner w/ agencies and organizations (local, state, fed & business) who can help set up programs;
  - Work with economic development departments and encourage them to promote industrial symbiosis programs
  - Decide where to put.businesses (don't just look at short term economics)
  - Redeveloping vs. sprawling – economics of being located near a site that can use their waste
- Performance envelope – earn the right to have regulatory flexibility by performing well.
- Partner with trade associations
- Partner with university, higher education, educational organizations
- Partner with EPA on regulatory flexibility issues, move them away form "command and control" methods
- Need to reach out to small businesses (tap larger businesses) & do vendor outreach
- Mentor Program (make them more effective)
- Develop innovative solutions
- Think more outside of the box when developing incentives (faster permitting, tax incentives)
- Work in the language of corporate decision makers (i.e., CEO's) and get them involved; educate upper management; identify actions that will get them involved
- Work with high level political representatives (i.e. governors) to get industry involved.

Untapped opportunities:

- Understand air emissions effects on the Bay;
- How do you deal with legacy toxics problems? Expand toxics of concern (leave legacy toxics on list, but add new ones that are not yet listed);
- New analytical tools and techniques for toxics;
- Education from standpoint of toxics. Trace elements that are critical, but in high levels they are toxic. Proper education;
- Green procurement – work with suppliers and require that their products do not contain specified chemicals. Establish a "green label" to advertise to consumers
- Technology transfer and study

- Corporate advertising to increase the Businesses for the Bay activities - promote good things that businesses are doing.
- More scientific data that clearly identifies the problem/impact and effect of potential positive actions.

4th Question

What tools/concepts/innovations would help?

- ISO 14,000; Environmental Management Systems (EMS), risk assessment/ risk prioritization
- Performance goals;
- Regulatory flexibility;
- Compliance Assistance;
- Environmental Business Council;
- Mentoring Programs;
- Create low-cost opportunities for businesses to meet with other businesses - helps with technical information transfer
- Voluntary program with 50% grant funding incentives
- Need risk assessment, some way to prioritize toxics in general.
- Scientific information:
- Links to tangible environmental benefits;
- Figure out what pieces we need, prioritize pieces
- Risk management strategy;
- Effluent trading/pollution credits programs
- Effective education program about the Chesapeake Bay

Environmental Perspective: Breakout Session Summary

This breakout session was comprised of a diverse array of environmental, state, and academic representatives, and much of the breakout session involved understanding each others viewpoint. This summary overviews the major discussion points at the environmental breakout session. A subsequent environmental roundtable will be held where Chesapeake Bay watershed environmental groups will set more specific goals and objectives to incorporate into the toxics strategy.

The facilitator, Kim Coble, Chesapeake Bay Foundation, outlined the myriad of roles that the environmental groups have played and can play in helping to achieve the goal of a "Bay Free of toxics": advocacy, education, and partnership. She challenged the environmental community to go beyond listing actions that others should take to achieve the toxics strategy goal and develop actions that environmental groups can take to help achieve the toxics strategy goal.

"Bay Free of Toxics" and "Zero Release"

There was consensus among the environmental groups that "there is nothing good about toxics in the Chesapeake Bay." They supported the concept of a "Bay free of toxics" and of a "zero release" goal. The environmental groups agreed that it is important to challenge the dischargers to prove that the chemicals do not cause an adverse effect on living resources and that the Bay Program should promote the "precautionary principle". The precautionary principle involves proving that the chemicals are not toxic before releasing into the environment, as opposed to releasing chemicals and then conducting source reduction, remediation, and restoration efforts once an impact is observed.

Other stakeholders who were not from environmental groups raised the issue regarding the potential inconsistency of a Bay free of toxics versus a Bay free of toxic impacts. One suggestion was that the definition of toxics should be cleared up so that one universal description of toxics can be included in the strategy. Other participants noted that a zero discharge goal is impossible but it could be attained if the strategy noted where it was applicable and for what processes.

