Getting in Step with Phase II

A Workshop for Stormwater Program Managers

June 22-23, 2004

Philadelphia, Pennsylvania

Cosponsored by:

U.S. EPA Office of Wastewater Management
U.S. EPA Office of Wetlands, Oceans, and Watersheds
U.S. EPA Region 3

903B04002

Getting in Step with Phase II

A Workshop for Stormwater Program Managers

Philadelphia, PA
June 22–23, 2004

Tuesday, June 22

8:00 – 8:30 **Registration**

8:30 – 8:45 **Opening Remarks/Introductions**
US EPA Region III Sponsors; Paula Estornell and Fred Suffian, US EPA Region III

8:45 – 9:15 **Overview of the Phase II Program**
Barry Tonning, Tetra Tech
Brief review of the Clean Water Act NPDES program and the Storm Water Phase I and II components; discussion of Phase II requirements and the Ninth Circuit Court Case ruling.

9:15 – 10:30 **Illicit Discharge Detection and Elimination**
Christy Williams, Tetra Tech
Review of basic program elements and regulatory requirements; programmatic considerations and program implementation.

10:30 – 10:45 **Break**

10:45 – 12:00 **Illicit Discharge Detection and Elimination: Field Application of Program Principles**
Francis R. Albright, Gannett Fleming
Field surveys, outfall reconnaissance inventories, mapping, and water quality analysis.

12:00 – 12:15 **Quick and Dirty Outfall Reconnaissance Inventory Exercise**

12:15 – 1:15 **Lunch**
On your own.

1:15 – 2:45 **Post Construction Runoff Control: Basic Program Requirements**
Christy Williams, Tetra Tech
Review of NPDES Phase II Storm Water Permit requirements for post-construction runoff; design for minimizing post construction runoff impacts.

2:45 – 3:00 **Break**

3:00 – 3:30 **Case Study: Post Construction Storm Water Management**
Jason Papacosma, Arlington County, VA

3:30 – 4:30 **Post Construction Design and Performance Standards**
Christy Williams, Tetra Tech
Details on options for addressing design and performance standards for post construction storm water runoff.

4:30 – 5:00 **Case Study: Storm Water Controls for Challenging Situations**
Adam P. Sapp, Stormwater Management.

5:30 pm **Social and Networking Hour**

Wednesday, June 23

8:00 – 8:30 **Registration**

8:30 – 9:00 **Review and Discussion of Day 1 topics**

9:00 – 10:15 **Building Blocks for Effective Storm Water Education and Outreach**
Barry Tonning, Tetra Tech
Conducting education and outreach through six simple steps; defining organizational goals and identifying target audiences; program evaluation approaches.

10:15 – 10:30 **Break**

10:30 – 11:30 **Engaging and Involving Key Stakeholders and the Public In Your Program**
Barry Tonning, Tetra Tech
Identifying key stakeholders, stakeholder participation approaches, processes for incorporating stakeholder input into storm water program activities, dealing with difficult behaviors, separating stakeholder positions from needs.

11:30 – 12:00 **What It Takes to Change Behavior**
Barry Tonning, Tetra Tech
How to incorporate social marketing techniques into a storm water outreach program to sell ideas and attitudes and generate behavior changes.

12:00 – 1:15 **Lunch**
On your own.

1:15 – 2:15 **Problems and Solutions Implementing the Storm Water NPDES Program**
Paula Estornell, US EPA Region III
What does US EPA look for in a Phase II Storm Water Permit? How about the States? Hear what agency representatives have to say about the permit and storm water management programs during this presentation and facilitated discussion.

2:15 – 2:45 **Integrating Storm Water Programs with Other Water Resource Programs**
Christy Williams, Tetra Tech
Outreach, involvement, and other tools for coordinating water resource management through storm water, watershed planning, and other programs; targeting problem runoff pollutants through storm water management.

2:45 – 3:00 **Break**

3:00 – 4:00 **Working with the News Media to Enhance Your Outreach/Involvement Efforts**
Deborah Fries, Pennsylvania DEP; Patrick Boyle, US EPA Region III (Invited)
Partnering with the news media – how to get the media's attention, how to make your press releases relevant, and how to draw people into storm water related issues.

4:00 – 4:30 **Group Discussion: Don't Reinvent the Wheel!**
Hear what other MS4 communities from around the region have already done to integrate their storm water programs with other water resource programs

4:30 pm **Wrap-up, evaluation, and adjourn**

TD
388.5
6481
2004

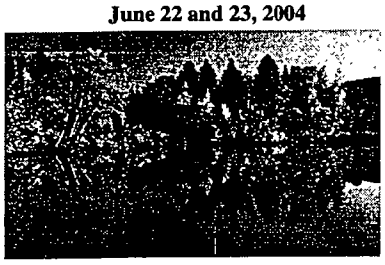
U.S. EPA Region III
Regional Center for Environmental
Information
1650 Arch Street (3PM52)
Philadelphia, PA 19103

903B04002

Getting In Step with Phase II Workshop for Storm Water Managers

Philadelphia, PA

June 22 and 23, 2004



Welcome!

- **Workshop Sponsors**
  US EPA Headquarters Office of Wetlands, Oceans, & Watersheds
  US EPA Region III Water Protection Division
- ***Getting in Step A Guide for Conducting Watershed Outreach Campaigns*, December 2003**
  Developed by State-EPA Nonpoint Source Management Partnership Outreach Workgroup (contractor Tetra Tech)
- **EPA Region III Representatives**

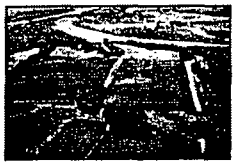
Paula Estornell, P.E.	Fred Suffian
NPDES Storm Water Coordinator	NPS Program Manager
estornell.paula@epa.gov	suffian.fred@epa.gov

What is Storm Water?

Runoff from natural precipitation, such as rain events and snow melt and other surface runoff and drainage

3

Point Source vs. Nonpoint Source



POINT Source

- Discharge of wastewater/ washwater/storm water from a discrete point into Waters of the U.S.
- Requires an NPDES permit

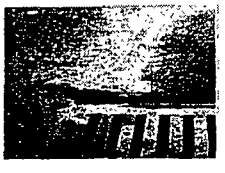
NONPOINT Source

- Any runoff that is not a point source
- A largely voluntary program at the Federal level

4

Why is Storm Water a Problem?

- Pollutants discharged from developed and disturbed land
  - Quality
  - Quantity



- Other pollutants enter storm sewer system
  - Illicit discharges
  - Illicit connections

5

Storm Water Pollutants

- Sediment
- Nutrients
- Bacteria
- Oxygen Demand
- Oil and Grease
- Trace Metals
- Toxic Chemicals
- Chlorides
- Thermal Impacts

6

Sources of Impairment

EPA Region III Leading Cause of Stream Impairment:

- **Agriculture**
- **Urban Storm Water**
- **Resource Extraction**

7

Expected Benefits of the Storm Water Program

- **Drinking water benefits**
- **Reduced illness from contaminated seafood & contaminated water**
- **Improved commercial, recreational and subsistence fishing**
- **Enhanced opportunities for swimming and boating**
- **Reduced flood damage**
- **Navigational benefits**
- **Enhanced aesthetic value**

8

Overview of the Phase II Program

Getting In Step With Phase II

A Workshop for Storm Water Program Managers

Sponsored by US EPA

Presented by Tetra Tech

Overview of the Phase II Program

The Clean Water Act

Rivers and Harbors Act (1899)
Water Pollution Control Act (1948)
Fed Wtr.Poll. Control Act (1956)
Water Quality Act (1965)

Federal Water Pollution Control or "Clean Water" Act (1972)

CWA Amendments (1977)
Water Quality Act (1987)
Coastal Zone Amendments (1990)

Phase I Rule (1990)
Phase II Rule (1999)

United States Code, Title 33

Sec. 1251. Congressional declaration of goals and policy

- (a) Restoration and maintenance of chemical, physical and biological integrity of Nation's waters, national goals for achievement of objective

The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter

  - (1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985
  - (2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983
  - (3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;
  - (4) it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;
  - (5) it is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State;
  - (6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans; and
  - (7) it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this chapter to be met through the control of both point and nonpoint sources of pollution.

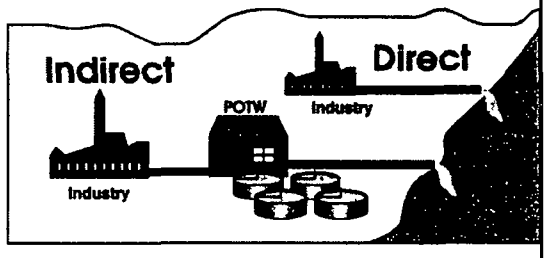
The Clean Water Act approach

- CWA Part I: discharge-based approach
  - *Controls & permits for point source discharges such as treatment plants and storm water discharged to streams (Section 401) by regulating treatment requirements (technology-based)*
- CWA Part II: water quality based approach
  - *Water Quality Standards developed; targets waters that are still polluted through monitoring, assessment, and cleanup plans under the "Total Maximum Daily Load" (TMDL) provisions (Section 303)*

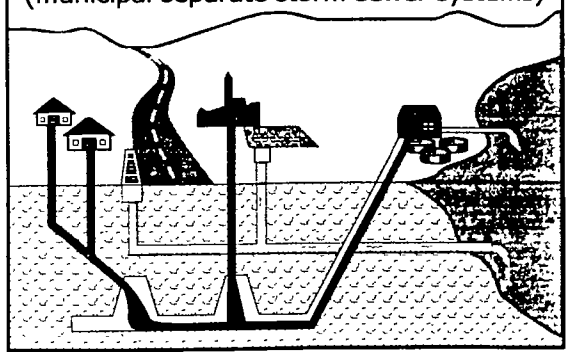
NPDES discharge permitting

- Illegal for any point source (pipe, ditch, channel, tunnel, vessel) to discharge pollutants to surface waters without a permit
- Coverage:
  - Industrial and municipal wastewater
  - Industrial, urban, and construction-related storm water discharges; active/ some abandoned mines
  - Concentrated animal feeding operations (CAFOs)
- Also covers ships, other vessels, or other manmade conveyance, and offshore oil rigs

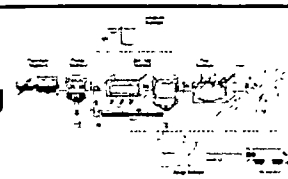
NPDES discharge permitting includes direct and discharges



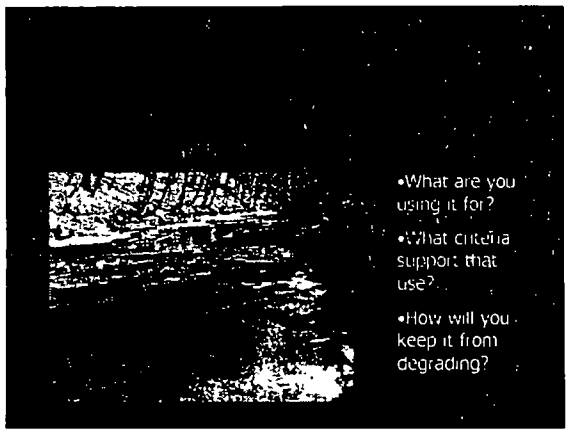
NPDES permitting also includes MS4s (municipal separate storm sewer systems)



NPDES permitting



- WWTP pollutant limits apply regardless of condition of receiving water or relative source contributions
- Same effluent limits placed on all point sources within each of dozens of categories of industries
  - *Generally, municipal sewage plants must achieve discharge equal to "secondary treatment"*
- Treatment levels determined by technical/economic feasibility
- MS4s don't have pollutant effluent limits . . . . yet . . .



Designated uses of water resources . . .

Designating waterbody uses

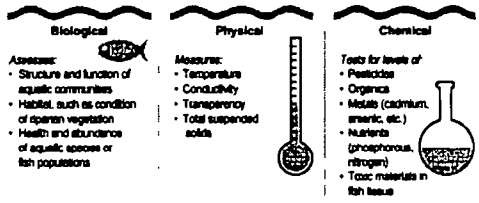
General rules:

- Must designate all *existing* uses (i.e, since November 1975)
- Fishable/swimmable uses *required*, with rare exceptions
- *Waste transport* as a designated use is not OK
- Multiple uses OK; most sensitive use reigns
- Can consider economic factors

Water quality criteria: linked to designated uses

- Basic types of criteria:
  - Narrative, numeric, and biological
  - Water column/sediment/fish tissue
- Categories of criteria:
  - Aquatic life, human health, wildlife

Figure 8: Monitoring Types and Pollutants or Conditions That They Measure



Antidegradation requirements

- Purpose: Prevent deterioration of existing levels of good water quality
- Generally applies parameter-by-parameter, not waterbody-by-waterbody
- Three tiers of protection:

  Tier 1: Must meet WQC (all)

  Tier 2: No degradation except for "important" social/economic development (for HQ waters)

  Tier 3: WQ to be "maintained and protected" (for ONRWs)

Total Maximum Daily Loads

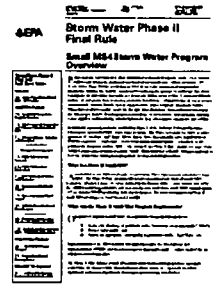
Waters that don't meet the criteria for their designated use need a TMDL cleanup plan to:

- Identify where pollutants are coming from
- Estimate loads coming from each source
- Figure out ways to control pollutant loads
- Develop a plan for implementing the controls

TMDLs include point and nonpoint sources!

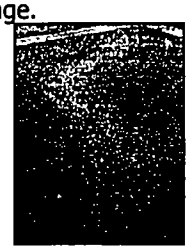
Closeup: The NPDES Phase II Storm Water Program

- Water Quality Impacts
- Regulatory Background
- Six Minimum Measures
- Recent Court Decisions
- Local Phase II General Permits



What is storm water?

Runoff from natural precipitation, such as rain events and snow melt and other surface runoff and drainage.



Why is Storm Water a Problem?

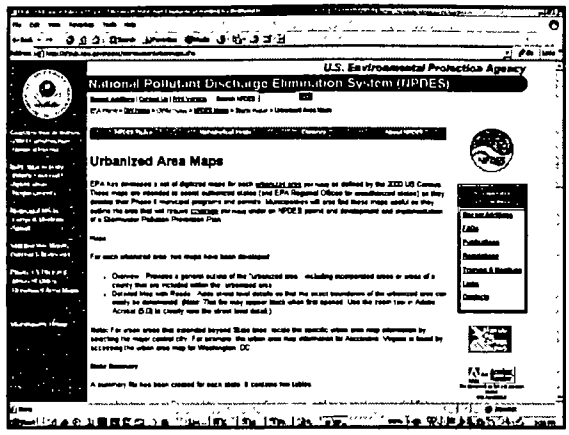
- **Developed and disturbed land contributes to problems**
  - **Quality (e.g., pollutants such as sediment, nutrients)**
  - **Quantity (e.g., excess storm water flows)**
- **Other pollutants enter storm sewer systems and pollute storm water**
  - **Illicit discharges**
  - **Illicit connections**

How is Storm Water Regulated Under the NPDES Program?

- Phased approach to regulation
  - Phase I: Regulated discharges from large & medium sized MS4s and industrial/construction activity (≥5 acres)
  - Phase II: Regulated discharges from small MS4s and small construction activities (≥1 acre)
- Permitting Authority (State or US EPA) issues NPDES permit to regulated dischargers

Storm Water Phase II Regulations

- Promulgated on December 8, 1999
- Required permits for:
  - Small MS4s in urbanized areas
  - Additional MS4s designated by the Permitting Authority
  - Construction disturbing 1-5 acres
- Excluded from regulation storm water discharges from industrial facilities that have "no exposure" of industrial activities or materials to storm water.

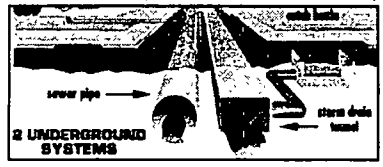


What is an MS4?

A *municipal separate storm sewer system* (MS4) is:

A conveyance or system of conveyances... owned by a state, city, town, or other public entity that discharges to waters of the U.S. and is:

- designed or used for collecting or conveying storm water
- not a combined sewer (i.e., carries sewage & runoff)
- not part of a Publicly Owned Treatment Works (POTW)

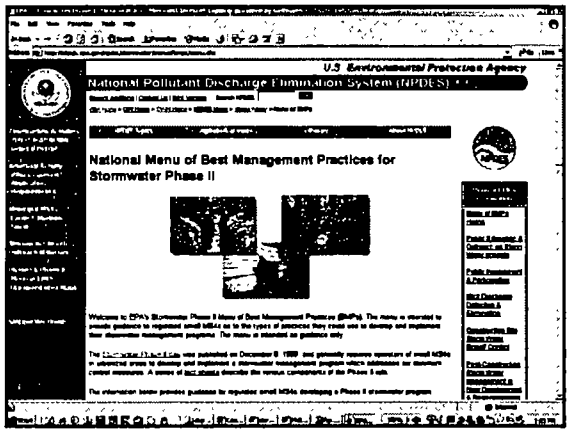


Regulated Small MS4
General Permit Requirements

- Required to develop, implement and enforce a program to:
  - Reduce the discharge of pollutants to the maximum extent practicable (MEP),
  - Protect water quality, and
  - Satisfy the appropriate water quality requirements of the Clean Water Act
- Program must include:
  - Six minimum control measures
  - Evaluation/assessment efforts & recordkeeping

Regulated Small MS4
Permit Requirements

- Must submit a "Notice of Intent" (NOI) to discharge or individual permit application and identify the following elements for each minimum control measure:
  - Best management practices
  - Measurable goals for each BMP
  - Timing and frequency of the actions
  - Responsible persons
- EPA has issued a "menu" of BMPs as guidance



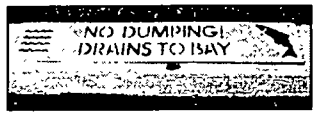
Six Minimum Control Measures

- **Public Education and Outreach**
- **Public Involvement/Participation**
- **Illicit Discharge Detection and Elimination**
- **Construction Site Runoff Control**
- **Post-Construction Storm Water Management in New and Redevelopment**
- **Pollution Prevention/Good Housekeeping for Municipal Operations**

Minimum Control Measure: Public Education and Outreach

MUST:

- Distribute educational materials to the community, or
- Conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff



Minimum Control Measure: Public Involvement /Participation

MUST:

- Comply with State, Tribal and local public notice requirements, at a minimum

Minimum Control Measure:
Illicit Discharge Detection and Elimination

MUST:

- Develop a sewer system map of all outfalls and the names of all receiving waters
- Prohibit non-storm water discharges, through an ordinance or other means, and implement appropriate enforcement procedures
- Implement a plan to detect and address non-storm water discharges
- Inform public of hazards associated with illegal discharges and improper disposal of waste

Minimum Control Measure:
Construction Site Storm Water Runoff Control

MUST:

- Develop a program to reduce pollutants from construction activities that disturb $\geq$ 1 acre
- Use an ordinance, or other regulatory means, with penalties, that requires appropriate erosion & sediment controls and requirements to control runoff of wastes
- Have procedures for:
  - site plan review
  - site inspection & enforcement
  - public input

Minimum Control Measure:
Post-construction Storm Water Management in New Development and Redevelopment

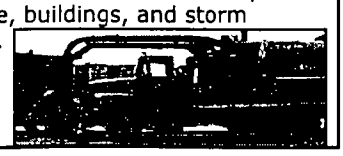
MUST:

- Develop a program, using an ordinance or other regulatory means, to address runoff from new development and redevelopment projects that disturb $\geq$ 1 acre
- Implement strategies with a combination of structural and/or non-structural BMPs
- Ensure adequate long-term operation & maintenance (O&M) of BMPs

Minimum Control Measure:
Pollution Prevention/Good Housekeeping for Municipal Operations

MUST:

- Develop an O&M program to prevent or reduce pollutant runoff from operations
- Include employee training to prevent and reduce storm water pollution from activities such as the maintenance of park and open space, buildings, and storm water systems.



9th Circuit Ruling (Environmental Defense Center v EPA)

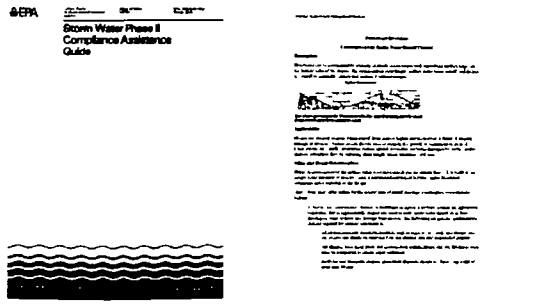
- Upheld Phase II rule, but required EPA and States to:
  - Make applications for general permit coverage (NOI and SWMP) available to the public
  - Review applications to determine if they meet the "Maximum Extent Practicable" (MEP) standard before permit coverage commences
  - Adopt a process to accommodate public hearings

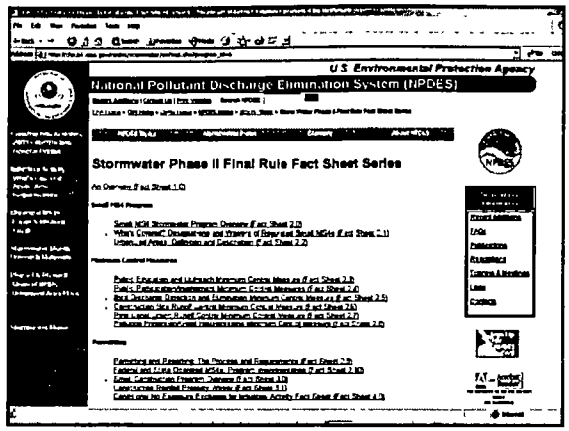
EPA Guidance on 9th Circuit Court Ruling (April 16, 2004)

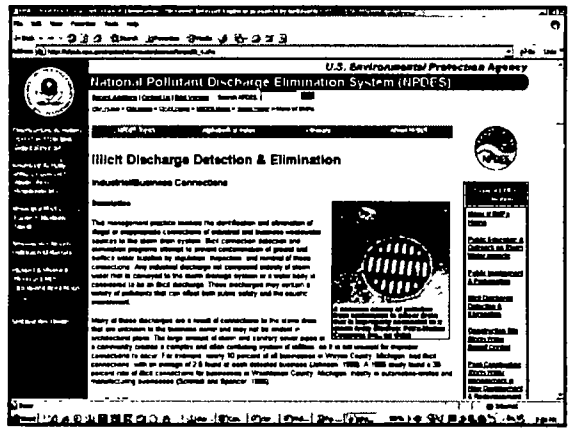
- Public availability of Notices of Intent
  - EPA recommends NOIs be available on the web; at least a 30 day review period
- Opportunity for public hearing
  - Describe process for requesting a public hearing, standard by which requests will be judged, procedures for conducting hearings, and procedures for considering information submitted at the hearing
- Permitting Authority reviews of NOIs
  - Must review NOIs, but official "approval" is not necessary

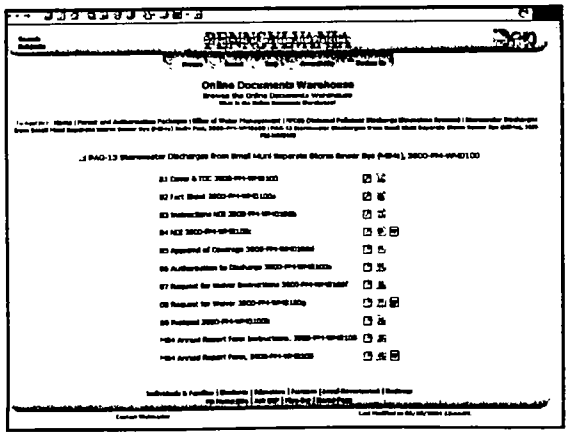
US EPA Resources on the Web:

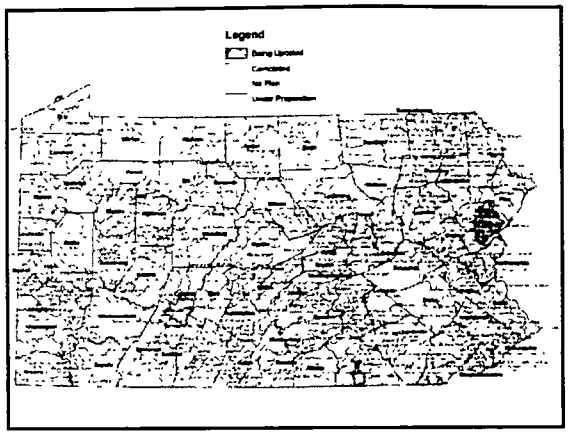
http://cfpub.epa.gov/npdes/stormwater/munic.cfm





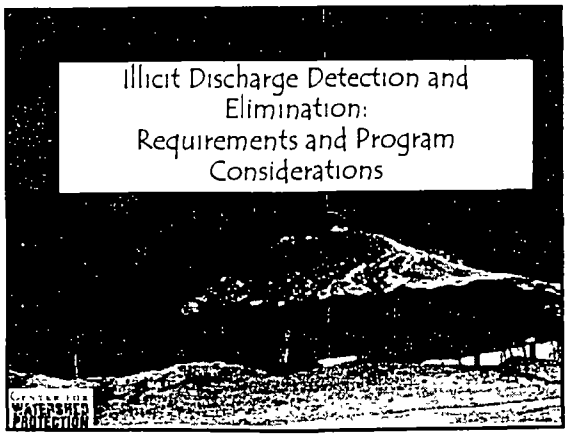



Online Documents Warehouse


Legend

Illicit Discharge Detection and Elimination

Illicit Discharge Detection and Elimination: Requirements and Program Considerations



Presentation Overview

- Terminology Review
- Illicit Discharge Basics
- Phase II MS4 Requirements
- Program Considerations
- Helpful Resources

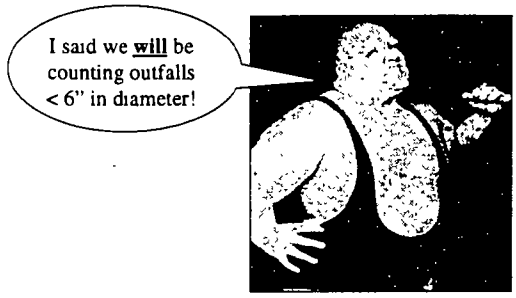
What is an Illicit Discharge?

- A discharge to an MS4 that is not composed entirely of storm water except permitted discharges and fire fighting related discharges

  40 CFR 122.26(b)(2)
  - Unique frequency, composition & mode of entry
  - Interaction of the sewage disposal system & the storm drain system
  - Produced from "generating sites"

What is a Storm Sewer?

- Enclosed pipe or open channel
- From a regulatory standpoint (40 CFR 122.26(b)(5)):
  - Major outfall = enclosed storm drain pipes 36 inches or greater in diameter & open channels that drain more than 50 acres
  - For industrial land uses, major outfall = enclosed storm drain pipes 12 inches or greater in diameter & open channels that drain more than 2 acres
- Minor storm outfalls are smaller than these thresholds



Both major & minor storm outfalls can be a source of illicit discharges & both merit investigation

Discharge Frequency

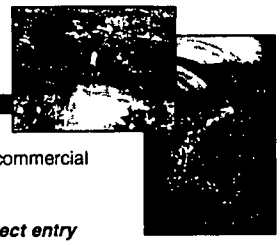
- **Continuous discharges**
  - Occur ***most or all of the time***
- **Intermittent discharges**
  - Occur over a ***shorter period of time*** (e.g., a few hours per day or a few days per year)
- **Transitory discharges**
  - ***Occur rarely***, usually in response to a singular event such as an industrial spill, ruptured tank, sewer break, transport accident or illegal dumping episode

Discharge Flow Types

- Sewage & septage flows
- Washwater flows
- Liquid wastes
- Tap water *
- Landscape irrigation flows *
- Groundwater & spring water flows *

* Note: Not typically considered illicit

Mode of Entry



- ***Direct entry***
  - Sewage, industrial, commercial cross-connection
  - Straight pipe
- ***Indirect entry***
  - Groundwater seepage
  - Spills
  - Dumping
  - Outdoor washing activities
  - "Nuisance" or non-target water

Land Use & Potential Generating Sites

- Residential
- Commercial
- Industrial
- Institutional
- Municipal

Illicit Discharge Detection and Elimination: Requirements and Program Considerations

Land Use & Potential Generating Sites

Land Use	Generating Site	Activity Producing Discharge
Residential	Apartments Multi-family Single Family Detached Common Areas	Car Washing Driveway Cleaning Dumping/Spills Lawn/Landscape Watering Septic System Maintenance Swimming Pool Discharges
Commercial	Campgrounds/RV parks Car Dealers/Rental Car Care Car Washes Coin Laundry/Dry Cleaning Gas Stations/Auto Repair Shops Marinas Nurseries & Garden Centers Oil Change Shops Restaurants Swimming Pools	Building Maintenance (power washing) Dumping/Spills Landscaping/Grounds Care (irrigation) Outdoor Fluid Storage Parking Lot Maintenance (power washing) Vehicle Fueling Vehicle Maintenance/Repair Vehicle Washing

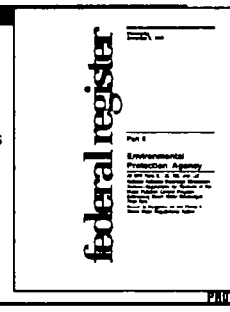
Land Use & Potential Generating Sites

Land Use	Generating Site	Activity Producing Discharge
Industrial	Auto Recyclers Beverages & Brewing Construction Vehicle Washouts Distribution Centers Food Processing Garbage Truck Washouts Marinas, Boat Building & Repair Metal Plating Operations Paper & Wood Products Petroleum Storage & Refining Printing	All Commercial Activities Industrial Process Water or Rinse Water Loading & Un-Loading Area Washdowns Outdoor Material Storage (fluids)
Institutional	Cemeteries Churches Corporate Campuses Hospitals Schools & Universities	Building Maintenance (power washing) Dumping/Spills Landscaping/Grounds Care (irrigation) Parking Lot Maintenance (power washing) Vehicle Washing
Municipal	Airports Landfills Maintenance Depots Municipal Fleet Storage Areas Ports Public Works Yards Streets & Highways	Building Maintenance (power washing) Dumping/Spills Landscaping/Grounds Care (irrigation) Outdoor Fluid Storage Parking Lot Maintenance (power washing) Road Maintenance Spill Prevention/Response Vehicle Fueling Vehicle Maintenance/Repair Vehicle Washing

Phase II Program Requirements

(Source: 64 FR 68722 – December 8, 1999)

- Storm sewer system map
- Regulatory mechanism (e.g. ordinance) to prevent illicit discharges
- Plan to detect & address non-storm water discharges
- Education
- Measurable goals



Phase II Program Requirements
(EPA Guidance)

- Plan to detect and address illicit discharges should include:
  - Procedures for locating priority areas likely to have illicit discharges
  - Procedures for tracing the source of an illicit discharge
  - Procedures for removing the source of the discharge, and
  - Procedures for program evaluation and assessment

Program Component Considerations

- Audit existing programs
- Establish responsibility & authority
- Make an initial assessment of illicit discharge potential
- Develop program goals & strategies
- Conduct field & lab work to identify illicit discharges
- Find & fix illicit discharges
- Prevent illicit discharges
- Revisit & update program goals

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Auditing Existing Resources & Programs

- Purpose:
  - Determine the most capable local agency to run program
  - Identify available staffing, resources and gaps
  - Understand local resources, expertise that can be applied
- Elements:
  - Legal authority
  - Mapping data
  - Field staff
  - Lab/monitoring equipment and expertise
  - Education and outreach
  - Discharge removal
  - Program funding

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Legal Authority Audit Potential Questions

- Does an illicit discharge ordinance already exist?
- Does effective inter-departmental coordination and cooperation currently occur?
- Is there an existing reporting and tracking system (e.g., hotline)?
- Is the municipality involved with industrial NPDES permit activities?

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Mapping Data Audit Potential Questions

- Does current Geographic Information System data exist and does it include coverage of sanitary and storm sewer networks?
- Is there a centralized location for the data?
- Are digital and hardcopy versions of mapping data readily available?

www.stormwatercenter.net

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Field Staff Audit Potential Questions

- Are municipal staff available to walk stream miles and record information?
- Do municipal staff have the training and expertise to lead a field team?
- Are basic field supplies already owned by the municipality and available for use?

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Lab/Monitoring Equipment & Expertise Audit Potential Questions

- Does the municipality have access to an analytical laboratory?
- Is there a local University or Institution that might be a willing partner?
- If yes, is the existing equipment and instrumentation considered to be safe, accurate and reliable?
- Are experienced municipal staff available to conduct analytical analyses?
- Does the lab and staff have the capability to conduct more sophisticated special studies?

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Education & Outreach Audit Potential Questions

- Does the community already have an Internet website to post outreach material?
- Are there regular community events that can be used to spread the message?
- Are there good inter-agency communication mechanisms in place?
- Do outreach materials on illicit discharges already exist?

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Discharge Removal Audit Potential Questions

- Who currently responds to spills, overflows and hazardous material emergencies
- Are municipal staff properly equipped and trained to repair most common types of illicit connections?
- Does the municipality have clear authority identifying responsible parties?
- Is there a response time commitment to known and reported problems?
- Is there a list of pre-approved contractors to perform corrections?

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Program Funding Audit Potential Questions

- Is there a dedicated annual budget line item planned for the IDDE program?
- Are there cost share arrangements/opportunities available with other departments?
- Have grant awards been awarded to the municipality for special studies associated with watershed restoration in the past?

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Auditing Existing Resources & Programs

- Desired Product or Outcome(s):
  - Initial five year IDDE program development plan over the current permit cycle
- Budget and/or Staff Resources Required:
  - Less than one staff month for smaller communities
  - Up to three staff months for larger communities

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Establish Responsibility & Authority

- Purpose:
  - Establish authority to regulate, respond & enforce discharges
  - Identify & prohibit inappropriate connections through plumbing code updates
  - Develop reporting & tracking system
- Elements:
  - Identify responsible department/agency
  - Ensure adequate legal authority
  - Develop tracking system

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Establish Responsibility & Authority

- Desired Product or Outcome(s).
  - Local ordinance
  - Internal & external reporting and tracking system
- Budget and/or Staff Resources Required:
  - Month of staff effort if no major surprises or unforeseen costs
  - Actual time-frame to adopt an ordinance or fund a response system often longer
  - Adoption of ordinance & budget authorization may require multiple votes over many months or years
  - Where existing hotlines exist significant staff & infrastructure savings should be realized

Center for Watershed Protection

Model Illicit Discharge Ordinance

- Definitions
- Discharge Prohibitions
- Compliance Monitoring (right of entry for inspection and sampling)
- Requirement to control illicit discharges and implement BMPs
- Enforcement and Penalties

www.stormwatercenter.net

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Initial Assessment of Illicit Discharge Potential

- Purpose:
  - Determine the potential severity for illicit discharges
  - Identify which subwatersheds or generating land use merit priority investigation
- Elements:
  - Define drainage areas
  - Compile data
  - Characterize drainage areas
  - Characterize illicit discharge potential

Center for Watershed Protection

Initial Assessment of Illicit Discharge Potential

- Desired Product or Outcome(s)
  - Prioritization of problem catchments or subwatersheds
  - GIS or other database system to track outfalls
  - Generation of basic mapping for subsequent field work
- Budget and/or Staff Resources Required:
  - Staff effort to assess the current conditions should be less than four staff weeks
  - Quality & accuracy of initial assessment depends on extent & quality of existing information

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Compile Data

Very Useful
- Aerial photos or orthophotos
- Drainage area boundaries
- Hydrology including piped streams
- Land use or zoning
- NPDES storm water permittees
- Outfalls
- Sewer system, 1" = 200' scale or better
- Standard Industrial Classification (SIC) codes for all industries
- Storm drain system, 1" = 200' scale or better
- Street map or equivalent GIS layers
- Topography (5 foot contours or better)

Good Supplementary Data
- Age of development
- As-builts
- Condition of infrastructure
- Field inspection records
- Depth to water table & groundwater quality
- Historical industrial uses or landfills
- Known locations of illicit discharges (current & past)
- Outfall & stream monitoring data
- Parcel boundaries
- Pollution complaints
- Pre-development hydrology
- Sanitary sewer I/I surveys
- Septic tank locations or area served by septic systems
- Sewer system evaluation surveys (SSES)

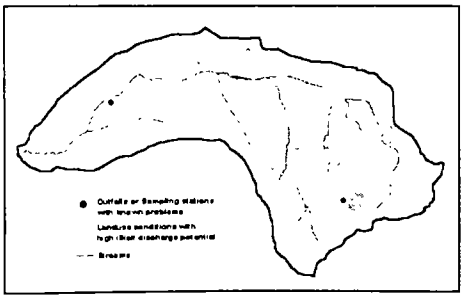
Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Characterizing Illicit Discharge Potential for Drainage Areas

Potential for Illicit Discharges	Indicators
Low	• Few historical complaints • Good dry weather water quality • Good biological data • Some of drainage area contains land use conditions & generating sites with high illicit discharge potential
Medium	• Some historical complaints • Fair dry weather water quality • Fair biological data • Substantial portions of drainage area contain land use conditions & generating sites with high illicit discharge potential
High	• Many historical complaints • Poor dry weather water quality • Poor biological data • Most of drainage area contains land use conditions & generating sites with high illicit discharge potential

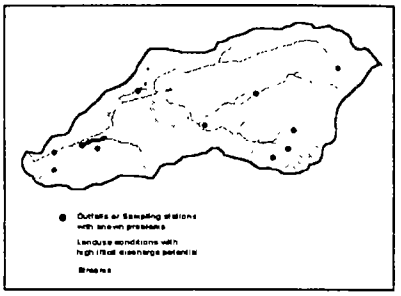
Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Drainage Area with Low Potential for Illicit Discharges



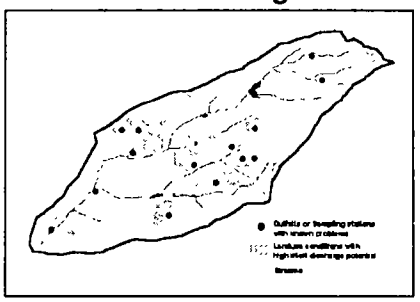
Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Drainage Area with Medium Potential for Illicit Discharges



Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Drainage Area with High Potential for Illicit Discharges



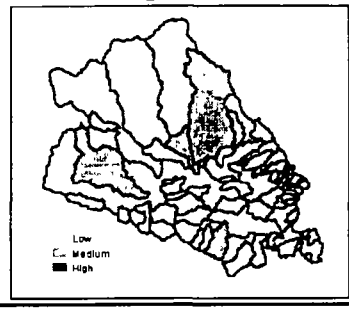
Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Characterize Illicit Discharge Potential in the Community

Characterization	Indicators
Minimal (no known problems)	Majority of subwatersheds are rated as having low risk, with remainder rated Medium
Clustered (isolated problems)	More than 20% of subwatersheds rated as Medium or High risk
Severe (rampant problems)	More than 50% of subwatersheds ranked as Medium or High risk, or more than 20% of subwatersheds ranked as High Risk

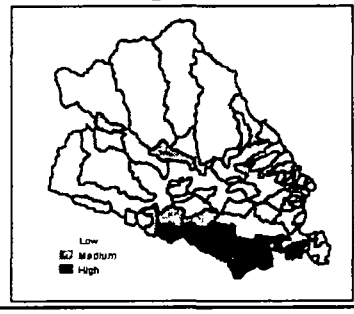
Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Community with Minimal Illicit Discharge Problems



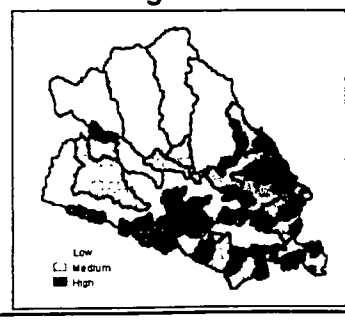
Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Community with Clustered Illicit Discharge Problems



Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Community with Significant Illicit Discharge Problems



Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Developing Program Goals & Strategies

- Purpose:
  - Define detailed goals & performance milestones to measure progress in program implementation during 1st permit cycle
  - Make sure scarce resources allocated to address real water quality problems
  - Choose most appropriate and cost-effective methods to find illicit discharges
- Elements:
  - Program goals
  - Program strategies

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Developing Program Goals & Strategies

- Desired Product or Outcome(s):
  - Program goals & measurable indicators for:
    - overall program administration
    - outfall assessment
    - finding and fixing illicit discharges
    - prevention of illicit discharges
  - Detailed yet flexible field investigation strategy
- Budget and/or Staff Resources Required:
  - Staff effort ranges from 2 to 6 weeks to draft goals & strategies, conduct meetings, respond to comments & finalize
  - Goals & strategies should be continuously revisited and updated

Illicit Discharge Detection and Elimination: Requirements and Program Considerations

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Goals Related to Overall Program Administration

Example Measurable Goals	Timeframe	Priority
Audit existing capabilities & identify needs	Immediately	essential
Designate one program head & identify key support staff		essential
Develop a complete list of ongoing activities related to IDDE		optional
Coordinate & communicate with other affected agencies	At program start up Continuously & regularly after that	essential
Develop a projected 5-year budget		essential
Secure funding to match 5-year goals		essential
Draft & promulgate new or modified ordinance	Year 1	essential
Establish a tracking & reporting system		essential

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Goals Related to Outfall Assessment

Example Measurable Goals	Timeframe	Priority
Define & characterize drainage areas or sewer sheds	Year 1	essential
Conduct stream walk of all stream miles	Begin Year 1, complete 1st screening end permit cycle Repeat once per permit cycle	essential
Develop digital map of all outfalls, land use & other relevant infrastructure	Year 1 Continuously & regularly after that	essential
Secure analytical laboratory services	Initiate in conjunction with field screening	essential
Sample & trace source of % of flowing outfalls each year of permit cycle	Initiate during 1st permit cycle Expand & enhance where problems are observed	essential
Conduct regular in-stream monitoring of single parameter		optional
Conduct intermittent flow investigations at % of outfalls where in-stream water quality poor		optional
Integrate all collected stream data & citizen complaints into GIS system	Initiate during 1st year Expand & enhance with time	optional

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Goals Related to Finding & Fixing Illicit Discharges

Example Measurable Goals	Timeframe	Priority
Develop spill response plan & coordinate emergency response with other agencies	Immediately	essential
Remove all obvious illicit discharges	Ongoing in conjunction with field screening & response to hotline reports	essential
Train staff on finding illicit discharge sources	Initiate during 1st year Expand & enhance with time	essential
Repair fraction of illicit discharges identified through field screening or citizen complaints	Initiate during 1st permit cycle Expand & enhance where problems observed	essential
Establish hotline for public to call in and report incidents	Initiate during 1st year Expand & enhance with time	optional
Inspect & dye-test all industrial facilities	Initiate during 1st permit cycle Expand & enhance where problems observed	optional
Develop system to track results of on-site inspections	Initiate during 1st year Expand & enhance with time	optional
Establish pre-approved list of plumbers & contractors to make corrections		optional
Establish Adopt-a-Stream program	Initiate during 1st permit cycle Expand & enhance where problems observed	optional

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Goals Related to Preventing Illicit Discharges

Example Measurable Goals	Timeframe	Priority
Distribute educational materials to citizens and industries	Initiate during 1st year Expand & enhance with time	optional
Conduct storm drain stenciling	Initiate during 1st permit cycle Expand & enhance where problems are observed	optional
Hold hazardous waste collection days at least annually		optional
Conduct upland subwatershed site reconnaissance surveys to better characterize generating site potential		optional

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Conduct Field & Lab Work to Identify Illicit Discharges

- Purpose:
  - Conduct rapid field screening to identify & track suspected outfalls & stream segments in priority subwatersheds
  - Conduct investigatory sampling & analysis to establish flow types & likely sources
- Elements:
  - Field screening
  - Field data analysis
  - Chemical monitoring

Center for Watershed Protection

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Conduct Field & Lab Work to Identify Illicit Discharges

- Desired Product or Outcome(s)
  - Locations & physical characterizations of all outfalls incorporated into tracking system
  - Strategy on how to conduct & pursue chemical analysis
  - *Indicator monitoring for suspect outfalls*
  - Local "fingerprint" library
- Budget and/or Staff Resources Required:
  - Extent & number of outfalls initial factor influencing level of effort
  - Extent & complexity of observed problems will dictate level of effort
  - Budget estimates based on a MS4 with 10 miles of stream & analyzing 80 samples per year range from $30,000 to $50,000

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Reviewt & Update

Find & Fix Illicit Discharges

- Purpose:
  - Use a variety of tools & techniques to narrow down the source of illicit discharges & correct the problem
  - Establish an appropriate & effective enforcement program to ensure repair
- Elements
  - Using land use to isolate the source
  - Tracking the discharge through the storm drain
  - Pinpointing the source of the discharge
  - Source tracking techniques for low-density development areas
  - Fixing illicit discharges

Center for Watershed Protection

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Reviewt & Update

Find & Fix Illicit Discharges

- Desired Product or Outcome(s):
  - Finding & fixing illicit discharges is the core goal
  - Ancillary outcomes:
    - Reduced incidences of illicit discharges resulting in improved water quality
    - Increased homeowner & business awareness
    - Tracking system to document problems & repairs & identify repeat offenders
- Budget and/or Staff Resources Required.
  - Budget & staff resources needed to find sources variable
  - Fixing problem more predictable & can often involve qualified contractors
  - Repair costs can be incurred fully by offending party or shared

Center for Watershed Protection

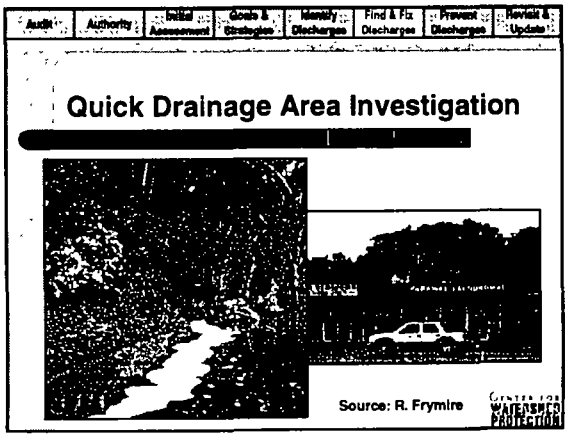
Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Reviewt & Update

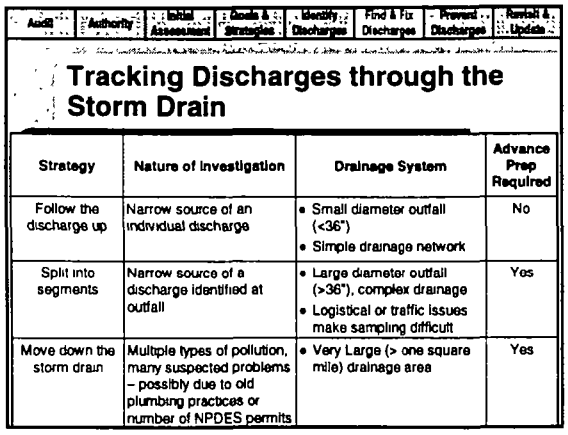
Benefits & Challenges of a Complaint Hotline

Benefits
- Leads to early detection & correction
- Encourages active public stewardship
- Can "piggyback" on other call response needs
- Identifies suspected facilities for further investigation & education
- Increases facilities & municipalities sense of accountability
- Increases likelihood of discovering intermittent discharges

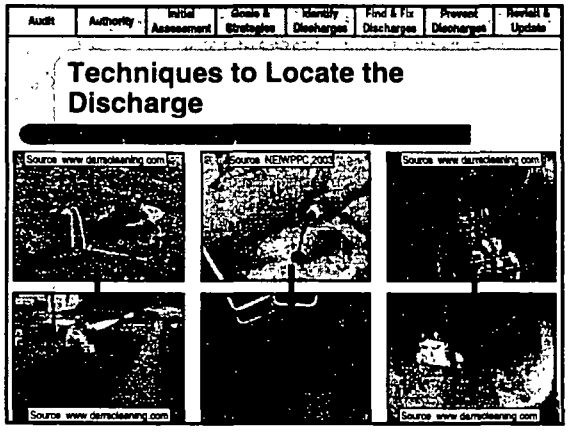
Challenges
- Time & money to provide 24/7 service
- Marketing the hotline number
- Establishing inter- & intra-departmental process

Center for Watershed Protection





Strategy	Nature of Investigation	Drainage System	Advance Prep Required
Follow the discharge up	Narrow source of an individual discharge	• Small diameter outfall (<36") • Simple drainage network	No
Split into segments	Narrow source of a discharge identified at outfall	• Large diameter outfall (>36"), complex drainage • Logistical or traffic issues make sampling difficult	Yes
Move down the storm drain	Multiple types of pollution, many suspected problems – possibly due to old plumbing practices or number of NPDES permits	• Very Large (> one square mile) drainage area	Yes



Fixing Illicit Discharges

- Who is responsible?
- What methods will be used to repair?
- How long will the repair take?
- How will removal be confirmed?