Outreach and Education

There was a consensus among the breakout session participants that the Bay Program should focus on outreach and education to communicate what is known about toxic impacts and the Bay and sources of chemical contaminants to the Bay is critical. The all recognized the need for "community communicators" who can translate toxics information into a form that is understandable and relevant to a wide audience. The message should effectively communicates risk and include a list of actions that can be taken in response to the information. Some examples of outreach activities include:

1. Developing a universal message about toxics to convey to the public. This message should convey that "there is nothing good about toxics in the Bay", communicate the risk to public health and aquatic life, and address the economic incentives for reducing chemical releases.

2. Focus on public outreach to make communities aware of the conditions in their backyard instead of focusing all governmental efforts on helping businesses with toxics reduction.
3. Concentrate on communicating a simple message the public can understand.
4. Tap into the Bay Program Communications Subcommittee efforts to convey an accurate message about toxics.
5. Inform people as to what they can do to reduce pollution and work towards zero discharge (e.g., purchase toxics-free products).
6. Hold focus groups to address toxics related concepts and assess the knowledge base of the public.
7. Develop a speakers bureau to deliver a consistent correct message about toxics to the public.
8. Translate CBP technical information into a more public friendly verse.

What can the CBP do to help reduce point sources into the Bay?

- Offer technical assistance grants to non-profits to provide a level of expertise to small organizations.
- Develop a goal related to expanding SIC codes and TRI reporting data.
- Promote research to assess chemical contamination in areas with little information.
- Develop a long-term and a short-term goal for point source toxics reduction. For example, the long-term goal could be a toxics free Bay and zero release but short-term goals would serve as steps to achieve this goal (e.g., no toxics present that cause adverse effects to living resources).
- Work with the departments of economic development to create additional incentives to lure toxics free companies into the watershed (as opposed to large polluting companies). This could result in a "no net increase in toxics" theme (similarly to the no net loss of wetlands goal).
- Recruit transportation and automobile industries into *Businesses for the Bay*.
- Focus on persistent bioaccumulative chemicals in more arenas than just the Toxics of Concern (TOC) list (e.g., promoting no mixing zones).
- Develop TRI chemical reduction goals that take into account the newly added chemicals, new thresholds for persistent bioaccumulative toxics, and the new reporting sectors.
- Begin to focus on human health impacts from chemical contaminants and include the public health model as part of the health of the Bay assessment.
- Promote the utilization of the TOC list to promote criteria development for the chemicals that are most problematic in the Bay.
- Increase participation in *Businesses for the Bay*. Prove that voluntary efforts can work. If voluntary efforts do not increase participation, a regulatory approach could be considered.

Additional suggestions

Other suggestions of activities that could achieve a toxics free Bay that are not necessarily related to Bay Program efforts are:

- Expanding the number of chemicals that industry has to report. By making additional information available to the public, industry would be motivated to continue loadings reductions so that they are not on top of the TRI list.

- Lower the mercury threshold. The current mercury threshold is relatively high which could indicate why there are few mercury related fish consumption advisories in the watershed.
- Ensure environmental groups continue to call attention to Bay problems (e.g., industries who are major polluters), but have industry and government help in these communication roles.

APPENDIX

Agenda

Breakout Session Background Papers

Participant List

The Government Perspective

Introduction

The Bay Program is currently reviewing and revising the *1994 Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy* and, through a series of critical issue forums, is seeking stakeholder input on new directions the Bay Program should take on toxics-related issues. The public sector plays a significant and critical role in preventing pollution from entering our waterways and getting into our drinking water supplies. Traditionally, governments have implemented regulatory programs to protect local natural resources and comply with state and federal water quality and toxic release standards. However, many government entities, recognizing the high costs and limitations of these traditional programs, are taking voluntary steps, often in partnership with businesses and the general public, to reduce pollution through pollution prevention activities. The Government element of the Forum seeks to bring together local and state representatives to consider approaches and techniques that will advance public sector efforts to prevent pollution and, as a result, reduce toxic pollution from entering the Bay, its rivers and streams. The objective of the Forum is to explore opportunities to:

- prevent pollution by advancing solid waste management efforts including source reduction activities;
- prevent pollution by advancing pretreatment and source reduction efforts at government-owned or managed point source facilities such as Publicly Owned Treatment Works (POTWs); and
- enhance public education programs to encourage business, industry and community residents to take steps to reduce and prevent pollution.