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Preventing Illicit Discharges

- Purpose:
  - Identify location & regulatory status of generating sites
  - Screen for bad actors
  - Target appropriate education & enforcement efforts
- Elements:
  - Residential
  - Non-Residential
  - Community Wide

Audit | Authority | Initial Assessment | Goals & Strategies | Identify Discharges | Find & Fix Discharges | Prevent Discharges | Revisit & Update

Preventing Illicit Discharges

- Desired Product or Outcome(s):
  - Local prevention programs that target the most common intermittent and transitory discharges
  - Three sectors to target include neighborhoods, generating sites, and municipal housekeeping
- Budget and/or Staff Resources Required:
  - Can be considerable and should be coordinated with other 6 minimum measure work related to education, public involvement, and municipal employee training
  - Economies realized when community staffs are cross-trained, partnerships are developed with watershed organizations, and regional efforts are undertaken which take advantage of pooled resources

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Revisiting & Updating Program Goals & Strategies

- Purpose:
  - Revise the program to prevent or eliminate the most serious illicit discharges in the most cost-effective manner in response to monitoring and hotline information gathered in the first few years of the permit cycle.
- Elements:
  - Revisit goals and strategies
  - Update goals and strategies

CENTER FOR WATERSHED PROTECTION

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Using Tracking Systems

- Updated mapping to reflect outfall locations, surveyed stream reaches, locations of confirmed illicit discharges, locations of suspicious discharges, dumping sites, etc.
- Water quality results associated with specific outfall and in-stream sampling
- Frequency of hotline use and associated number of "hits" or confirmed illicit discharges
- Program costs by major area (e.g., office, field, lab, education, enforcement, etc.)
- Number of corrections and cost associated with each correction

CENTER FOR WATERSHED PROTECTION

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Revisiting & Updating Program Goals & Strategies

- Desired Product or Outcome(s):
  - Updated tracking database & annual report with summary of progress to date, findings, recommendations for program revisions, & work plan for upcoming year
- Budget and/or Staff Resources Required:
  - Ongoing responsibility of the program manager
  - Staff effort to prepare an annual report about 3 to 4 weeks
  - 1st annual report will require more effort than subsequent years.

CENTER FOR WATERSHED PROTECTION

Illicit Discharge Detection and Elimination: Requirements and Program Considerations

Program Component	Timeframe
1 Audit existing programs	1st year
2 Establish responsibility & authority	1st year
3 Make an initial assessment of illicit discharge potential	1st year
4 Develop program goals & strategies	1st year
5 Conduct field & lab work to identify illicit discharges	Ongoing, starting 1st year
6 Find & fix illicit discharges	Ongoing, as discharges are found Start by 2nd year
7 Prevent illicit discharges	Ongoing, starting 1st year
8. Revisit & update program goals	Ongoing for minor changes Major review once per permit cycle

Table 11. IDDE Program Costs

IDDE Program Component		Start Up Cost		Annual Cost	
		Low	High	Low	High
Component 1	a) Perform Audit	$3,000	$9,000	NA	NA
	b) Initial Program Plan	$1,000	$3,000	NA	NA
Component 2	a) Adopt Ordinance	$1,000	$17,000	NA	NA
	b) Tracking System	$2,000	$15,000	$2,000	$2,000
Component 3	a) Desktop Analysis	$1,000	$4,000	NA	NA
	b) Field Mapping	$500	$1,000	NA	NA
Component 4	a) Develop Goals	$1,000	$3,000	NA	NA
	b) Field Monitoring Strategy	$1,000	$3,000	NA	NA
Component 5	a) ORI	NA	NA	$5,700	$12,800
	b) Establish Hotline	$1,300	$7,700	$1,500	$11,400
	c) Sample Analysis	$500	$15,500	$9,000	$21,200
	d) Outfall Map	NA	NA	$500	$1 000
Component 6	a) Isolate	NA	NA	$2,000	$5,200
	b) Fix	NA	NA	$10,000	$30,000
Component 7	a) Education	$1,000	$8,100	$1,300	$13,900
	b) Enforcement	NA	NA	$1,000	$14,000
Component 8	a) Program Administration	$10,000	$15,000	$10,000	$15,000
TOTAL		$23,300	$101,300	$43,000	$128,500

CENTER FOR WATERSHED PROTECTION

Illicit Discharge Detection and Elimination (IDDE) Guidance

- Center for Watershed Protection and University of Alabama (EPA Funded)
- 3 Part Document (Phase II MS4 emphasis)
  - Introduction
  - Programmatic Components
  - Technical Field and Lab Information
- Draft available at: www.cwp.org

Additional Resources

- *Investigation of Inappropriate Pollutant Entries into Storm Drainage Systems A User's Guide* (Pitt et al., 1993)
  - **www.epa.gov/npdes/pubs/investigating_inappropriate_pesds.pdf**
- *Illicit Discharge Detection And Elimination Manual* (NEIWPPC,2003)
  - **www.neiwpcc.org/iddmanual.pdf**
- *A Guidance Manual for Identifying and Eliminating Illicit Connections to Municipal Separate Storm Sewer Systems* (Galveston County Health District, 2002)
  - **www.gchd.org/pages/pollution/GuideManual.pdf**
- The Rouge River Project Illicit Discharge Elimination Program
  - **www.rougeriver.com/techtop/illicit/index.html**

CENTER FOR WATERSHED PROTECTION

Illicit Discharge Detection and Elimination: Field Application of Program Principles

Field and Laboratory Assessment Protocols: Detecting Inappropriate Discharges

Presented By: Center for Watershed Protection

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Conduct Field & Lab Work to Identify Illicit Discharges

- Purpose
  - Conduct rapid field screening to identify & track suspected outfalls & stream segments in priority subwatersheds
  - Conduct investigatory sampling & analysis to establish flow types & likely sources
- Elements
  - Field screening
  - Field data analysis
  - Chemical monitoring

Center for Watershed Protection

Audit	Authority	Initial Assessment	Goals & Strategies	Identify Discharges	Find & Fix Discharges	Prevent Discharges	Revisit & Update

Conduct Field & Lab Work to Identify Illicit Discharges

- Desired Product or Outcome(s)
  - Locations & physical characterizations of all outfalls incorporated into tracking system
  - Strategy on how to conduct & pursue chemical analysis
  - Indicator monitoring for suspect outfalls
  - Local "fingerprint" library
- Budget and/or Staff Resources Required
  - Extent & number of outfalls initial factor influencing level of effort
  - Extent & complexity of observed problems will dictate level of effort
  - Budget estimates based on a MS4 with 10 miles of stream & analyzing 80 samples per year range from $30,000 to $50,000

Center for Watershed Protection

Top Problems in Identifying Inappropriate Discharge Sources

Source Related
- Periodic nature
- Illegal dumping / one-time dischargers
- Illegal connections
- Inflow/infiltration from sanitary sewers
- After-hours discharges

Infrastructure Related
- Accessibility (building, stream, outfall, traffic)
- Complexity of network
- Natural influences (tidal, groundwater)
- Size of drainage basin
- Multiple sources w/in system

Program Related
- Accuracy of mapping
- Timeliness of complaint
- Insufficient staffing
- Insufficient expertise
- Slow laboratory analysis
- Unreliable equipment
- Use of unreliable indicators

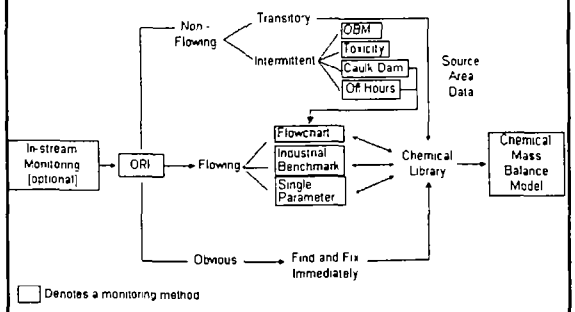
Conditions Driving Program Setup

- No Suspected Discharges
  - broader stream assessment program
- Isolated Problems
  - confined subwatersheds, reaches, or specific industries where history of suspect discharges exist
- Severe Problems
  - recognize that IDDE program will need significant commitment (staff, equipment, budget) for improvements to be realized

Field and Lab Protocol

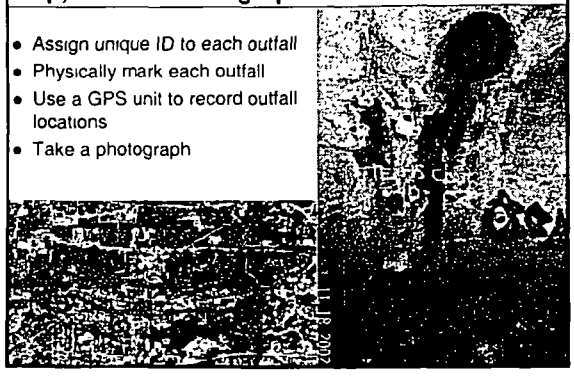
1. Pre-Screening Prioritization
2. Outfall Reconnaissance Inventory (ORI)
3. Post-Screening Prioritization
4. Detailed Field Sampling / Lab Analysis

IDDE Monitoring Framework

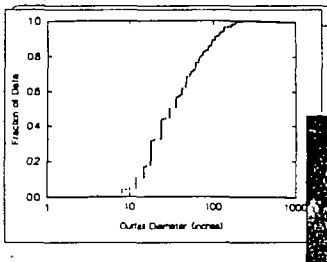


Outfall Reconnaissance Inventory (ORI) Map, Mark & Photograph Outfalls

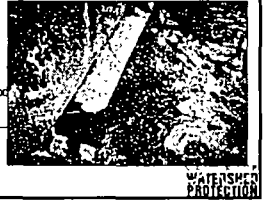
- Assign unique ID to each outfall
- Physically mark each outfall
- Use a GPS unit to record outfall locations
- Take a photograph



Small Outfalls Are Important

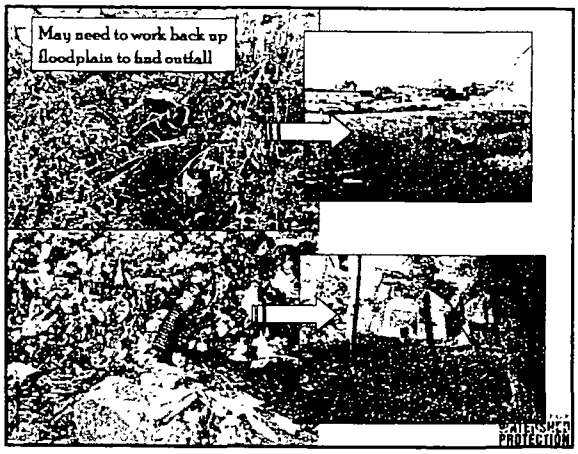


Small outfalls (<36") represent 50% of outfalls in Birmingham, AL

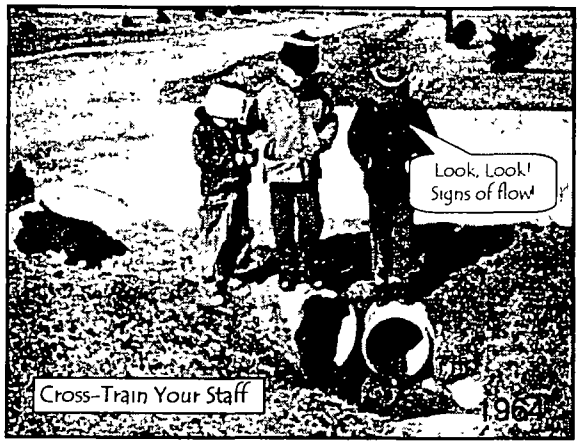


6" Drain in Lewisburg, TN

WATERSHED PROTECTION


May need to work back up floodplain to find outfall

Look, Look! Signs of flow!
Hone Your Detective Skills

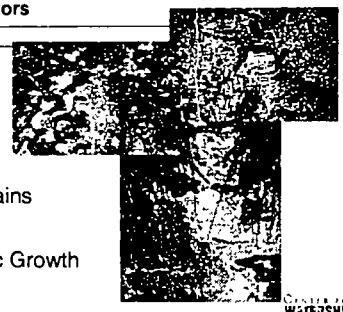

Look, Look! Signs of flow!
Cross-Train Your Staff
1964

Outfall Reconnaissance Inventory (ORI)
Record Basic Characteristics

- Dimensions
- Material
- Whether or not outfall is flowing

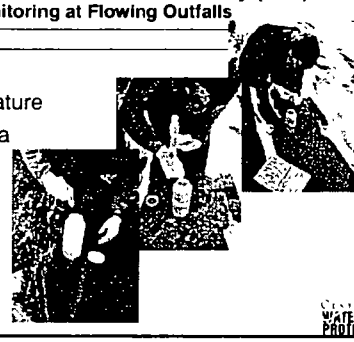
Outfall Reconnaissance Inventory (ORI)
Physical Indicators

- Odor
- Color
- Turbidity
- Floatables
- Deposits/Stains
- Vegetation
- Pipe Benthic Growth



Outfall Reconnaissance Inventory (ORI)
Simple Monitoring at Flowing Outfalls

- pH
- Temperature
- Ammonia

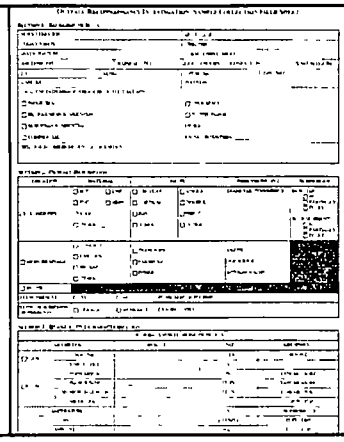


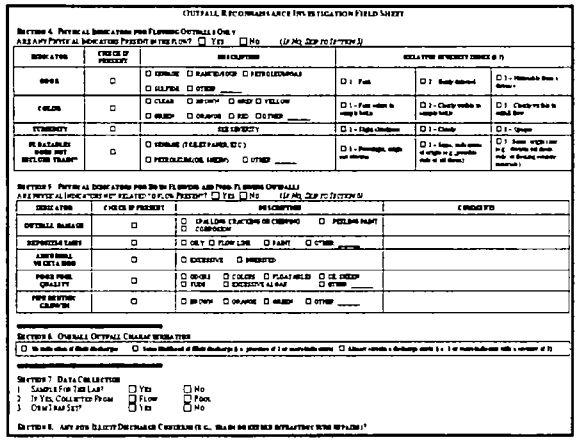
Outfall Reconnaissance Inventory (ORI)

- Take flow sample at outfalls with likely problems
- Deal with major problems immediately

Photo Source R Frymire

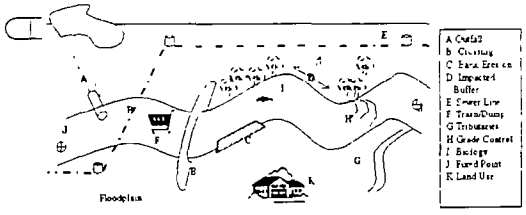
WATERSHED PROTECTION





Unified Stream Assessment

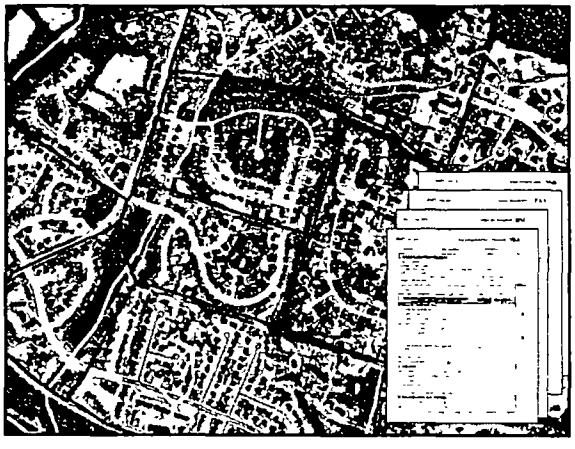
- Continuous walking assessment of stream & floodplain corridor

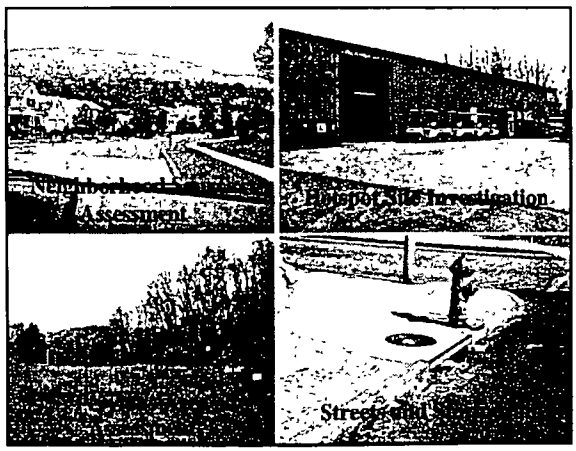


- Three person team, about 2 to 4 miles/day
- GPS, Digital camera, field sheets, tracking form
- Limited data to guide detailed restoration assessments

Land Use & Potential Generating Sites

- Residential
- Commercial
- Industrial
- Institutional
- Municipal





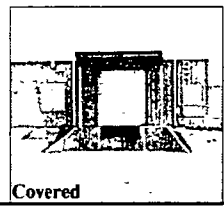
Hotspot Site Investigation

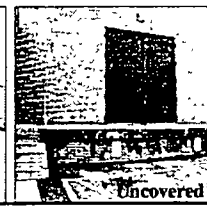
- Site Data and Basic Classification
- Vehicle Operations
- Outdoor Material
- Waste Management
- Physical Plant
- Turf / Landscaping Areas
- Stormwater Infrastructure

WATERSHED PROTECTION

Hotspot Site Investigation, cont.
Outdoor Materials

C. OUTDOOR MATERIALS ☐ N/A (Skip to part D)	Observed Pollution Issues?
C1. Are loading/unloading operations present? ☐ Y ☐ N ☐ Can't Tell If yes, are they uncovered and draining towards a storm drain inlet? ☐ Y ☐ N ☐ Can't Tell	○
C2. Are materials stored outside? ☐ Y ☐ N ☐ Can't Tell If yes, are they ☐ Liquid ☐ Solid Description _____ Where are they stored? ☐ grass/dirt area ☐ concrete/asphalt ☐ banked area	○
C3. Is the storage area directly or indirectly connected to storm drain (circle one)? ☐ Y ☐ N ☐ Can't Tell	○
C4. Is staining or discoloration around the area visible? ☐ Y ☐ N ☐ Can't Tell	○
C5. Does outdoor storage area lack a cover? ☐ Y ☐ N ☐ Can't Tell	○
C6. Are liquid materials stored without secondary containment? ☐ Y ☐ N ☐ Can't Tell	○
C7. Are storage containers showing signs of or in poor condition/rusting? ☐ Y ☐ N ☐ Can't Tell	○


Covered


Uncovered

WATERSHED PROTECTION

What the ORI Cannot Do

- Misses a significant number of discharges, and can sometimes lead to a "false positive" as well (Pitt, 2001)
- Detect intermittent flows that leave no trace
- Quantify impacts definitively (no direct measure of relative problem)
- Define sources (except for some obvious indicators)

Post-Screening Prioritization

ORI, combined with other existing data, can help determine:

- Extent of the problem
- If problems are "clustered"
- Indicators of intermittent discharges
- Relative ranking of problem outfalls

Factors to Consider

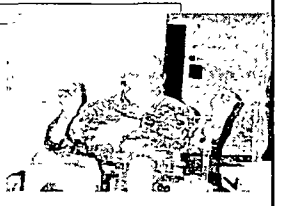
- Fraction flowing (from ORI)
- Number with physical indicators, and severity
- Indicators at dry outfalls
- Other existing monitoring data
- In-stream goals
- History of complaints

Detailed Field Sampling / Lab Analysis

- More detailed sampling that includes
  - Sampling to ID problem outfalls not apparent from physical indicators alone
  - Source identification
  - Potential intermittent monitoring

Forensics

- Run chemical tests
- Choose specific indicators depending on local "fingerprints" or based on land use in area

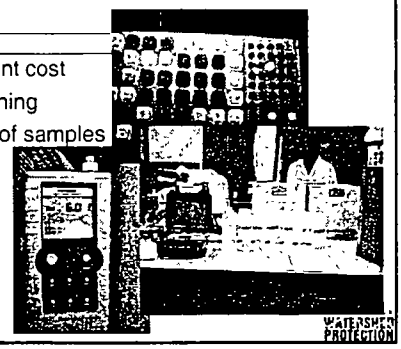


Key Features for Ideal Indicators

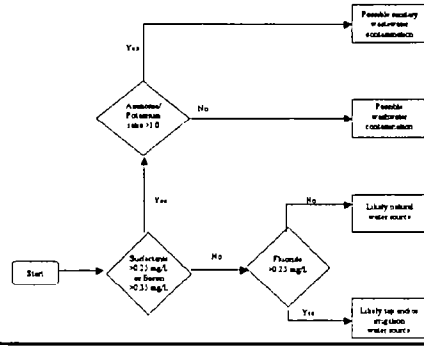
- Distinguishes a particular source
- "Tight" statistical distribution
- Precise measurement
- Safe
- Relatively inexpensive
- Simple to conduct

Key Lab Considerations

- Equipment cost
- Staff training
- Number of samples
- Safety
- Disposal



Flow Chart to Identify Illicit Discharges in Residential Drainage Areas



Flow Chart Example

- Surfactants = 0.76 mg/L
- Fluoride = 0.52 mg/L
- Ammonia = 0.6 mg/L
- Potassium = 2.5 mg/L

- Therefore possible washwater contamination

Another Flow Chart Example

- Boron = 0 05 mg/L
- Fluoride = 0.75 mg/L
- Ammonia = 0 1 mg/L
- Potassium = 1 0 mg/L

- What is the most likely source?

WATERSHED PROTECTION

Benchmark Concentrations to Identify Industrial Discharges

Benchmark	Concentration	Notes
Ammonia (mg/L)	≥50	• Existing "Flow Chart" Parameter • Concentrations higher than the benchmark can identify a few industrial discharges
Potassium (mg/L)	≥20	• Existing "Flow Chart" Parameter • Excellent indicator of a broad range of industrial discharges
Color (Units)	≥500	• Supplemental parameter that identifies a few specific industrial discharges Should be refined with local data
Conductivity (µS/cm)	>2000	• Identifies a few industrial discharges • May be useful to distinguish between industrial sources
Hardness (mg/L as $CaCO_3$)	≤10 >2,000	• Identifies a few industrial discharges • May be useful to distinguish between industrial sources
pH (Units)	≤5	• Only captures a few industrial discharges • High pH values may also indicate an industrial discharge but residential wash waters can have a high pH as well
Turbidity (NTU)	≥1,000	• Supplemental parameter that identifies a few specific industrial discharges

Chemical Fingerprint Library

- Shallow Groundwater
- Spring Water
- Tap water
- Irrigation
- Sewage
- Septic Tank Discharge
- Common Industrial Discharges
- Commercial Car Wash
- Commercial Laundry

WATERSHED PROTECTION

Fingerprints of Major Sources

Sewage
- E Coli
- Detergents (various)
- High Ammonia/ Potassium Ratio

Wash Water
- Detergents (various)

Shallow Groundwater
- Hardness, pH

Tap Water
- Fluoride
- Sometimes Hardness

Septage
- E Coli
- Fluorescence
- High Ammonia/Potassium

Special Indicators for Intermittent Discharges

- Optical brightener monitoring
- Toxicity testing
- Outfall damming
- Take a sample from the pool

Finding and Fixing

- Move up the pipe
- Use smoke or dye testing once narrowed
- Use enforcement or repair

Most Wanted List

IDDE HOW TO PROBLEM SOLVER MATRIX

Type	Detect	Trace back to a source	Remove	Prevent
Sewage Ammonia, Detergent, E. Coli best chemical tracers Odor, turbidity, floatable materials best physical indicators				
Break in the Right of Way	• Outfall sampling • Hotline • In stream data	• Trunk investigations	Repair by municipality	Sewer System rehabilitation
Direct connection commercial or industrial	• Outfall sampling • Hotline • In stream data • Roving dye test	• Trunk investigations including dye test	Enforcement	• Plumbing code • Building inspection
Direct connection residential	• Outfall sampling • Hotline • In stream data	• Trunk investigations • Smoke or dye	• Enforcement • Incentive or aid?	
Infrequent discharge such as RV dumping	• Hotline in stream • Hotline upland • In stream if daily • Intermittent analyses	• Trunk investigations	• Make them stop (smack down) • Spill response	• Education • Presence in the watershed • Fines
Straight Pipes/ Septic	• In stream data • Hotline • Time of sale inspections	• In stream data/ hotline stream walk • Inspections known	• Enforcement • Incentive or aid?	• Septic maintenance program • Education • Good septic design guidelines

WATERSHED PROTECTION

Most Wanted List Cont'd

IDDE HOW TO PROBLEM SOLVER MATRIX

Type	Detect	Trace back to a source	Remove	Prevent
Wash water Detergents best chemical tracer Suds, odor best physical indicators				
Direct connection commercial or industrial	• Outfall sampling • Hotline • In stream data • Intermittent analyses • Roving dye test	• Trunk investigations dye test • Likely need intermittent	• Enforcement	• Plumbing code • Building inspection • Fines plumbing contractors
Direct connection residential	• Outfall sampling • Hotline • Intermittent analyses	• Trunk investigations Smoke or dye	• Enforcement	• Plumbing code • Building inspection • Fines plumbing contractor • Education do it yourselfers
Power wash/ car wash (commercial operators) Commercial Wash Down (other)	• Hotline upland • Intermittent analyses	• Through hotline	• Enforcement	• Training and education • Fines • NPDES permit • Presence in the watershed
Residential car wash	• USSR • Intermittent analyses	• Direct observation	Ask them to stop	• Education

WATERSHED PROTECTION

Most Wanted List Cont'd

IDDE HOW TO PROBLEM SOLVER MATRIX

Type	Detect	Trace back to a source	Remove	Prevent
Oils/ Solvents Oil sheen/ oil stains/petroleum odor best indicators				
Professional oil change/ car maintenance	• Hotline upland and at outfall • Toxicity measurements analyses	• Upland ID known • Land use analysis if outfall	• Enforcement • Spill response	• Fine structure • Education/ training • Presence in the watershed • NPDES • Inspection permit
Dumping Heating oil/ solvents	• Hotline upland and at outfall	• Upland ID known • Outfall try to find immediately		• Fines • Presence in the watershed
Homeowner oil change	• Hotline upland and at outfall	• Upland ID known • Trunk investigation	• Warning/ information • Fines	• Education • Hazardous waste pickup • Fines • Presence in the watershed
Spill (trucking)	• Hotline	• Upland ID known • Outfall try to find immediately	• Spill response	• Fine structure • Education/ training

WATERSHED PROTECTION

OUTFALL RECONNAISSANCE INVESTIGATION/ SAMPLE COLLECTION FIELD SHEET

SECTION 1. BACKGROUND DATA

SUBWATERSHED		OUTFALL ID	
TODAY'S DATE.		TIME (MIL)	
INVESTIGATORS·		FORM COMPLETED BY	
AIR TEMP (°F)·	RAINFALL (IN)	(LAST 24 HOURS)	RAINFALL (IN) (LAST 48 HOURS)
LAT	LONG.	GPS MARK #.	GPS UNIT·
CAMERA		PHOTO #S	

LAND USE IN DRAINAGE AREA (CHECK ALL THAT APPLY)

- ☐ INDUSTRIAL
- ☐ ULTRA-URBAN RESIDENTIAL
- ☐ SUBURBAN RESIDENTIAL
- ☐ COMMERCIAL
- ☐ OPEN SPACE
- ☐ INSTITUTIONAL
- OTHER: _____
- KNOWN INDUSTRIES· _____

NOTES (E.G., ORIGIN OF OUTFALL IF KNOWN)

SECTION 2. OUTFALL DESCRIPTION

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **CLOSED PIPE**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ STEEL ☐ OTHER _____	☐ CIRCULAR ☐ ELIPTICAL ☐ BOX ☐ OTHER _____	☐ SINGLE ☐ DOUBLE ☐ TRIPLE ☐ OTHER _____	DIAMETER/ DIMENSIONS _____	IN WATER ☐ NO ☐ PARTIALLY ☐ FULLY WITH SEDIMENT· ☐ NO ☐ PARTIALLY ☐ FULLY
☐ **OPEN DRAINAGE**	☐ CONCRETE ☐ EARTHEN ☐ RIP-RAP ☐ OTHER ____	☐ TRAPEZOID ☐ PARABOLIC ☐ OTHER ____		DEPTH ____ TOP WIDTH. ____ BOTTOM WIDTH. ____	
☐ **IN-STREAM**	**(APPLICABLE WHEN COLLECTING SAMPLES)**				
FLOW PRESENT?	☐ YES ☐ NO	***IF NO, SKIP TO SECTION 5***			
FLOW DESCRIPTION (IF PRESENT)	☐ TRICKLE ☐ MODERATE ☐ SUBSTANTIAL				

SECTION 3. QUANTITATIVE CHARACTERIZATION

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐FLOW #1	VOLUME		LITER	BOTTLE
	TIME TO FILL		S	
☐FLOW #2	FLOW DEPTH		IN	TAPE MEASURE
	FLOW WIDTH	_____' _____"	FT, IN	TAPE MEASURE
	MEASURED LENGTH	_____' _____"	FT, IN	TAPE MEASURE
	TIME OF TRAVEL		S	STOP WATCH
TEMPERATURE			°F	THERMOMETER
pH			pH UNITS	TEST STRIP
AMMONIA			mg/L	TEST STRIP

OUTFALL RECONNAISSANCE INVESTIGATION FIELD SHEET

SECTION 4. PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY

ARE ANY PHYSICAL INDICATORS PRESENT IN THE FLOW? ☐ YES ☐ NO *(IF NO, SKIP TO SECTION 5)*

INDICATOR	CHECK IF PRESENT	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
ODOR	☐	☐ SEWAGE ☐ RANCID/SOUR ☐ PETROLEUM/GAS ☐ SULFIDE ☐ OTHER _____	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
COLOR	☐	☐ CLEAR ☐ BROWN ☐ GREY ☐ YELLOW ☐ GREEN ☐ ORANGE ☐ RED ☐ OTHER _____	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
TURBIDITY	☐	SEE SEVERITY	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
FLOATABLES -DOES NOT INCLUDE TRASH!!	☐	☐ SEWAGE (TOILET PAPER, ETC) ☐ SUDS ☐ PETROLEUM (OIL SHEEN) ☐ OTHER _____	☐ 1 – Few/slight, origin not obvious	☐ 2 – Some; indications of origin (e g., possible suds or oil sheen)	☐ 3 - Some, origin clear (e g , obvious oil sheen, suds, or floating sanitary materials)

SECTION 5. PHYSICAL INDICATORS FOR BOTH FLOWING AND NON-FLOWING OUTFALLS

ARE PHYSICAL INDICATORS NOT RELATED TO FLOW PRESENT? ☐ YES ☐ NO *(IF NO, SKIP TO SECTION 6)*

INDICATOR	CHECK IF PRESENT	DESCRIPTION	COMMENTS
OUTFALL DAMAGE	☐	☐ SPALLING, CRACKING OR CHIPPING ☐ PEELING PAINT ☐ CORROSION	
DEPOSITS/STAINS	☐	☐ OILY ☐ FLOW LINE ☐ PAINT ☐ OTHER _____	
ABNORMAL VEGETATION	☐	☐ EXCESSIVE ☐ INHIBITED	
POOR POOL QUALITY	☐	☐ ODORS ☐ COLORS ☐ FLOATABLES ☐ OIL SHEEN ☐ SUDS ☐ EXCESSIVE ALGAE ☐ OTHER _____	
PIPE BENTHIC GROWTH	☐	☐ BROWN ☐ ORANGE ☐ GREEN ☐ OTHER _____	

SECTION 6. OVERALL OUTFALL CHARACTERIZATION

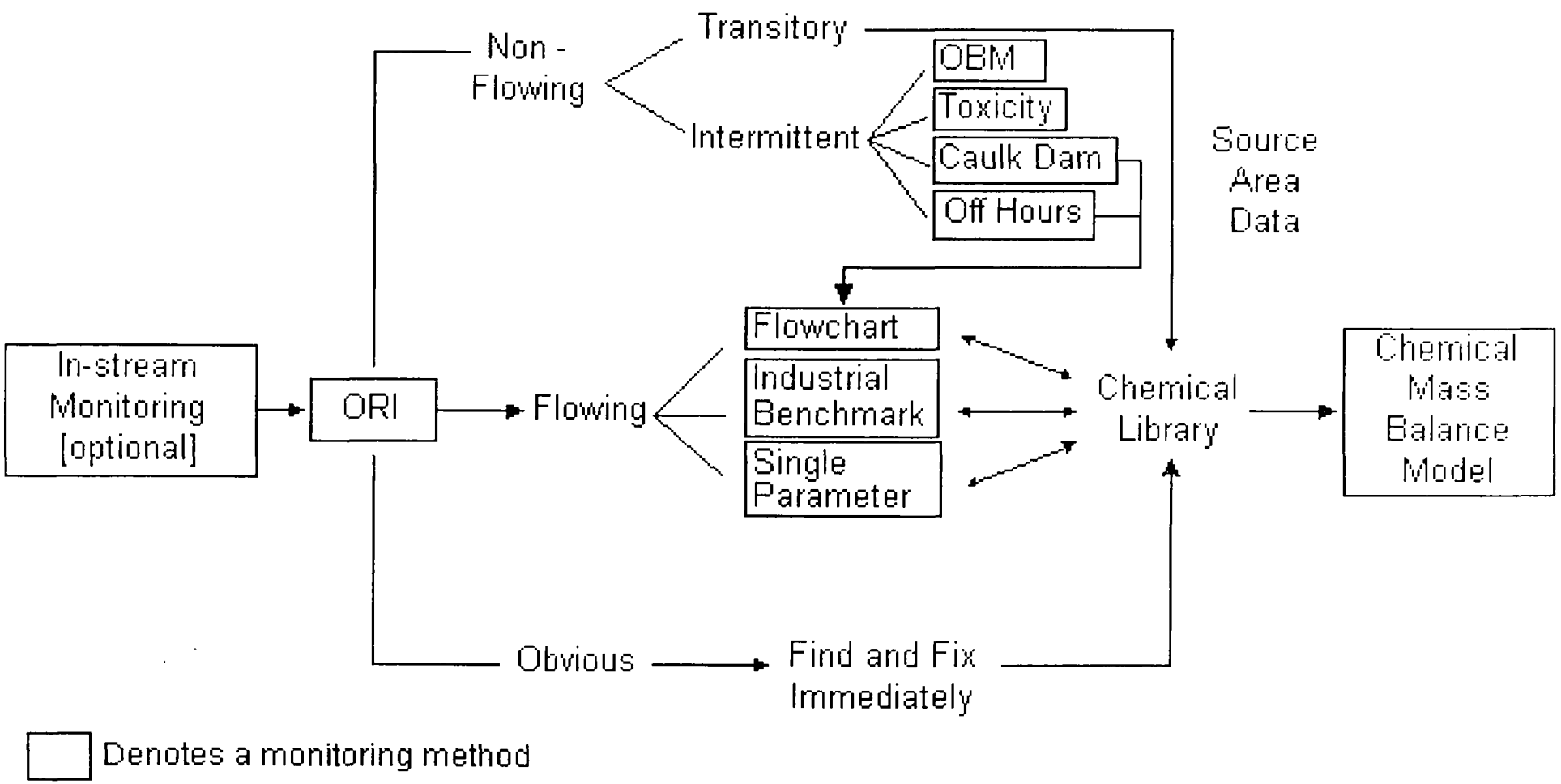
☐ **No indication of illicit discharges** ☐ **Some likelihood of illicit discharge (i.e., presence of 2 or more indicators)** ☐ **Almost certain a discharge exists (i.e., 1 or more indicator with a severity of 3)**

SECTION 7. DATA COLLECTION

1. SAMPLE FOR THE LAB? ☐ YES ☐ NO
2. IF YES, COLLECTED FROM: ☐ FLOW ☐ POOL
3. INTERMITTENT FLOW TRAP SET? ☐ YES ☐ NO IF YES, TYPE: ☐ OBM ☐ CAULK DAM ☐ TOXICITY

SECTION 8. ANY NON-ILLICIT DISCHARGE CONCERNS (E.G., TRASH OR NEEDED INFRASTRUCTURE REPAIRS)?

IDDE Monitoring Framework



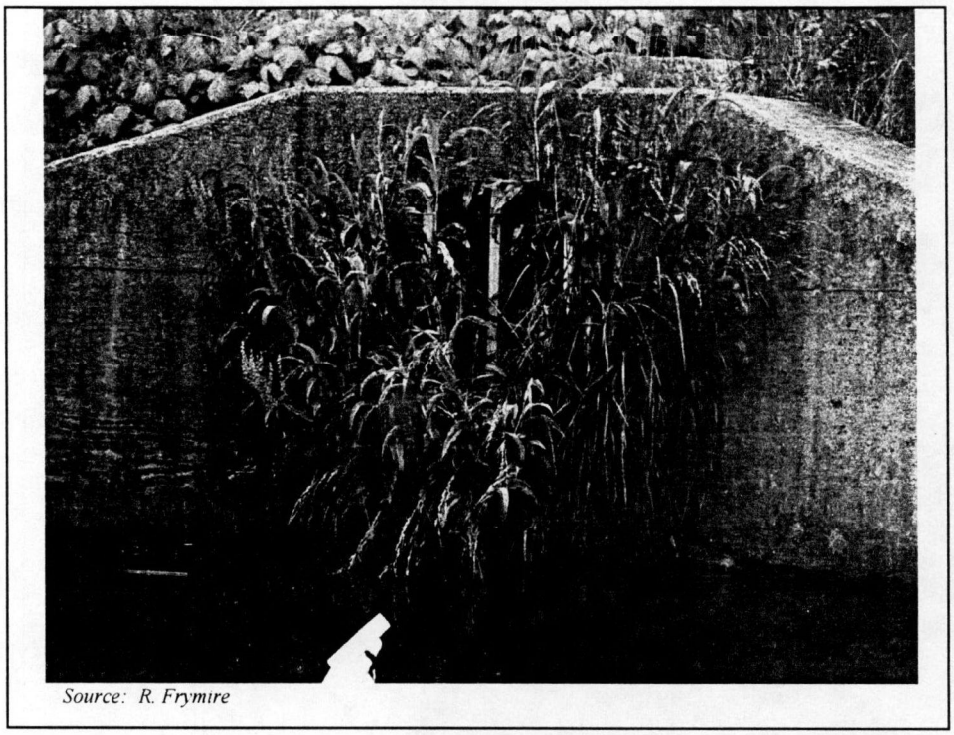
Quick and Dirty Outfall Reconnaissance Inventory Exercise

Quick and Dirty ORI Exercise

(Pardon the pun!)

Look at each photo and answer the following:

1. Is the outfall a closed pipe or open drainage?
2. What material is the pipe made of?
   (RCP, CMP, PVC, HDPE, Steel, Other?)
3. Is there flow present?
4. What is the color of the flow?
5. Are floatables present? If so, what kind?
6. Is there any outfall damage?
7. Are there any deposits or stains?
8. Is there any abnormal vegetation in or around the outfall?
9. Should a water sample be collected at this outfall?
10. Do you see anything else? What kind of discharge might this be?



Source: R. Frymire

Source: Fort Worth DEM

Post Construction Runoff Control:
Basic Program Requirements

Post-Construction Runoff Control

Requirements & Basic Program Considerations

Acknowledgments

Information adapted from slides prepared by:

The Center for Watershed Protection
www.cwp.org
Tetra Tech, Inc.
www.Ttwater.com

CENTER FOR WATERSHED PROTECTION

Presentation Overview

- Water Quality Impacts from Post-Construction Storm Water Runoff
- Post-Construction Minimum Measure
- Basic Elements of a Post-Construction Storm Water Program
- BMP Maintenance Program Elements

Effects of Development on Storm Water Runoff

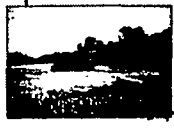
Increases:
- Impervious surface area
- Storm water volume
- Storm water velocity
- Deposition of pollutants

Decreases:
- Storm water quality
- Ground water recharge
- Baseflow
- Natural drainage systems including riparian vegetative cover

Consequences of Development to Urban Streams

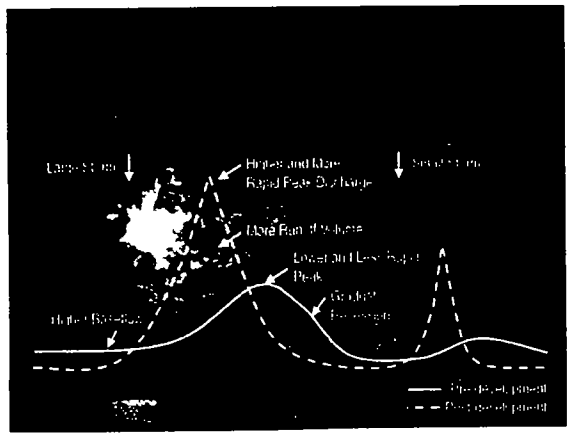
- Increased rate and severity of flooding
- Increased erosion of stream banks and bottoms (stream widening and channelization)
- Increased sedimentation
- Increased chemical pollution
- Altered biological populations
- Degradation of riparian habitat
- Increased stream temperatures (loss of riparian cover)

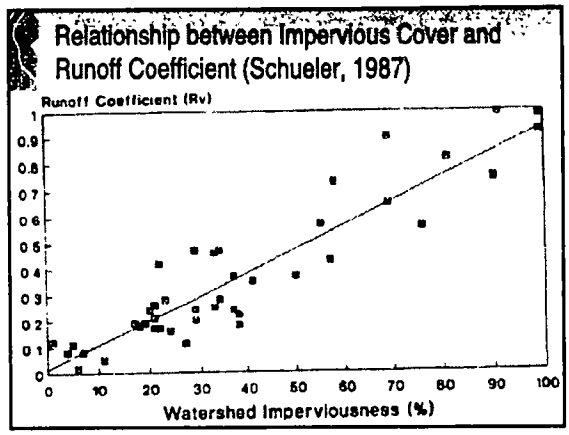
Common pollutants in urban storm water

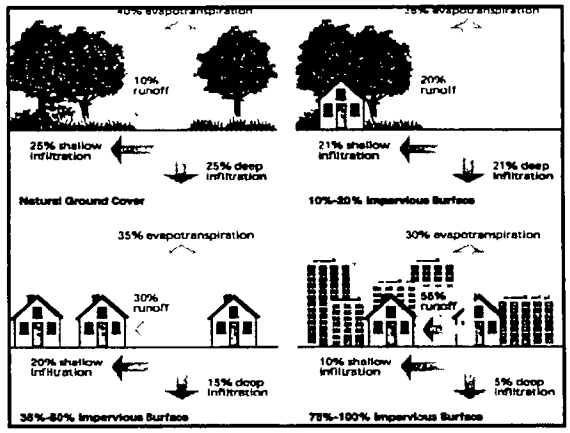


- Sediment
- Nutrients
- Oxygen-demanding substances
- Pathogens
- Road Salts

- Hydrocarbons
- Heavy Metals
- Heat
- pH




Relationship between Impervious Cover and Runoff Coefficient (Schueler, 1987)
Runoff Coefficient (Rv)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
90
100
Watershed Imperviousness (%)


10% runoff
25% shallow infiltration
25% deep infiltration
Natural Ground Cover
20% runoff
21% shallow infiltration
21% deep infiltration
10%-20% Impervious Surface
35% evapotranspiration
30% runoff
20% shallow infiltration
15% deep infiltration
35%-50% Impervious Surface
30% evapotranspiration
55% runoff
10% shallow infiltration
5% deep infiltration
75%-100% Impervious Surface

What are the benefits of a storm water program?

- Meet regulatory requirements
- Reduce flooding
- Improve water quality
- Prevent erosion
- Preserve biological populations
- Sustainable infrastructure

What are the benefits of a storm water program?

- Improve aesthetics
- Protect riparian areas
- Increase property values
- Educate the community
- Reduce infrastructure and maintenance costs

Phase II Minimum Control Measure:

Post-construction Storm Water Management in New Development and Redevelopment

MUST:

- Develop a program, using an ordinance or other regulatory means, to address runoff from new development and redevelopment projects that disturb ≥ 1 acre
- Implement strategies with a combination of structural and/or non-structural BMPs
- Ensure adequate long-term operation & maintenance (O&M) of BMPs

Phase II Minimum Control Measure:

Post-construction Storm Water Management in New Development and Redevelopment

RECOMMEND:

- The BMPs chosen should:
  - be appropriate for the local community
  - minimize water quality impacts
  - attempt to maintain pre-development runoff conditions
- Participation in watershed planning efforts
- Assess existing ordinances, policies, and programs that address storm water runoff quality
- Provide opportunities for public participation

What are the common elements of a post-construction runoff control program?

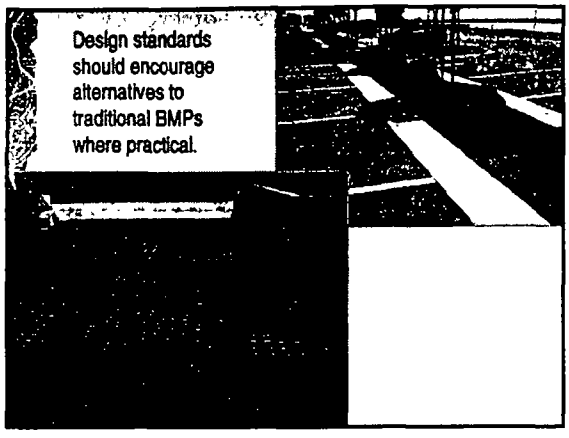
- Update of General/Comprehensive Plan and Environmental Review Procedures
- Development of Storm Water Design Standards
- Process for Review and Approval of Storm Water Plans for New Development
- Post-construction BMP maintenance, tracking and inspection
- Penalty provisions for non-compliance
- Training and Education

Update of General/Comprehensive Plan and Environmental Review Procedures

- General/Comprehensive plan amendments:
  - Some cities are required by the State to develop plans to guide in decision-making process for planning (e.g., General Plans or Comprehensive Plans)
  - These plans should include watershed, stormwater quality and quantity policies
- Environmental review procedures
  - Many cities review or screen projects for potential environmental impacts
  - Ensure that the City's review procedures address stormwater quality impacts
  - Should address both construction and post-construction

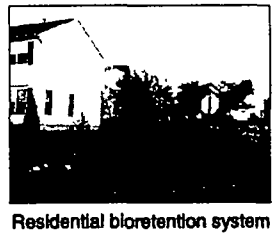
Development of Storm Water Design Standards

- Storm Water Design Standards are used by both the development community and City engineers
- Sets minimally acceptable BMPs and sizing criteria
- Ordinance should require compliance with storm water design standards



Low-impact development

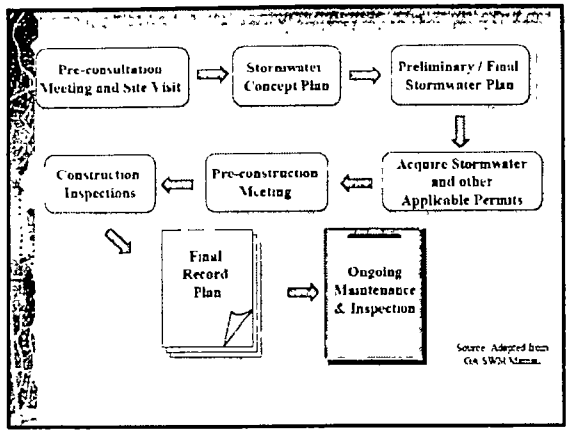
- Smaller-scale, distributed BMPs
- Focused on retention and infiltration
- Multiple benefits in addition to storm water control



Residential bioretention system

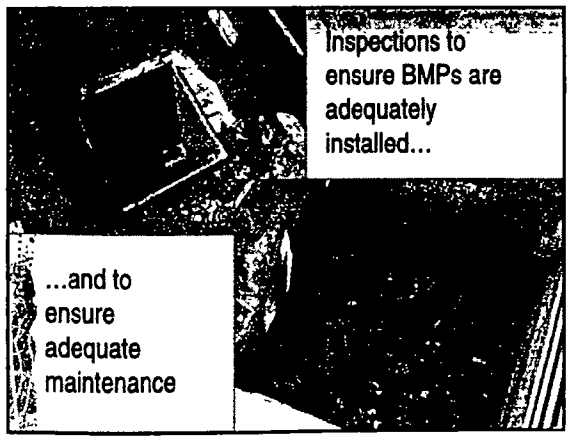
Process for Review and Approval of Storm Water Plans for New Development

- Cities must review and approve storm water plans for new development and redevelopment
  - Review will be based on the City's Storm Water Design Standards
  - Document the process for plan review and approval
    - Consider a checklist or detailed guidance for plan review staff
  - Develop process to review both construction and post-construction plans
  - Consider long-term O&M during review



Long-Term Operation and Maintenance of BMPs

- EPA recommends that you ensure the appropriate implementation of the structural BMPs by considering some or all of the following:
  - Planning provisions for long-term O&M
  - Inspections during construction to verify BMPs are built as designed;
  - Post-construction inspection and maintenance of BMPs; and
  - Penalty provisions for noncompliance with design, construction or operation and maintenance.



Maintenance Program Options

Option 1 – Municipality responsible for Public Facilities; Homeowners or Businesses have responsibility for Private Facilities

- Reduces Costs
- Good option for small communities with limited staff
- Community still responsible for education, tracking, and enforcement (e.g., regular inspections)

Maintenance Program Options

Option 2 – Municipality has full responsibility

- Uncommon due to expense
- Avoids legal proceedings
- Better control
- Requires dedicated staff and funding

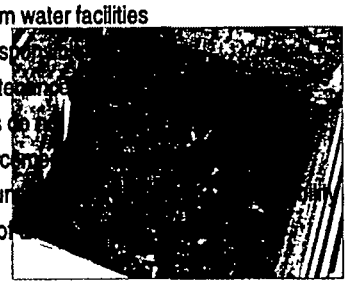
Maintenance Program Options

Option 3 - Community Has Responsibility for Public Facilities and Private Facilities that Discharge to Public Facilities

- Hybrid of Options 1 and 2
- Better control
- Requires dedicated staff and funding

BMP Maintenance Challenges

- Locating storm water facilities
- Identifying res
- Lack of mainte
- BMP designs
- Lack of enforc
- Owners are u
- Proliferation o maintenance

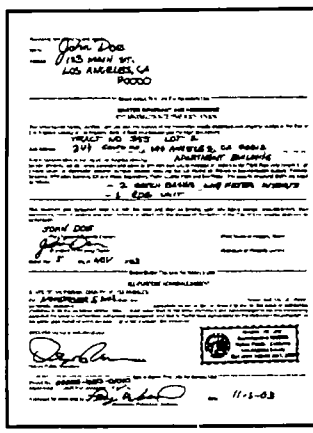


BMP O&M Administrative Elements

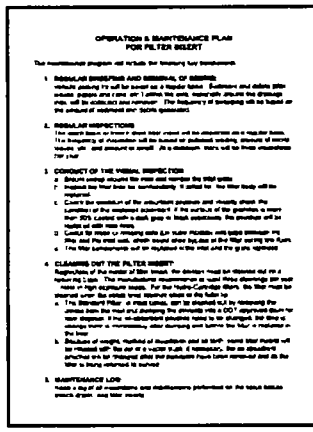
- Operation and Maintenance Ordinance
- Performance Criteria and Design Guidance
- Construction Inspection Checklists
- Performance Bonds
- As-built Certification Requirement

BMP O&M Planning Elements

- Agreements and Arrangements
- Easements
- Maintenance Plans and Schedules
- Development of Unit Costs



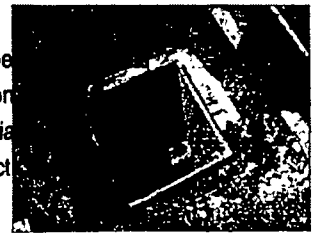
Sample Covenant and Agreement Form (City of Los Angeles)



Sample Operation and Maintenance Plan (City of Los Angeles)

Maintenance Tools

- Notification and reminders
- Tracking System
- "As Built" and Inspe
- Pollution prevention
- Educational Materia
- Proprietary Product



City of Los Angeles

STORMWATER OBSERVATION REPORT FORM

- STANDARD URBAN STORMWATER MITIGATION PLAN (SUSMP) - SITE SPECIFIC MITIGATION PLAN

Stormwater Observation Report Form (for As-Built Certification) City of Los Angeles

Inspection Checklist

Facility: _____ Inspector: _____

Type: Routine Pre-storm Post-storm

Date: _____

Items	Y	N	N/A
1. [illegible]			
2. Are trees, shrubs or bushes present on the embankment?			
3. Do the following show signs of erosion?			
- Embankment			
- Temporary spillway			
Side slopes			
Inlet outlet area, apron			
- Controlling weir			
4. Are [illegible] present?			
5. Are there any flat repairs required?			
6. Are there any [illegible]?			
7. Do ground cracks require sealing?			
8. Visible damage-deterioration to structure or mechanical components?			
9. Visible signs of unusual environmental?			
10. Is there an odor problem?			
11. Is there an insect problem?			
12. Is there visibly water in unappropriate areas?			
13. Is there evidence of encroachment or improper use of unpermitted areas?			
14. Are there signs of vandalism?			
15. Do the lines, pipe, inlet or other valve devices need repair?			
16. Is there evidence of oil, grease or other automotive fluids entering or dumping into facility?			

Example of BMP inspection checklist

Typical Maintenance Needs for Storm Water BMPs

- Wet Pond
- Dry Pond
- Infiltration Trench
- Underground Sand Filter

WET POND

- PERMANENT POOL
- CONTROLLED RELEASE
- SEDIMENTATION
- SAFETY
- LIFE SPAN – 20-50 years

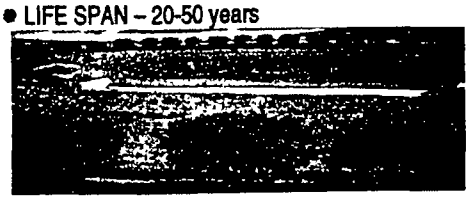
WET POND MAINTENANCE

ROUTINE
- DEBRIS AND LITTER REMOVAL
- VEGETATION MANAGEMENT
- ANIMAL CONTROL
- MECHANICAL

NON-ROUTINE
- SEDIMENT REMOVAL
- ALGAE CONTROL
- REPLACE MECHANICAL
- RECONSTRUCT EMBANKMENTS& SPILLWAYS
- ACCESS

DRY POND

- NO PERMANENT POOL
- DETENTION (48hrs)
- SEDIMENTATION
- LIFE SPAN – 20-50 years



DRY POND MAINTENANCE

ROUTINE

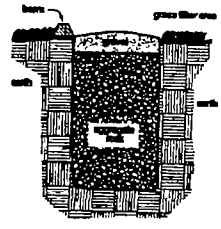
- DEBRIS AND LITTER REMOVAL
- VEGETATION MANAGEMENT
- ANIMAL CONTROL

NON-ROUTINE

- SEDIMENT REMOVAL
- AERATE
- RECONSTRUCT EMBANKMENTS & SPILLWAYS
- ACCESS

INFILTRATION TRENCH

- GRAVEL FILLED EXCAVATION
- SEEPAGE INTO UNDERLYING SOIL
- LIFE SPAN – 10 years



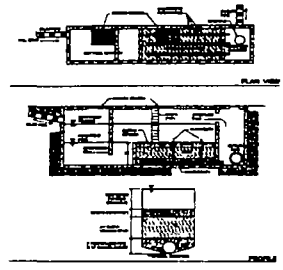
INFILTRATION TRENCH MAINTENANCE

ROUTINE
- DEBRIS AND LITTER REMOVAL
- VEGETATION MANAGEMENT
- ANIMAL CONTROL

NON-ROUTINE
- DETHATCH
- REMOVE AND REPLACE GRAVEL

UNDERGROUND SAND FILTER

- LIMITED SPACE
- FILTRATION
- SAFETY
- LIFE SPAN – 20-50 years



UNDERGROUND SAND FILTER MAINTENANCE

ROUTINE
- GET A PROFESSIONAL
- DEBRIS AND LITTER REMOVAL
- VEHICLE FLUIDS
- FENCING AND LOCKS
- MECHANICAL & ELECTRICAL COMPONENTS

NON-ROUTINE
- SEDIMENT REMOVAL
- REPLACE TOP INCHES OF SAND
- REPLACE FILTER MEDIA
- REPLACE UNDERDRAINS
- REPLACE MECHANICAL & ELECTRICAL COMPONENTS
- REPLACE CONCRETE SHELL

Urban Legends

- West Nile virus and mosquitoes
- Toxic sediments
- BMPs becoming jurisdictional wetlands
- Liability for drowning
- Others?

Penalty Provisions for Noncompliance

- Can include:
  - Non-monetary penalties
  - Fines
  - Bonding requirements
  - Permit denial
  - Denial of occupancy permit.
- Develop an escalating enforcement plan to document steps that will be taken to address non-compliance
- Educate staff on how to use penalty provisions when necessary

Training and Education

- The City must train it's own staff on the post-construction program
  - Plan review staff
  - Construction inspectors
  - BMP maintenance inspectors
  - Code enforcement, others?
- Local developers and engineers must also be educated so they develop adequate plans.
- Education for property owners on maintenance of BMPs

Questions?

Post-construction stormwater management in Arlington, Virginia

Post-construction stormwater management in Arlington, Virginia

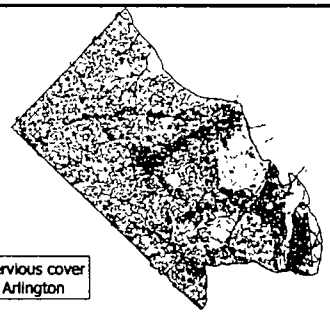
Getting in Step with Phase II:
A Workshop for Storm Water
Program Managers
EPA Region III, Philadelphia, PA
June 22, 2004

Jason Papacosma
Watershed Planner
Department of Environmental Services

ARLINGTON

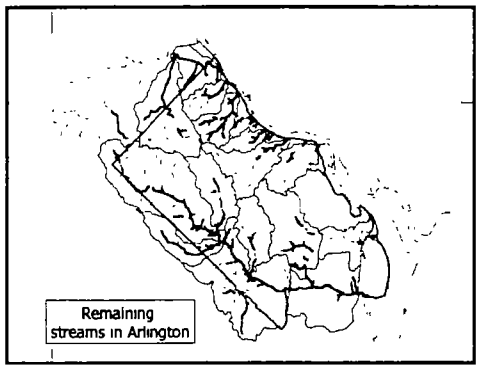
People and Stormwater in Arlington

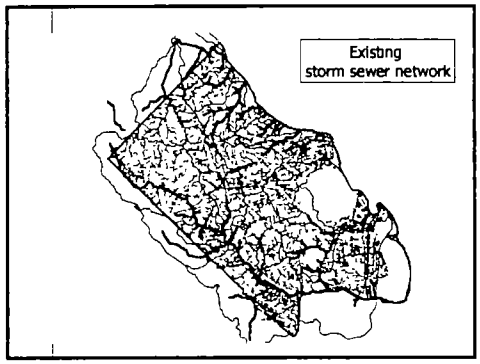
- 2000 Census: 189,453 people
- 26.5 square miles
- 7,149 persons/square mile (DC~9,000/sq. mi.)
- 40% impervious cover
- 300 miles of storm sewers
- 28.5 miles of perennial streams



Impervious cover in Arlington

Post-construction stormwater management in Arlington, Virginia





Arlington's Key Stormwater Challenges

- Arlington is mostly built-out
- Existing development has much greater impact on streams than new development
- Most development occurred before regulations that protect water quality and stream channels
- Most County streams in fair condition at best
- Redevelopment provides opportunities to improve water quality over long term

Post-construction stormwater management in Arlington, Virginia

Regulatory framework

- MS4 Permit
- TMDL Program
- Chesapeake Bay Program

- Chesapeake Bay Preservation Ordinance
- Stormwater Detention Ordinance
- Erosion and Sediment Control Ordinance

Watershed Management Strategy – in brief

- Driven by 'built-out' nature of Arlington
- Implement urban housekeeping 'best practices' (e.g., street sweeping, catch basin cleaning, etc.)
- Restore stream corridors
- Identify opportunities for regional BMP retrofits
- Deal with worst impacts of development with on-site BMPs
- Outreach and education
- Monitoring

Post-construction stormwater quality and quantity requirements for development projects

Post-construction stormwater management in Arlington, Virginia

Stormwater quality control - 1

- Chesapeake Bay Preservation Ordinance
- First enacted 1992; major revision in 2003
- All development projects with >2,500 sf of land disturbance subject to water quality requirements
- Water quality requirements a combination of on-site BMPs and contributions toward regional watershed solutions
- Ordinance also requires post-construction tree canopy

Stormwater quality control - 2

- Water quality treatment requirements based on pre- vs. post- impervious cover change
- On-site filtration/infiltration BMPs required to treat runoff from vehicle-related pavement (parking lots, loading areas, etc.)
- Contribution to Watershed Management Fund an option for requirements not met by treating on-site pavement
- Exemptions for *de minimus* areas (e.g., single-family home driveways, entrances to parking garages, etc.)

Stormwater quality control - 3

- Watershed Management Fund contribution rate set to reflect opportunity cost of BMP design/construction/maintenance
- But, discounted to acknowledge:
  - Regional water quality benefits of infill development in Arlington
  - Higher cost-effectiveness of larger scale solutions
- WMF used for stream restoration, BMP retrofits, street sweeping enhancement, outreach/ed, monitoring, etc.
- Generating approximately $400,000 per year

Post-construction stormwater management in Arlington, Virginia

Stormwater quality control - 4

- BMP design: Virginia DCR Stormwater Management Manual; Northern Virginia BMP Handbook (both due to be updated)
- Developing requirements for as-built certification
- Maintenance: Require maintenance agreement and annual certification of proper maintenance; random inspection

Stormwater quantity control

- Traditional flood control ordinance
- Maintain 100-year flood capacity of USACOE channel - ~50% of Arlington
- Maintain 10-year capacity of storm sewer system
- Mostly underground vault systems
- Stream channel protection not highest priority, given 'built-out' condition
- But, in watersheds where stream restoration will occur, channel protection becomes important

Encouraging better site design

- Water quality/quantity requirements and WMF rate encourage impervious cover reduction
- ChesBay ordinance requires site design standards to minimize impervious cover and stormwater runoff; working on developing these standards
- Green building incentive program – stormwater/site design component

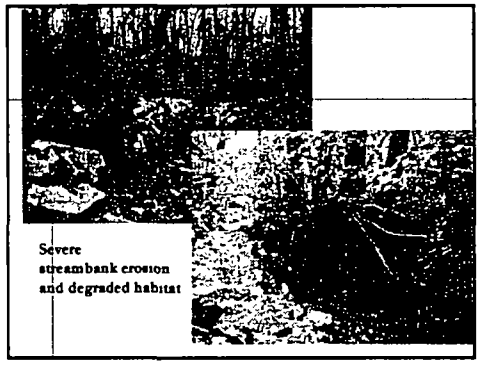
On-site BMPs

Post-construction stormwater management in Arlington, Virginia

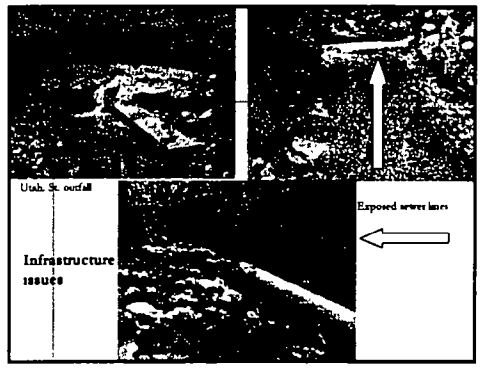
Donaldson Run Stream Restoration Project

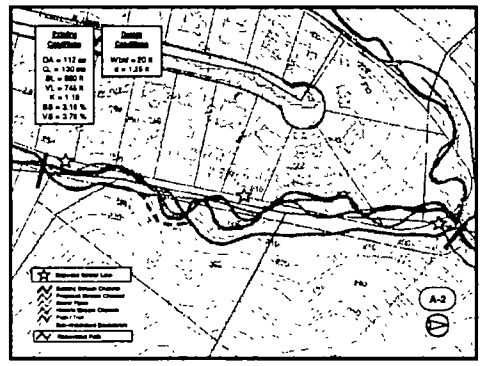
Project scope

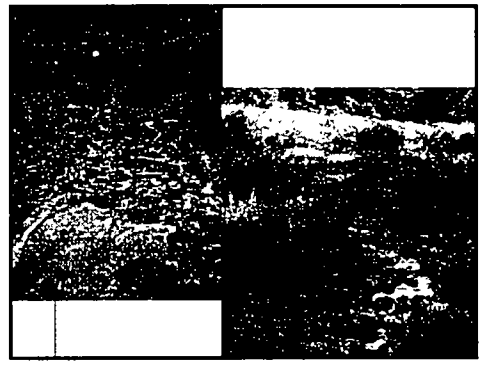
- Focuses on one of most eroded stream reaches in Arlington with good potential for restoration
- Study watershed hydrology: impervious cover, drainage network, stormwater flows
- Study stream hydraulics, dimension, pattern, and profile
- Redesign and reconfigure stream to dynamic equilibrium: stable, self-maintaining system
- Partnership with several County agencies as well as local neighborhood



Post-construction stormwater management in Arlington, Virginia







Next Steps for the Program

- Stormwater Funding Feasibility Study underway
  - Identified key problems and needs, priorities and objectives
  - Worked with staff and citizen advisory group to recommend program enhancements
  - Stormwater utility funding framework under serious consideration
- Virginia recently revised State stormwater legislation; new regulations will affect localities like Arlington
- Outcome of both may change how post-construction stormwater is managed in Arlington
- Chesapeake Bay cleanup will also have significant impact on Arlington's stormwater program

Discussion

- Contact info:
  - Phone 703.228.3613
  - Email: jpapacosma@arlingtonva.us
- Watershed program info:
  www.co.arlington.va.us/des/epo/epo_main.htm
- FY03 MS4 annual report:
  www.arlingtonva.us/des/epo/pdffiles/NPDESfinal03.pdf

ARLINGTON

Post Construction Design and Performance Standards

Post-Construction Design Standards & Manuals

Acknowledgments

Information adapted from slides prepared by:

The Center for Watershed Protection
www.cwp.org

CENTER FOR WATERSHED PROTECTION

Tetra Tech, Inc.
www.Ttwater.com

Presentation Overview

- Requirements and typical components in a design manual
- Types of storm water BMP sizing criteria
- Additional design standard issues to consider

EPA Phase II Requirements

- MUST: ... develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects... program must ensure that controls are in place that would prevent or minimize water quality impacts.
- RECOMMEND: EPA recommends that the BMPs chosen:
  - be appropriate for the local community;
  - minimize water quality impacts; and
  - attempt to maintain pre-development runoff conditions.

State Storm Water Design & Performance Standards

- Some States have adopted minimum statewide design criteria and/or storm water performance & design standards
  - Maryland, Georgia, New York, Vermont, Washington, Virginia, Delaware
- Other States have developed BMP guidance documents with specifications to assist in the selection of appropriate BMPs
  - Pennsylvania

Components of a Typical Storm Water Design Manual

- Procedures for reviewing stormwater plans
- Basic sizing criteria
- List of acceptable practices
- Performance criteria
- Guidance on storm water treatment practice selection
- Storm water credits
- Design examples
- Construction specifications
- Checklists for construction inspection

Source: CWP Manual Builder

Questions to Consider When Adopting a New Storm Water Manual

- What kind of development do you expect in the future?
- What kind of impacts does development cause in your community?
- What kind of rain falls on the community (e.g., intensity, seasonality)?
- How experienced is your community with storm water management?
- What kind of manual do you really need?

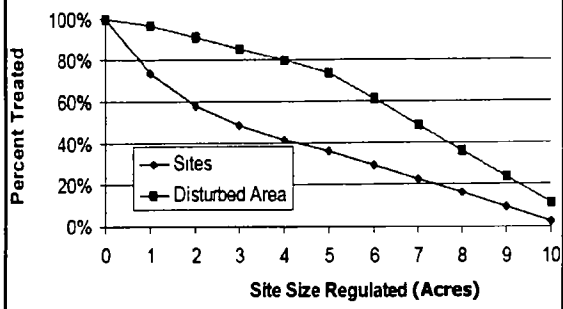
Manual Tips

- Establish basic rules and engineering criteria
- What is required v. voluntary?
- Provide flexibility in interpretation
- Allow manual to be revised administratively
- Standardize the review process

Early Design Standards Considerations

- Minimum site size
- Minimum performance requirements, design & sizing criteria
- Waivers and exemptions
- Redevelopment projects
- Review burden

What site size to cover?



Source: Tetra Tech, 2002

Minimum site size issues to address

- NPDES construction storm water minimum: one acre
- Some communities have gone as low as 5000, 1000 and even 250 square feet
- Impervious Cover vs. disturbed area?
- Do you want to deal with single family lots, decks, and additions?
- Do you want to address specific types of construction (e.g., gas stations, steep slopes, etc.)

Minimum performance requirements, design & sizing criteria

BMP performance objectives:

- Promote infiltration?
- Maintenance of existing drainage system in a natural state?
- Maximize onsite storm water storage?
- Protection of critical areas?
- Water quality protection?
- All of the above?

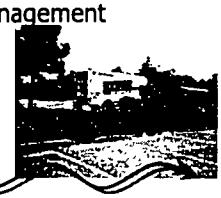
Low-impact development

- Smaller-scale, distributed BMPs
- Focused on retention and infiltration
- Multiple benefits in addition to storm water control

Residential bioretention system

Low-impact development

- These practices treat ~1/2 to 1 inch of rainfall—not the 2-year, 24-hour storm
- They are, however, good first practices in the storm water management treatment train



Benefits of low-impact development

- Pollutant removal
- Runoff volume and peak flow reduction via infiltration
- Ground water recharge
- Can be incorporated readily into landscape plans
- Less land area required for construction
- Aesthetic benefits

What BMP sizing criteria do you need?

- Groundwater recharge?
- Water quality
- Channel protection?
- Overbank flood protection
- Extreme flood protection

Groundwater Recharge Criteria

- Adopted in a few states
- Requires infiltration of frequent rainfall events
- Encourages better site design/LID
- Maintain pre-dev. rates of groundwater recharge to sustain small stream flows
- 0.1 to 0.4 inches, depending on soil type
- No recharge at hotspots

Water Quality Criteria

Option	Equation	Notes
1st Half Inch	WQv=(.5)(A)	Based on the 1st flush concept; treats 1st half inch of runoff
90% Rule	WQv=[(P)(Rv)(A)]/12	Storage needed to capture and treat 90% of average ann. SW vol.
One Inch per Impervious Acre	WQv=(1)(Impervious Acres)/12	Larger volume of 1st flush, based on amount of site impervious area
On-Site Load Calculation	Yearly load in pounds = [(P2)(.9)(Rv)/12](C)(A)(2.72)	Goal is to reduce a percentage of post development loads by as certain amount

90% Rule

- Goal: capture and treat 90% of the annual runoff volume
- Presumptive compliance with an approved BMP design
- More stringent sizing for hotspots and sensitive watersheds

Channel Protection Criteria

- Adopted in several states
- Common criteria requires extended detention of the volume of the one year, 24 hour rainfall event
- Storm is 2 to 3 inches
- Goal: reduce erosion and habitat alteration in downstream channels by detaining bankfull and sub-bankfull flows

Overbank Flood Protection Criteria

- Impervious cover dramatically increases peak discharges for 1 to 10 year return storms
- 2 and 10 year peak discharge control traditionally applied
- Overbank flooding can be beneficial
- Storm drains/open channels designed to convey the 10 year return storm
- No strong justification for 2 year storm control

Extreme Flood Protection Criteria

- Flood plains operationally defined as the land area within the ultimate 100-year storm flow
- Flood plains provide natural flood storage
- New development in flood plains should be restricted/prohibited
- Past development in flood plains may warrant protection
- 100 year control not needed if downstream development is not located in the 100 year flood plain.

What models and design assumptions will you allow?

- Minimize disputes during plan review
- Establish accepted hydrologic models
- Standard design assumptions for:
  - Predevelopment conditions
  - Off-site drainage

Additional issues to consider

- Feasibility and testing of BMPs
- Pretreatment requirements
  - Essential for all BMPs, prolongs need for maintenance
- Maintenance and Safety
  - Access for maintenance
- Landscaping
  - How will vegetation be maintained?

Waivers and Exceptions

Storm Water Credits?

- Conservation of natural areas
- Rooftop disconnection
- Non-rooftop disconnection
- Sheet flow to stream buffer
- Grass channels

Redevelopment Projects

Issue: Stormwater treatment costs 5 to 10 times more in redevelopment areas than new development areas

- Can be a disincentive to smart growth
- Set treatment requirements based on impervious cover change (I.e. MD)
- Apply smart site design principles

Single Family Houses

Issue: Single lots built by individual builders can be tricky to regulate

- Some home builders do not have storm water treatment experience
- Expense of an engineered plan

Getting your manual accepted

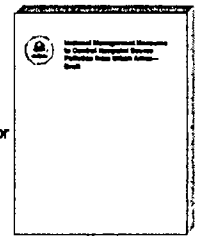
- Review other stormwater manuals
- "Sell" your manual to the public, elected officials, developers, engineers
  - Link to local concerns
  - Costs and economic benefits
  - Education, education, education
- Address concerns directly

Example Guidance & Manuals

- EPA's National Urban Management Measures Guidance
- Western Washington Stormwater Manual
- Maryland Stormwater Design Manual

National Management Measures to Control Nonpoint Source Pollution from Urban Areas

- Presents a comprehensive watershed approach to controlling urban stormwater
- 12 management measures outline goals for each area of stormwater management, such as
  - Storm water treatment practices for new development
  - Construction site erosion and sediment control
  - Highways and bridges, and
  - Onsite wastewater treatment systems



Available Summer 2004 from http://www.epa.gov/nps/

Management Measure 5: New Development Runoff Treatment

- By design or performance:
  - (a) reduce the post-development loadings of TSS so that the average annual TSS loadings* are no greater than the predevelopment loadings or
  - (b) reduce the average annual TSS loadings by a minimum of 80 percent of the influent concentration of TSS.
- Maintain the post-development average volume and peak runoff rates at levels that are similar to predevelopment levels
- Maintain discharge temperatures in runoff at levels similar to predevelopment levels

Minimum Control Measures vs. Management Measures

	Program Framework	Watershed Protection	Site Development	Runoff Treatment	OWTSs	Bridges and Highways	Construction Site E&SC	Pollution Prevention	Operation and Maintenance	Program Evaluation
Public Education	✓							✓		
Public Involvement	✓							✓		
Illicit Discharge	✓				✓			✓		
Construction Site E&SC	✓						✓			
Post-construction	✓	✓	✓	✓		✓			✓	✓
Pollution Prevention	✓				✓	✓	✓	✓		✓

Western Washington Stormwater Manual

- 5 Volumes
  - Volume I - Minimum Technical Requirements and Site Planning
  - Volume II - Construction Stormwater Pollution Prevention
  - Volume III - Hydrologic Analysis and Flow Control Design/BMPs
  - Volume IV - Source Control BMPs
  - Volume V - Runoff Treatment BMPs

Western Washington Flow Control/Treatment Standards

- Uses a rainfall-runoff continuous hydrologic simulation model (HSPF)
- Match discharge durations of flows from the developed site to the durations of flows from the pre-developed site for the range of pre-development discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow.
- Pre-developed condition shall be forested land cover.
- Requires treatment of runoff from pollution-generating impervious and pervious surfaces.

Stormwater Management Manual
for Western Washington

Volume I - Minimum Technical Requirements and Site Planning
Volume II - Construction Stormwater Pollution Prevention
Volume III - Hydrologic Analysis and Flow Control Design/BMPs
Volume IV - Source Control BMPs
Volume V - Runoff Treatment BMPs

Prepared by
Washington State Department of Ecology
Water Quality Program

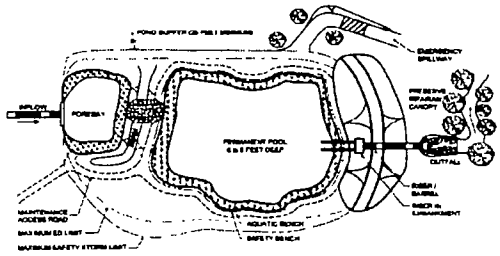
August 2001

http://www.ecy.wa.gov/programs/wq/stormwater/manual.html

Maryland Storm Water Design Manual

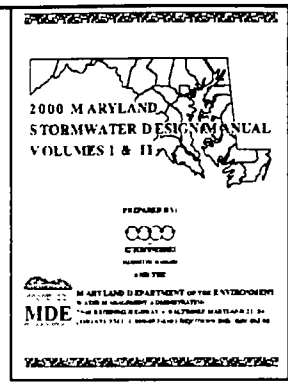
- Manual applies 14 general performance standards to any construction activity disturbing 5,000 sf or more.
- First statewide manual to apply the five unified storm water sizing criteria.
- Allows storm water credits for innovative site planning.

Sets performance criteria for BMP Designs



Example: Pond Pretreatment Criteria

Each pond shall have a sediment forebay...sized to contain 0.1 inches per impervious acre of contributing drainage.



http://www.mde.state.md.us/Programs/WaterPrograms/SedimentandStormwater/home/index.asp

Questions?

Case Study: Storm Water Controls for Challenging Situations

Stormwater Controls for Challenging Situations

COME RAIN, WE SHINE ®

Stormwater Management Inc.

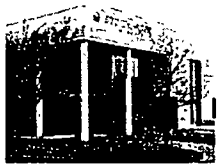
Adam Sapp, PE

COME RAIN, WE SHINE ®

Today's Objectives

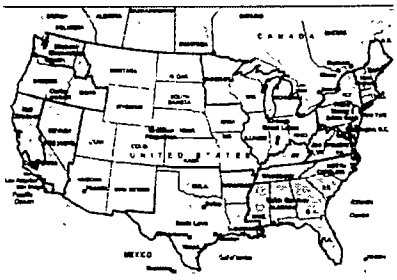
- Introduce Stormwater Management Inc.
- Discuss Stormwater pollutants
- Discuss Stormwater Treatment

Stormwater Management Inc.