During a facilitated break-out session, government representatives (local and state) will identify pollution prevention opportunities that they can and are implementing and explore opportunities to advance these efforts on a watershed-wide basis to achieve Chesapeake Bay Program toxic reduction and prevention goals and objectives. Corresponding break-out sessions from other key stakeholder groups, including the environmental community and industry, will be examining similar issues from their perspectives during the Forum.

Background

In 1994 the Executive Council of the Chesapeake Bay Program adopted the Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy. The goal of the strategy is "a Chesapeake Bay free of toxics...". To help achieve the overall Bay Program goal, the Executive Council further committed by the year 2000, to achieve voluntary participation by all state and local governments within the Chesapeake Bay basin in the implementation of pollution prevention programs aimed at further reducing the use and generation of potentially toxic chemicals at their facilities.

As defined in the strategy, pollution prevention is a hierarchy of approaches directed ultimately towards reducing or eliminating the amount of chemical contaminants at the source of production or preventing them from entering the environment or a waste stream. Source reduction is the preferred method when practical, followed by recycling/reuse, and energy recovery. Treatment, followed by safe disposal, should be used as a last alternative.

Regulatory programs, including recycling efforts and point source pre-treatment programs, have required local and state agencies to take steps that ensure the achievement of this goal. However, when comparisons are made between the current condition of the Bay and the toxics-free goal set out by the Executive Council, one can see that there is still a lot of room for improvement. Furthermore, increasing population projections for the Bay watershed will continue to present additional challenges to achieving the "Bay free of toxics" goal.

In light of these challenges and the costs and limitations of traditional efforts, governments are taking voluntary steps to reduce the quantity and toxicity of waste entering the local waste stream. For example, communities such as Fauquier County, Virginia, Baltimore County, Maryland and Lancaster County, Pennsylvania are taking programmatic and policy actions to prevent pollution.

But a fundamental question remains, how might we encourage similar efforts in communities throughout the Bay watershed and what additional steps can be taken by government to move closer to the achievement of a "Bay free of toxics"?

Suggested Discussion Topics and Actions

The following questions and suggested actions were developed to help direct the discussion during the break-out session. Participants should come prepared to discuss these issues and to insert additional thoughts and ideas.

- Governments are receivers of waste at landfills and/or at publicly owned treatment works. Beyond traditional regulatory programs, what actions could state and local governments take to reduce the quantity and toxicity of waste it receives? What might the Chesapeake Bay Program do to facilitate such actions from a watershed-wide perspective?

- Recycling efforts at the local level have improved dramatically over the last 10 years and clearly demonstrate the commitment of local governments to resource protection issues. Could we do more in this area? Would a Bay-wide recycling goal help advance these local and state objectives?

- Source reduction seems to be the next threshold issue to address to advance local environmental protection initiatives. What can government do to promote source reduction activities? How might the Chesapeake Bay Program promote and support such efforts? Would a Bay-wide task force charged with addressing this issue be helpful and complementary to current efforts to address source reduction?

- Education programs have been successful in preventing pollution in several local governments located in the Bay watershed. What can the Bay Program do to promote more educational initiatives that advance the achievement of toxic reduction goals?

- Would a Bay-wide government task force charged with promoting source reduction and pollution prevention activities throughout the watershed be useful to advancing these initiatives?

Industry Perspective

Introduction

The Bay Program is currently reviewing and revising the *1994 Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy* and, through a series of critical issue forums, is seeking stakeholder input on new directions the Bay Program should take on toxics-related issues. In the 1994 strategy, pollution prevention by industrial and government point sources plays a large role in helping the Chesapeake Bay Program achieve its goal of a toxics free bay. The Bay Program is committed to working in partnership with industry and government to achieve a series of pollution prevention-related commitments. Leading up these voluntary initiatives is the Bay Program's Toxics Subcommittee and its Pollution Prevention Workgroup. The Subcommittee is responsible for providing an overall direction on how to achieve its goal of a bay free of toxics, while the Pollution Prevention Workgroup, whose membership consists of representatives from industry and federal, state, and local governments, helps to define specific pollution prevention activities that should be taken to achieve that goal. Below is a summary of the actions and accomplishments that have been achieved to date by the Workgroup and its partners in business, industry, and government.