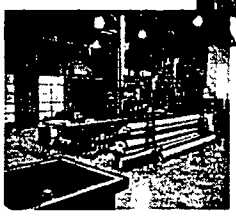
- Headquartered in Portland, OR
- Staffed by environmental engineers, scientists, civil engineers
- State-of-the-art research laboratory
- Product performance claims strongly backed by data

Regional Sales Map



Company background Regional

- Regional office in Elkridge,MD



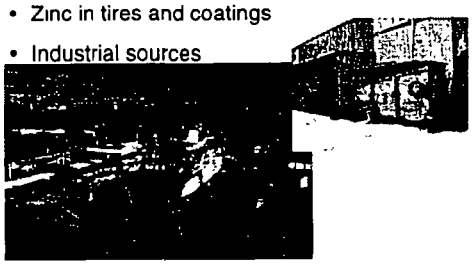
Stormwater Pollutants

Sediment (TSS)

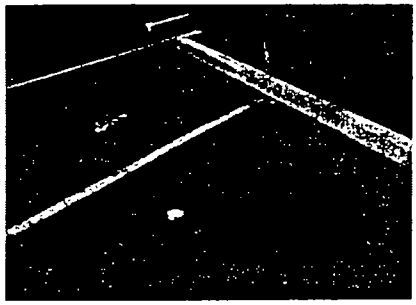
- Concentration
- Particle Size Distribution
- Specific Gravity

Metals

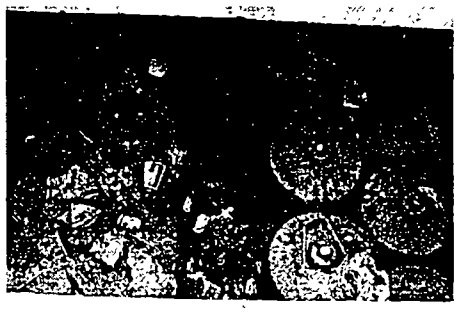
- Copper is commonly found in brake linings, bushings, windings, biocides
- Zinc in tires and coatings
- Industrial sources



Oil and Grease



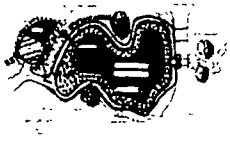
Pesticides & Herbicides

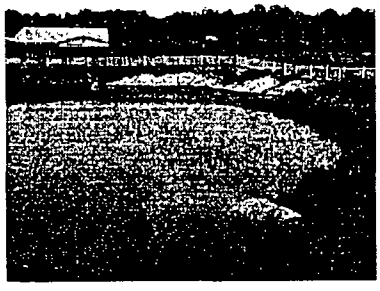


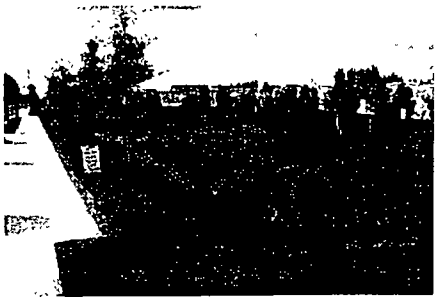
Preferred Method of Treatment

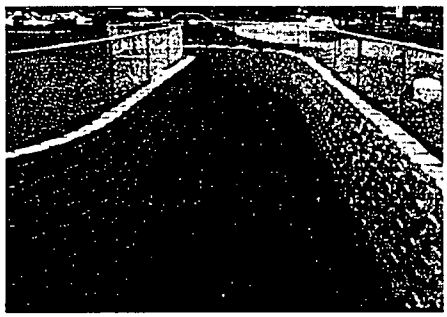
Preferred Stormwater Treatment Technologies

- Ponds
- Wetlands and Marshes
- Bio-retention
- Swales
- Filters

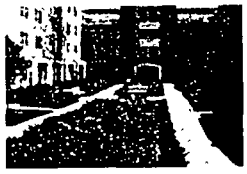


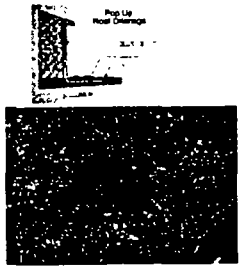






Apartment Courtyard Biofiltration System





Runoff is directed to center planter and either infiltrates or overflows into small inlets

Courtesy Geosyntec Consultants

What can be done when space is not available for conventional BMP's?

Stormwater Technologies

Filtration – Screening - Settling

- **Filtration**
  - Removes TSS, soluble metals, nutrients, oil & grease, based on filter media type
- **Screening**
  - Removes larger particles and trash & debris, based on high flow rates and screen size
- **Settling**
  - Removes sediment and oils & floatables, based on residence time and gravity separation

Filtration

The Stormwater Management StormFilter®

Highest performing passive BMP
Effective for soluble metals, nutrients and fine particles

Settling

StormGate Separator™

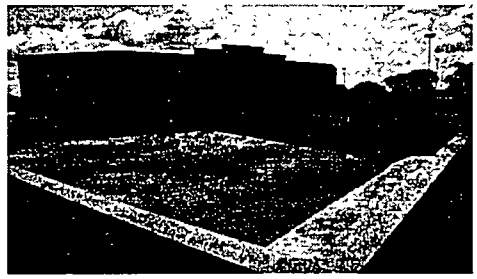
Engineered, tested gravity separator for typical TSS removal applications

Screening

StormScreen™

High-flow screening system for debris and coarse particles

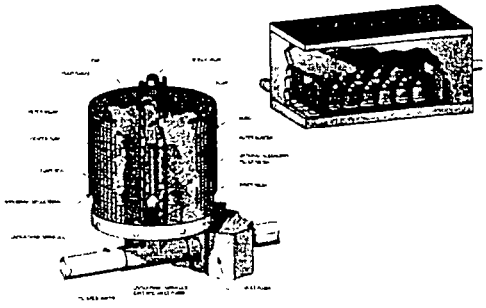
Filtration

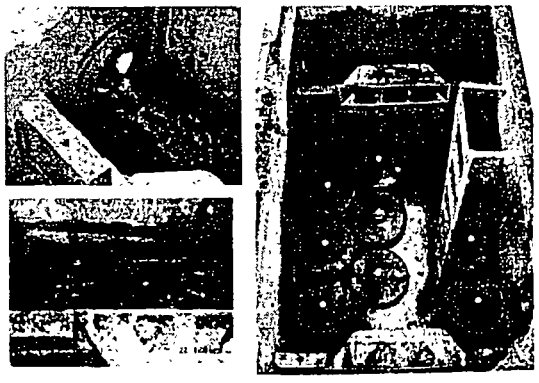


The Stormwater Management StormFilter

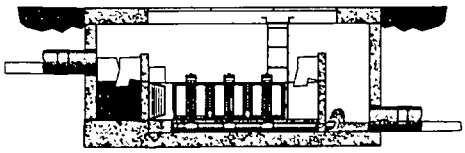
- Approved by Washington State for Primary Treatment
- Approved by Maryland as Stand Alone Treatment for new development
- NJ CAT Verified
- Interim NJ DEP verification for Stand Alone

The Stormwater Management StormFilter

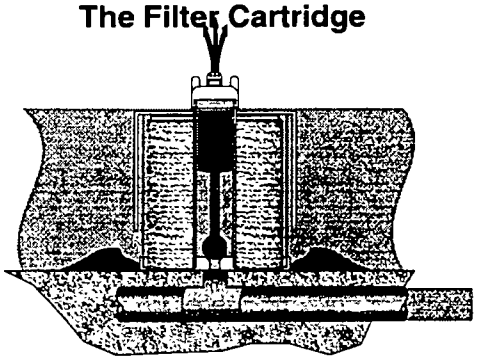




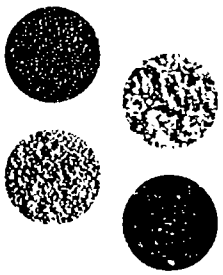
StormFilter Profile View Steps



The Filter Cartridge

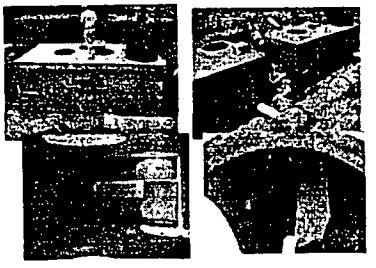


Filter Media Options

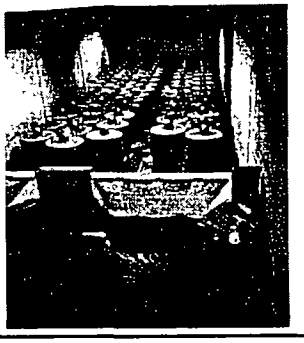


- CSF® leaf media
- Perlite
- Zeolite
- Granular Activated Carbon (GAC)

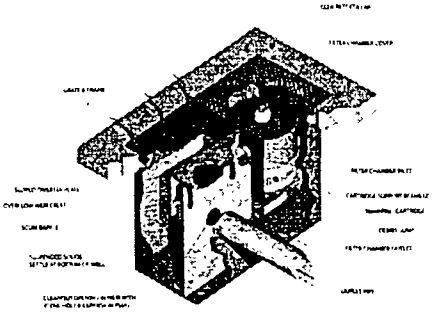
Precast StormFilters



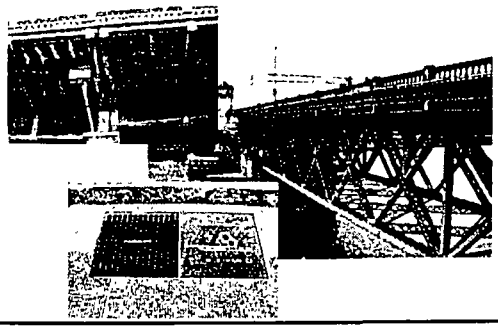
Box Culvert StormFilter

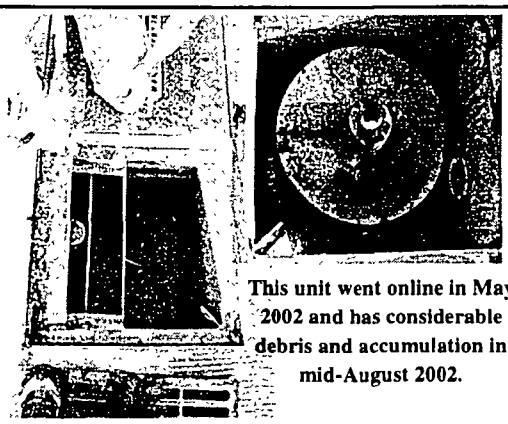


CatchBasin StormFilter



Burnside Bridge
Portland, OR

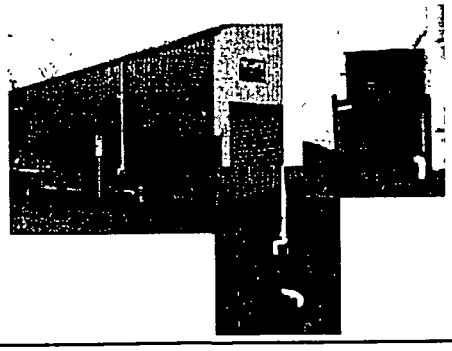




This unit went online in May 2002 and has considerable debris and accumulation in mid-August 2002.

Industrial and Remediation

DownSpout StormFilter

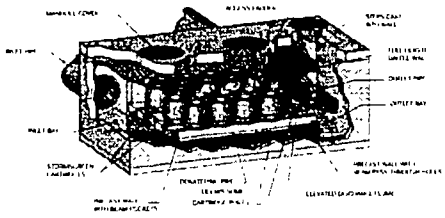


For Oil loadings above "normal" runoff loads (10-45 mg/l)

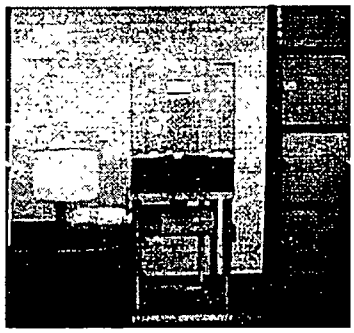
- Cartridge Cozy
- StormBoom

SCREENING

StormScreen



StormScreen Operation



El Paseo Simi Shopping Center

- 8x16 Precast StormScreen
- 14 Screen Cartridges with Sorbent Hoods
- Approx. 35 Acres & 7 cfs
- Target Pollutants are Trash, Debris, Sediment, Free Oils and Greases

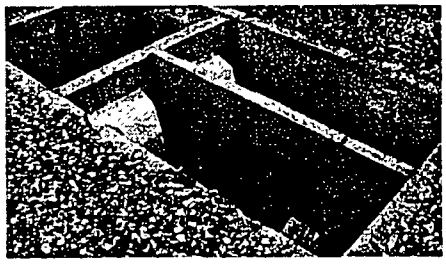
SETTLING

Hydrodynamic Devices

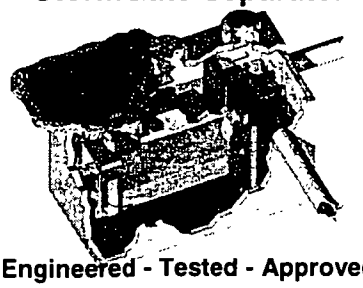
- Rely on Settling (Stokes Law)
- Primary focus is grit, heavy oils, and floatables
- Examples: Stormceptor, Vortechnics, HIL Downstream Defender, CDS
- Typical NW Performance results are 30% TSS removal at design flow.

StormGate Separator

Before Top Slab Installation



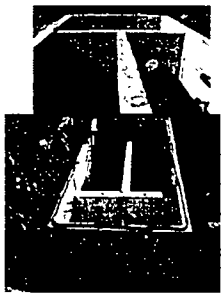
StormGate Separator



Engineered - Tested - Approved

Engineered - Tested - Approved

- Hydraulics engineered to control velocities throughout the system
- Design based on residence time
- Long serpentine flow path prevents short-circuiting
- Meets Maine DEP standardized testing requirements for procedure and particle size (OK-110)



StormGate Separator Flow Path

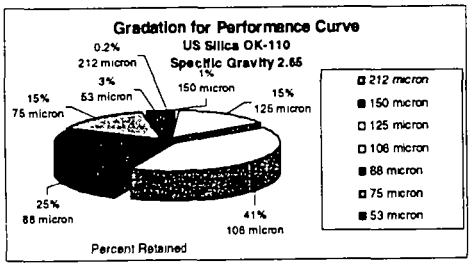
Primary Settling Chamber

Secondary Settling Chamber with Orifice Box

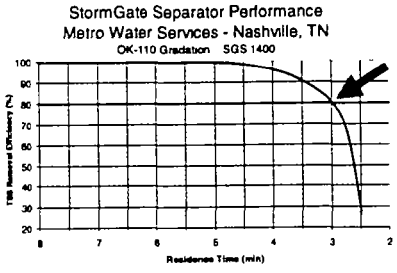
Inflow and Overflow Weir Chamber

Bypass and Outlet Chamber

Particle Size Gradation for Performance Curve



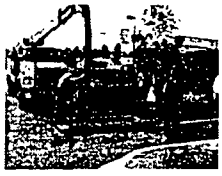
Product Performance



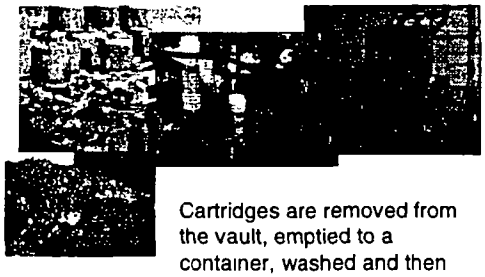
Maintenance, monitoring, laboratory services

Annual Maintenance

- Remove cartridges
- Clean sediments from vault bottom
- Inspect vault
- Install fresh cartridges



Cartridge Recycling

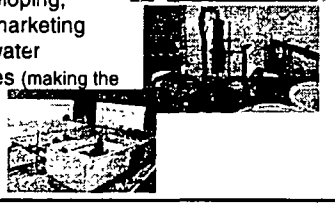


Cartridges are removed from the vault, emptied to a container, washed and then refurbished for reuse

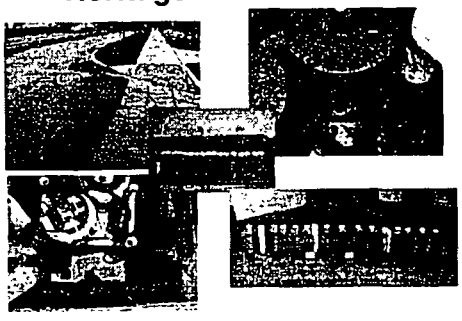
Corporate Focus

Industry leaders in stormwater pollution removal research (successful field samples on 34 events in '03 so far)

Designing, developing, producing and marketing effective stormwater products/services (making the science practical)



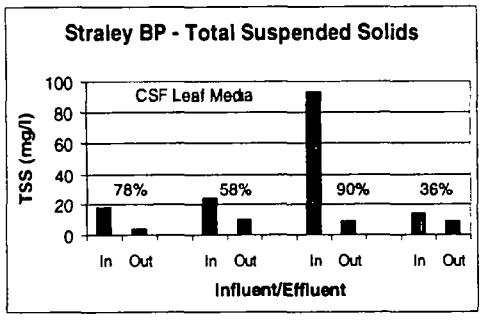
Heritage Market Place



Heritage Market Place
Clark County , WA

Storm Date	Peak Q in l/s	TSS IN mg/l	TSS OUT mg/l	Removal %
4/26/02	16	280	27	0 90
5/17/02	13	82	26	0.68
6/28/02	17	206	28	0.86

Design Flow 0 75 cfs using CSF media 15 gpm
Aggregate TP removal = 46%
Aggregate Zn removal = 62%



• Total Zn removal = 61%

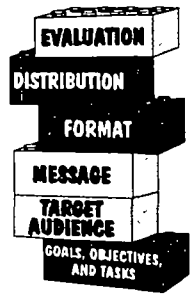
BMP Selection

- All sites are not created equal
- Choose the BMP that's going to address the site specific pollutants
- BMP's should be selected on effectiveness not cost

COME RAIN,
WE SHINE.

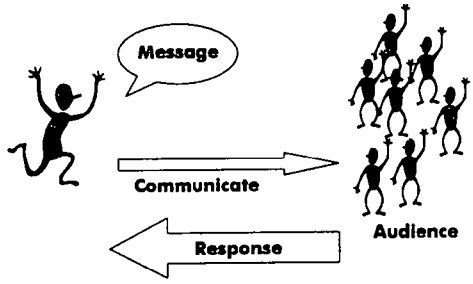
Getting in Step:

Building Blocks for Effective Education and Outreach



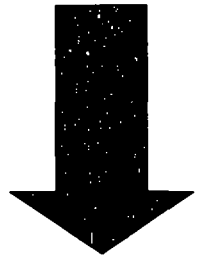
Barry Tonning, Tetra Tech

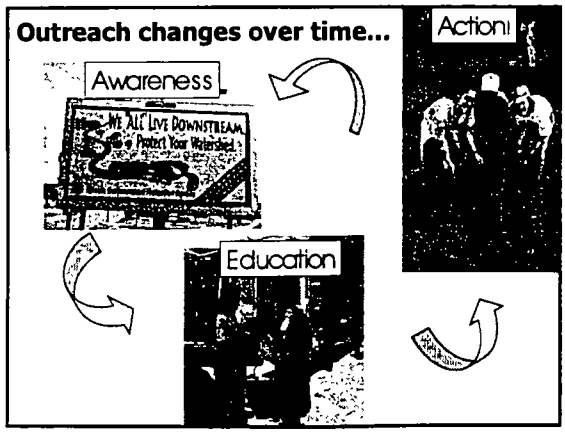
What Is Outreach?

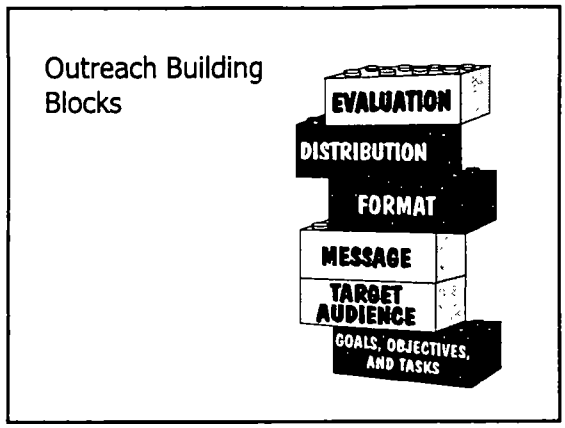


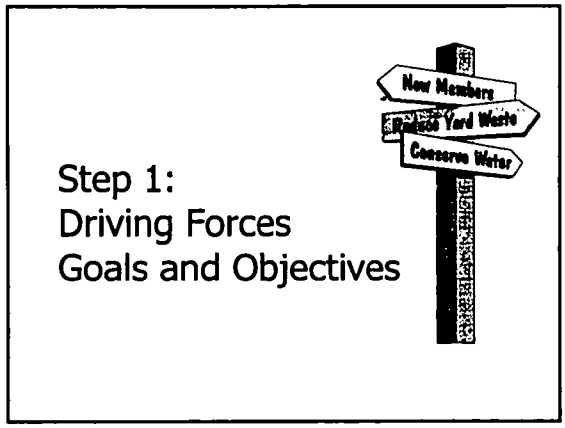
Phases of Behavior Change

- Awareness
- Knowledge
- Action



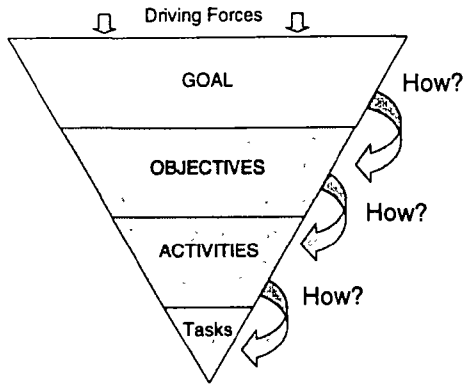

Outreach changes over time...
Awareness
Education
Action!


Outreach Building Blocks
EVALUATION
DISTRIBUTION
FORMAT
MESSAGE
TARGET AUDIENCE
GOALS, OBJECTIVES, AND TASKS


Step 1:
Driving Forces
Goals and Objectives
New Members
Yard Waste
Conserve Water

Driving Forces

- Why do you need outreach?
  - New regulations
  - Public pressure
  - Political pressure

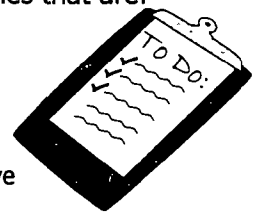


Goals

- General statements that express the broad focus of the entire planning and management effort.
  - Vision
  - Problem
  - Mission

Objectives

- Define outcomes that are:
  - *S*pecific
  - *M*easurable
  - *A*chievable
  - *R*elevant
  - *T*ime-sensitive



Goal

- Improve water quality of Cityville's water resources through effective stormwater management.

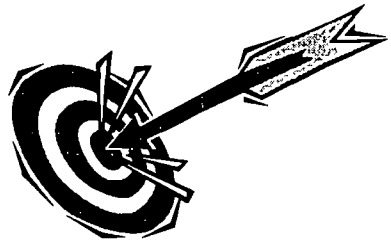
Objectives

- Make MS4 residents aware of the impacts of stormwater runoff to Cityville's water resources and educate them on proposed actions.
- Develop and distribute 5 newspaper inserts on lawn management to MS4 residents in the next 12 months.

Activities

- Develop unifying theme and logo by 4/04.
- Identify newspaper outlet to distribute inserts by 6/04.
- Identify key topics for each issue by 6/04.
- Design layout and write text for first issue by 9/04.
- Send issue 1 to printers by 11/04.

Step 2: Target Audience



Who Do We Need to Reach?

- Public Agencies
- Elected and other public officials
- Non-governmental organizations
- Business and Industry
- Students and others in academia
- Citizens, voters, the public

Target Audience

- Break down your audience by. . . .
  - Geographic location
  - Socioeconomic
  - Gender
  - Age
  - Ethnicity
  - Occupation

Target Audience

- Information needed
  - Demographics
  - Knowledge of the message
  - Communication channels
  - Attitudes/perceptions

Target Audience

- Research the target audience
  - Focus groups
  - Phone interviews
  - Pre/post surveys
  - Public agencies
  - Community leaders
  - Trade associations

Recent Survey of Tampa Residents

- Only 19% knew that they lived in a watershed.
  - No-35%
  - Don't know-46%
- 36 percent of respondents left their pet's waste on the ground.

Step 3: Message

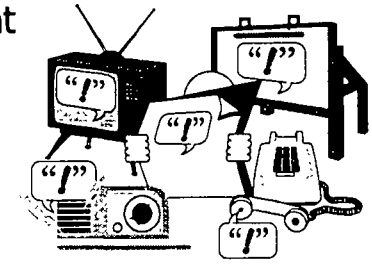
Message

- Specific to target audience
- Should have direct benefit to target audience
  - "Improves/protects resources"
  - "Costs less"
  - "Improves health"
  - "It's convenient"
  - "It's free"

Social Marketing

- Applying commercial marketing principles to social issues, such as seatbelt use, anti-smoking, to achieve a change in behavior
- More on this topic later today!

Step 4: Format



Format: Displaying the Message

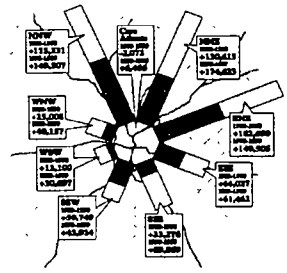
Print	"Stuff"	Events
Newsletters	Calendars	Festivals
Fact sheets	Magnets	Clean-ups
Flyers	Bumper stickers	
Magazine articles	Tote bags	
Stenciling		
Posters, displays	Frisbees	
Training		
Billboards	Lapel pins	Mini-

Formats

- Brochures and Fact Sheets
  - Can be distributed widely
  - Provide more detail on issues
  - Different shapes and sizes

Displaying Data

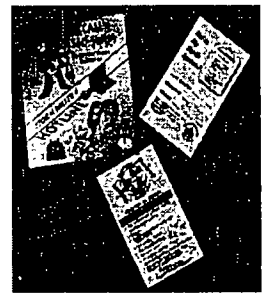
- **Use photos and maps**
- **Summarize data into easy to read formats**
- **Report cards**
- **Explain the "so what" of the data**
- **Show trends**



Dot scan of growth in metro Atlanta (data from ARC 2000). Bold figure, case population counts

Formats

- Stuff
  - Magnets
  - Stickers
  - Water bottles
  - Drink cozies
  - Mouse pads



Format

- Events
- Volunteer Monitoring
- Field tours
- Connect people to the resource

The Media

News Media	Electronic Media
Radio	Listservers
Newspaper	Web sites
Television	CD-ROMs
Magazines	

Where Does the Public Obtain Information on Water Issues?

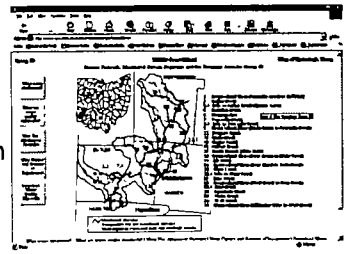
Local television news	47%
Local newspapers	27%
Radio news programs	18%
Friends, family, neighbors	4%
Environmental mailings	2%
Community leaders	1%

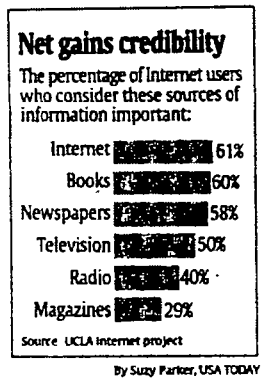
92%

Source: Lake Research Inc; for the Upper Mississippi Basin

Formats

- Web Sites
  - Reach larger audiences
  - Adaptable/Changeable





Step 5: Distribution

- How will you distribute your materials?
- Who will distribute the message?

Distribution

Delivering the message . . .

Mail
Phone
Door-to-door
Events
Presentations businesses
Piggybacking
Media
Stakeholder-stakeholder
Conferences/workshops
Targeted

Who is your messenger?

Step 6: Evaluation

?

When do you evaluate your program?

- Before program development
- During implementation
- After implementation

Why evaluate?

- Program success justification
  - Shows a cost-effective program
  - Show impacts and benefits
- Understand the good, bad and ugly
  - What went right? What went wrong?
- Program refinements and improvements
  - Adaptive management
- Helps with your annual report!

Adaptive Management

- Keeps you from
  - Blindly charging ahead
  - Being paralyzed by indecision
- Helps you
  - Learn from your mistakes
  - Refine your program to achieve success

Evaluation

Before	**Formative. Will the plan achieve the objectives?**
During	**Process. Are the tasks assigned, resources adequate? (Adaptive mgt)**
After	**Outcome. Did we do what we said we were going to do?**
Much Later	**Impact. Did our message reach the target audience? Did we achieve our objectives?**

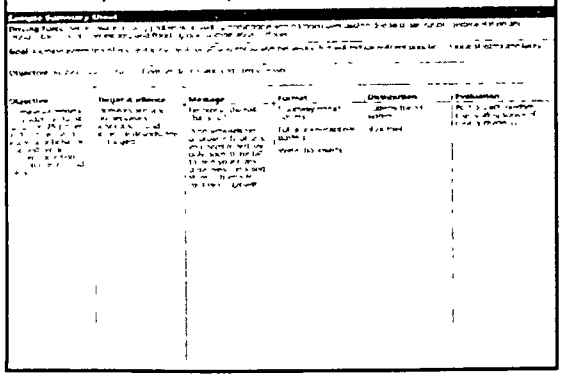
Evaluation Tools

- Assessment tools include:
  - Focus groups
  - Surveys
  - Interviews
  - Water quality data
- Tools may be part of Before/After approach
  - Remember to get your baseline data so you can measure success

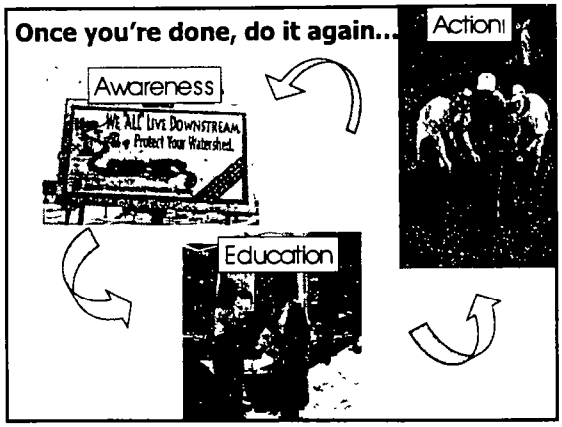
Putting Pen to Paper

- Write out your plan
- Allocate time and dollars with each task
- Review your plan every week
- Make changes as you go

Summary sheet for your outreach strategy

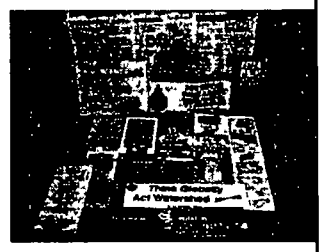


Once you're done, do it again...



The Art of Outreach

- White space
- Layout
- Graphics
- Communicating technical data
- Photographs
- Color
- Content

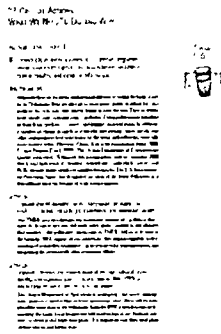


White space - how to get it

- 1/3 white space vs. 2/3 text
- Widen margins (scholar margin)
- Increase the leading
- Use ragged right margins

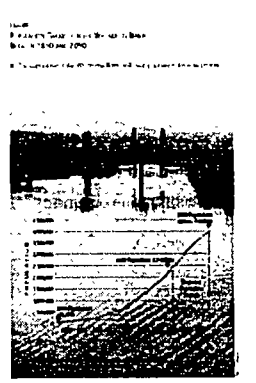
Layout

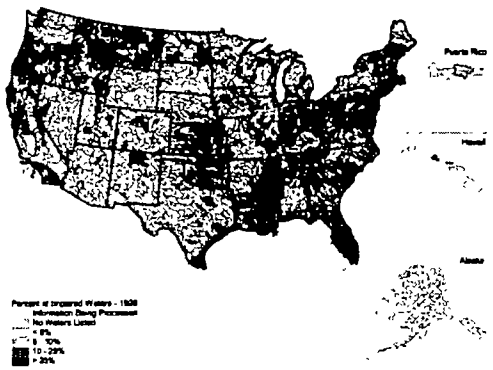
- Create a template
- Go with fonts that work - use restraint!
- Lots of subheads - think USA Today



Graphics

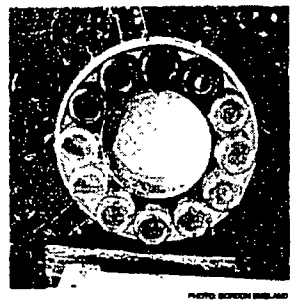
- Less is more
- Repeat graphics
- Pull quotes
- Show results, i.e., "data"





Communicating technical data

- Show relevance
- Know your audience
- Use pictures
- Use plain English!

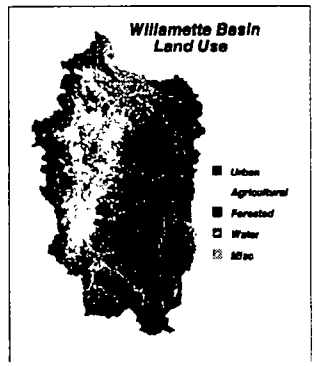


Willamette River Corridor:

~ 2/3 of natural flow disrupted

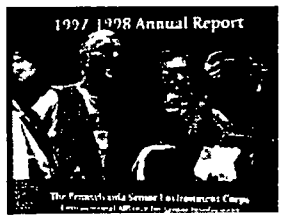
> 85% streamside vegetation removed

plagued by multiple pollutants & sources



Photographs

- Show your project in action
- Show people doing things
- Use only good photos

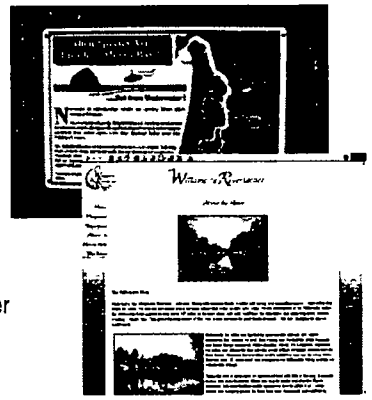


Color on a shoestring

- One-color vs. two-color
- Colored paper
- Digital printing

Content

- Tell a story
- Use quotes
- Lead off with questions
- Keep asking yourself "so what?" Why does the reader need to know this?



Engaging and Involving Key Stakeholders and the Public In Your Program

Engaging and Involving Stakeholders in Your Stormwater Program

Barry Tonning

Tetra Tech

What is public involvement?

- Two Types
  - The use of appropriate procedures to inform the public and consider the views of interested parties in planning and decision making.
  - Having members of the public participate in implementing stormwater management efforts.
- Outreach comes first; then public involvement

Why is it necessary?

- Ensures that community concerns are factored into the decisions made.
- Shares the responsibility of the decision.
- Enables partnerships to be formed to combine financial resources.
- Puts the implementation of the decision into the hands of the community.
- Establishes a framework for planning and conducting stormwater activities.

PI Minimum Measure

To satisfy this minimum control measure, the operator of a regulated small MS4 must:

- Comply with applicable State, Tribal, and local public notice requirements; and
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Integrating stakeholders into stormwater planning/mgmt

- Many solutions depend on voluntary BMPs and action-based partnerships
- Outreach promotes awareness, education, and action (i.e., adoption of BMPs)
- Stakeholder involvement builds acceptance for management actions and can increase the amount of resources available

What can stakeholders do?

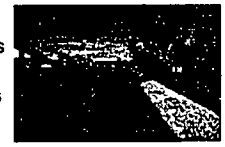
- Assessment of receiving waters
  - Educate the public on assessment processes
  - Recruit agency and other monitoring partners
  - Solicit information on dump sites, discharges, eroded areas, unique resources, etc.

What can stakeholders do?

- Identify and describe problems, sources, and impacts
  - Distribute information on suspected problems
  - Begin discussions on possible solutions
  - Create awareness of problem identification process

What can stakeholders do?

- Develop, plan, and help identify resources to solve problems
  - Provide educational info on actions/practices to stakeholders
  - Promote discussion of the alternatives deliberation process
  - Solicit potential funding sources for alternatives selected



What can stakeholders do?

- Implement solutions
  - Educate the public on behavior changes or mgmt measures needed
  - Motivate target groups to take action
  - Recruit BMP cost-share project partners

Evaluate effectiveness, adapt if necessary:

- Reinforce stakeholder participation and support
- Recruit long-term volunteer monitoring partners
- Recognize partners in successful projects

What is a stakeholder?

- A group or individual who:
  - has the responsibility for implementing a decision.
  - is affected by the decision.
  - has the ability to impede or assist in implementing the decision.

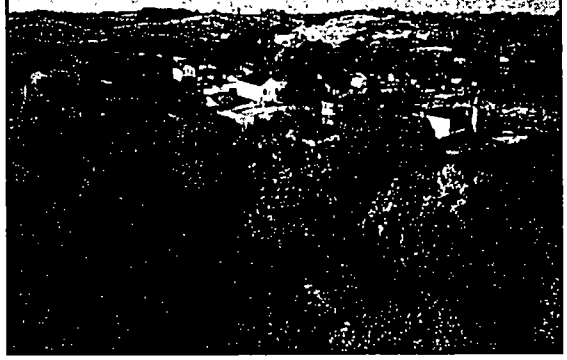
Why are stakeholders important to the process?

- Ensure that community concerns are factored into the decision-making process.
- Share responsibility for the decision.
- Enable partnerships to be formed to combine financial resources.
- Put the implementation of the decision into the hands of the community.
- Establish a framework for planning and conducting watershed activities.

Each stakeholder group is different

- Internal goals
- Priority issues
- Political climate
- Regulatory context
- Scale of watershed
- Budget / resources
- Decision-making processes

Scoping audiences to develop an involvement strategy

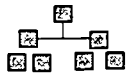


Identify potential stakeholders

- Local elected officials
  - board of supervisors, mayor, planning commissions, school boards
- Key business groups
  - developers, farmers, businesses, industry, realtors
- Regulators
  - federal, state, and local representatives
- Community organizations
  - fishing clubs, nature societies, preservation groups, League of Women Voters, religious orgs, PTA
- Community residents
  - "yard farmers," riparian landowners, voters, seniors

Define organizational structure

- Formal vs. informal
- Roles and responsibilities
- Decision-making methods

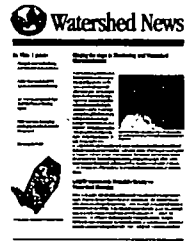


Tips to increase the success of your stakeholder group

- Start early (when you don't know what to do)
- Recognize differences
- Communicate clearly and often
- Be honest
- Listen
- Build on successes
- Commit resources to complete activities

Tips to increase the success of your stakeholder group

- ✓ Only call a meeting when it's absolutely necessary
- ✓ Piggyback onto other efforts
- ✓ Tap into larger groups
- ✓ Show progress to the group (data collected, newspaper clippings)
- ✓ Bring in new members
- ✓ Give praise (thank you notes, awards)



Tips to increase the success of your stakeholder group

- Bring food . . . (!)
- Integrate stakeholders into the rest of the watershed management process
- Focus on issues important to them
- Make it fun!

Tools for working with stakeholders

- Consensus building
- Resolving conflicts

Making Decisions

- Decide and notify
- Gather input, then decide
- Consensus
- Limited delegation

Selecting the Decision Process

- Time available
- Importance of the decision
- Information needed
- Need for buy-in
- Capabilities of the group

Making decisions by consensus

- Consensus is a decision we can live with.
- As the level of involvement increases, so does the level of ownership or buy-in to the process and the outcome.
- Include a fall-back position.

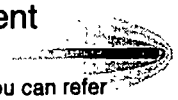
What's Your Role?

- Participate
- Manage the process
- Ensure appropriate information flow
- Make decisions or delegate decision-making via a clearly understood process

Role of the Facilitator

- Helps the process sponsor and participants focus on the task at hand
- Makes sure everyone has a chance to participate in the process
- Defends others from personal attack
- Makes suggestions on how to proceed
- Builds agreements among participants

Building an agreement

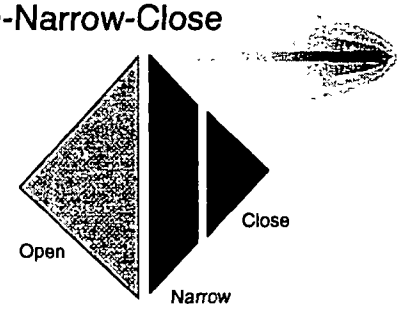


- Establish ground rules that you can refer back to if needed. Get agreement on the ground rules before proceeding.
- Examples:
  - shared responsibility
  - speak one at a time
  - no personal attacks
  - confidentiality of discussion
  - honor time limits (during meeting and overall)

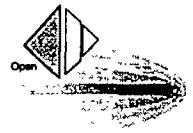
Open-Narrow-Close

- Open - gather information
- Narrow - organize information
- Close - select the best approach and reach agreement

Open-Narrow-Close



Open



- Propose (limited opening)
  - Someone leads off to get the discussion started
- List (moderate opening)
  - Let's list 4 or 5 items that need to be addressed
- Brainstorm (wide opening)
  - Let's get our ideas out before considering them
- Make sure everyone has a chance to participate (take turns during the listing process)

Clarify

- Make sure everyone understands each idea to be considered
- Ask the person who proposed the idea to clarify it

Screening criteria

- Develop criteria that will be used to evaluate the ideas.
  - Environmental benefit
  - Geographic
  - Cost
  - Benefits large groups of people
  - Time frames
  - Others?

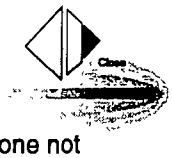
Narrow

- Combine obvious duplicates to eliminate redundancy
- Prioritize N/3 (number of ideas and divide by 3 = the number of votes each person gets)
- Straw poll (Let's get a quick show of hands of how many people want to keep this one?)

Advocate

- Allow anyone a chance to advocate for an issue
- Advocacy can illuminate contextual benefits and/or relationships with other options
- Advocacy can change minds!
- Avoids the "if we only knew" outcome

Close

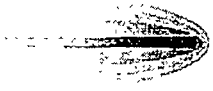


- Negative poll (is there anyone not willing to take #5 off the list?)
- Build-up/eliminate (What can we add to option B to make it work for you?)
- Both/and (Can we go with both of these?)

Tools for active listening

- **Reflect** (Glen, could you restate in Bob's words, what he just said?)
- **Paraphrase** (so what I hear you saying is...)
- **Perception check** (It sounds like...)
- **Open-ended questions to uncover perceptions** (what do you think are some of the reasons for...)

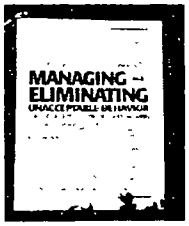
Dealing with distracting behaviors



- Make eye contact
- Stand up
- Walk halfway
- Walk up to them
- Ask "What do you think?"
- Give feedback at a break
- Give feedback to the whole group

Difficult behaviors

- Boomerang
  - (throw the question back to the group . . . gives you time to gather your thoughts)
- Regain focus
  - ("Just a moment, let's go one at a time...")
- Ask/say
  - (It's very quiet all of a sudden. What does this silence mean?)



Difficult behaviors (cont.)

- Enforce agreements
  - (Remember we said we were going to...?)
- Accept and defer/deal
  - (I understand you're frustrated. Can you hang in there for 10 more minutes?)

Resolving conflict

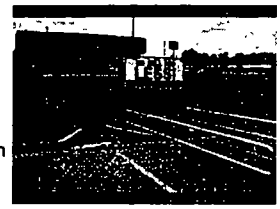
- Up front venting
- Know the difference between a need and a position
- Turn the negative into a positive
- Separate beliefs from facts
- Focus on common goals

Up front venting

- Why isn't this going to work?
  - Helps with groups who have a historical relationship (baggage) with each other.
  - Helps with issues that have been around for years.