Background

In 1994 the Executive Council of the Chesapeake Bay Program adopted the Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy. The goal of the strategy is " ..a Chesapeake Bay free of toxics ..". Since 1994 there has been progress towards meeting this goal, however, challenges remain in achieving this goal. Several programs have evolved since this strategy was put into effect and are described below:

Businesses for the Bay

In 1994, the Bay Program committed to work with industry to develop a voluntary, cooperative pollution prevention program modeled after the U.S. EPA's successful 33/50 Program. To do so, the Bay Program hosted a series of Industry Roundtables throughout the Chesapeake Bay watershed to solicit input about what this voluntary program should be like. As a result of these efforts, *Businesses for the Bay* was developed. *Businesses for the Bay* is a voluntary pollution prevention program for business and industry, as well as federal, state and local government facilities, associations, and environmental groups, within the Chesapeake Bay region. Since the program began in 1996, *Businesses for the Bay* has become a nationally recognized and award winning program that boasts participation by more than 230 facilities.

Businesses for the Bay asks its participants to commit to prevent pollution at its facility by implementing a variety of source reduction activities such as materials substitution, employee training, and in-process recycling. Participants are also asked to annually report on their progress in preventing pollution. According to the 1998 reports, releases of more than 222 million pounds of waste were either reduced or recycled by *Businesses for the Bay* participants. These wastes ranged from specific chemicals to office paper. Many facilities indicated that they conducted opportunity assessments to identify new ways to prevent pollution while others noted that they already had preventative maintenance programs in place. Also, 15 of the facilities offered pollution

prevention training to a total of 6,300 employees. In addition, 13 facilities chose to report their resulting cost savings, which totaled an amazing $1.4 million. That's good news for industry and the Bay!

In order to help participants learn how to implement various pollution prevention techniques, *Businesses for the Bay* offers a variety of technical assistance. One way is through its Business-to-Business Mentor Program, where individuals at participating facilities offer their technical expertise on a variety of pollution prevention-related topics to other businesses. To date, over 90 individuals have volunteered to be Mentors. *Businesses for the Bay* also provides technical assistance workshops throughout the Bay watershed and works closely with the state and district pollution prevention coordinators who also provide assistance.

All participants in *Businesses for the Bay* receive positive publicity for their efforts. However, those that are outstanding are eligible for the Excellence Awards, presented annually. Parker's Exxon (DC), Hercules, Inc.'s Hopewell Plant (VA), and Northrop Grumman's Electronic Sensors and Systems Sector (MD) were recognized as 1998's Excellence Awards Recipients. Robert Dunn, Virginia State Environmental Affairs manager for E.I. Dupont de Nemours Co., Inc., was also honored as 1998's Mentor of the Year.

Toxics Release Inventory

One of the primary goals of *Businesses for the Bay* and the Pollution Prevention Workgroup is to reduce the releases and off-site transfers for treatment and disposal of Toxics Release Inventory (TRI) chemicals from all Chesapeake Bay basin reporting industries by 65% between 1988 and 2000. According to the 1997 TRI data, the most recent data available, facilities that report to the TRI cut releases by 67% between 1988 and 1997. This reduction holds steady from 1996 when industry achieved the same level of reductions and exceeded the Bay Program's voluntary goal of 65% well ahead of schedule! Federal facilities have also done their part in reducing their releases and off-site transfers of TRI chemicals, and achieved an 84% reduction between 1994 (the first year federal facilities were required to report to the TRI) and 1997.

Suggested Discussion Topics and Actions

Through a revised strategy, the Bay Program seeks to build upon the pollution prevention successes it has achieved to date and to strengthen its partnership with industry and governmental facilities. Input from these key stakeholders is critical in determining new directions and actions the Bay Program should take to achieve its goal of a bay free of toxics.

In preparation for the forum, please consider the direction you would like to see the Bay Program take in this new strategy. Consider how your facility can help the Bay program achieve its goal of a bay free of toxics. Come prepared to discuss your ideas during the breakout session for industrial stakeholders.

The Environmental and Public Interest Community's Perspective

Introduction

The Bay Program is currently reviewing and revising the 1994 Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy and, through a series of critical issue forums, is seeking stakeholder input on new directions the Bay Program should take on toxics-related issues. The purpose of the Toxics Point Source Forum is to provide the Chesapeake Bay Program with our perspective on the efforts and future directions that are needed to meet the toxics goal of a toxics-free Bay. The Bay Program will then use our input (as well as the input from other stakeholders) to assist them in the revision of the Toxics Strategy. As part of this effort the first question for us to address is what action can the environmental and public interest communities take towards achieving the toxics goal. Historically, we have called for actions and changes among regulators and regulated communities. This role is important and should continue. However, we have other opportunities and these will be the focus of our discussion at the forum. Other stakeholders (regulated community and local and state governments) will be conducting parallel examinations and submitting their input to the Bay Program.

Background

In 1994 the Executive Council of the Chesapeake Bay Program adopted the *Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy.* The goal of the strategy (the toxics goal) is "...a Chesapeake Bay free of toxics by reducing or eliminating the input of chemical contaminants from all controllable sources to levels that result in no toxic or bioaccumulative impact on living resources that inhabit the Bay or on human health." Since 1994 there has been progress towards meeting this goal; however, we remain far from achievement of the goal.

The environmental and public interest communities have historically played three primary roles in the efforts to meet the toxics goal: 1) educate; 2) advocate; and 3) partner. The education component has focused on education of the public and decision-makers but not on education of the regulated community. Education has taken place indirectly through mechanisms such as workshops and training. Education has also taken place indirectly through mechanisms such as ongoing dialogue and debate, critical reports and "white papers", and highly public challenges to use of certain toxics.

Advocacy efforts have included legislative activities, such as bill drafting, lobbying and testifying. Additionally, the environmental and public interest communities have advocated by criticizing administrative and regulatory shortfalls and inadequacies. (This traditional role is the dye with which we are often cast.)

A newer role for us has been the development of partnerships with the regulated community and other "nontraditional" players, such as schools or faith communities. The Elizabeth River Project in Norfolk, Virginia, is one of the best known examples of a collaborative effort. Through the use of collaboration and consensus, a wide variety of river constituents have come together to forge an effort on restoring the Elizabeth River.

Our efforts in pursuing these three roles have led to a variety of successes. Reports documenting toxic contamination in the Bay and its tributaries and some of the associated risk have yielded new laws and regulations. Consistent representation on work groups, planning committees and task forces have helped to change regulatory programs. However, when a comparison is made between the current condition of the Bay and the toxics-free goal set out by the Executive Council, one can see that there is still a lot of room for improvement and success.

This leads us to the point of the discussion - What more can the environmental and public interest communities do to facilitate progress towards meeting the toxics goal?

Suggested Actions

Below are some suggestions for actions that could be taken by the environmental and public interest communities. These are simply suggestions to start our discussion. Please come prepared to discuss these suggestions. Please bring your own ideas, as well.

- Find and advocate for an issue of similar concern with the regulated community (mutual regulatory changes, state purchasing programs, municipal pretreatment program requirements)
- Embrace and promote a precautionary principal approach to toxics (discuss how to get other stakeholder groups to embrace the principal as well)
- Develop an education program for legislators, regulators, local governments and consumers on our concerns and recommendations regarding toxics in the Bay
- Promote regulatory adoption of sediment criteria development (as well as other criteria development)
- Consider the definition of toxics reduction (does recycling/restoration/source reduction fit in?)
- Find a mechanism to address the imbalance of representation on task forces and workgroups
- Work with the regulated community to develop a "ten point plan" of mutually agreeable actions that should/will be taken with regards to toxics
- Develop strong universal message about toxics
- What can the Chesapeake Bay Program do to be more supportive

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June 22, 1999
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