Need vs. position

- Position: I refuse to remove my parking lot curbing and install an infiltration swale
- Need: My business isn't doing so well, and I don't think I have the money to do it
- Resolution: Perhaps a cost-share project could help, with city work crews helping with demolition and construction



Turn the negative into a positive

- This process has dragged on for years and we never come to any decision.
- I would like to see a timeline developed for an 18-mo. period with major decision points identified.

Separate Beliefs from Facts

- Belief: There are too many government folks at the table.
- Fact: There are 6 county reps (3 from water resources, 1 from solid waste, and 2 from the health dept), 4 environmental group members, 3 elected officials, 4 industry reps, and 1 state representative

Opportunities for involvement

- Storm drain stenciling/marking
- Adopt-a-Storm Drain/Stream/Wetland program
- Volunteer monitoring
- Stream walks
- Community cleanups
- School curricula/field trips

Portland's Stormwater Cycling

- Portland, OR provides a brochure for cyclists to view good SW practices in the city.
- Cyclists see ecoroofs, swales, and naturescaping
- Also have educational workshops
  - Stormwater Storytelling
  - After the Flush: A Wastewater Story

WatershED Student Curriculum

- Boulder, CO developed a watershed and stormwater lessons for local schools. Presentations include:
  - Boulder Creek Watershed Virtual Tour
  - Water Conservation
  - Drinking Water/Source Water Protection
  - Stormwater/Pollution Prevention
  - Enviroscape Watershed Model
- Classroom teachers meet science, math, social studies and language arts standards

Provide Information

Through...

- Community hotlines
- Public surveys
- Web site/email
- Participation at stakeholder meetings/public hearings

Think Blue Public Survey

- San Diego's Residential Stormwater Survey
  - Phone Survey (random digit dial)
  - Baseline in 2001, follow-up in 2002, 2003
- Some findings
  - 19% decrease in # of people who dump paint down the storm drain
  - 8% increase in # of people correctly attributing beach closures to polluted runoff (not sewage)
  - 3% decrease in # of people who think that what enters the storm drain goes to a WWTP.

Last thoughts on conventional wisdom

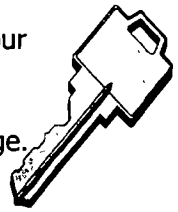
If you always do what you've always done, you'll always get what you always got.

Old country saying

What It Takes to Change Behavior

What It Takes to Change Behavior

The key to successful outreach is targeting your message to a specific audience and having it respond to your message.



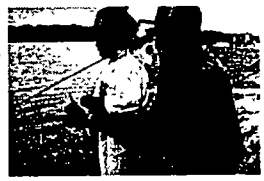
Why do they do what they do?

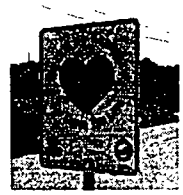
How can you get them to change?

Through Social Marketing!

What is Social Marketing?

Applying commercial marketing principles to social issues to achieve a change in behavior.





Why Social Marketing?

- Most people aren't interested or don't know much about environmental issues
- Knowledge alone is not enough - we need action!
- It works

Popular Social Marketing Campaigns

- Buckle Up America
- Smokey Bear
- Truth Campaign
- National Youth Anti-Drug Campaign

ONLY YOU CAN PREVENT WILDFIRES.

Thinking Like a Marketer

- Rule # 1: Focus on the audience
- Rule # 2: See Rule # 1
- Rule # 3: See Rule # 2

Thinking Like a Marketer (cont.)

- Beneficial exchange
  - Real Benefits
    - Save money
    - Save time
    - Protect health
  - Perceived Benefits
    - Fit in with others (It's cool)
    - People expect it
    - Everyone else is doing it
    - I'll get rewarded

What Barriers Prevent Behavior Change?

- Physical Barriers
  - **Too hard to do**
  - **Too far to drive**
  - **Not safe**
  - **Takes too long**
  - **Not convenient**
- Economic Barriers
  - **Added costs**
  - **No cost savings**

Barriers, cont.

- Education Barriers
  - Don't know how to do it
  - Need training
- *Social/Psychological Barriers*
  - Against social norms
  - Fear of doing something different
  - I don't have the skills to do this
  - Tried it once and it didn't work

Overcoming Barriers

- Everyone else is doing it (or not doing it)
- We'll teach you how to do it
- Save money/get money
- It takes 5 minutes or less
- It's the cool thing to do
- You'll get a reward if you do it

Remember the 3 Hs . . .

- Health
  - Drinking water, swimming, their children's health
- Home
  - Property values, flooding
- Heritage
  - Historical value, future generations, stewardship, quality of life

Tools for Changing Behaviors

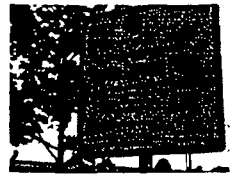
- Social norms
- Commitments
- Prompts
- Incentives
- Vivid communication
- Building motivation

Social Norms

- Desired behavior perceived as normal and expected
- Tools:
  - Compliance
    - Rebates (positive)
    - Fees (negative)
  - Conformity
    - Use statistics

Other Social Norms Techniques

- Eco-labeling
- Recycling bins at curb (public)
- Yard or home signage
- Farm or construction demonstration sites/fields



Commitments

- Pledges (verbal or written)
- Sign-ups
- Petitions
- Donations (time/money)

Prompts

- Behavior reminders
- Use at "point-of-sale"
- Target specific behaviors

Incentives

- Money, money, money, money
- Free stuff
- Recognition
- Reward positive behavior
- Disincentives: punish negative behavior (e.g., user fees)

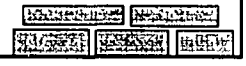
Vivid Communication

- Vivid
  - Less Vivid:
    - Storm water runoff contributes 5 millions tons of sediment to the bay each year
  - More Vivid:
    - Each year, rain water washes enough dirt to fill 500,000 dump trucks directly into the bay.
- Tangible
- Positive, clear terms
- Comparisons
- Humorous

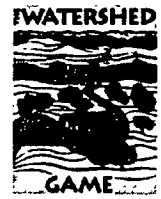
"Please don't soil our waters!"

Building Motivation Over Time

- Provide public recognition
- Show results of actions or how their contribution was used
- Point out things they've done
- Offer long-term training and support



Defining Your Message



- Address the behavior barriers
- Awareness, education, action
- What's in it for them
- Use one or more social marketing techniques

Prioritizing Behaviors

- Maine's General Permit: Outreach messages and behaviors must target behaviors that have the highest impact on water quality
- Think about:
  - Project goals
  - Ease of adoption
  - Consequences of each behavior
  - Barriers for each behavior
  - Cost of promotion
  - Technical soundness of behavior

Behavior Selection Matrix										
Water Quality Objective = Reduce Nonpoint Runoff Into Reservoir Areas										
Recommended Practice	Protective Questions (Please score 1-6 in terms the highest score, 6 being the worst) Note: Behaviors can receive the same score if applicable									
	When behavior will result in the most in reduction in pollution?	Which behavior will be the most influential to promote to my audience?	Which behavior will be the most advantageous for my audience to adopt?	Which behavior is the most attractive to my audience?	Which behavior will be the easiest to promote due to the problem?	Which behavior is the most cost-effective?	Which behavior will have additional water quality benefits?	Which behavior will get the highest community response?	Which behavior has the best scenario to overcome? (List the scenario in Appendix X to identify barriers)	Total Score (Sum of scores 1-6)
Pick up pet waste	3	1	2	7	2	3	8	1	1	30
Reduce fertilizer application to one twice a year for more than a year	1	3	4	6	1	2	1	4	3	18
Plant site-private vegetation to filter out nutrients	2	6	6	3	7	1	1	3	5	34
Have septic systems inspected and pumped every 5 years	4	7	7	8	3	4	2	8	8	48
Leave grass clippings on the lawn	5	3	3	2	8	5	4	2	3	23
Plant native shrubs that require less fertilizer	6	4	4	1	4	4	3	1	4	31
Instructions										

Problems and Solutions Implementing th NPDES Storm Water Program

June 23, 2004

Paula Estornell, P.E.
US EPA, Region III
1650 Arch Street
Philadelphia, PA 19103
estornell.paula@epa.gov

EPA Region III Storm Water Permits

Permitting Authority	Phase I / II MS4 Permits	Phase II MS4 Permittees	Estimated Construction Permittees
DC - EPA	1 Phase I (IP)	NA	Included in MS4
DE	1 Phase I (IP) 3 Phase II (IP)	3	1190
MD	11 Phase I (IP) 2 Phase II (GP)	60	1500-2000
PA	2 Phase I (IP) 2 Phase II (GP)	923	2500
VA	11 Phase I (IP) 1 Phase II (GP)	60	5 x Phase I
WV	1 Phase II (GP)	40	1000

2

Common Storm Water Program Implementation Issues

- Controlling quantity
- Documenting water quality improvement
- Limited funding
- Quality/enforceability of SWMP/SWPPP
- Translating TMDL allocations into permit requirements

3

Quantity

4

Controlling Quantity

- Problem: Volume and rate of flow
  - Stream bank erosion
  - Loss of aquatic habitat
- Solution:
  - Intercept flow with infiltration devises
  - Build green
  - Stream bank protection

5

Demonstrating Water Quality Improvement

6

Demonstrating Water Quality Improvements

- **Problem: Difficult to show water quality improvements due to**
  - **variable nature of storm water**
  - **multiple discharges to rivers / streams**
  - **Minimal monitoring requirements**
  - **Length of time to restore stream**
- **Solution:**
  - **Utilize data from other monitoring programs**
  - **Cite literature on BMP performance**
  - **ASCE BMP Data base**
  - **Establish pilot studies to monitor stream long term**

7

Typical Pollutant Removal Rates TSS

• BMP Options	Percent Removal
– Constructed Wetlands	65-80
– Detention Pond	50-95
– Infiltration Basins/ Trenches	75-95
– Porous Pavement	65-95
– Surface Sand Filters	75-90
– Vegetated Filter Strips	30-70
– Street Sweeping	55-90

Source – ASCE, EPA ORD

8

Typical Pollutant Removal Other Parameters

BMP Options	Bacteria	TN	TP	Metals
■ Constructed Wetlands	NA	30	50	40-70
■ Detention Pond	NA	10	20	30-70
■ Infiltration Basins/ Trenches	75-95	40-70	50-70	70-90
■ Porous Pavement	NA	80-85	60-70	30-90
■ Surface Sand Filters	NA	30-40	50-60	20-80
■ Vegetated Filter Strips	NA	20-60	20-60	20-80
■ Street Sweeping	NA	40-75	40-75	35-85

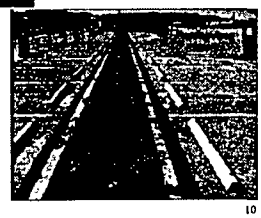
Source – ASCE, EPA ORD

9

BMP Projects

Wetland Creation

Infiltration Trench



Street Sweeping

10

Limited Funding

- **Problem: Limited Funding**
  - **Small municipalities have difficulty financing storm water management**
  - **Competing funding needs for other priorities**
- **Solution:**
  - **Permit and annual discharge fee**
  - **Federal State funding/grants**
  - ***Storm water utility fee***

11

Storm Water Management Potential Funding Resources

- 1 The Catalog of Federal Domestic Assistance
  http://www.cfda.gov/
- 2 An Internet Guide to Financing Stormwater Management
  http://stormwaterfinance.urbanecenter.buffalo.edu/
- 3 Clean Water Act Section 104(b)(3), EPA Headquarters
  www.epa.gov/owow/cwfinance/index.htm
- 4 Clean Water Act Section 106
  Applications should be sent to EPA, Region III, Grants Audit & Management Branch.
- 5 Chesapeake Bay Small Watershed Grants Program
  http://www.nfwf.org/programs/chesapeake_app.htm
- **6. Five Star Restoration Challenge Grant Program**
  http://www.nfwf.org/programs/5star-rfp.htm
- 7 Economic Development Administration, US Dept of Commerce
  http://www.osec.doc.gov/eda/html/1a11_1c_philadelphia.htm
- 8 Coastal Zone Management (CZM) and Coastal Nonpoint Pollution Program (CNPP) Grants
  http://www.dvrpc.org/planning/czm/AppGuide2002Rev.pdf
- **9. Environmental Finance Program (EFP) for MD**
  www.mdeg.umd.edu/EFC/index.html
- **10. Local Government Environmental Assistance Network**
  www.lgean.org
- 11 Environmental Grantmaking Foundations - 2001
  Resources for Global Sustainability, Inc., rgs@environmentalgrants.com

12

Quality of SWMP

- Problem: SWMP may be incomplete or poor quality
  - Lack of experience
  - Lack of oversight
- Solution:
  - Guidance
    - (National Menu of Best Management Practices, APWA Designing and Implementing an Effective Storm Water Management Program
  - Literature
    - (Storm water – Journal for Surface Water Quality Professionals)
  - ASCE BMP Data base

13

Clarification of Existing Regulations MS4 Permits adhere to TMDL

November 22, 2002 EPA Memorandum

- NPDES permit conditions must be consistent with the assumptions and requirements of available WLAs (40 CFR 122.44(d)(1)(vii)(B))
- Effluent limits for NPDES-regulated storm water discharges that implement WLAs in TMDLs may be expressed in the form of BMPs (40 CFR 122.44(k)(2)&(3))
- The permit's administrative record should support that the BMPs are expected to be sufficient to implement WLAs (40 CFR 124.8, 124.9, 124.18)
- Where effluent limits are specified as BMPs, the permit should also specify the monitoring necessary to assess whether load reductions are achieved (40 CFR 122.44(l))

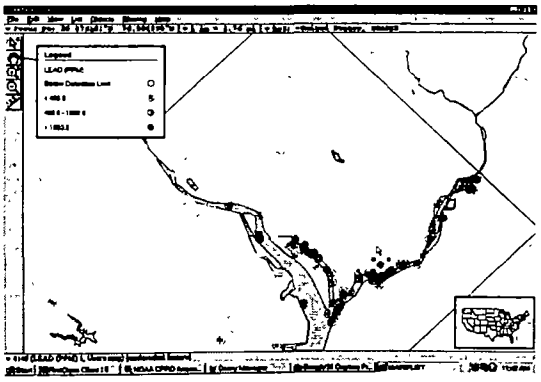
14

Case Study: DC MS4 Draft Permit

- Draft Permit renewal public notice 11/14/03
- Highlights of Draft Permit
  - Effluent limits narrative not numeric
  - BMPs to achieve WQS and TMDL WLAs
  - TMDL WLAs are not effluent limitations
  - Representative monitoring
  - If WLA goals not met then develop implementation plan*
- EPA revising draft permit in response to comments

15

Washington DC



DC TMDL Goals

Anacostia and Tributary Percent Reductions

- **TSS** 77
- **Fecal** 90
- **Organics/Metals** 98
- **BOD** 50

Other MS4 Permit Case Studies

- Florida statewide GP For Small MS4s
  - SWMP consistent with TMDL allocation; must modify SWMP if not meeting TMDL allocation
- Cherry Creek Reservoir, Denver, CO
  - Implement specific management practices based on requirements of TMDL; document that WLAs are being met; revise BMPs if necessary
- Albuquerque, NM
  - Permit designed to implement TMDL requirements through use of BMPs; target loads listed in permit; monitoring and reporting requirements; revise BMPs if necessary

19

National General Permits Workgroup

- Goal of Workgroup:
  - Develop guidance on integrating TMDLs with General Permits
- Progress to Date
  - EPA and States phone conference every 6 weeks for 1 year
  - Developed draft guidance sections and GP sample language
- Expected Deliverables
  - GP template language and guidance
  - Develop recommendations on appropriate monitoring/evaluatio
  - Compile case studies, sample permits, tech support documents
- Website with permit language/HQ contacts
  - http://cfpub.epa.gov/npdes/gpwg/gpwg.cfm
  - Christine Ruf, OWOW, Greg Schaner, OWM

20

Resources

- 1 National Menu of Best Management Practices for Storm Water Phase II (www.epa.gov/npdes/menuofbmps/menu.htm)
- 2 National Storm Water Best Management Practices (BMP) Database www.bmpdatabase.org
- 3 *Considerations in the Design of Treatment Best Management Practices to Improve Water Quality*, EPA Office of Research and Development, NRMRL, EPA/600/R-03/103, September 2002
- 4 EPA Chesapeake Bay Program document titled, *Storm Water Best Management Practice Categories and Pollutant Removal Efficiencies*, updated March 10, 2003 (Chesapeake Bay Program's Urban Storm Water Workgroup, Annapolis, MD, www.chesapeakebay.net/uwg.htm, select "Current Projects and Information")

21

Integrating Storm Water Programs with Other Water Resource Programs

The "Big Picture"

Integration of Storm Water and other Water Resource Programs

What's in the "Big Picture"?

- *Multiple Pollutant Sources*
  - *Industrial*
  - *Municipal WWTPs*
  - *SSOs and CSOs*
  - *MS4s (municipalities, universities, etc.)*
  - *Construction Sites*
  - *Industrial Facilities*
  - *Agricultural CAFOs*
  - *Non-permitted non-point sources*

What's in the "Big Picture"?

- *Multiple Goals*
  - *TMDLs*
  - *Water Quality Standards and Uses*
  - *NPDES Permit Compliance*
  - *Watershed planning*
  - *Pollutant of concern reduction*
  - *Increased awareness in community*
  - *Non-point source pollution control*
  - *Coastal management*
  - *Source water protection (drinking water)*
  - *Wetlands protection & conservation*

Incentives to Thinking "Big Picture"

- *Achieving and maintaining water quality standards*
- *Ensuring proper TMDL implementation*
- *Improving watershed-based decisions*
- *Increasing access to various funding sour*
- *More efficient use of existing resources (funding and staff)*

What Are the Benefits of Thinking "Big Picture"?

- *Enhances water quality results*
- *Promotes watershed level monitoring*
- *Promotes watershed planning*
- *Integrates existing water programs*
- *Encourages efficiency*
- *Produces cost-savings*
- *Promotes involvement and "buy in" amo stakeholders*
- *Improves outreach and education*

What Are the Challenges?

- *Adequate stakeholder involvement*
- *Integrating nonpoint and point sources*
- *Permitted and non-permitted sources*
- *Conflicting or overlapping jurisdictions*
- *Conflicting monitoring and/or reporting requirements*
- *Different goals, pollutants of concern*

Basic Steps to Integration

- Step 1: Define the "Big Picture"
- Step 2: Determine Goals
- Step 3: Identify Needs
- Step 4: Outline SW Program Elements & Tools
- Step 5: Determine Stakeholders
- Step 6: Develop Partnerships

Step 1: Defining the Big Picture

- *Look for existing "drivers" for action and integration*
  - *TMDLs*
  - *Permits*
  - *Public concern*
  - *Source water protection*
  - *Coastal management*
- *Consider existing boundaries*
  - *Watershed management planning area*
  - *Impaired waterway*
  - *Service area boundary*
  - *Municipal jurisdiction*

Step 2: Determine Goals

- *Water quality improvements*
  - *Beneficial uses*
  - *Water quality criteria*
- *TMDL allocations*
- *Outreach and education*
- *Permit compliance*
- *Effective resource allocation*
- *Watershed plan*

Step 3: Determine Needs

- *Water quality data*
- *Pollutant/stressor & source identification*
- *Mapping*
- *Outreach and education tools*
- *Discharger information*
  - *Inspections*
  - *Illicit discharges and connections*
- *Funding*
- *Staffing*

Step 4: Outline SW Program Elements and Tools

- *Water quality data*
- *Mapping*
- *Outreach and education tools*
- *Discharger information*
  - *Inspections*
  - *Illicit discharges and connections*
- *Funding*

Step 5: Determine Stakeholders & Contributions

Permitted Stakeholders

- *Permitting authority*
- *EPA*
- *Municipalities*
- *POTWs*
- *Industrial facilities*
- *Developers*
- *CAFOs*

Non-permitted Stakeholders

- *Local businesses*
- *Residents*
- *Universities*
- *Agency partners*
- *Planning organizations*
- *Nonprofits*
- *Watershed organizations*

Step 6: Develop Partnerships

- *Early and continuous involvement ensures long-term support*
- *Define roles and expectations*
- *Establish goals for partners*
- *Develop information/data sharing mechanisms*
- *Establish reporting mechanism amongst partners*

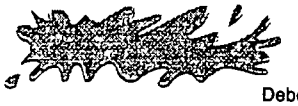
"Big Picture" Outcomes

- *TMDL*
- *Improved compliance*
  - *For MS4*
  - *Within MS4*
  - *Among other permittees*
- *Watershed-level monitoring*
  - *Baseline*
  - *Trends*
- *Watershed plan*
- *Pollutant trading*
- *Source water protection plan*
- *Coastal management plan*
- *Watershed-based permitting*

Working with the News Media to Enhance Your Outreach/Involvement Efforts

Working with the Media:

Storm Water:
Making News When it's Not Raining



Deborah Fries
Pennsylvania Department of Environmental Protection
Southeast Regional Office, Norristown

Working with the Media:

Early news coverage: venting

"New EPA regulations muddy storm waters"
– Montgomery Life 5/8/03

"New stormwater rules mandated without funding"
– Pottstown Mercury 2/29/04

"Stormwater meeting draws poor turnout"
– Lansdale Reporter 4/12/04

Working with the Media:

Finding your news stories
avoid old issues

- New requirements are unfair (unfunded mandates)
- Problems are too huge or too complex to solve to solve (illegal hookups)
- "Our Town vs Big Government"

Working with the Media:

Finding your news stories

successes/benchmarks

- Ordinances adopted
- Mapping completed
- Brochures/posters available
- Workshops scheduled
- Web site launched

Working with the Media:

Finding your news stories

education & cooperation

- How to use fertilizer
- How to dispose of motor oil
- How to help your watershed group
- How to help your community identify illegal connections/discharges
- How to report problem developers
- How to report clogged inlets

Working with the Media:

Shaping your news stories

3 basics to remember

- Objective – what's your point?
- Audience – what they already know? Need to know?
- Scope – how much detail is warranted?

Working with the Media:

Shaping your news stories

O

Your objective

- Persuade residents to stop letting pet waste enter storm sewers?
- Publicize how progressive your MS4 community has been in meeting new requirements ?

Working with the Media:

Shaping your news stories

A

Your audience

- Dog owners in your community?
- State, county and municipal governments?

Working with the Media:

Shaping your news stories

S

Scope of information

- Detailed analysis of contaminants in dog waste? Number of dogs in municipality?
- List all actions taken since March 2003? Focus on outreach to developers?

Working with the Media:

Telling your news stories

passive/defensive

- Twp. meetings often result in critical quotes
- Problem developers complain to reporters

Working with the Media:

Telling your news stories

proactive/planned

lease for benchmarks
nts, such as stenciling
ters/photographers on
lk-throughs in the field
set up demonstrations

Working with the Media:

Telling your news stories

Outreach: local vs regional audience

- Print story "brochures mailed this week to homeowners?"
- TV story on stenciling project?
- TV story about runoff pollutants?
- Print story about bio-filters?

Working with the Media:

Telling your news stories

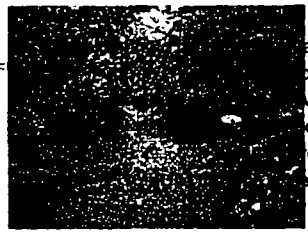
Publicity: specialty audience

- Trade publications: government
- Trade publications: environmental
- Local Cable
- Green media

Working with the Media:

Telling your news stories

tools



ate problems
before/afters)
with reporters
est speakers
eat locations
nerate news

Working with the Media:

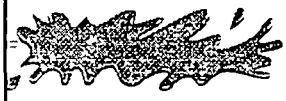
Retelling your news stories

Bad news opportunities

hase II implementation helped –
i.e., mapping
pportunity to restate what will be
accomplished and the timeline
- Public officials' quotes
- Reminder news releases

Working with the Media:

Discussion



Contact me at.
Deborah Fries
Defries@state.pa.us
484 250-5808

Partnering with the news media to achieve your goals

Barry Tonning
Tetra Tech

How informed is the public on environmental issues?

Percentage of correct responses:

- The most common source of water pollution: 23%
- How most US electricity is generated: 33%
- Definition of biodiversity: 40%
- The primary benefit of wetlands: 53%
- Most common reason for species extinction: 73%

Source.NEETF/Roper Starch Survey

What's important to the public when it comes to water quality?

- Public health issues
- Drinking water supplies
- Stewardship responsibilities
- Recreation and tourism impacts

Source: The McKnight Foundation

Where does the public get its information on water issues?

- Local television news 47%
- Local newspapers 27%
- Radio news programs 18%
- Friends, family, neighbors 4%
- Environmental mailings 2%
- Community leaders 1%

Source: Lake Research Inc; for the Upper Mississippi Basin

Tualatin River Basin Study

Sources of water quality information:

- Newspapers 67%
- Television 43%
- Word-of-mouth 18%
- Radio 14%
- Brochures 10%

Why is water quality improving?

- Public awareness 45%
- Regulations 33%
- WW treatment 27%

Source: Riley Research Associates 1997

Most effective source of info?

Newspapers	29%
Television	19%
Newsletters	8%
Word-of-mouth	8%
Brochures	5%
Bill insert	3%
School materials	3%
Signs	3%
Radio, meetings, events	1%

Source. Tualatin River Basin Study, Riley Research Associates 1997

Good, trusted sources of info:

Environmental groups	32%
News media	20%
Local government	13%
Sewer agency	11%
State forestry, fish & game	7%
US EPA	4%
State agriculture agency	1%

Source: Tualatin River Basin Study Riley Research Associates

Who's the most believable?

- Local daily or weekly newspapers 22%
- Local television news 12%
- Department of Natural Resources 10%
- Magazines 10%
- DNR printed materials 9%
- Family and friends 8%
- Commercial ag dealers 6%
- County conservation staff 6%
- County extension agent 4%

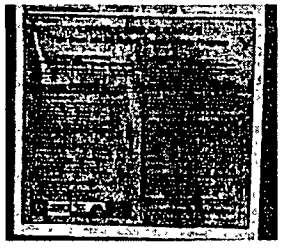
Source University of Wisconsin, 1998

"If you don't exist in the media, for all practical purposes, you don't exist."

Daniel Schorr
News Analyst
National Public Radio

Why use the media?

- It's effective
  - people get their news from the news media
- It's available
  - the space between the ads must be filled
- It's free!
  - you buy the ads but the news is free!

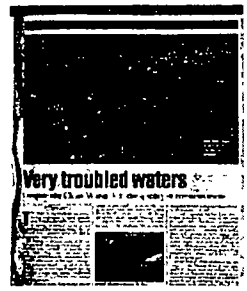


Levels of media involvement

- Low
  - avoidance, fear, loathing, paranoia, panic
- Medium
  - PAO used, periodic releases, reporter's names remembered, some calls returned
- High
  - regular releases, relationships built, story ideas generated, public education focus

The media are different . . .

- Television
  - movement/sound-driven, prime news source
- Radio
  - sound-oriented, narrow audience segments
- Newspapers
  - good access, convenient, long articles
- Magazines
  - longer articles, greater analysis, re-circulation



Television news

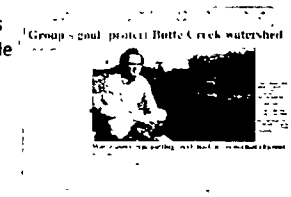
- Primary source of news for 70+% of adults
- Good for general awareness, events
- Often focuses on victims, controversy
- Complex issues covered poorly
- Attempts "to reach their viewers' intellect through their emotions"
- Magnifies the good, the bad and the ugly

How to do the news

- Initiating coverage:
  - builds awareness of organization & its role
  - informs and educates the public
  - motivates and reinforces staff, supporters
  - introduces and frames debate on issues
- Responding to coverage
  - provides feedback, sets the record straight
  - gives local angle to regional/national issue

Initiating coverage

- News releases
  - good for education, awareness
  - remember to include local angle
- News conferences
  - usually for important events
- Commentary forums
  - interview programs, letters to editor



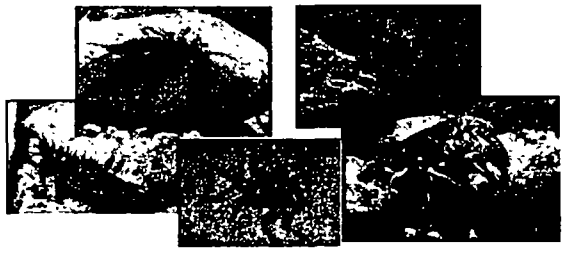
Responding to coverage:

- Don't let misinformation stand unchallenged!
- Piggyback on coverage to increase audience awareness and knowledge of local issues

What makes the news?

Good news stories:

- Have a local angle
- Address significant issues
- Are unique and interesting
- Affect many people
- Focus on a celebrity
- Sometimes involve controversy

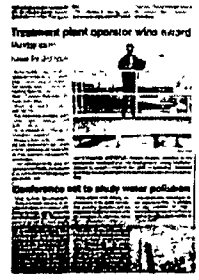


Everything you ever wanted to know about reporters

- They always have deadlines
- Most aren't trained in the sciences
- They're very curious people
- New information is their lifeblood
- They don't like runarounds
- Their suspicion is aroused by secrecy

Tips for working with reporters

- Establish a relationship beforehand
- Think like Clark Kent or Lois Lane
- Return calls, respect deadlines
- Be open and accessible
- Provide appropriate background info
- Be proactive rather than reactive
- Provide feedback on coverage



Interview tips

- Preparation is key!
  - find out why they're calling
  - ask about the deadline
  - conduct background research
  - identify your key message
  - return the call before the deadline

Interview tips

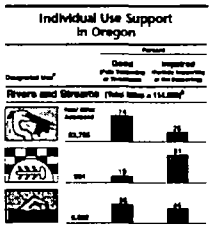
- Stick to your key message
  - avoid "what ifs," personnel and legal issues, opinions, policy commentary
- Stay calm; think, then speak
  - use conversational tone and complete sentences; know when to stop talking
- For TV, wear grays, blues or browns
  - with pastel shirts; no black/white, large floral prints, gaudy jewelry, supersized nose rings, etc.

News release?

DEQ, DNR, and DOA signed an MOA on a joint 319 and TMDL implementation project to supply TA and QA/QC services for priority BMPs targeted at N, TP and TSS reductions in three local MS4s. Also, a number of CAFO-impacted 14-digit HUCs will be addressed. CRP set-asides, EQIP projects, and other measures affecting HELs are being studied by NRCS to complement the project, which is part of a larger SWPP under the 1996 SDWA amendments.

News conferences

- Develop a plan
  - subject, speakers, location, time, date, invitees, materials needed
- Provide background materials
  - news release, issue backgrounder, graphics, quotes, interview subjects
- Conduct follow-up activities
  - contact no-shows, respond to coverage



Working with the news media

- Welcome the opportunity to comment
- Take time to collect your thoughts
- Avoid criticizing your critics
- Refrain from passing judgement
- Treat all reporters/media equally
- Explain regulatory or scientific issues
- Keep communication pathways open

Remember . . .

- Don't play favorites, always be honest
- Always assume you're on the record
- Never pick a fight with anyone who buys their ink by the barrel
- Freedom of the press applies only to those who own one

Group Discussion:
Don't Reinvent the Wheel!

NOTES

Resources

Resource List for Stormwater Management Programs

May 2004

EPA 833-F-04-003

This is a list of helpful resources for stormwater program managers. It is by no means a comprehensive list as there are too many helpful materials produced by too many organizations. This list is meant to highlight EPA's tools and resources to get stormwater programs managers started on developing or improving their programs.

This list is divided into six sections—general stormwater information, public education, outreach, and involvement; illicit discharge detection and elimination; construction site runoff control; post-construction site runoff control; and pollution prevention/good housekeeping. Environmental Protection Agency Resource publications can be ordered free of charge from the National Service Center for Environmental Publications (http://www.epa.gov/ncepihom/index.htm).

General Stormwater Information

- Stormwater Web Site - This EPA web site contains technical and regulatory information about the NPDES stormwater program. It is organized according to the three types of regulated stormwater discharges—construction activities, industrial activities, municipal separate storm sewer systems. http://cfpub2.epa.gov/npdes/home.cfm?program_id=6
- 2003 Construction General Permit - This 59-page document is EPA's new Construction General Permit (CGP). http://www.epa.gov/npdes/pubs/cgp2003_entirepermit.pdf
- Construction General Permit - The web site describes EPA's construction general permit and provides links to fact sheets and the new electronic notice of intent web site. http://cfpub.epa.gov/npdes/stormwater/cgp.cfm
- Construction Industry Compliance Assistance Center - This web site, developed by the National Center for Manufacturing Sciences, provides explanations of environmental rules for the construction industry. Also provided are links to detailed information, including state regulations and other resources. http://www.cicacenter.com/
- Fact Sheet on EPA's 2003 CGP - This 38-page document describes EPA's CGP. http://www.epa.gov/npdes/pubs/cgp2003_fs.pdf
- Menu of Best Management Practices (BMPs) for Phase II - This EPA web site contains more than 100 fact sheets detailing BMPs for each minimum control measures. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/menu.cfm
- Measurable Goals Guidance - EPA developed this web site to help small MS4 communities select measurable goals to evaluate their program. http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm
- NPDES News - Use this web site to sign up for EPA's NPDES News listserver to receive updates on the EPA's NPDES program. http://cfpub.epa.gov/npdes/newsregister.cfm
- Stormwater Control Operation and Maintenance Model Ordinance - EPA developed this web site to assist managers in developing their own ordinances. http://www.epa.gov/owow/nps/ordinance/stormwater.htm
- Stormwater Phase II Final Rule Fact Sheet Series - EPA developed these fact sheets to explain the Phase II rule, minimum control measures and permitting. http://cfpub.epa.gov/npdes/stormwater/swfinal.cfm
- Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices - This manual provides detailed guidance on the development of storm water pollution prevention plans (SWPPP) and identification of best management practices (BMPs) for construction activities. It provides technical assistance and support for all construction activities subject to pollution prevention requirements established under NPDES permits for storm water point source discharges. It includes a set of worksheets, a checklist, and a sample SWPPP (EPA 832-R-92-005). http://www.epa.gov/npdes/pubs/owm0307.pdf
- Stormwater Management - Center for Watershed Protection developed this web site to provide managers with links to helpful manuals and other web sites. http://www.cwp.org/stormwater_mgt.htm

- Stormwater Manager's Resource Center - This web site has many resources for stormwater managers, including guidance documents, slide shows, model ordinances, and fact sheets. http://www.stormwatercenter.net/
- Stormwater Phase II Fact Sheet Series - EPA developed this web site to provide links to 15 helpful fact sheets. http://cfpub.epa.gov/npdes/stormwater/swfinal.cfm?program_id=6
- Stormwater Practices for Cold Climates - The document, developed by the Center for Watershed Protection can be downloaded for free. http://www.cwp.org/cold-climates.htm

Public Education and Outreach

- After the Storm Video (EPA 840-V-04-001) - New ½ hour television program about watersheds co-produced by EPA and The Weather Channel premiered on Feb. 4, 2004. http://www.epa.gov/weatherchannel/
- American Oceans Campaign - This web site has helpful materials for educating the public, such as a video narrated by Ted Danson, links to stormwater resources in California, and a special report developed by AOC. http://www.americanoceans.org/runoff/main.htm
- Communicator's Guide for Federal, State, Regional, and Local Communicators - The Federal Communicator's Network developed this guide to offer some general guidance to improve the trust between government and the public by helping officials communicate clearly to the public and by making government's message relevant. http://govinfo.library.unt.edu/npr/library/papers/bkgrd/communicators.html
- Community Culture and the Environment: A Guide to Understanding a Sense of Place, Nov. 2002 (EPA 842-B-01-003)
  The Guide was developed by EPA and explores the concepts of community and culture and provides tools for identifying, assessing, and working cooperatively within the social dynamics and local values connected to environmental protection. http://www.epa.gov/ecocommunity/tools/community.pdf
- Earthwater Stencils - This site provides ideas for public involvement activities for stormwater programs. http://www.earthwater-stencils.com/
- Getting In Step: A Guide for Conducting Watershed Outreach Campaigns, (EPA 841-B-03-002) - The Getting in Step watershed outreach guidebook provides some of the tools you will need to develop and implement an effective watershed outreach plan. If you're a watershed practitioner trained in the sciences, this manual will help you address public perceptions, promote management activities, and inform or motivate stakeholders. http://www.epa.gov/owow/watershed/outreach/documents/getnstep.pdf
- Getting in Step: Engaging and Involving Stakeholders in Your Watershed - This document, developed by EPA, provides the tools needed to effectively identify, engage, and involve stakeholders throughout a watershed to restore and maintain healthy environmental conditions. http://www.epa.gov/owow/watershed/outreach/documents/stakeholderguide.pdf
- Kids, Students, Teachers - This EPA web site provides information and curricula on educating a variety of age groups on the environment and water pollution. http://www.epa.gov/epahome/students.htm
- Know Your Watershed - This web site, developed by the Conservation Technology Information Center, has a good list of helpful resources (including guidebooks) for watershed groups. http://www.ctic.purdue.edu/KYW/
- Public Education and Outreach Menu of BMPs - This web site has links to 14 facts sheets on different BMPs for educating the public. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/pub_ed.cfm
- Public Involvement and Participation Menu of BMPs- This EPA web site has links to 10 fact sheets detailing ideas and activities n how to get the public involved. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/pub_inv.cfm
- Stormwater Month Outreach Materials and Reference Documents - EPA has developed a set of materials that state or local governments can customize and use in their own stormwater outreach campaigns. http://cfpub.epa.gov/npdes/stormwatermonth.cfm
- Volunteer Monitoring - Check out this EPA web site to download helpful fact sheets and methods manuals, learn about upcoming events, and link to other helpful resources. http://www.epa.gov/owow/monitoring/volunteer/
- Water Environment Federation for Students - Check out ths web page to download WEF's materials and

curricula for educating various age groups. Also provides information in Spanish. http://www.wef.org/WefStudents/index.jhtml

Illicit Discharge Detection and Elimination

- Illicit Discharge Detection and Elimination Manual - The New England Interstate Water Pollution Control Commission developed this manual to provide an overview of the IDDE component of the Phase II regulations and practical information on various approaches municipalities can use to carry out the requirements of the regulations. http://www.neiwpcc.org
- Illicit Discharge Detection and Elimination (IDDE) Menu of BMPs- This EPA web site links to 8 fact sheets outlining various IDDE best management practices. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/illicit.cfm
- Illicit Discharges Model Ordinances - EPA developed this web site to assist managers in developing their own ordinances. http://www.epa.gov/owow/nps/ordinance/discharges.htm
- Investigation of Inappropriate Pollutant Entries into Storm Drainage Systems: A User's Guide Information to allow the design and conduct of local investigations to identify the types and to estimate the magnitudes of non-stormwater entries into storm drainage systems (EPA-600-R-92-238). http://www.epa.gov/npdes/pubs/investigating_inappropriate_pesds.pdf
- Sanitary Sewer Overflows (SSOs) - EPA developed this web site to provide more information on SSOs, including fact sheets and an SSO toolbox.

Construction Site Runoff Control

- Best Management Practices for South Florida Urban Stormwater Management Systems - The South Florida Water Management District has prepared this document to increase public awareness about the management of urban stormwater runoff and how best management practices (BMPs) can be used to improve water quality. http://www.sfwmd.gov/org/reg/evg/bmp_manual.pdf
- Construction Site Runoff Control Menu of BMPs - This EPA web site links to 39 fact sheets outlining various IDDE best management practices. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm
- Erosion and Sediment Control Model Ordinances - EPA developed this web site to assist managers in developing their own ordinances. http://www.epa.gov/owow/nps/ordinance/erosion.htm
- International Erosion Control Association - The International Erosion Control Association is a non-profit, member organization that provides education and resource information for professionals in the erosion and sediment control industry. http://www.ieca.org/
- International Stormwater Best Management Practices Database - This database provides access to BMP performance data for about 200 BMP studies conducted over the past 15 years. http://www.bmpdatabase.org.
- Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices - This manual provides detailed guidance on the development of storm water pollution prevention plans (SWPPP) and identification of best management practices (BMPs) for construction activities. It provides technical assistance and support for all construction activities subject to pollution prevention requirements established under NPDES permits for storm water point source discharges. It includes a set of worksheets, a checklist, and a sample SWPPP (EPA 832-R-92-005). http://www.epa.gov/npdes/pubs/owm0307.pdf

Post-Construction Site Runoff Control

- Bioretention Applications. EPA Fact Sheet - Two case studies (in Largo, Maryland, and Tampa, Florida) demonstrate the potential to use low impact development practices in the design of new parking facilities and as retrofits for existing parking facilities to reduce runoff volume and remove pollutants. Includes monitoring data. (EPA-841-B-00-005A)
- Low Impact Development Center - The Low Impact Development Center strives to help communities use proper site design techniques to protect their water resources. http://www.lowimpactdevelopment.org/
- Low-Impact Development Page - This page, developed by EPA, provides links to EPA documents and other

helpful organization's web sites. http://www.epa.gov/owow/nps/lid/

- Low Impact Development Integrated Management Practices Guide - Prince George's County Maryland developed this manual to push the site design envelope to show how stormwater controls can be integrated into a site in innovative ways. The practices are pure concepts which are presented to provide the user with examples of what could be done to control stormwater. http://www.goprincegeorgescounty.com/Government/AgencyIndex/DER/PPD/LID/principles.asp?h=20&s=&n=50&n1=160
- Post-Construction Controls Model Ordinance - EPA developed this web site to assist managers in developing their own ordinances. http://www.epa.gov/owow/nps/ordinance/postcons.htm
- Post-Construction Site Runoff Control Menu of BMPs - This EPA web site links to 39 fact sheets outlining various structural and non-structural best management practices for post-construction runoff control. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/post.cfm
- Smart Growth - This EPA site provides information on various smart growth topics and EPA funding sources, and links to other helpful web sites. http://www.epa.gov/livability/
- Street Storage for Combined Sewer Surcharge Control: Reducing the rate of runoff entering combined sewer systems using street storage and catch basin modifications - Two case studies in Illinois. October 2000. EPA-841-B-00-005C.
- Street Storage System for Control of Combined Sewer Surcharge: Retrofitting Stormwater Storage into Combined Sewer Systems. EPA Report: EPA/600/R-00/065 available in PDF at: http://www.epa.gov/ednnrmrl/repository/epa-600-r-00-065/index.html. Also available through NTIS: NTIS NO: PB2000-107451.
- Vegetated Roof Cover: EPA Fact Sheet, EPA-841-B-00-005D. Case study in Philadelphia, Pennsylvania on vegetated roofs. The study demonstrates the use of a vegetated roof to reduce runoff, conserve energy and improve community aesthetics. Includes design information and monitoring data.

Pollution Prevention/Good Housekeeping

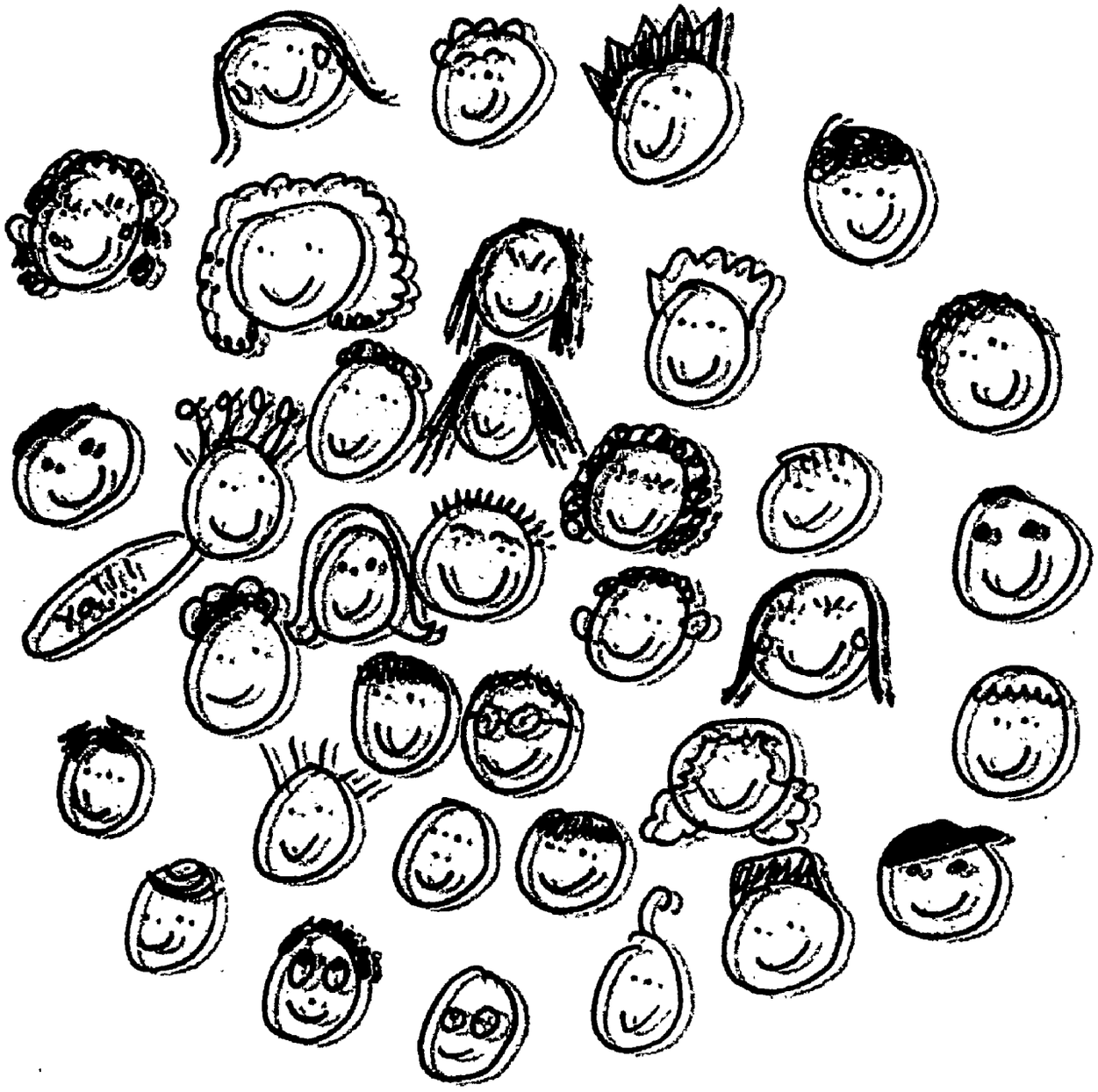
- Pollution Prevention and Good Housekeeping Menu of BMPs - This EPA web site links to 31 fact sheets outlining various best management practices for pollution prevention and good housekeeping. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/poll.cfm

Funding Sources

- Catalog of Federal Funding Sources for Watershed Protection - The Catalog of Federal Funding Sources for Watershed Protection Web site is a searchable database of financial assistance sources (grants, loans, cost-sharing) available to fund a variety of watershed protection projects. http://cfpub.epa.gov/fedfund/
- State Revolving Fund - State Revolving Fund programs in each state and Puerto Rico are funded by EPA and operated like banks. Assets are used to make low- or no-interest loans. http://www.epa.gov/owm/cwfinance/cwsrf/index.htm

Getting in Step:

Engaging and Involving Stakeholders in Your Watershed



Getting in Step:

Engaging and Involving Stakeholders in Your Watershed

This publication was prepared by Tetra Tech, Inc., under contract 68-C-99-249 to the U.S. Environmental Protection Agency.

ACKNOWLEDGMENTS

Principal authors to this document include Charlie MacPherson and Barry Tonning of Tetra Tech, Inc. Emily Faalasli of Tetra Tech, Inc., developed the illustrations and the layout design. The authors would like to thank all of the people who contributed to this guide by sharing with us their successes working with stakeholders as well as their pitfalls and mistakes. Keep that ball rolling!

Contents

Introduction: Watershed Protection In the New Millennium 1
Purpose of this guide 1
What's inside? 2
Why involve stakeholders? 2
Each stakeholder group is unique! 3
Section 1: Stakeholders and Watershed Management 5
Using a watershed approach 5
Involving stakeholders throughout the planning process 7
Section 2: Getting Started 13
Identify driving forces 13
Define internal goals and objectives 14
Develop a framework for stakeholder involvement 16
Section 3: Outreach and Communication Tools 21
Using outreach to strengthen stakeholder efforts 21
Changes in outreach over time 21
Steps for conducting effective outreach 24
Section 4: Building Your Stakeholder Group 29
Researching key interest groups 30
Inviting the stakeholders to participate 36
Hosting productive meetings 37
Conducting the first meeting 40
Building a stakeholder operating plan 41
Section 5: Keeping the Ball Rolling 43
Top 12 tips to move the process forward 43
Making decisions by consensus 47
Resolving conflict 52
Section 6: Beyond the Stakeholder Group 57
Establishing independent watershed management groups 57
Organization types 58
Securing funding 60
Section 7: Resources 63
Contacts 63
Case studies 63
How-to guides 64
Web sites 71

Introduction:

Watershed Protection In the New Millennium

No matter what you call it—cooperative resource management, civic environmentalism, a watershed partnership, place-based management, or environmental democracy—involving stakeholders in protecting natural resources is here to stay. Local residents are tired of talk and want action. National environmental groups acknowledge the power of activating and motivating people and institutions. The business community is beginning to embrace open, inclusive, performance-based environmental management systems to save money and improve performance. And government agencies are eager to work with partners to help restore and protect America's watersheds.

Stakeholder involvement in watershed issues has gained momentum in recent years because of the nature of water quality problems in our country. Thirty years ago, most water quality problems were linked to discharges from factories and wastewater treatment plants. Today, however, 40 percent of our nation's waters do not meet their water quality goals because of runoff from streets, farms, mines, yards, parking lots, and other nonpoint sources of pollution. Solving these problems requires the commitment and participation of stakeholders throughout our communities.

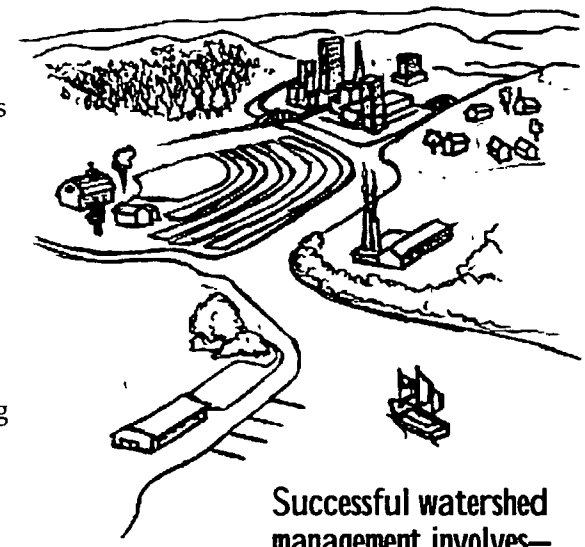
Stakeholder involvement is more than just holding a public hearing or seeking public comment on a new regulation. Effective stakeholder involvement provides a method for identifying public concerns and values, developing consensus among affected parties, and producing efficient and effective solutions through an open, inclusive process. Managing that process requires some attention to the logistics and synergies of creating and operating a team of diverse people pursuing a common goal.

Purpose of this guide

The purpose of this guide is to provide the tools needed to effectively engage stakeholders to restore and maintain healthy environmental conditions through community support and cooperative action. This guide is intended primarily for federal, state, tribal, and

What's in the Introduction?

- Purpose of this guide
- What's inside?
- Why involve stakeholders?
- Each stakeholder group is unique!



Successful watershed management involves—and benefits—everyone.

This guide defines a stakeholder as a person (or group) who is responsible for making or implementing a management action, who will be affected by the action, or who can aid or prevent its implementation.

local agency personnel involved in watershed management activities. The guide can also help private organizations interested in recruiting stakeholders and involving stakeholders in local or regional watershed efforts.

What's inside?

This guide is meant to provide real-world information that you can apply to your situation. There are seven sections included in the guide. Each section builds on the previous one, but you may skip around to any topic. References to related information are indicated with a ☞.

The last section includes resource information, case studies, web sites, and other how-to guides related to watershed protection. Case studies are included throughout the guide to highlight success stories, to share some of the challenges, and to show that you are not alone. Wherever possible, a contact and phone number are provided.

Coalfield "bucket brigade" helping streams in Pennsylvania

Environmental consultant Bill Sabatose of the Little Toby Creek watershed in Pennsylvania periodically leads "bucket brigade" remediation projects that apply granular limestone to streams heavily impacted by acid drainage from abandoned coal mines. The limestone adds alkalinity as it tumbles downstream and dissolves, reducing acidity and raising the pH. The projects are both low-tech remediation activities and social outings, and they have achieved results that provide an important sense of making a difference in the watershed.

Stakeholder involvement enhances communication, cooperation, and shared responsibility.

Why involve stakeholders?

If you're responsible for developing and implementing a watershed management program, you need support from relevant stakeholders—those who will make decisions, those who will be affected by them, and those who can stop the process if they disagree.

Over the past 20 years, watershed managers have found a lot to like about involving interested parties in their work. Involving stakeholders

- Builds trust and support for the process and product
- Shares responsibility for decisions or actions
- Creates solutions more likely to be adopted
- Leads to better, more cost-effective solutions
- Forges stronger working relationships
- Enhances communication and coordination of resources

It is important to note that public involvement processes can greatly enhance watershed management efforts, but they can't override laws and regulations enacted by elected officials and public agencies. In fact, stakeholder processes are used most often to *support and complement* legally required actions such as achieving water quality standards, protecting drinking water supplies, restoring habitat, and generally making the nation's waters fishable and swimmable.

Another important aspect of stakeholder involvement is utility. If you convene a group and don't somehow include their input in the process or product, they'll likely wonder why they wasted their time with you. Make sure that the contributions of stakeholders are both recognized and used in some manner to aid the goals of the watershed program.

Each stakeholder group is unique!

This guide provides tools and tips for working effectively with stakeholders, but it is important to recognize that there is no "one-size-fits-all" approach. Each stakeholder group is unique, and its makeup and operation will depend on several factors—the driving forces of the effort, the agencies' internal goals, the geographic scale, the time frame needed for decision making, the available budget, and the political climate. Before forming a stakeholder group, all of these factors must be considered to determine the best way to proceed.

Sometimes, after you have completed an internal assessment of the driving forces and issues, you might determine that convening a stakeholder group is not the best approach to achieve your goals. It might make more sense to form a small technical workgroup and proceed with your work, especially if the project is small and involves only a few outside parties.

There is no "one size fits all" approach.

Too much too soon on the Santa Ynez?

Dense stands of willows along the banks of the Santa Ynez River in California's Lompoc Valley impede storm water flows from vegetable and flower farms, causing flooding and erosion of the riverbanks. In 1994, a group of politicians, planners, and farmers approached the California Coastal Conservancy for help. The Conservancy enlisted the well-respected Land Trust for Santa Barbara County, and a program to establish a watershed-wide plan to control flooding and deal with other possible issues was launched.

The Land Trust hired a project manager and professional facilitator and convened a stakeholder group composed of property rights advocates, environmentalists, farmers, and resource agency representatives to begin developing the plan. Almost immediately, political currents, mistrust, and confusion threatened to derail the initiative. Some landowners perceived the effort to move beyond the willow issue to address other concerns in the watershed as a direct attack on land and water rights. The lack of motivation and a strong foundation—common issues, trust, broad support, acute problems requiring immediate attention—caused the process to unravel soon after it began.

People were confused by and suspicious of the attempt to develop a comprehensive basin plan just to address the willow problem. "Why are you doing this?" was a common refrain throughout the first few months. The Conservancy and Land Trust believed that support for a basin plan existed, but that belief was based on early interviews with flood-impacted farmers and others who did not necessarily represent other important stakeholders in the watershed. As the process unfolded, mistrust and suspicion grew. People wanted to know why a plan was being developed if it was not required, and they questioned the authority of the Land Trust and Conservancy to "force" a plan on local residents.

Less than a year after the planning committee was convened, it was disbanded because of an inability to agree on the scope and objectives of the process. Organizers noted that "a truly comprehensive approach to resource management must be allowed to evolve at its own pace, especially where most of the resources are on private land."

"The fatal flaw on the Santa Ynez was rushing the process and telling landowners, water districts and special interest groups that they were going to collaboratively develop a watershed plan," said Carolyn Barr, project director for the Land Trust. "We did not take the time to understand their interests and fears, and we tried to impose a process that was not appropriate for the place and time."

(Excerpted from California Coast & Ocean, *Summer 1996)*

Let's get to work!

Launching a full-blown basin planning and management programs to address a limited set of issues can backfire if the situation is not ripe for a broad-based, cooperative approach. Building awareness and trust, conducting educational activities, engaging stakeholders, and convening a planning group take commitment, time, and resources. Forcing the process can complicate things, as the case study on the Santa Ynez River demonstrates.

However, important partners and even potential critics should be included to make sure their concerns and interests are addressed early in the process.

There are common elements to be considered when working with stakeholders. The remaining sections of this guide provide tips and tools to increase the effectiveness of your efforts to involve and engage stakeholders in protecting water quality.

Section 1:

Stakeholders and Watershed Management

What's in Section 1?

- Using a watershed approach
- Involving stakeholders throughout the planning process
- Where are we now and where do we want to go?
- How do we get there?
- How will we know when we've arrived?

Whatever the reason for conducting watershed management activities, stakeholders can help. Inclusive processes increase awareness and understanding of issues and challenges, generate more data, help determine priorities, increase support for remediation programs, and generally enhance the likelihood of success. Stakeholder processes often provide the reality check for scientific efforts: they seek to synthesize ecological, technical, social, cultural, political, and economic concerns through a process that helps to define what's actually doable.

The move toward integrated, holistic watershed management has meant that more attention must be paid to factors beyond the water body itself—how land is used, what type of vegetative or other cover it has, and how it is managed. Such an approach requires the involvement of landowners, developers, farmers, urban governments, homeowners, recreational groups, and other constituents in the watershed if real progress is desired.

All types of stakeholders should be involved.

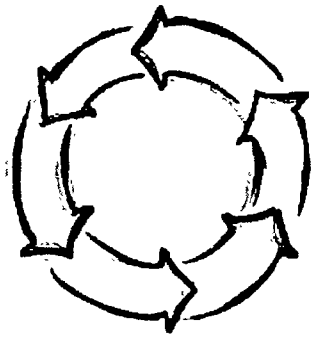
Using a watershed approach

Organizations in both the public and private sectors have enthusiastically embraced a watershed approach to protect and preserve the quality of surface water and groundwater. This approach has developed rapidly over the past decade at the federal, state, and local levels. More than half the states now manage their water resources through river basin programs that consider all impacts in a drainage area rather than discrete programs to address point and nonpoint sources of pollution.

A watershed approach is particularly helpful in addressing tribal, federal, state, and local responsibilities under various Clean Water Act Programs. For example, the "Total Maximum Daily Load" (TMDL) program requires cleanup plans for waters that don't meet the minimum water quality criteria associated with the designated use of the water body. Development of a TMDL involves identification of the pollutant(s) that exceed water quality criteria, careful

Public support and sufficient participation are essential for project success. A high rate of participation is key in voluntary projects because nonpoint sources of pollution are widespread.

—North Carolina Cooperative Extension Service



A cyclical, iterative process continues to improve the management plan.

assessment of the sources (point and nonpoint) of those pollutants, analyses of possible pollutant reduction strategies, and a plan to implement selected actions designed to lower pollutant loads so the water body meets minimum water quality criteria.

USEPA requires that states subject TMDL pollutant loading and other calculations to public review, and recommends public participation to implement load allocations for nonpoint sources. For example, a TMDL for sediment might include an analysis of sediment loads from construction sites, timber harvest activities, row crop farming, and stream bank erosion caused by increased flows. These analyses—and any plan to address sediment loads—would benefit greatly from the involvement of construction contractors, loggers, farmers, and storm water managers in the affected watershed. Their intimate knowledge of the activities and land management practices contributing to sediment loads and their participation in remediation actions designed to reduce them significantly enhances the scientific and technical validity of the loading analysis and increases the likelihood that appropriate control measures will be implemented.

Clean Water Act regulations to prevent the degradation of cleaner waters also require public participation. Under 40 CFR Part 131.12, antidegradation programs must include a policy for ensuring that waters exceeding minimum water quality criteria are protected from degradation and must also include a method for implementing that policy. Public participation and intergovernmental coordination is specifically required when considering proposals (e.g., NPDES permits, Section 404 permits) that would lower the quality of waters already meeting the criteria for their designated use. Engaging and involving the public in refining and implementing antidegradation policies can help to increase the efficiency and effectiveness of a state antidegradation program. For example, West Virginia's antidegradation implementation procedure allows for public notice and comment regarding reviews, findings, and decisions, and outlines a nomination process for "any interested party" to request higher protection levels for state water bodies.

Clearly, engaging and involving stakeholders benefits both regulatory and non-regulatory actions to restore and protect America's waters. Synthesizing people, policies, priorities, and resources through a watershed approach blends science, technology, and statutory responsibilities with social, economic, and cultural considerations. The procedures for implementing this process are discussed in the following sections.

The management cycle

Stakeholder involvement is not conducted in a parallel course with watershed management, but rather is *woven throughout to* strengthen the end result. This section describes the watershed management

process from planning to implementation, highlighting key areas where stakeholder involvement is critical. Keep in mind that the overall process is iterative or cyclical, not linear, so it can be initiated at any phase. Recognize also that you might not conduct every activity in each phase. Some activities can be skipped with sufficient justification, but it helps to know what you're skipping and why in case those issues need to be addressed during later iterations of the cycle.

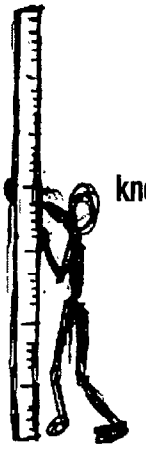
Steps in an iterative process

Assessment, planning, management, and implementation are iterative processes driven by continuous evaluation and adaptation. A watershed approach to resource management embodies these elements through a cyclical process characterized by the following steps:

1. Define the watershed and nested hydrologic units
2. Conduct initial outreach; organize stakeholder and technical teams
3. Establish broad consensual goals and/or conduct a visioning exercise
4. Collect relevant watershed and community assessment information
5. Analyze and evaluate information; identify and address data gaps
6. Assess, prioritize, and analyze key concerns and issues
7. Develop management objectives and strategies for implementation
8. Implement, evaluate, and adapt selected management actions

Involving stakeholders throughout the watershed planning process

Stakeholders need to be involved at each stage of the watershed planning process. Their knowledge of local social, economic, political, and ecological conditions provides the yardstick against which proposed solutions must be measured. Also, the goals, problems, and remediation strategies generated by stakeholders define what's desirable and achievable. Weaving stakeholder input, legal requirements, and resource protection strategies into an integrated tapestry for managing surface water and groundwater resources is what the watershed approach is all about.



Both the knowledge, and needs, of stakeholders provide a yardstick to measure solutions.

The following questions will lead you through the watershed approach, highlighting where stakeholders are critical to the outcome:

- Where are we now and where do we want to go?
- How do we get there?
- How will we know when we've arrived?

Watershed planning and management checklist

Where are we now and where do we want to go?

Scoping

- ❑ *Identify the driving forces*
- ❑ *Identify the geographic scope of the effort*
- ❑ *Identify the key issues and goals in the community*
- ❑ *Determine the level of stakeholder involvement needed*
- ❑ *Form partnerships after deciding who to include initially and how to find them*
- ❑ *Identify goals and objectives for addressing community concerns*
- ❑ *Develop a problem statement regarding priority issues to be investigated, assessed, and managed during this iteration of the management cycle*
- ❑ *Conduct outreach on how the approach will be carried out and how stakeholders can participate*

Information Collection

- ❑ *Determine information needed to characterize environmental, economic, and social conditions*
- ❑ *Collect information on environmental, economic, and social conditions*
- ❑ *Characterize the current condition of the watershed*

Assessment and Targeting

- ❑ *Identify suspected causes and sources of watershed impairments or threats*
- ❑ *Target and prioritize specific geographic areas for management action*

1. Where are we now and where do we want to go?

Asking this question helps to guide your assessment of current conditions and define the problems you want to address. Stakeholders need to be brought in at this phase to help identify social and environmental concerns in the watershed, assist with gathering data, initiate public outreach, create a vision for the future, and develop a list of potential problems. Your watershed protection efforts will be built on this foundation to ensure that future management goals and objectives consider the views, capabilities, and values of the stakeholders.

2. How do we get there?

This question identifies specific activities that will be conducted to achieve the goals and objectives outlined in the previous phase. Stakeholders will assist with identifying the strategies to be implemented, often taking the lead on the actions. Stakeholders can also support funding opportunities for sustaining the watershed efforts in the future through grants, in-kind services, education, and outreach.

Planning and implementation—The issue is not whether to plan, but how to develop plans that lead to action. The most effective plans contain a comprehensive analysis of existing conditions and ecological, social, economic, cultural, and political issues. However, they focus mostly on identifying, prioritizing, and targeting problems and generating possible solutions based on real-world conditions. Plans must be understandable to the public and lead to strategic actions that improve water quality and habitat. Watershed plans should be viewed as management tools rather than merely as technical studies.

The issue of scale—The scale of the planning/management program greatly influences how it will unfold. Efforts to manage smaller basins (less than 100 square miles) can be as complicated as programs in large watersheds. The scale chosen usually depends on the land and water issues of concern. If the issue is forest management and the basin is mostly rural, a large watershed can be effectively managed by a single partnership. On the other hand, urban watersheds facing industrial, residential, and commercial impacts as well as new development effects might have to be addressed at the subwatershed level.

Attempts to manage watersheds that are too large can fail because communication and stakeholder interaction can be difficult and interests may diverge over a broad region. The scale chosen should be based on a common-sense analysis of the people, issues, and activities in the watershed under study. Of course, when smaller management units are required some attempt should be made to coordinate with other subwatershed groups in the basin. Interaction among these groups must be handled carefully and on a case-

specific basis. Efforts to create an umbrella management program with representation from each smaller unit can cause tension, especially if the overarching program attempts to dictate policy or process to its constituent groups. A loose, flexible arrangement that focuses on communication and cooperation rather than structure and process is often the best approach.

3. How will we know when we've arrived?

A key step to watershed protection is determining when you have achieved your goals and objectives. This involves developing appropriate indicators to evaluate the progress of the watershed efforts, as well as conducting monitoring to measure improvements in the watershed. Stakeholders should be involved in developing the indicators to be used and can also assist with monitoring efforts through volunteer monitoring programs or by acting as watchdogs in the watershed.

Measuring success—Stakeholders and the public want to achieve success, and that usually means improvements in water quality or aquatic habitat. Success also means development of an effective, sustainable, long-term process capable of recruiting new leaders, participants, and resources.

Measuring environmental success is not difficult, though often improvements occur many years after restoration and new management practices are implemented. Success indicators should be derived from the goals established by the partnership, and goals should be SMART (specific, measurable, attainable, relevant, and time-sensitive). Although a variety of environmental indicators can be used, some might not be relevant to stakeholders or the public. The Green Mountain Institute defines indicators as "direct or indirect measures of some valued component or quality of a defined system used to assess and communicate the status and trends of the system's health." The World Wildlife Fund calls indicators "tools to simplify, measure and communicate complex events or trends."

Communicating environmental conditions—The ability of indicators to communicate defines their relevance. Stakeholders may glaze over at graphs of dissolved oxygen trends, sediment transport, or substrate embeddedness, but they might exhibit keen interest in a simplified, consolidated fish health index. Public agencies are increasingly adopting indices that incorporate a suite of indicators to more effectively communicate environmental conditions. For example, the state of Florida issues periodic ecosystem summaries that contain brief overviews of assessment, stressor, and trend data along with a consolidated speedometer-type graphic that gauges conditions over a range from poor to excellent. The Tennessee Valley Authority uses a color-coded scheme to denote good (green), moderate (yellow), and poor (red) conditions for indicators like temperature, nutrients, and dissolved oxygen.

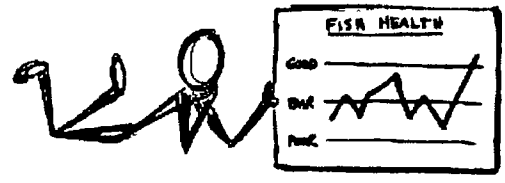
Why watershed plans fail

The Center for Watershed Protection conducted a broad assessment of the value of planning documents in protecting water resources and identified a number of reasons why some plans failed:

- *Planning activities were conducted at too great a scale*
- *The plan was a one-time study rather than a long-term management process*
- *Stakeholder involvement and local ownership were lacking*
- *The plan skirted land use/management issues in the watershed*
- *The document was too long or complex*
- *Recommendations were too general*

The Center recommends the creation of watershed management plans that focus on the subwatershed scale, measure and forecast land use, guide the location and density of future development, emphasize strategic resource-based monitoring, involve stakeholders and the public, and promote coordination of resources. A plan must be a guide to the future rather than simply a reflection of the past, and it must incorporate a continuous cycle of assessment, action, evaluation, and adaptation.

How environmental conditions are communicated is important.



Watershed planning and management checklist

How do we get there?

- ❑ *Identify ongoing management efforts and gaps or additional management needs*
- ❑ *Outline possible alternatives and potential resources*
- ❑ *Develop strategies (management practices, pollution prevention programs, outreach activities, permits, Total Maximum Daily Loads, etc.) that designate who is responsible for doing what, by when, where, and how. Make sure each strategy is tied to the management goals.*
- ❑ *Develop indicators linked to the strategies (environmental, programmatic, social)*
- ❑ *Identify funding opportunities and other resources*
- ❑ *Implement selected management strategies*
- ❑ *Conduct outreach and collect feedback on activities*
- ❑ *Make adjustments to ongoing strategies as needed*

Technical teams that design and conduct monitoring and assessment programs should consult with stakeholders to determine what kinds of indicators or groups of indicators are understandable and useful. Innovative approaches like the transparent plastic cups used by rice farmers in Louisiana to measure suspended sediment levels are often best. A sample is left in the cup for a few hours to settle out, and growers can tell whether the water from their flooded fields is too muddy to release to adjacent streams by measuring the level of silt in the bottom of the cup.

Regardless of the indicator scheme adopted, showing stakeholders how chemical, physical, and biological parameters are used or incorporated into indices helps develop an appreciation for scientific and technical principles and processes. Linking indicators to water quality and habitat condition further aids this effort and is an important consideration in any assessment and monitoring program.

Restoring Sawmill Creek Using an Innovative Management Approach

Sawmill Creek is a second-order freshwater stream on Maryland's coastal plain. Two-thirds of the watershed has been converted to residential and light industrial land use over the past 50 years, jeopardizing the base flow of groundwater to the creek. Various stakeholders in the Sawmill Creek watershed have come together under an adaptive management approach to reverse declines in water quality and habitat in the creek.

Five Anne Arundel County government departments, seven state agencies, three federal agencies, five nongovernmental organizations, several local businesses, and many private citizens joined in 1994 and pooled their resources to develop the approach. Each partner was required to use only existing programs to achieve the project's goals; no new funding was allocated for the project. The group adopted a watershed perspective and developed implementation and monitoring teams.

The implementation team drafted a strategy for each major problem that described the geographic location of the problem, prescribed a general restoration goal, and identified the responsible management agencies. The monitoring team investigated the cumulative impacts of the various land use practices in the watershed. Project partners used feedback from the monitoring team's investigations to revise and improve the details of each restoration project. After four years, the focus has shifted from assessment and planning to implementation and evaluation.

—Larry Lubbers, Watershed Restoration Division, Maryland Department of Natural Resources

Examples of environmental indicators

Description of Indicator Type	Examples of Indicators
Document the extent to which programmatic, regulatory, and other actions have been taken	▪ *Number of permits reissued with new limits* ▪ *Number of point sources in substantial noncompliance* ▪ *Elapsed time from identification of serious discharge violations until correction* ▪ *Number of targeted facilities/properties that have implemented BMPs* ▪ *Amount of fertilizer sold or used* ▪ *Number of estuary acres monitored* ▪ *Number of communities enacting zoning or storm water management ordinances* ▪ *Number of public water systems with source water protection plans* ▪ *Number of public outreach activities and citizens reached*
Describe actions or conditions which are likely to impact surface or groundwater quality	▪ *Reduction in nutrient loadings from each type of point and nonpoint source* ▪ *Reduction in pollutant loadings to groundwater from underground injection wells* ▪ *Stability and condition of riparian vegetation* ▪ *Percent imperviousness upstream* ▪ *General erosion rate upstream* ▪ *Amount of toxics discharged in excess of permitted levels* ▪ *Amount of toxics discharged by spills* ▪ *Number of businesses and households that have altered behaviors or processes to reduce pollutants*
Measure the extent to which ambient water quality has changed	▪ *Pollutant concentrations in water column, sediments, and groundwater* ▪ *Frequency, extent, and duration of restriction on water uses—bathing, drinking, fishing, shellfishing* ▪ *Percent of stream miles or lake or estuary acres that support each designated use* ▪ *Percent of stream miles with impaired or threatened uses* ▪ *Percent of citizens who rate major water bodies as usable for various recreation activities*
Measure direct effects on the health of humans, fish, other wildlife, habitat, riparian vegetation, and the economy of the region	▪ *Aquatic community metrics* ▪ *Reduction in waterborne disease in humans* ▪ *Size of wetlands or riparian habitat lost or protected* ▪ *Size of commercial and recreational fish harvest* ▪ *Increased jobs and income due to recreation*

Watershed planning and management checklist

How will we know when we've arrived?

- ❑ *Identify relevant indicators*
- ❑ *Evaluate indicators for desired targets*
- ❑ *Develop monitoring strategy (ambient, compliance, and intensive surveys)*
- ❑ *Implement actions and reevaluate*

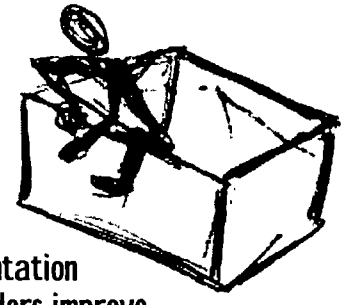
4. Repeating the cycle: where do we want to go next?

Because watershed management is cyclical, you're never really done. Management is dynamic: conditions, priorities, resources, and capabilities can all change over time. Repeating the cycle provides an opportunity to update assessments, priorities, goals, and management strategies and address issues that were not dealt with during previous iterations because of resource constraints or other reasons. The process of moving cyclically through the planning and management steps and making constant adjustments is called *adaptive management*. This approach allows consideration and use of innovative and even experimental strategies and avoids the narrow-minded pursuit of activities just because they're in "The Plan."

Section 2 focuses on the nuts and bolts of starting a stakeholder involvement process and defining how the participant group will operate.

Indicators for the Chesapeake Bay

The Chesapeake Bay Program tracks a considerable number of environmental indicators, including those associated with nutrients, living resources, toxics, and programmatic activities. A comprehensive list of these indicators and other information regarding their use is available on the Web at http://www.chesapeakebay.net/indicators.htm.



Innovation and experimentation help stakeholders improve watershed conditions.

Section 2:

Getting Started

In this section you will learn to identify the driving forces that prompted your watershed management effort, determine your internal goals and objectives, and outline how the stakeholders will complement and support your overall program. Keep in mind that once the stakeholders convene, the goals and objectives you first identified will be modified to include their issues. Taking the time to discuss any inconsistencies in goals and to reach consensus on how to proceed is the most important aspect of the stakeholder process.

Identify driving forces

When initiating a stakeholder involvement program, you must first identify the driving forces behind your effort. This will help you determine the scope and level of participation throughout the rest of the process. For example, many programs under the Clean Water Act require or strongly recommend stakeholder involvement to implement efforts related to source water protection, coastal zone management, protection of estuaries, Total Maximum Daily Loads, and water quality criteria and standards. The permitting process for wastewater discharges, storm water management, and combined sewer overflow control also requires public input and involvement, as do activities conducted under state and federal nonpoint source pollution programs and the Endangered Species Act.

Why stakeholder groups form

The driving force for initiating a stakeholder involvement effort often centers around a specific issue such as water quality violations in a stream segment, an NPDES permit upgrade to expand wastewater treatment capacity, or the need to reduce loadings of a specific pollutant into a water body.

Development of a TMDL, or cleanup plan for waters not meeting minimum criteria, also spawns the creation of many watershed groups. Stakeholder involvement is extremely valuable in reviewing the relevant water quality criteria and water body use designation for appropriateness, identifying likely sources of problem pollutants, developing strategies for reducing pollutant loads, and implementing the selected strategies. When TMDLs address nonpoint sources of pollution, stakeholder participation is even more helpful. Watershed

What's in Section 2?

- Identify driving forces
- Define internal goals and objectives
- Develop a framework for stakeholder involvement

Why stakeholder groups form

- **To strengthen TMDL implementation.** *TMDL guidance from the USEPA notes that "adequate public participation should be a part of the [impaired waters] listing process to make sure that all water-quality limited waters are identified." In addition, the guidance encourages strong state and local involvement in the TMDL development process: "States and involved local communities should participate in determining which pollution sources should bear the treatment or control burden needed to reach allowable loadings. By involving the local communities in decision-making, EPA expects that a higher probability of successful TMDL implementation will result."*
- **To be eligible for state funding.** *The state of Washington, for example, does not require local watershed planning, but when those efforts are supported by state funds they must include local governments, tribes, and "representatives from a wide range of water-resource interests."*
- **To follow recommended guidance.** *The USEPA's* Ecological Risk Assessment Framework *and the* Proposed Guidelines for Ecological Risk Assessment *outline a process for risk assessment that "provides a mechanism for stakeholder involvement that helps ensure that assessment information is relevant to the issues under consideration," according to a report by the Water Environment Research Foundation.*
- **To comply with new legislative requirements.** *The 1996 amendments to the Safe Drinking Water Act require stakeholder involvement in developing programs to protect rivers, lakes, reservoirs, wellhead recharge zones, and other sources of drinking water.*
- **To respond to federal decisions.** *The Black Bear Conservation Committee (BBCC) was formed in 1990 when the U.S. Fish and Wildlife Service announced its decision to list the Louisiana black bear as threatened under the guidelines of the Endangered Species Act.*
- **To address conflict over specific issues.** *The Niagara Frontier in New York State has a large percentage of wetlands, and it is frequently difficult to balance healthy economic growth with resource protection. The Wetlands Roundtable was created to address the friction between conservation and growth in the Niagara Frontier area.*

residents and land managers usually have a much richer knowledge of potential pollutant loading activities and a better perspective of what's likely to work in terms of remediation. For example, the Rouge River Wet Weather Demonstration Project tapped area residents' knowledge of possible waste disposal sites and found dozens of small, leaking landfills that were not registered in state or local databases. The Center for Watershed Protection and other technical support organizations report that targeted workshops with homeowners on how to reduce residential storm water impacts associated with home, yard, and garden practices are more effective than brochures or media campaigns that don't feature workshops.

Direct engagement with groups to address a specific issue provides the basis for stakeholder group formation in many cases. In other cases, stakeholder involvement is also driven by a desire to develop proactive responses to potential future threats. These stakeholder programs are often the most challenging because the driving force is much more subtle, making it tough to motivate action—especially if there is no specific time frame for accomplishing activities such as acquiring a permit or complying with a regulation. These issues may include managing the long-term growth of a region in an environmentally sensitive manner, exploring options for sharing water resources among localities, or preserving the cultural heritage of a region.

Regardless of the reason for watershed planning and management initiatives, there are clearly significant legal, logical, and logistical reasons to engage and involve both the public and other agency stakeholders. Identifying the driving forces for including stakeholders is an important step in designing the stakeholder involvement program because it will define the scope and level of participation throughout the process.

Define internal goals and objectives

Once you've determined why you're undertaking a watershed planning or management initiative, it is important to examine your organization's internal goals and objectives regarding the project. Addressing this issue before involving stakeholders will help you determine which stakeholders need to be involved based on your goals and objectives. Internal goals may overlap somewhat with the driving forces, but they usually go beyond mere compliance with legal or logistical requirements. The following are typical internal *programmatic* goals:

- Characterize and resolve an existing problem (e.g., flooding, water quality violations)
- Clarify the scope and magnitude of a perceived problem
- Deal with impacts from future agricultural, industrial, commercial, or residential development
- Protect important recreational or habitat resources

Internal *management* goals like the following also need to be considered:

- Efficiently coordinate the deployment of public agency resources
- Generate awareness and interest in resolving potential problems
- Build trust in the sponsoring organization and its partners
- Create support for funding and implementing selected management practices

After you outline the general goals you hope to achieve, you must identify specific objectives to accomplish them. For example, if one of your goals is to alleviate flooding in the county, your objectives might be to conduct an inventory of drainage areas, to perform hydrodynamic modeling, and to implement a storm water education program.

Remember that internal agency programmatic and management goals are only a subset of the overall aims of the planning/management process. Stakeholders will bring to the table their own set of goals and objectives that will be incorporated into the overall project goals.

Goal of the Umatilla River Fisheries Restoration Program

The Umatilla River Fisheries Restoration Program is a collaborative effort between the Confederated Tribes of the Umatilla Indian Reservation (who have treaty rights to the river), federal agencies, the Oregon Department of Fish and Wildlife, and the local community. The goal of the Umatilla River Fisheries Restoration Program is to restore 47,000 salmon and steelhead to the river. Program partners completed a project that diverts water from the Columbia River, where there is no shortage of water, and delivers it to three of the five irrigation districts in the Umatilla Basin.

Sample driving forces, goals, and objectives for a watershed management effort

What are the driving forces for the watershed management effort in Starshader County?

- Need for a TMDL to address excessive sediment loads in the 303d-listed Salmon River.
- Angler demands for cleaner water and better habitat to support recreational fisheries.
- Localized flooding caused by faster runoff from urban areas.

What are the goals of the watershed management plan?

- Increase awareness about water quality issues in Starshader County.
- Develop and implement a TMDL for sediment in the Salmon River.
- Restore fish habitat and water quality to improve the fishery.
- Reduce flooding impacts by addressing flows and/or floodplain development.

What are the key objectives?

- Identify, engage, and involve relevant stakeholders.
- Characterize land uses and land management practices in the watershed.
- Assess land use/management practices on fish habitat.
- Identify activities and/or areas significantly contributing to sediment loading.
- Identify land use/management practices that may exacerbate flooding.
- Assess cyclically flooded properties to determine impacts and possible options.
- Develop management strategies targeted at reducing flooding impacts, sediment, and habitat degradation.
- Identify resources to implement the selected management strategies.
- Evaluate the success of implemented actions; adapt as necessary.

Develop a framework for stakeholder involvement

After assessing the driving forces and identifying your internal goals and objectives for the project, you should be able to (1) determine whether stakeholder involvement is needed and (2) define the level of involvement. This is the time to start outlining a structure for the stakeholder group, possible roles and responsibilities, and decision-making methods. Keep in mind that this is just a preliminary framework. The stakeholders will comment and provide their own input on how they think they should operate (☞presented in Section 4). When developing a stakeholder involvement framework, you must answer questions such as

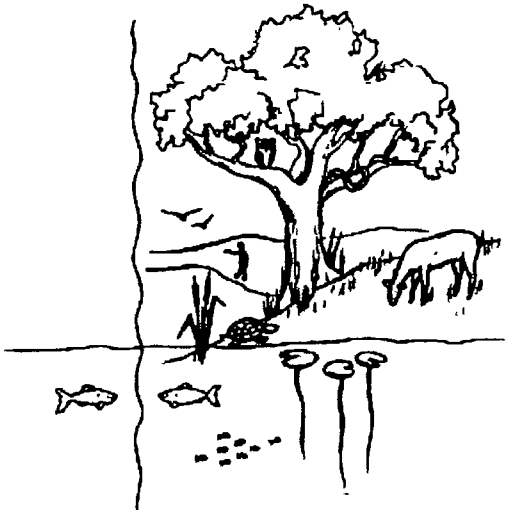
- How will the group be structured? (fully empowered management entity, advisory body, subset of the management committee, ad hoc group)
- How will decisions be made? (majority vote, consensus, input received but decisions made by responsible party)
- What is the membership of the group? (one representative from each locality or interest group, cross section of the watershed residents, etc.)
- What are the roles and responsibilities of the stakeholders? (outreach, selection of management options, representation of larger constituencies, preparation of reports, etc.)

The rest of this section reviews these questions to help you decide which approach best fits the circumstances at hand.

Stewardship in Napa County, California

The Napa County Resource Conservation District views natural resource stewardship as "a community perspective that moves from dealing with objects (people, parts, pieces) to dealing with relationships." District planning and management processes are not necessarily targeted at changing practices in the agricultural community, but rather at building a stewardship ethic.

Thus, stewardship management as practiced in Napa County "is not a process or set of tools to be used to alter or affect the values of others," contends former Napa County Resource Conservationist Dennis Bowker. "Behavior changes may result from the development of stewardship but they are not the purpose of stewardship."



Groups may focus on a single aspect...

... or take a holistic approach

Organizational structure

Watershed stakeholder groups range from informal, ad hoc groups to highly organized and well-funded nonprofit corporations. Some are made up mostly of government agencies, with a sprinkling of interest group and citizen representation. Most adopt a statement of purpose or vision (e.g., *"to protect, conserve, manage, and restore land and water resources through a cooperative/consensus process designed to meet the needs of present and future generations"*).

Some stakeholder groups focus on a single aspect of the resource (e.g., fisheries, aesthetics), while others adopt a holistic or ecosystem approach. Watershed groups are very much driven by the interests, capabilities, and contacts of participants. Since they often emerge in response to problems, stakeholder groups may be highly focused on those concerns initially. Gentle guidance can help expand a stakeholder group's mission over time to encompass a broader, more holistic approach, if necessary, but it is best to let this maturation process evolve at its own pace.

Although it might seem desirable to merge resource planning and management groups in the same basin into a comprehensive structure, many of these small, focused organizations value their independence and may resist efforts to force them into a larger group. Coordination and communication are the best approaches to build cooperation. Keeping interest groups informed of larger planning and management efforts and seeking their input and expertise at every opportunity can create an effective, efficient management program without the burden of rigid, overarching structural and procedural components.

Working with manageably sized stakeholder groups

There are several ways to balance the need for inclusion of multiple stakeholders with the desire for working with a group that's not too large. Committees of 25 or more people can present logistical and other problems and make it impossible to offer adequate time for participation by all members. Stakeholders for the Santa Clara Basin Watershed Management Initiative include regulatory agencies, publicly owned treatment works, storm water permittees, environmental groups, the Guadalupe-Coyote Resource Conservation District, the Silicon Valley Manufacturers' Group, the Chamber of Commerce, and the League of Women Voters. A core group of stakeholders was convened to serve as an advisory board to established decision-making bodies and local communities. The core group oversees the Santa Clara Basin Watershed Management Initiative and coordinates the activities of nine subgroups to develop the watershed management plan.

Watershed partnerships take time!

Professor Paul Sabatier and his watershed partnership research team at the University of California (Davis) found that it takes time—frequently about 48 months—to achieve major milestones such as formal agreements and implementation of restoration, education, or monitoring projects. Stakeholders in general perceive that their partnerships have been most effective at addressing local problems, even serious ones. On the other hand, they perceive that partnerships have occasionally aggravated problems involving the economy, regulation, and threats to property rights. Indeed, Sabatier and his team found that partnerships apparently have the most positive impact on the most serious problems in the watershed. This finding contradicts the fear that consensus-based processes often avoid important issues and generate ineffectual agreements.

—Stakeholder Partnerships as Collaborative Policymaking: Evaluation Criteria Applied to Watershed Management in California and Washington; UC Davis

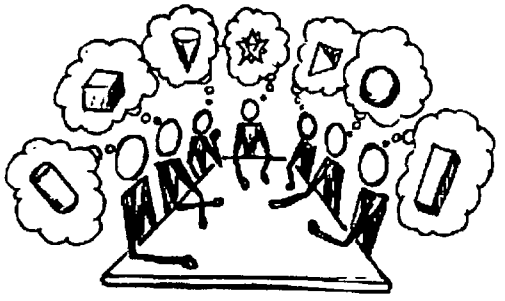
Massachusetts' collaborative approach to restore wetlands

The Massachusetts Wetlands Restoration and Banking Program (WRBP) was established in 1994 to undertake a comprehensive, statewide wetland restoration effort. Because several agencies already had funding or other wetland restoration efforts in place and others had a strong interest, it soon became apparent that the state could benefit from a collaborative approach to wetland restoration.

Through WRBP's initiative, state and federal agencies joined forces under the federal Coastal America Partnership. In June of 1994, officials from the Massachusetts Executive Offices of Environmental Affairs and Transportation & Construction and the federal Departments of Transportation, Commerce, Army, Agriculture, and the Interior and the Environmental Protection Agency gathered to sign the Resolution to Restore Massachusetts Wetlands. This agreement commits the partners to joint implementation of a comprehensive, watershed-based wetlands restoration program for Massachusetts. The signatories have become the core of the Partnership to Restore Massachusetts Wetlands, a broad coalition of more than 200 organizations and individuals who have joined forces to support implementation of the resolution.

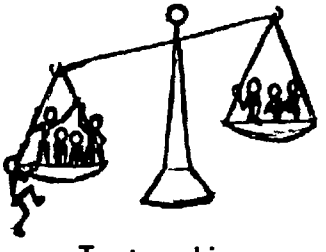
—Christy Foote-Smith, Wetlands Restoration & Banking Program, Boston, MA

Stakeholders in a group usually bring different backgrounds, interests, and agendas.



Ecosystem management through role reversal

The Illinois Conservation 2000 program includes a component for managing targeted ecosystems that turns the traditional agency-led approach on its head. Local stakeholder partnerships have primary oversight over nearly all aspects of the projects and are authorized to call in state agency resources as needed. The role reversal removes state agencies from the often-difficult task of resolving conflicts among various interests and gives the resulting consensus recommendations a validity untarnished by charges that the management strategy represents only what "the state" wants to do.



Try to achieve a balanced representation.

Membership

Membership in watershed organizations is also highly variable. Some are composed of like-minded people who share a concern for a specific resource facing a highly focused threat (e.g., a lakeshore homeowners association dealing with elevated nutrient levels). Others are more like "textbook" stakeholder partnerships, consisting of people with very different backgrounds, perspectives, values, interests, and agendas. In both cases, however, membership is often based simply on interest, commitment, and energy. Of course, when the basin is large and the issues are many, it is often desirable to establish a representative board or committee to make decisions. This process is highly subjective, but must be based on honest efforts to ensure that all stakeholder perspectives are represented.

Often the biggest challenge when selecting stakeholders is to achieve a balanced representation among the various interests so that people don't feel that the "deck is stacked" against them. ☞ Section 4 goes into detail on how to identify key audiences in the community and select stakeholder representatives for participation in your effort.

Decision-making methods

There are many approaches for considering input from stakeholders in final management decisions. Managers can gather input informally from individual stakeholders or interest groups to increase understanding of stakeholder perspectives and make a decision without ever convening a meeting. Conversely, the sponsoring organization can hand over significant authority to a formally organized stakeholder committee and agree to abide by whatever decisions it makes. Regardless of the approach, the process and its impact on the resulting product must be clearly stated at the outset. This enables decision makers to establish clear boundaries for the involvement of others, lets people know what to expect and what is expected of them, and helps build support for the final decision. Generally speaking, as the level of involvement in the decision making increases, so does the level of commitment to the outcome.

Soliciting formal or informal input without sharing real authority is commonly practiced in natural resource management programs. Sharing of authority was relatively rare in the past but is becoming more common under the watershed planning and management approaches developing today. Giving stakeholders a real voice in decision making might cause some discomfort at first, but this approach generates much more interest, involvement, and commitment from participants and gives them a real "stake" in the outcome.

Most partnerships seek consensus on decisions, but there are concerns that such an approach leads to lowest-common-denominator (rather than better) decisions or discussions that avoid contentious or critical issues. ☞ See Section 5 for specific guidance on making decisions by consensus.)

Roles and responsibilities

Outlining proposed roles and responsibilities for the stakeholder group will help clarify expectations, reduce conflict, and encourage a smooth group process. There are two major areas for involvement—*process* and *content*.

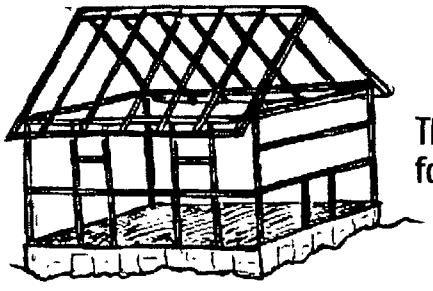
The person responsible for managing the process is usually a facilitator. Outside facilitators (i.e., third-party persons not connected directly to the sponsoring agency or other stakeholders at the table) are usually best. The facilitator should be perceived as a neutral party who will not contribute his or her ideas to the group. Facilitators should be objective and maintain a broad perspective, but they should also challenge assumptions, act as a catalyst, generate optimism, and help your group connect with similar efforts. It is important to make sure that the stakeholders feel comfortable with the facilitator. Sometimes, even if the facilitator is truly neutral, some members of the group might not feel their concerns are being validated or incorporated into the process. If this is the case, it's best to select someone else to manage the process.

Stakeholders usually participate in determining the content of the effort. This is where you outline some possible roles and activities for the stakeholders. Again, remember that this is just a first cut at proposed roles and responsibilities. Once the stakeholders convene, they will have an opportunity to make changes.

Possible roles and responsibilities for stakeholders include the following:

- Clarify overall project goals and objectives
- Ensure all relevant interests are adequately represented
- Provide input on watershed problems
- Help develop evaluation criteria for analyzing management options
- Provide input on the preferred management strategies
- Help conduct community education and outreach throughout the process

Once you have developed a preliminary framework for your stakeholder group, you're ready to move on to conducting outreach and identifying the stakeholder participants.



The framework is built for a stakeholder group.

Do we always need consensus?

Don't jump to the conclusion that consensus is needed for every decision. In some cases, it is more appropriate to gather input from the stakeholders and then make a decision. The factors to consider when selecting a decision-making method include time available, the importance of the decision, the information needed to make the decision, the capability of the group to make the decision, and the information required to make a decision. And remember, consensus is a decision everyone can live with, not necessarily one that is eagerly supported by all.

Checklist for your watershed framework:

- ❑ What are the driving forces behind this effort?
- ❑ What are our agency's/organization's internal goals?
- ❑ How will we achieve those goals?
- ❑ Do we need stakeholder involvement? How much?
- ❑ What will be the structure of the group?
- ❑ What will be the membership of the group?
- ❑ How will decisions be made?
- ❑ What are some of the proposed roles and responsibilities of the stakeholders?

Section 3:

Outreach and Communication Tools

What you have done so far...

- ✓ Identified driving forces behind your effort
- ✓ Defined internal goals and objectives
- ✓ Developed a framework for group structure, membership, decision-making methods, and stakeholder roles

Using outreach to strengthen stakeholder efforts

Once you have identified your internal goals and objectives and developed a preliminary stakeholder framework, you need to start conducting outreach and education activities. If people are expected to exhibit concern over a water resource, gather and process assessment information, and support preservation or restoration proposals, they must be engaged through a planned, long-term outreach program.

Outreach is a process that involves communicating information to an audience and getting a response from that audience. How you communicate the information (fact sheets, news articles, watershed festivals, CD-ROMs, etc.) will depend on the audience, the message you're trying to deliver, and your budget.

Changes in outreach over time

Outreach is conducted throughout all phases of the stakeholder involvement effort to *raise awareness* of the issues and the process, *educate* stakeholders and the community on the issues of concern, and *motivate* the community to identify and implement solutions. One of the most common roles of stakeholders is to conduct outreach and education to their constituents in the community. Keep in mind that your outreach and education products will change throughout the process. As the stakeholders become more aware of

What's in Section 3?

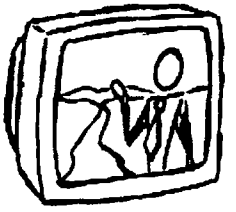
- Using outreach to strengthen stakeholder efforts
- Changes in outreach over time
- Steps for conducting effective outreach

Outreach efforts inform and involve potential stakeholders as well as the general public.

The first installment of the Getting in Step *series,* "A Pathway to Effective Outreach in Your Watershed", *provides detailed information on developing and executing outreach efforts. (See http://www.epa.gov/owow/watershed/outreach/documents to download an electronic copy of the guide.)*

the issues, your outreach efforts will shift to educating them on possible causes and solutions. The table on the next page provides some examples of what kinds of outreach to conduct throughout your project.

Mass media will reach the widest audience early on in the project.



In the beginning . . .

At the outset of your project, your primary outreach objective is to make the community aware of the major watershed issues. It will be easier to recruit stakeholders if they are already familiar with the issues. Your primary format at this stage will probably be mass-market venues such as the local newspapers, radio, or TV.

Try to get on the agenda at various community meetings and make a brief presentation on the project. Look in local newspapers to see which groups meet regularly so you know where to target your efforts. Find out who the environmental reporters are and see if they would be interested in covering your project.

Tip:

Make a presentation at the regularly scheduled meetings for local elected officials. These meetings are often televised on the local cable network and the news media usually attend. Make sure you bring a background fact sheet to hand out to the media.

After you've researched your community . . .

Once you've researched key audiences in the community, you'll have a better understanding of their values and concerns, their level of knowledge on watershed issues, and how they get their information on watershed issues. You can use this information to develop targeted outreach materials with messages that relate specifically to the intended audience. You're still in the awareness phase, but your outreach materials will include more information on causes of concern and show the community how they can participate in solving these problems.

After you've formed your stakeholder group . . .

Once your stakeholder group is up and running, you will need to develop outreach materials for a variety of audiences for communication and education among your stakeholders, distribution by your stakeholders to their constituents, and distribution to the community at large.

Tip:

E-mail listservers are a great way to promote communication among stakeholders. The Kent County (Michigan) Storm Water Management Task Force uses e-mail frequently to communicate, edit documents, and comment on activities between monthly meetings.

How outreach activities change over the course of the management program

What's Happening	Possible Outreach Products/Activities
Awareness stage *You're just starting your project, and need to let people know about what the issues are and what some solutions might be.*	▪ Prepare a map of the watershed with political boundaries overlaid. ▪ Prepare a 2-page background sheet on the issues and your project. ▪ Develop a list of media contacts. ▪ Assemble a media kit (including the map, a background sheet, a contact list, and three news articles with quotes). ▪ Submit articles to local media outlets (newspapers, TV, radio). ▪ Make presentations at local government meetings.
Education stage *You've researched some key audiences in the community and have gathered information on their values, attitudes, concerns, and communication channels.* *You've formed the stakeholder group and asked them what outreach products they would find useful.*	▪ Continue to submit articles to various media outlets on the issues of concern. ▪ Expand on the list of media contacts to include other venues of communication within the community (e.g., periodicals, cable television stations, community newsletters). ▪ Develop targeted outreach materials such as fact sheets or flyers that include messages relevant to specific audiences. ▪ Develop a general slide show on the project showing geographic scope, major issues of concern, and possible sources of pollutants. Include a script that the stakeholders can use to make presentations to their constituents. ▪ Develop a speaker's bureau for the stakeholders so they can go out in the community to make presentations. ▪ Sponsor events such as a canoe trip, watershed festival, or city-farm tour. ▪ Develop news items that can be included in stakeholder-related publications. ▪ Prepare a newsletter or listserver that can be used for communication within the stakeholder group and for distribution to the community. ▪ Develop a traveling tabletop display that can be used at libraries, fairs, schools, etc.
Action stage *The stakeholder group is up and running and implementing parts of the management plan.*	▪ Conduct demonstration projects in the watershed. ▪ Initiate a volunteer monitoring program. ▪ Conduct a storm-drain stenciling program. ▪ Continue generating media coverage (e.g., feature articles on BMP implementation, program activities, etc.). ▪ Hold events to showcase successes and motivate the community on additional efforts that need to be taken.

Steps for conducting effective outreach

To develop and implement effective outreach to support your watershed efforts, you need to consider the following steps:

1. Define project goals and objectives
2. Identify target audiences relevant to goals and objectives
3. Develop your message, based on the goals, objectives, and audience(s)
4. Package your message in formats appropriate to the audience(s)
5. Distribute your message to the target audience(s)
6. Evaluate your outreach efforts, and adjust as necessary

Within each step you must gather information to be able to effectively target your messages to the right audiences. Each step more or less builds on the previous one so it is important to address each one. Too often, outreach efforts start in the middle of the process and important steps— identifying measurable objectives or defining target audiences, for example—are ignored. Such an unfocused approach is ineffective and wastes resources.

Step 1: Define your goals and objectives

As stated previously, your outreach goals and objectives will reinforce your overall goals for the watershed effort. For example, if one of your goals is to restore the water quality of Cane Creek, one of your outreach objectives might be to educate farmers about the benefits of fencing off their streams to livestock. Another could be to make the landowners living adjacent to the stream aware of failing septic systems and educate them about a cost-share program available through the health department.

Your outreach objectives should be SMART— specific, measurable, achievable, relevant, and time-specific. You will probably develop several objectives for each issue you're trying to tackle. Keep the desired outcome in mind when forming your objectives. Do you want to create awareness, provide information, or encourage action among your target audience? It is very important to make your objectives as specific as possible and to include a time element as well as a result. This approach will make it easier to identify specific tasks for achieving the objective and will enable you to evaluate whether you've achieved the objective.

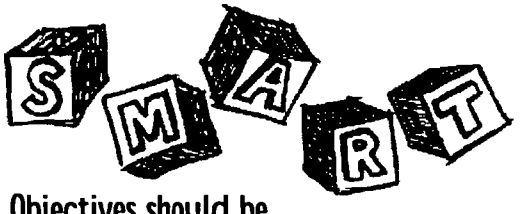
Step 2: Identify your target audience

Your target audience is the group of people you want to reach with your message. Keep in mind that your stakeholder group is only one target audience; you will target other groups within the community as well, such as elected officials, homeowners, farmers, and business people. Raising general awareness of the value and function of a water resource might include a very broad target audience like a

Getting stakeholders' attention and piquing their interest

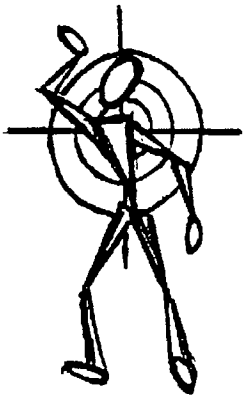
The Upper Chattahoochee Basin Group in north Georgia developed a public involvement plan to engage and involve stakeholders. The plan provides a good example of how to proceed to build the awareness and knowledge needed to develop and implement consensus-based solutions:

- *Develop a master list of interested parties and their issues*
- *Conduct scoping interviews with stakeholder groups*
- *Distribute outreach materials and sponsor events and workshops*
- *Create a forum for airing and resolving stakeholder issues*
- *Hold regular briefings for the news media, civic groups, and other organizations*



Objectives should be Specific, Measurable, Achievable, Relevant, and Time-specific.

mass media market. Define your target audience as the narrowest segment possible that still retains the characteristics of the audience. If your audience is too broad, chances are you won't be able to develop a message that engages and resonates with those you are targeting. Be creative in defining and developing perspectives on target audiences and in finding out what makes them tick.



Target your audience—narrowly identify the groups of people you want to reach with your message.

This is where your stakeholders will be invaluable. Use them to help gather information needed to develop targeted materials and to identify the best distribution mechanisms for the materials.

Think of the target audience as your customer. You want to sell your customer a product (e.g., environmental awareness, membership in an organization, participation in a stream restoration project, or some voluntary behavior change), so you need to find out what will make your customer buy the product. The kind of information needed to characterize and assess the target audience/customer might include:

- What is the demographic makeup of the audience?
- How does the audience receive its information?
- What is the knowledge base of the audience regarding the issues involved?
- What is the perception/attitude of the audience on those issues?

The tools provided in ☞Section 4 on researching potential stakeholders can help you get the answers to these questions.

Georgia surveys elected officials to focus its coastal outreach efforts

The Georgia Coastal Management Program (GCMP) was faced with the challenge of educating a rapidly growing public about the natural resources on which its sought-after quality of life is based. Because most land use decisions are made at the local level, much attention has been focused on local government and elected officials.

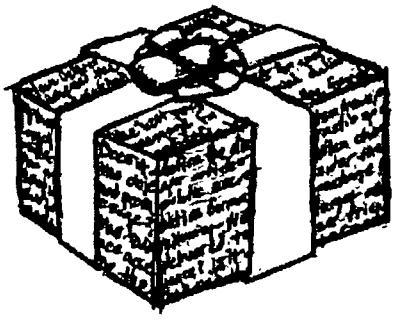
To develop a personal relationship with more than 80 local government officials, staff from the GCMP conducted face-to-face surveys with them. "We asked them what the most important natural resource issues were in their communities and how they thought the Coastal Management Program should focus its efforts." The results showed that 75 percent of local government officials recognized the importance of protecting groundwater resources from saltwater intrusion and contamination, but only 25 percent of the officials mentioned nonpoint source pollution as a natural resource issue for their communities. "We know that nonpoint source pollution is a widespread problem in our coastal area, and the fact that the elected officials are not aware of it shows us where to concentrate our outreach efforts."

—Beth Turner, Georgia Coastal Management Program

It's a cliche, but marketing is a mindset. You need to think like a marketer, or "marketeer" as some people prefer to call them... [There] is a new trend emerging, which is changing the way we look at the field of marketing. Increasingly, smart individuals at environmental organizations across the country are realizing that there are valuable lessons to be learned from the marketing sector. Congratulations. You are one of them."

—*Marketing the Environment: Achieving Sustainable Behavior Change Through Marketing; Huron Rivepr Watershed Council*

Develop a message with benefits that will attract your target audience, and package it effectively.



Step 3: Develop your message

After gathering information on the target audience, you are ready to craft a message that will engage them and help achieve your objective. To be effective, messages must be understood by the intended audience and appeal to them on their own terms. The message should be specific and tied directly to something your target audience values. Remember that these are your customers and you want them to buy your product! Some benefits you might want to include in your message are

- Money savings
- Time savings
- Convenience
- Free of charge
- Health improvements
- Efficiency
- Drinking water quality
- Stewardship
- Recreation opportunities
- Habitat protection

In addition to attracting attention, being understandable, and providing a link to something of value, effective messages should also state specific actions required to achieve the desired results. Instructions should be clear, nontechnical, and familiar to the audience. Providing a means for the target audience to become more involved or receive additional information through a toll-free telephone number, Internet site, or other means always helps. Focus on making everything—the behavior change requested, the involvement needed, or the support required—"user-friendly."

The stakeholder group will be a valuable resource in verifying that the messages are appropriate for the target audience and will be understandable to them.

Step 4: Package your message

You've defined your objective, assessed the target audience, and crafted your message. Now it's time to determine the best package or format for the message for eventual delivery to the target audience. In some cases the format will define the distribution mechanism (newspaper articles, radio spots, public events). When choosing alternative formats, consider the following:

- Will the package be deliverable to the target audience?
- Is it "user-friendly?"
- Can the target audience decipher it?
- Does it accomplish the objective and promote the message?
- How will the target audience access and use the information?

- Is it something they will see once and discard or refer to often?
- Can it be produced in-house, with existing resources?
- How much will it cost, and who will pay for it?

Once you go out with your message, repeat it, repeat it, repeat it! The formula for success in the marketing world is

Reach x Frequency = Results

where reach is how many people are exposed to the message and frequency is the number of times they hear or see it.

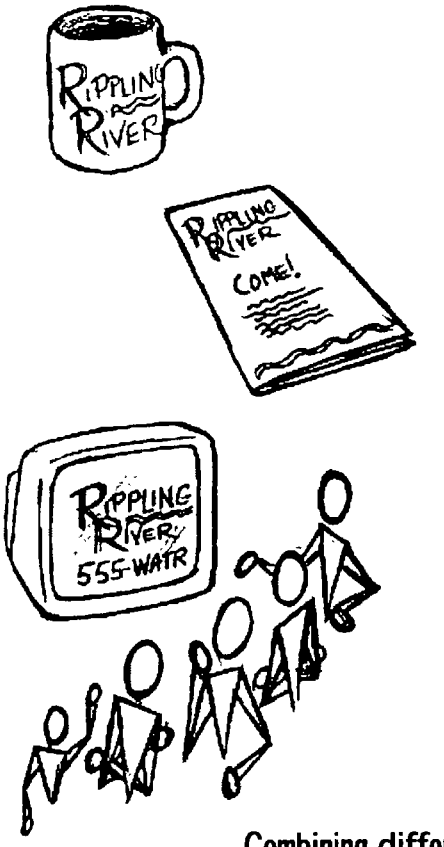
The following is an overview of some popular message packages. Choose one (or more) that helps achieve the desired result with the available resources. Combining formats can reinforce your message considerably.

Print. By far the most popular format is print. Printed materials include fact sheets, brochures, flyers, magazine and newspaper articles, booklets, posters, bus placards, billboards, and doorknob hangers. They can be easily created and can be referred to again and again by the target audience.

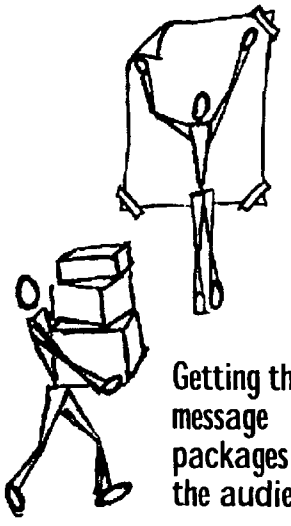
Stuff. "Stuff" refers to promotional items or "give-aways." These include Frisbees, magnets, key chains, tote bags, coffee mugs, and bumper stickers. Give-aways represent a good format to promote watershed organizations, simple actions, and general awareness.

Media. Working with the professional media—newspapers, television, magazines, and radio—will help to reach broad target audiences. Opportunities to place your message in the media include informational news stories, people features, issue analyses, public service announcements, interview programs, call-in shows, editorial columns, and feature items related to sports, recreation, or outdoor living.

Internet. Increasingly, the Internet is becoming a powerful means of communication. It provides worldwide access to hundreds of thousands of sites containing millions of documents, chat rooms for special interest groups, and database/mapping features that are almost mind-boggling. Although the World Wide Web is used regularly and extensively by agency personnel, environmental group leaders, and the business community and can be a valuable format, average citizens still get the great bulk of their environmental messages from more traditional venues. Remember, too, that a Web-based approach is geared to a certain target audience—one that is very much "plugged in" and perhaps already attuned to your objectives.



Combining different formats can reinforce your message.



Getting the message packages to the audience...

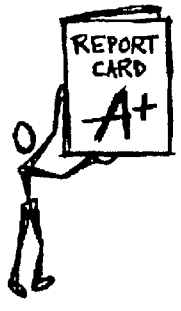
Step 5: Distribute your message

Once the message has been packaged in the desired format, you can proceed with distribution. Figuring out ahead of time how you will distribute your outreach materials can affect the development and design of the products. Common distribution mechanisms include direct mail, door-to-door, by phone, through targeted businesses, presentations, as handouts at events, through media outlets, and posting your message in public places.

Depending on where you are in our outreach efforts, your stakeholders can serve as a distribution vehicle for most of your outreach and education materials. Remember that you don't always have to distribute the message yourself. If your target audience subscribes to an existing periodical, it may be more effective to piggyback your message in that publication. It will certainly save you the hassle of dealing with mailing lists, postage costs, or news media releases. It will also increase the likelihood that your message will actually be read by members of the target audience since they are already familiar with the publication.

Step 6: Evaluate your outreach efforts

Evaluation provides a feedback mechanism for continuous improvement of your outreach efforts. Many people don't think about how they're going to evaluate the success of their outreach program until after it has been implemented. Building in an evaluation component from the beginning, however, will ensure that at least some accurate feedback on the outreach program's impact is generated.



Feedback is crucial to improvement of your outreach program.

Your time and available resources will determine the degree to which you evaluate your outreach program. At a minimum, you will review the outreach plan with the staff or watershed team to determine whether the objectives were attained or supported, the target audience reached, and so forth. Outreach programs ideally feature pre- and post-tests of randomly selected people to measure what knowledge or behaviors existed before the program was implemented and after it ended. This approach is used mainly for large-scale, high-level efforts because of the resources involved.

Your stakeholders can assist in the evaluation of your outreach efforts by providing feedback from their constituents. You should track the following: How were outreach materials distributed? Was the message understood? What was the response to the information?

Tip:

Piggybacking your efforts by including your outreach information in existing publications or presenting your information at regularly scheduled meetings of important target audiences is both efficient and effective.

Section 4:

Building Your Stakeholder Group

What you have done so far . . .

- ✓ Determined that you need stakeholder involvement for your project and that no existing group can accommodate your overall effort
- ✓ Identified the driving forces that led you to this point (e.g., violation of water quality standards, new regulations, potential threats to the resource)
- ✓ Outlined your internal programmatic and management goals for the project
- ✓ Developed a framework for stakeholder involvement, including the level of decision-making authority and the process to be used
- ✓ Conducted initial outreach to create awareness of your issues in the community

If you have not yet identified your internal goals or developed a preliminary framework for how the stakeholder group will operate, go back to ☞ Section 2. You need to complete those steps before you identify and recruit stakeholders because (1) that information will determine who should be involved and (2) potential stakeholders will ask questions related to those steps (How much time is involved? Will I be making decisions or serving in an advisory capacity? How will we make decisions?). You'd better have some answers.

Depending on the project, you might already have a fairly good idea of the likely stakeholders for your effort. But what if you're going into an unfamiliar watershed or you want to try to get better representation from some nontraditional interest groups? This section shows you how to research the key interest groups in a community and identify the stakeholder representatives who should be invited to participate. This process involves characterizing the community through various demographic, cultural, and other approaches to ensure that you know "where they're coming from."

What's in Section 4?

- Researching key interest groups
- Inviting the stakeholders to participate
- Running productive meetings
- Conducting the first meeting
- Building a stakeholder operating plan

Identify stakeholders who should be invited to participate.

Researching key interest groups

Before building your stakeholder group, spend some time researching the key interest groups in your community. If the community will be responsible for implementing the management strategies developed, it is vital that a cross-section of the community participate in the process. When looking at key interest groups for watershed involvement, we tend to draw from the same groups—local elected officials, environmental organizations, and agency personnel. Key interest groups are not just power brokers like the mayor, the head of the Chamber of Commerce, or the president of the PTA. Remember that stakeholders are not only those who influence a decision but also those who are affected by it and those who can aid or prevent its implementation.

We also tend to select the people who ask to participate. This leaves out groups who need to be involved but are reluctant to come to the table. By researching key interest groups you might uncover some nontraditional audiences such as church organizations, the local garden club, or university professors who have a strong role in the community.

When researching the key issues in a community or watershed, you will gather information to build a profile. By the end of your research, you will have defined the following:

- Primary geographic features, political boundaries, and landmarks in the area
- Major organizations in the community
- Key activities and where they occur (e.g., school football games, agricultural fairs, concert series)
- Influential persons and opinion leaders
- Knowledge in the community of your project issues
- Methods of communication in the community
- Attitudes and perceptions regarding your project issues

Where do you start?

Several resources are available to help you to determine the key interest groups in the community. As a first cut, consider researching local government agencies, local organizations, and the local media. This will give you a foundation to build on. As you talk to people, always ask them where you might find additional information about the community.

Community cultural profiling

The USEPA has put together an entire manual on profiling communities. It provides examples, worksheets, and a variety of methods for developing a detailed picture of a particular community. To receive a copy of Community Culture and the Environment: A Guide to Understanding a Sense of Place, *refer to the resources listed in Section 7.*

Tip:

If your primary stakeholders belong to an organization that meets regularly, consider starting the process by attending their meetings. Providing information and initiating a dialogue on their turf can help get the ball rolling in a relaxed, nonthreatening environment. As other stakeholders get involved the group can decide whether to start separate meetings or continue "piggybacking."

Local government

The first place to start might be the phone book. Check out the government listings in the blue pages and identify three or four departments to start with. These might include the department of parks and recreation, the department of soil and water conservation, the water and sewer authority, the office of economic development, and the planning department.

Local organizations

Local organizations can provide you with information on the community's interests and makeup. For example, if there are many churches in the area, the religious community might be an important key interest group. The local Chamber of Commerce can provide information on the kinds of businesses located in the community, business trends, and names of local business leaders. Recreational organizations can tell you about the kinds of activities available (e.g., birding, canoeing, and rafting) and the numbers of people involved.

To build a list of local organizations to contact, start with the community newspaper. Look in the calendar of events section, which shows what organizations are active and when they meet and provides contact information. Don't forget to look in the sports section, which might have a calendar of its own.

Typical departments in a local government

Building and Development
Community Services
Economic Development
Health Department
Land Records and Property Transfers
Libraries
Mapping and Geographic Information
Parks and Recreation
Planning and Zoning
School Board
Social Services
Soil and Water Conservation
Tourism Board
Water and Sewer Services

Information needed to identify potential stakeholders

Once you have identified several different groups to contact, you need to identify the kind of information that will be valuable in building your community profile and identifying potential stakeholders. There are no set questions to ask since the information you need will be related to your own internal goals. Some possible questions include the following:

- What are the problems affecting the watershed, from the community's perspective?
- Who has the potential to help protect the watershed?
- What are the political, cultural, and economic factors in the community?
- What are the demographics of the community?
- How is your organization perceived in the community?
- Who are the influential leaders—religious, civic, business?

Research local government, organizations, and businesses to identify potential stakeholders.

How do you get the information?

Once you have identified the types of information you need from the key interest groups, how do you get the information? You can use several different tools depending on the makeup of the community and your available resources (time and money). Any information you collect will be useful, so don't worry if you don't have access to

Possible contacts for identifying potential stakeholders

Agencies

Federal government

US Environmental Protection Agency

US Fish and Wildlife Service

Natural Resources Conservation Service

US Army Corps of Engineers

US Department of Transportation

State government

- *Department of Natural Resources*
- *Environmental Agency*
- *Department of Fish and Game*

Local government

- *Planning Commissions*
- *Conservation Districts*
- *Health Department*

Organizations

Civic organizations (e.g., League of Women Voters)

Religious organizations

Recreational organizations (e.g., Trout Unlimited)

Historical or cultural associations

Business organizations (e.g., Chamber of Commerce)

Environmental organizations

Financial institutions

Homeowner associations

Political organizations

Parent-teacher associations

Individuals

Landowners

Youth

Seniors

a Census Bureau database (see www.census.gov) or can't make your survey results statistically significant. Methods for gathering information range from visual observations to crunching data from research agencies. You'll probably use a combination of techniques that includes direct interaction with the community and indirect access through surveys, databases, and archives.

Indirect methods

Indirect methods to obtain information about potential stakeholders include surveys, newspaper archives, census data research, geographic information system data, and other techniques that do not involve face-to-face contact.

Surveys by mail
Mail surveys are an excellent way to get baseline information about a community. Before conducting a mail survey, make sure you'll be able to get current addresses for mailing. Keep in mind what information you want to collect, how you are going to use that information, and who is going to tabulate the data. This can save a lot of anguish once the results come back. From a respondent's perspective, make the survey relatively short (and explain up-front how long it will take to fill it out). State the objective of the survey clearly, make the format easy to read, and include a self-addressed stamped envelope to increase the return rate. If you want to make your results statistically significant, consult a marketing professional or college instructor for suggestions on random sampling techniques, follow-up prompting, and other issues.

Pros/Cons: Mail surveys allow participants to think about their answers before responding, can reach large numbers of people, and can gather data from people who might not be accessible in person. The disadvantages include printing and mailing costs, staff time required for tabulation of results, and the potential for low response rates.

Surveys by phone
Surveys by phone can also provide good information about your key interest groups. Again, make sure you have access to current phone numbers and the resources available (phones and volunteers) to carry out the survey. The success of phone surveys tends to vary geographically: rural audiences are more willing to take the time to answer questions than urban audiences. Standardize the greeting used by all of your volunteers, and practice proper phone skills. If a person called does not want to participate, thank the person and move on to the next one. Schedule calls at mixed times—some during weekends, some during the day, but most during the early evening (but not at dinnertime!).

Pros/Cons: Phone surveys allow data gathering from people who might not be accessible in person, elicit immediate responses, and can accommodate many participants. The disadvantages include the need

to access correct phone numbers for participants, lack of time for participants to think about their responses, level of resources involved, and exclusion of those who will not respond to unsolicited calls.

Databases
Many organizations collect information on their constituents and maintain the information in a database. This data can provide you with strong demographic information, indicate trends, and identify key people. Local public agencies such as planning departments and property tax evaluation agencies can provide information on zoning ordinances, trends in development, and revenue sources. Soil conservation districts keep records on land-use patterns, size of parcels, and farming practices. The Chamber of Commerce and other trade associations keep track of their constituents and the numbers and types of businesses located in the community.

Census data is collected every 10 years and was last collected in 2000. This data is available through the Internet from the U.S. Bureau of the Census at www.census.gov and from local libraries. If you do not have access to these files or do not have the resources needed to extract the information, consider asking a college marketing class for assistance. Often they are looking for real-world projects, and they might be willing to conduct a detailed analysis of the target group at no charge.

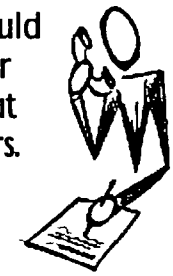
Pros/Cons: Databases can provide consolidated demographic data and can sort the data by different parameters. Some databases can be unwieldy to work with, are not current, or require technical expertise to extract the data. Databases do not provide qualitative information on behavior patterns or attitudes.

Local newspapers
The local papers can provide a tremendous amount of insight into a community. This is particularly important for small towns. The sports page shows you which teams are active in the area as well as recreational activities. Letters to the editor show you the issues and concerns of the community, and the events calendar provides information on the local organizations, cultural events, and happenings about town.

Direct methods

Direct methods tend to be more resource-intensive than indirect methods but provide qualitative information on attitudes, values, and behavior patterns. Direct interaction also helps you to start building relationships with potential stakeholders and allows you to pursue other lines of questioning that surveys may omit. Direct methods include focus groups, community meetings, and one-on-one interviews.

Phone surveys could be used to gather information about your stakeholders.



What you need to know about potential stakeholders

- *What is their knowledge of watershed issues?*
- *What are their attitudes and opinions about their community?*
- *How do they use the resource?*
- *What language and messages motivate them?*
- *Where do they get their information?*
- *Whom do they trust?*
- *What do they value in their community?*
- *What are the key local activities in the community?*

Focus groups
Focus groups provide an opportunity to meet with several members of the community at once and allow them the chance to expand on comments and ideas. The focus group participants may be selected through surveys, recommended by a particular organization, or selected at random. Typically, up to 12 members are asked to participate for one or two hours. Be sure to schedule the focus group at a time and place convenient for the participants. For example, many people, including government officials of small localities, have jobs during the day and are available to meet only after 5:00 p.m. The focus group should be handled by an outside facilitator to avoid introducing bias into the results. A series of questions are asked to the group and the answers recorded on flip charts or video/audio tape. Focus groups also enable you to start building a network of people you might want to use later to deliver your message.

Pros/Cons: Focus groups can provide insights about the interest group's composition, perceptions, and beliefs; provide interaction among participants; and build support for further actions or outreach. The disadvantages are that the success of a focus group depends largely on the facilitator, focus groups can accommodate only a few participants, and the time demand on participants is considerable. Finally, focus groups might not be suitable for certain cultures where peer pressure or deference to others might inhibit discussion.

Community meetings
Community meetings provide a forum to collect information on a variety of topics for all members of the community. The meetings can be unstructured in an open-house type of format, or they can be focused around specific issues. It's important to remember that you are still gathering information so you want to allow plenty of opportunity for the participants to share their thoughts, concerns, and suggestions.

Pros/cons: Once established, community meetings can be conducted on a regular basis to inform the group about stakeholder activities, solicit input, and maintain communication. Organizing community meetings is time-consuming, and often you're competing with other regularly scheduled meetings (e.g., school board, local board of supervisors).

Farmers' concerns about TMDLs

In response to a presentation made at a local Farm Bureau to introduce water quality issues and TMDLs, the Yolo County, California Resource Conservation District convened a focus group composed of area farmers. Their concerns included the following:

- *We don't have time to come to meetings*
- *We don't want a bunch of stakeholders that know nothing about farming telling us how to farm*
- *We want to be the only decision makers on these projects*
- *There are issues of private property rights*
- *How are we going to afford to make the changes in practices?*
- *We don't want to do something now and then have an agency come to us in a few years and tell us what we did is wrong and we have to change it*
- *We don't feel there is enough scientific data in place to tell us what we should be doing*

—Katy Pye, Yolo County Resource Conservation District

Using data-gathering techniques to collect community information

Goal: *To determine level of awareness and willingness of the community to participate in watershed protection activities.*

Methods: *Focus groups, surveys by mail, community meetings.*

Focus Group Questions

- *What community organizations do you belong to?*
- *Whom do you go to for advice about rangeland management?*
- *What are three things you value about your community?*
- *How do you spend your leisure time?*
- *Where do you get your information on environmental issues?*
- *What are some key activities that occur in your community?*
- *Do you think the water quality in your community is improving or declining? Why?*
- *How is the land managed in your community (ownership, leased lands, and land-use planning)?*

Survey questions

- *What do you think are the biggest problems facing your community?*
  (a) education
  (b) crime
  (c) water quality
  (d) taxes
  (e) other

- *In your opinion, what is the best use of the Rio Platte?*
  (a) irrigation
  (b) habitat for birds and wildlife
  (c) recreation (hunting, fishing, canoeing)
  (d) other

- *Please indicate whether you have a positive or negative view about the following groups, or indicate if you don't recognize the group.*
  (a) U.S. Environmental Protection Agency
  (b) Friends of the Rio Platte
  (c) Farm Bureau
  (d) Texas Fish and Game Commission
  (e) Trout Unlimited
  (f) Soil and Water Conservation District
  (g) Northeast Water Supply Association

Open house

- *Have you heard about our organization? If yes, from whom?*
- *Can you find where you live on this map?*
- *Which environmental resource(s) do you think best describes your community?*

What do you do when the landowner says "No"?

One of the first landowners I asked about streambank fencing said no. Since we felt like he was a key stakeholder, we didn't want to give up.

I would stop by when I was in the neighborhood and visit with him. We talked about everything but fencing. We were fencing in other areas at the time.

One day I stopped and asked him if fencing would be OK if I did it. He wanted to know how I was going to do it, me being a bureaucrat and all. I told him not to worry about that part. He finally agreed, if I did it.

I fenced it with a small grant for materials and I provided the muscle and sweat. He has been a good friend ever since and speaks highly of fencing.

—Frank Lucas, Pequea-Mill Creek Project, Natural Resources Conservation Service

You might need to use creative methods to involve some stakeholders.

What do you do with the information collected?

Once you have a picture of the values and concerns of various interest groups within a community, you can select possible stakeholder representatives to participate in your project. Go back again to your driving forces, goals, and objectives to determine if your list of stakeholders represents all of the issue areas.

Inviting the stakeholders to participate

Once you've developed a list of stakeholders, invite them to participate in writing. If someone in the community recommended them, be sure to include that person's name in the letter. To increase the chances of participation, tailor each letter with the reasons why they need to be involved in the project. For example, if you're trying to get representation from the building community, you might want to highlight the fact that no one from the building community is involved with the watershed planning process.

Follow up your letter with a personal phone call to answer any questions and confirm their participation. Be prepared for resistance. If the potential stakeholders say they can't participate in the kickoff meeting, make sure you send them any information that comes out of the meeting and ask if there is someone from their organization who could attend in their place.

Sometimes, no matter how hard you try, you won't be able to get key stakeholders to attend a meeting. This doesn't mean that you can stop trying. It means you have to use a different technique to keep them informed and enable them to participate in the decision-making process. For example, when working with farmers in a watershed, often the best communication tool is one-on-one contact with a farmer in his field. Use this opportunity to hear his concerns, explain the issues, and show him why it's important to be involved.

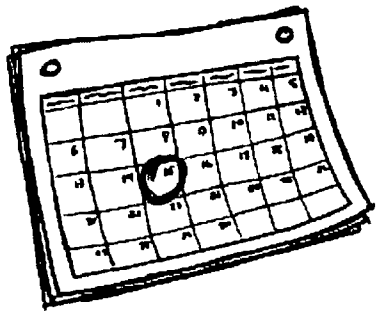
Sometimes stakeholders will say, "Just tell me when a decision is made." Again, it's up to you to continuously provide them with the information and allow them to enter the process when they feel ready.

If you still have gaps in your stakeholder group in terms of representation, don't worry. At the first meeting you can ask for suggestions for additional representation—stakeholders appreciate being asked for their input.

Hosting productive meetings

Because one of the primary tools for communication among stakeholders is "the meeting," this section presents some tips to make your meetings as productive as possible. There are four major elements to running a successful meeting:

- Provide advance notice to participants
- Develop a strong agenda
- Manage the process during the meeting
- Follow through



Successful meetings start with advance planning and advance notice.

Provide advance notice to participants

One way to set your meetings off on the right foot is to provide plenty of advance notice to participants. This shows respect for their time, demonstrates good planning skills, and increases the chance of attendance. If the stakeholder group will meet on a regular basis, try to establish a set date so everyone knows, for example, you will meet on the third Tuesday of every month.

Advance notice also refers to any materials the stakeholders need for the upcoming meeting. As part of agenda development (see section III) you will determine what information your stakeholders might need ahead of time to make informed decisions at the meeting. Make sure stakeholders have adequate time before the meeting to review such materials.

Develop a strong agenda

The agenda will serve as a road map to accomplish your meeting objectives. As a rule, the amount of time spent preparing for a meeting should be twice that devoted to the meeting itself. Before you can develop an agenda, you need to answer several questions. Each of these questions will provide information to help develop a strong agenda, which, when followed, will help you achieve your objectives.

1. **Why are you calling a meeting?** Often we call meetings first and then figure out what we want to accomplish in them. By first asking what you need to accomplish, you might determine that a meeting isn't necessary and that you can accomplish your goals some other way. Determining the purpose up front will set the stage for the rest of the elements that need to be considered. There are several reasons for calling a meeting. Some of the most common are sharing information, solving a problem, making a decision, tracking progress, celebrating achievements, and evaluating results.

What do stakeholders expect?

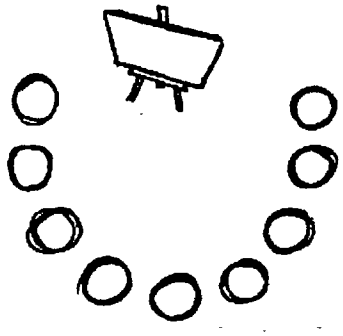
Researchers at the Social and Environmental Research Institute in Massachusetts summarized what participants expect of a public involvement process in a paper published in Society and Natural Resources: *access to the process, power to influence the process and its outcomes, access to information, a structure that promotes constructive interaction, facilitation of constructive personal behaviors, adequate analysis, and the enabling of future processes.*

2. **What do you hope to accomplish?**
   Determine what you hope to leave with at the end of the meeting. Are you looking for agreement on an issue? Increased awareness of an issue? A list of goals for an activity? If you can't clearly outline the desired results, chances are you need to go back and focus on the purpose of the meeting.

3. **Who needs to attend and what are their roles?**
   Based on your desired outcomes, determine who needs to be involved in the meeting. Nothing is more frustrating than holding a meeting and realizing that you can discuss an issue to death, but the one person who can make a decision on that issue is not present. Determine what the participants' roles will be. Who will lead the meeting? Do you need a facilitator? Who will take notes? How will decisions be made?

4. **What topics need to be discussed to reach the desired outcome?**
   Deciding on topics will help determine if materials need to be sent out ahead of time so that an informed decision can be made. It will also help in allotting time on the agenda for discussion. You may find that you will not be able to discuss all of the proposed topics and will have to narrow the list.

5. **What are the room layout arrangements?**
   The room layout is critical to the success of your meeting. Considerations include seating arrangements, lighting, and placement of equipment. If the room arrangements are not optimal, they can detract from the content of your meeting. The room layout will depend on several factors—the size of your stakeholder group, the length of the meeting, and the size of the meeting room. If possible, try to set up the seating so that all members can see each other using a U-shaped or semicircular arrangement. Tables in front of the participants create a barrier, but they also provide a place for notebooks, cups, and so forth. You want to create an environment that will stimulate discussion. Try to match the room size with the size of the group because some people are reluctant to speak in a cavernous room.



A semicircular arrangement allows members of the group to see each other.

Once you have answered the above questions, you can develop an agenda that is focused on the desired outcomes, allows enough time for discussion of key issues, and is structured so participants will feel they have contributed to the desired outcome.

Manage the process

The person responsible for managing the process of a meeting ensures that the desired outcomes are achieved and the participants feel they have contributed to the end result. It's not good enough to

reach a decision if the participants don't feel good about the process.

☞Section 5 goes into more detail about managing the process during the meeting (such as getting agreement on issues, maintaining balanced participation, and resolving conflicts), but there are some tips to follow to start a meeting off on the right foot.

1. **Have the participants introduce themselves.**
   Even if they just say their names, it breaks down a psychological barrier of speaking out loud. If time permits, you may want the participants to share something about their community or themselves to start building relationships.

2. **Review the agenda and the desired outcomes.**
   Make sure everyone is clear on the objectives of the meeting and what you hope to accomplish.

3. **Review the roles of the participants and how decisions will be made.**
   Participants can play various roles in a meeting—participation, information management, process management, and decision-making. Make it clear to the participants what their roles are. If there is an outside facilitator, the facilitator will introduce himself or herself and explain that he or she is there to manage the process, not the content, of the meeting. Explain the decision-making methods for reaching an agreement (majority vote, consensus, or information-gathering with another entity responsible for the ultimate decision).

4. **Develop ground rules.**
   Setting ground rules at the beginning of a meeting helps to focus the participants on the task at hand and provides a structure for the meeting. The facilitator should use the ground rules to guide the meeting and refer to them if they are not being followed. Typical ground rules include the following:

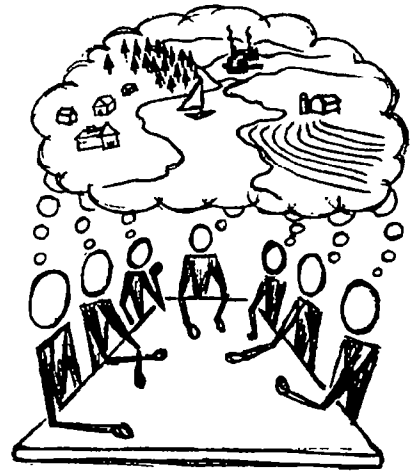
   - Honor time limits
   - Speak one at a time
   - Refrain from personal attacks
   - Maintain confidentiality

   Allow the participants to add additional ground rules they would like to see observed.

5. **Keep time on your side.**
   One of the easiest ways to lose credibility with a group is to disregard the time limits established for a meeting. If you said the meeting would start at 8:30, but you want to wait another 15 minutes for people who are late, you are in effect punishing the folks who made an effort to get there by 8:30. It also sets a

Visioning exercise

An excellent way to begin the stakeholder process is to conduct a visioning exercise, where public agency representatives, stakeholders, and other interested parties brainstorm on how the resource should look and function 10 or 20 years from now. Although vision statements are necessarily broad and lack detail, they are usually agreeable to nearly all participants and thus serve as an important touchstone later in the process, when discussions over devilish details require the perspective of a consensual "big picture."



bad precedent: no one will show up on time for the next meeting because they know you'll start late. The same is true for ending your meeting. People have other commitments, and it's presumptuous to assume that you can continue past the designated adjournment time. At the very least you should poll the group and ask if people are willing to stay an extra 15 minutes.

Follow through

Once the meeting is over you're still not done. Remember what your third grade teacher told you about how to write a story—tell them what you're gonna say, say it, and tell them what you said. A successful meeting will conclude by summarizing what occurred during the meeting, identifying action items based on the discussion, assigning individuals to accomplish those action items, and thanking all of the participants.

It is important to review the action items with the participants to make sure there is agreement on the next steps. Finally, remember that the final element of a successful meeting is producing and distributing a meeting summary. Effective meeting summaries are brief and well organized and are distributed soon after the meeting.

Vision 2025

The Los Angeles and San Gabriel Rivers Watershed Council is a consortium of community groups, government agencies, businesses, and academic institutions working to restore, preserve, and enhance watersheds in Los Angeles County. The vision of the council for the year 2025 states that "our watershed and our communities will be renewed through an integrated and cooperative approach to restoring the environment and the economy, creating a more livable future."

Conducting the first meeting

The first meeting with the stakeholder group can set the tone for the rest of the process, so careful planning is needed to ensure a smooth beginning. Before setting the date and time, poll the stakeholders on the most convenient day and time for them. Remember that most of your stakeholders have other jobs so they may not want to meet during the day. By asking them first, you are letting them know that this is their group and you are trying to accommodate their schedules, not yours.

Send materials out early

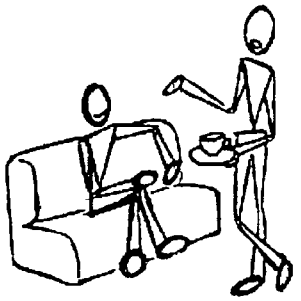
Mail any agenda materials and background information well ahead of the meeting to allow participants time to review them. E-mail and web site posting are tremendous assets for circulating pre-meeting information. In addition, personal phone calls to members to ensure they received the information and know how to get to the location go a long way in building relationships. Use the phone call as an opportunity to allow the stakeholders to voice any potential concerns or needs that you can resolve before the meeting (*I'm a vegetarian... Is the building wheelchair accessible?... I never got an agenda... You spelled my name wrong on the stakeholder list...*).

Consider providing 3-ring binders at the first meeting with the members' names printed on them that they will use throughout the project to organize all of the materials distributed.

Include time for social interaction

Include time for socializing. Consider starting the meeting with a social hour. This immediately puts people at ease and allows them to meet their fellow stakeholders informally. If the meeting is to be held during the day, begin with lunch before getting into the agenda items.

Also, make a point to remember members' names and to use them during the meeting. It's amazing how just a *"Good point, Bob"* or *"Justine was talking at the break about..."* or *"Tom, were you the one who mentioned..."* can go a long way toward making people feel worthwhile and included in the process. As people become familiar with the names of others at the meeting they will become more comfortable and considerate in their discussions and deliberations.



Allow time for social activities to break the ice and put your group at ease with each other.

Prepare an agenda

The agenda for your first meeting will obviously depend on your overall project objectives. It can be highly structured or simply a forum for group discussion. Whatever the case, it should be based on careful planning. In a watershed management planning process, the first meeting could focus on introduction to the issues and review of the preliminary framework to determine how the group will operate. Allow plenty of time on the agenda for group discussion to avoid one-way communication. As the watershed assessment, planning, and management processes unfold, meetings will focus on reviewing past activities, future plans, and adjusting the approach as new information comes in.

Building a stakeholder operating plan

It is helpful for the stakeholder group to develop an operating plan to outline the roles, structure, membership, and activities that will be conducted. There are many ways to develop this plan, and the approach used will depend on the group. A constant challenge to working with a stakeholder group is providing enough information to be useful in moving the process forward without undermining the group's input or giving the impression that decisions have already been made. It may be helpful to present the preliminary framework you developed when researching key audiences (☞Section II) and then let the group tailor it to their needs at the first meeting. If your stakeholders are new to the group process, it's often helpful to give them something to react to.

The operating plan may include the following elements: program goals, stakeholder goals, ground rules, roles, responsibilities, decision-making methods, and products. Again, this is only a guide. The plan will change and evolve as your group progresses.

Key elements of stakeholder operating plans

Program goals

Ground rules

Roles, responsibilities, and decision-making methods

Stakeholder goals, objectives, and tasks to achieve the goals

Products from the stakeholder program

Example stakeholder involvement issues to address during the watershed assessment, planning, and management process

Why are we here, and what is the challenge we're facing?

- *Why do the watershed assessment/plan now?*
- *County's key objectives of this project. Develop a plan that:*
  - *Supports the designated uses of streams and lakes*
  - *Protects water quality and enhances water quality where needed*
  - *Alleviates flooding as development occurs*
  - *Provides for a safe, adequate water supply*
  - *Supports wastewater, water withdrawal, and storm water permitting decisions*
  - *Increases awareness about water quality problems and solutions to protect water quality*
  - *Increases the understanding about the linkage between land use alternatives and water quality and flooding*
- *Discussion:* Are there any questions about the driving forces behind this project and the County's objectives? What are other objectives and considerations that should guide the assessment and evaluation of management options?

Key milestones in the project

- *Characterize the watershed*
- *Conduct scoping modeling analysis*
- *Conduct inventory of drainage*
- *Conduct field visits with the stakeholder group*
- *Develop detailed water quality and quantity models*
- *Identify promising watershed management strategies*
- *Use the models to assess the effectiveness of the alternative strategies*
- *Design and begin implementing a long-term monitoring program*
- *Develop draft management plan*
- *Committee recommends/endorses management plan*
- *County (and others) adopts management plan*

Stakeholder roles

- *Clarify overall project goals and objectives*
- *Review the scoping-level analysis and recommendations for future, general options to explore*
- *Provide input on proposed water quality and quantity indicators and targets*
- *Help develop evaluation criteria for analyzing management options*
- *Help screen for promising management options to model*
- *Review findings of the modeling analysis and provide input on the preferred management strategies*
- *Review and provide input on the proposed monitoring plan*
- *Review and provide input on the draft management plan*
- *Help conduct community education and outreach throughout the process*

Discussion questions

- *Do you have questions about any of the specific tasks or how they relate to each other?*
- *Are there questions about the input we need from you and how it will be used?*
- *Helping provide community outreach and education will be a key role. What materials would be the most helpful for you to take out into the community?*
- *From your experience, are there other water quality issues that the community is currently concerned about that we should address in the modeling and management plan?*
- *Given projected growth, can you think of potential future issues that we may need to address related to our scope of work?*
- *Are there other objectives and considerations we should weigh as we develop and evaluate management strategies? (Note: These objectives might include other planning objectives, cost to utility customers, impacts on landowners, equity, etc.)*

Section 5:

Keeping the Ball Rolling

What you have done so far . . .

- ✓ Identified internal goals and objectives
- ✓ Outlined a stakeholder operating framework
- ✓ Conducted outreach activities
- ✓ Researched key interest groups
- ✓ Identified and engaged key stakeholders
- ✓ Convened the first meeting
- ✓ Developed a stakeholder operating plan

Top 12 tips to move the process forward

Although stakeholder processes can be long and involved (someone once described stakeholder involvement as a turtle—slow and ugly), there are some specific tools you can use to smooth out the road ahead and build trust within the group.

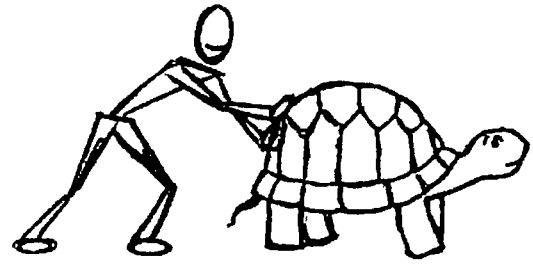
Keeping the momentum going throughout the life of a stakeholder process can be challenging, to say the least. The two most common causes of burnout are too many meetings and the feeling that the process is not progressing or worthwhile. Through careful planning and common courtesy, you can reduce the chances of participant burnout and maintain the energy level of the group.

1. **Involve stakeholders as soon as possible**. Many agency personnel are reluctant to bring in stakeholders too early in the process. They would rather wait until they have something to "show them." The early stage is actually the best time to involve stakeholders. Nothing can derail the process faster than asking for input after a decision has already been made. As soon as you know that you need the involvement of stakeholders, start involving them. Allowing stakeholders to help set the tone and the pace of the effort as it begins helps to maximize interest and buy-in.

2. **Be honest**. Building on the previous tip, lay all of your cards on the table at the beginning. If you're really not sure how the process is going to work, tell the group. It's OK not to have the answers, but it's not OK to mislead the group. This is particularly important with the decision-making methods. If the group will

What's in Section 5?

- Top 12 tips to move the process forward
- Making decisions by consensus
- Resolving conflict



Keeping the stakeholder process moving can be a challenge.

not have any decision-making authority, tell them up front. This will help reinforce to the group that there is no "hidden agenda."

3. **Listen.** Listening is not as easy as it sounds. Often we are so focused on how we are going to respond to what is being said, that we miss what's being said altogether. Active listening involves paying attention with both your body and your brain. Your body language—eye contact, your stance, how your arms are positioned—communicates a lot about how you're listening. Allow your brain to process what the person is saying without worrying about your response. Often the best response is no response. To make sure you have understood what was said and to let the speaker know you were listening, repeat what was said or ask a follow-up question to continue the dialogue.

4. **Communicate clearly and often.** Clear and frequent communication is essential. Do not assume your stakeholders understand the issues and processes. Many of your stakeholders may not be trained in the sciences and may not be comfortable with technical terms. Ask for feedback to see if the stakeholders understand the information being presented, or have them explain the concepts discussed to see if they are clear. Avoid the use of acronyms and techno-jargon!

   Ask your stakeholders how they would like to communicate with each other and outside the group. Choose several formats (e.g., e-mail, newsletters, phone chains, web sites, meetings) depending on the level of communication needed.

5. **Recognize differences early on.** It's OK to disagree. If you try to ignore conflict or make people think they're one big happy family (when they know they're not), you lose credibility. Accept and applaud the fact that everyone is at the table for different reasons, emphasizing that all they're there to accomplish common goals.

6. **Don't leave out stakeholders because they're difficult.** Inviting to the table those expressing the most intense opposition may cause some initial discomfort, but there are many potential benefits. They will likely bring considerable energy and a host of new perspectives to the process. In addition, they may have the ability to educate and activate others who were not accessible to the original team. Finally, if the opposition group has the ability to stop the planning/management process through legal or other means, it might be wise to work with its members and avoid a showdown in the courts or elsewhere. Nothing is gained by excluding people from the stakeholder group purely because of their views, criticism, or concerns. The ground rules for mutual respect, however, must be followed.

Getting started with stakeholders

Dave Martin of the Montana Department of Environmental Quality has some simple advice for managers who are initiating a stakeholder involvement program. Martin recommends attending regularly scheduled meetings of stakeholder groups (e.g., county soil and water conservation boards, environmental organizations, livestock producer committees, recreation groups, etc.), which provide a comfortable setting for stakeholders to hear about proposed watershed planning and management activities. When explaining new water quality or habitat improvement initiatives to those in attendance, Martin recommends "talking a little and listening a lot."

Why isn't this going to work?

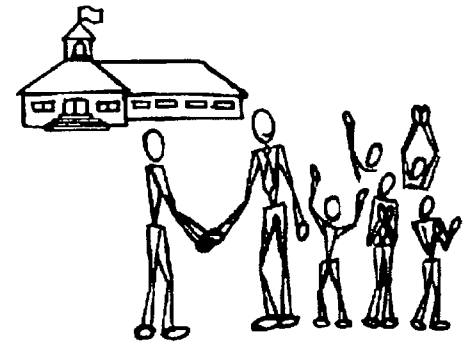
Sometimes, if you start a process by asking why it's not going to work, you can disarm resistant attendees and uncover various interests, opinions, and attitudes. Once you have identified the universe of barriers, you can address each one and try to identify solutions that will move the process forward.

7. **Focus on their issues.** Remember that people will bring their own concerns and issues to the process. Instead of focusing on how you're going to meet your internal goals, concentrate on meeting their needs. This will keep them involved in the process and help build trust throughout the effort.

8. **Establish mini-milestones.** Because stakeholder processes tend to be long and drawn out, it is important to achieve and build upon small successes. These mini-milestones can be used throughout the process to show success and keep the group energized and motivated. Start off with some projects that are likely to be noncontroversial and ones that will benefit most of the group members. This shows them that they can work together and produce something tangible. Examples of small projects include developing a slide show, holding an open house for the community, and creating a general brochure on the project.

   Use on-the-ground projects that stakeholders can see in their community to show their results. For example, host a stream cleanup, partner with a local school or garden club to landscape a common area, stencil storm drains, or hand out watershed materials at local events.

Establish mini-milestones such as community projects that will show positive results and keep the group motivated.



9. **Commit the resources needed to achieve your objectives.** Make sure the resources (personnel and financial) will be available to the group. Coordinating and maintaining stakeholder groups can be a substantial drain on resources. If your agency or organization is only providing seed money for the process, consider applying for grants (☞see Section 6) or getting in-kind services from members of the group. Keep your activities and projects in line with your budget. Don't go through the process of selecting activities that you know you won't be able to implement with your budget. Don't duplicate the efforts of other groups.

10. **Call a meeting only when it's absolutely necessary.** Are you calling a meeting just because you said you were going to, but you don't really have any new information for the group to consider? Meeting burnout is one of the most common by-

What do you do when stakeholders don't like outsiders?

Work in the Pequea-Mill Creek Project areas in Lancaster County, Pennsylvania, has relied on one-on-one landowner visits and heavy use of private funding channels to overcome the reluctance of Amish farmers to get involved in government programs. "Our goal is to install stream bank fencing on about 40 farms," said project coordinator David Wise. "Landowners are interested in on-site benefits, not saving the bay. Herd health, ease of conversion to rotational grazing, and improvement of wildlife and fish habitat have been major reasons for participation."

—David Wise, Ducks Unlimited, Inc.
(717) 733-0301

Nothing succeeds like success

When trying to reach consensus on pursuing a regional approach to managing our water and sewer needs among five localities, there was a great reluctance among the board of supervisors to cooperate with each other. Instead of trying to establish a regional management entity up front, we identified a project that all of the utilities could agree on—developing a wasteload allocation for the region—to show that we could work cooperatively and that addressing these issues on a regional scale made sense.

—Tim Slaydon, Director of Utilities
Spotsylvania County, Virginia

products of the stakeholder process. Think long and hard before asking your stakeholders to take time out of their schedules to come to a meeting. Try to communicate information to stakeholders through a flyer, phone call relay, or web site. Reschedule agenda-less meetings for a later date when there will be more substantive information to discuss. This will show that you value stakeholders' time and will reinforce the notion that when a meeting is planned, it is because key issues will be discussed and their participation is required.

Consider holding your meetings in creative locations to provide an educational opportunity for the participants. This approach gives the stakeholders a sense that each meeting is like a field trip. Possible meeting sites include the community wastewater treatment plant (try to arrange for a tour), the local high school (have a science teacher or a student make a watershed-related presentation, someone's home (this creates a warm, social environment), the police station, the zoo, the Chamber of Commerce, a marina, or a funky local restaurant. The possibilities are endless.

11. **Give feedback and praise**. We all like to know if what we're doing is having any affect on the outcome of a process. Stakeholders are no different. Give feedback to the group to show them how their efforts are moving the process forward. Provide

The BBCC works to avoid "reinventing the wheel" and has fun at the same time

The Black Bear Conservation Committee was formed in 1992 to transform the image of a threatened species from a liability for landowners to an asset and to develop management plans for increasing bear habitat from the Tensas River in northeastern Louisiana southward to the Gulf. After convening an impressive group of more than 70 corporate, public agency, agricultural, environmental, private, and university organizations, the BBCC developed restoration goals.

Attention to the human, social element—typified by informal, congenial cookouts prior to focused meetings designed to seek consensus and resolve conflict—has been cited as one of the more remarkable features of the group. As BBCC coordinator Paul Davidson puts it, "If your meetings aren't any fun, nobody will come to them."

The Black Bear Conservation Committee focuses its efforts on areas of concern that other entities are unwilling or not equipped to address. There is no need for the BBCC to get involved in land acquisition when other organizational members are in that business.

The BBCC does excel in conflict management and educational efforts. "By not competing with other groups we help to perpetuate positive attitudes and keep our efforts prioritized so that we get the most return on our investment of time and limited resources."

—Paul Davidson, Black Bear Conservation Committee

everyone with articles written about the project, publish data that they collected, pass on positive feedback from key decision makers. After a key event or decision point, write a personal letter to the stakeholders thanking them for their participation. Highlight key activities and participation by the stakeholders. Recognize the members who make substantial contributions of time and energy. If you produce an internal newsletter, consider profiling a stakeholder in each issue. Use quotes from stakeholders in articles.

12. **Make it fun**. The issues you're dealing with are serious, but that doesn't mean you can't have fun. Often the best way to start building relationships within the group is through social activities. These allow group members to interact and learn about each other on a personal level and can help alleviate possible conflicts down the road. Remember that meetings are not the only forums available to communicate with your stakeholders. Periodically, invite stakeholders and their families to an event that is purely social. Throw a barbecue along the river, sponsor a canoe trip, or have a crab feast. This allows relationships to be built and shows that you appreciate their hard work.

An occasion for a purely social event can help build relationships between stakeholders.

Making decisions by consensus

Because many stakeholder groups use consensus as a basis for making decisions, this section provides some tips on basic facilitation techniques to prevent the process from getting bogged down and stagnating. It is often advisable to retain an outside facilitator to work through the consensus-building process or at least to have someone who is trained in facilitation and is perceived as a neutral party.

The definition of consensus is ***a decision that the group can live with***. Consensus is not a majority vote. It is important to remind the stakeholders that consensus does not necessarily mean that they are supporting their first choice, but they are willing to support the decision selected. When making decisions by consensus, you must indicate up front a fallback position if consensus can't reached. For example, "If we cannot reach consensus on the management options to pursue, the county will have to select the options," or "If we cannot reach consensus on which watershed projects to fund, we will vote and go with the majority decision."

The key to any consensus process is to get agreement on something. How many times have we had all of our ideas taped up on the wall of a meeting room but were unable to get closure on which ideas to pursue? This section briefly reviews how to build an agreement.

Open-Narrow-Close

Interaction Associates, Inc., has developed a useful model for reaching an agreement called *Open-Narrow-Close*. (See Section 7

When working with stakeholders...

Do...

Start early

Recognize differences

Achieve a broad representation

Communicate clearly and often

Be honest

Listen carefully

Build on successes

Commit resources to complete activities

Focus on issues that are important to them

Make it fun!

Don't...

Bring stakeholders in at the end of the project

Set unrealistic goals

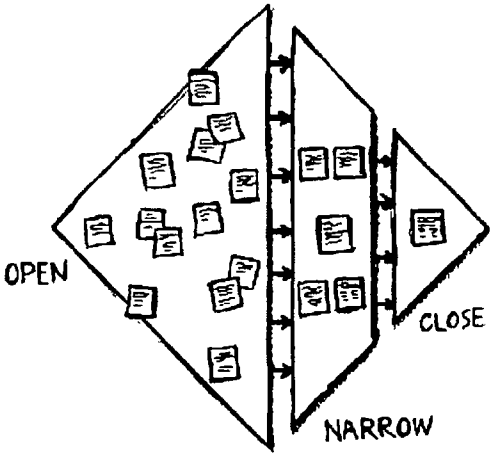
Leave out key stakeholders because they are difficult

for more information on Interaction Associates facilitation courses.) The basic steps to building an agreement are to gather or generate information (open), organize the information (narrow), and reach an agreement on the best approach (close).

Using sticky notes

Many groups use sticky notes to generate and sort through ideas. Have each participant write down one idea per note and then post the ideas on large sheets of paper taped to the wall. This allows you to easily group the information into categories and sort and rank the information later.

Before opening the floor for ideas, it is sometimes helpful to identify the screening criteria you will apply during the narrowing phase. This helps to bring forward topics that focus on considerations related to the end result or key aspects of the overall goals and objectives. The screening criteria can be anything the group agrees to. Some common criteria include relative effectiveness, time limits, cost considerations, geographic focus, and the ability to measure results.



Open

In the open phase the purpose is to generate ideas and stimulate discussion. It is important to stress to the group that you are not evaluating any ideas at this point. Approaches can include free-style brainstorming, going around the table and letting each person offer a suggestion, or starting with an initial list and having the group add to it. Taking turns and having people contribute one idea each time allows more people to participate, which promotes buy-in during the process.

Once all of the ideas have been generated, it is important to check back with the group to make sure everyone understands the ideas. If someone is confused, have the person who mentioned the idea explain it to the group. If your stakeholder group is a subset of a larger management effort, you may start the open phase with the proposed recommendations from the technical committee and then have the group add to them.

Narrow

During the narrowing phase you are trying to organize the information and get a sense of priorities. It is important to stress that no

Setting restoration project criteria in the state of Washington

The King County Engineering and Environmental Services Division developed the Small Habitat Restoration Program (SHRP) in response to disappearing spawning and rearing habitat for salmon, extreme bank and channel erosion, sedimentation in stream and wetland buffers, and water quality degradation.

To meet program goals, a Habitat Advisory Group established a set of guidelines for selecting projects. These guidelines stated that projects should be located in or along natural stream systems and/or wetlands and their buffer zones; should originate from county staff members, the public, or community groups; should include as partners other groups, governments, volunteer organizations, and/or fish and wildlife agencies; and should be constructed primarily with Washington Conservation Corps crews and volunteers, using low-cost materials.

decisions will be made during this phase. The first task is to combine any obvious duplicates. Remember to ask the group if it's OK to combine issues. Sometimes what may seem obviously related to you is distinctly separate to someone in the group.

Techniques to organize the information include applying the screening criteria to the issues, grouping similar topics, taking straw votes, and giving each member a certain number of votes to rank their preferences. This can be done by raising hands or by giving them one or more stickers to place directly on the flip charts. This allows you to see which issues are the most active and which ones you can target for elimination in the next phase.

After you have used the narrowing techniques, it is important to allow the members a chance to advocate for a particular issue, even if it did not score very high in the ranking process. This allows members to express their views and provide background information that can sometimes change people's minds.

Once you have a sense of the participants' priorities, you can start the closing process.

Close
During the closure phase, you remove ideas until you are left with the best approach or choice. The objective is to start with the ideas that have received the least attention. Based on the prioritization in the narrow phase, you should already have an idea of the level of interest on the various topics.

Ideas can be removed by negative polling. For example, you ask the group, "Is there anyone not willing to remove number 5 from the list?" If there is no opposition, physically remove it and praise the group for making progress. Then, working from both ends (using straw votes or negative polling), try to determine which topics the group wants to keep and which ones can be eliminated.

When two or three topics remain, you'll probably have more discussion on the merits of each and can determine if these discussions influence the group. One option is the "build up/eliminate" approach, which asks what must be added to or removed from a particular topic for the stakeholders to support it. The "both/and" technique allows you to choose more than one option if the participants agree. Don't force yourself into choosing between two ideas if you don't have to. For example, if you're left with two potential watershed projects to fund, maybe both watershed projects can be funded, with the total funding split between the two efforts.

Bring everyone along together

When building agreements with stakeholder groups, it's important to make sure that everyone is on the "same page" and that every-

Different Ways to Generate Ideas

Propose
(limited opening)
Someone leads off the discussion

List
(moderate opening)
Let's list 4 or 5 items that we want to address

Brainstorm
(wide opening)
Let's get all our ideas out first

Narrowing the field of possibilities

Combine obvious duplicates
to eliminate redundancy

Prioritize by using N/3
number of ideas divided by 3 = the number of votes each person gets

Apply screening criteria

Use straw votes
show of hands

Advocate
allow anyone to advocate for an issue

Closing in on a final decision

Negative poll
Is there anyone not willing to take #5 off the list?

Build up/eliminate
What can we add to option B to make it work for you?

Straw poll
Let's get a quick show of hands. Who wants to keep this one?

Both/and
Can we go with both of these?

Example Showing Open-Narrow-Close in Action

Situation

Your watershed group (nine persons) has received $10,000 to fund a watershed project in the community. Which project do you fund? (Note: Techniques used are highlighted in **bold**.)

Screening Criteria:
- ✓ Project must be completed in a year.
- ✓ Project must contribute to an improvement in water quality.
- ✓ Project must occur in the West Fraser watershed.
- ✓ Project must be doable with $10,000.

Open

*"Let's **brainstorm** some projects that we can fund."*

1. Conduct storm-drain stenciling in the town of West Fraser.
2. Plant a riparian buffer along Goose Creek.
3. Fence off 20 miles of stream along the Malone Dairy Farm.
4. Conduct a training workshop to educate development contractors on erosion control practices.
5. Conduct stream sampling to determine levels of fecal coliforms in the West Fraser River and publicize the results in the media.
6. Hold a fall watershed festival.

Narrow

Combine any duplicates.
Apply screening criteria.
"Which projects don't meet the criteria?"
"Goose Creek is not in the West Fraser watershed." (Eliminates # 2.)
"The watershed festival doesn't really improve water quality." (Eliminates #6.)

Bob: *"I think we should leave in the erosion and sediment control workshop because even though there isn't a direct benefit to water quality, there is an indirect benefit."* (You **ask the group** to raise their hands if they would like to leave #4 up. The group agrees to leave #4 on the list.)

Vote for preferences: *"With the remaining projects, let's have everyone cast three votes for their choices"* (using **N/3**, 9 people divided by 3 = 3 votes each).

1. Conduct storm-drain stenciling in the town of West Fraser. (6 votes)
2. ~~Plant a riparian buffer along Goose Creek.~~
3. Fence off 20 miles of stream along the Malone Dairy Farm. (11 votes)
4. Conduct a training workshop to educate development contractors on erosion control practices. (2 votes)
5. Conduct stream sampling to determine levels of fecal coliforms in the West Fraser River and publicize the results in the media. (8 votes)
6. ~~Hold a fall watershed festival.~~

Advocate: *"Does anyone want to advocate for a particular issue?"*

Sheryl: *"I think fencing off the stream alongside the Malone farm makes the most sense. His farm is the largest dairy operation in the county and we already know that fecal coliforms and sedimentation are our biggest problems. A lot of that is probably caused by cattle grazing along the streams. But I think we need to do some sampling too, so we can see if fencing the cattle out improves the situation."*

Close

You are left with four choices and have to get to one. Based on the N/3 vote during the narrowing phase, you start with the choices that received the least attention.

Negative polling: *"Based on the discussions, is there anyone not willing to take #1 (storm-drain stenciling) off the list?"* (Agreement to eliminate #1.)

1. ~~Conduct storm-drain stenciling in the town of West Fraser.~~ (6 votes)
2. ~~Plant a riparian buffer along Goose Creek.~~
3. Fence off 20 miles of stream along the Malone Dairy Farm. (11 votes)
4. Conduct a training workshop to educate development contractors on erosion control practices. (2 votes)
5. Conduct stream sampling to determine levels of fecal coliforms in the West Fraser River and publicize the results in the media. (8 votes)
6. ~~Hold a fall watershed festival.~~

"OK, we're left with numbers 3, 4, and 5. I haven't heard too much discussion on #4. Is there anyone not willing to take #4 off the list?" (Agreement to remove #4.)

1. ~~Conduct storm-drain stenciling in the town of West Fraser.~~ (6 votes)
2. ~~Plant a riparian buffer along Goose Creek.~~
3. Fence off 20 miles of stream along the Malone Dairy Farm. (11 votes)
4. ~~Conduct a training workshop to educate development contractors on erosion control practices.~~ (2 votes)
5. Conduct stream sampling to determine levels of fecal coliforms in the West Fraser River and publicize the results in the media. (8 votes)
6. ~~Hold a fall watershed festival.~~

Both/and: *"OK, we're left with choices 3 and 5. Can we combine numbers 3 and 5 to fence off the stream and conduct coliform sampling at just the Malone Farm, to see if the fencing program works? We'll probably get some good results from the sampling that we could publicize in the media. It might make others fence off their streams."* (Agreement on amending and combining the two choices.)

Decision: The watershed group agrees to fund a $10,000 project to fence off 20 miles of stream next to the Malone Dairy Farm and monitor the river to determine the water quality results. Findings from the sampling program will be publicized in a feature newspaper article on the project.

one is moving through the process together. It's like leading a group on a field trip to an art museum. You have to wait for the stragglers to catch up before you can begin talking about the next painting. If you rush to the next issue without ensuring that the group is with you, you risk having to discuss a topic again or realizing that their concerns were not addressed and you have to go back to square one. Some common places in the process where you may get bogged down because you have lost part of the group include the following:

Tip:

Avoid conflict by providing opportunities for stakeholders to interact at unstructured, informal social events. Watershed management is based on relationships among people. They need to get to know each other if they are to build a cooperative, coordinated watershed program.

No commitment to the problem. If you don't get agreement on what the problems are at the beginning of the effort, the stakeholders may not feel that it's worth the investment of their time.

Poor problem definition statement. Sometimes the group jumps ahead and states the problem as a solution. For example, stating a problem as "there are no riparian buffers in the watershed" is a solution. The problem statement might be "Increased sedimentation and elevated temperatures in the stream." Once the problems are clearly identified, alternative solutions can be proposed.

Resolving Conflict

Conflicts are inevitable, but not impossible to resolve constructively.

Hopefully, by following the steps above you have reduced the chances for conflict to occur. You have structured an open, honest process, listened to stakeholder concerns, and communicated with the stakeholders clearly and often. But, invariably, when different personalities are involved and the stakes are high, conflict can result.

To resolve conflict, you must first uncover the underlying interests or needs that cause people to take a particular position on an issue. When those interests or needs are evident, it is often possible to deal with them constructively.

What is conflict?

Conflict results when people have different positions on an issue and they don't believe it's possible to reach an agreement.

Know the difference between a need and a position

Often a stakeholder will express his or her concerns in the form of a position. It is very difficult to make progress when working with conflicting positions. Try to get stakeholders to state their concerns in terms of needs. For example, if a farmer says that he refuses to fence off his streams, ask him what his needs are for his cows. That prompts him to state his concerns differently, providing you with some issues you might be able to work with.

Position: I won't fence off my streams.

Need: My cows need access to water.

In this example, if the need for water can be addressed, the farmer might be willing to consider having his stream fenced. Sifting through positions on issues to get to the underlying needs or interests can be a delicate process. Often, the need relates to financial issues—funding for management practices, training on sediment and erosion control,

incentives for setting aside riparian buffers, money to upgrade on-site wastewater treatment systems, etc.

Finding the resources to implement management strategies takes the energy of the entire stakeholder group. ☞Section 6 provides a brief overview of funding issues, but the best way to attract financial support is to build an energetic, unified stakeholder group committed to addressing the interests and needs of its members. Public and private entities like to fund projects with lots of local support and enthusiasm.

Establishing the real needs and concerns of stakeholders will help resolve conflicting positions.

Use your active listening skills

Active listening skills are crucial in identifying and resolving conflict. Some techniques to use include the following:

- **Clarify.** As a first step, have people state their positions and repeat them back to the group to make sure everyone is clear. *"John, could you restate your concerns for me?"*

- **Reflect.** Ask each party to restate the other's position. *"John, could you restate what Bob's concerns are about fencing off the streams on his farm?"*

Some general observations regarding conflict and conflict resolution

- ✓ Conflict is a natural and normal phenomenon and is associated with nearly all human relationships.
- ✓ There are several basic human needs that are especially pertinent to conflict and conflict resolution—the need for recognition, development or fulfillment, security, and identity.
- ✓ People get involved in conflicts because their interests or their values are challenged, or because their needs are not met.
- ✓ It is easy to resolve a conflict stemming from a clash of interests. It is more difficult to deal with a conflict that arises from a clash of values. It is even more difficult to handle a conflict in which at least one party's basic needs are not satisfied.
- ✓ It is extremely difficult for the parties to the conflict, even with outside assistance, to find a solution that would completely satisfy everyone's needs.
- ✓ Mediators, intermediaries, and other third parties can't resolve conflict – they can only facilitate involving the parties directly so they can resolve it themselves.
- ✓ Despite the limited role of facilitators, some conflicts cannot be resolved without their help. The involved parties' perceptions of each other and of the issues of the conflict can be so biased and so limiting that they cannot mutually satisfactory options even when they have the desire to settle their differences. It is in such cases that third parties can be the most helpful. By bringing to the conflict their own knowledge and experience, their own perspective, and, of course, their own power and leverage, they make previously unconsidered options visible and feasible.

Source: Dimostenis Yagcioglu

Top 5 reasons that teams fail

1. ***Team members don't influence and get support from key external stakeholders.***
2. ***Team members don't set appropriate goals for the team and then build and implement a plan for reaching them.***
3. ***Team members don't spend enough time planning how they will work together.***
4. ***Team members don't know how to reconcile differences or resolve interpersonal conflict.***
5. ***Team members don't conduct efficient meetings that produce results.***

Source: Interaction Associates

- **Ask open-ended questions** to have the group identify possible solutions to the conflict. *"What could Bob do so that his cows have access to water?"*

- **Accept/legitimize.** Show the participants that you understand the problem. *"I understand that Bob's cows need access to water and that John is concerned about the nitrogen loadings in the stream, which are causing the water quality violations."*

- **Build on small agreements.** This technique might include having participants agree to discuss the issue further without asking for a commitment. *"So, Bob and John, do you agree to meet with the extension agent to explore possibilities for getting your cows access to water? Great!"*

Separate beliefs from facts

Our view of the world is a product of our experiences and beliefs. Our beliefs include our values, perceptions, attitudes, and opinions. Sometimes we state our beliefs as facts and they contradict other people's beliefs, creating conflict. It is important to separate beliefs from facts to keep the discussion focused on the issues.

Belief: There is not enough water supply in the county to support future growth projections.

Fact: The current water supply in the county is 15 million gallons per day and the projected growth for the year 2020 is an additional 200,000 residents.

Turn the negative into a positive

When your stakeholders start talking about all of the problems with the process or stating reasons why something won't work, take a break and regroup. Often the group will build on negative energy

Three simple questions to improve the success of a meeting

When planning an important meeting, it is essential to consider input from stakeholders on what they expect and what they would like to see. Stakeholders are more likely to share responsibility for implementation and success if they have participated in planning the work, assigning tasks, and identifying the resources required. The sense of ownership that comes from participation usually generates more cooperation and a sense of shared ownership in both the process and the product. Three simple questions to ask stakeholders when preparing for a meeting are:

- ✓ What are your hopes for this meeting?
- ✓ What are your concerns, if any?
- ✓ What advice do you have to help make this meeting successful... is there anything else I should know about the meeting or the issues we'll be discussing?

Source: Interaction Associates

Dealing with negative people

One of the challenges watershed programs face in developing a collaborative and open environment is dealing with negative people. This becomes an even larger issue in meetings. The following tips can help the leader and the group deal effectively with people who may become disillusioned or dissatisfied with group progress or otherwise create impediments to reaching consensus and implementing selected water quality improvement strategies:

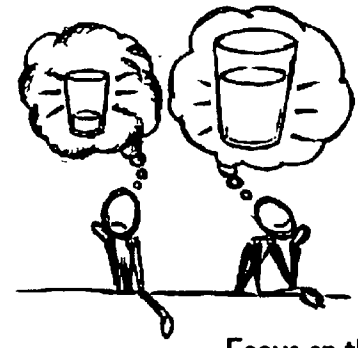
- ✓ Make sure participants have a vested interest in the meeting topic and understand their role. They are more likely to be active and cooperative
- ✓ Communicate the scope of the meeting clearly, to set expectations at the appropriate level
- ✓ Establish the process to be followed at the beginning of the meeting and stick with it
- ✓ Model a positive and receptive attitude, whether you're the facilitator, meeting leader, or participant
- ✓ Address objections or concerns directly and involve the group in dealing with them
- ✓ Seek to understand all participant points of view by asking probing questions like "How do you see this problem? What do you think is happening? How is the situation affecting your group?"

Source: Interaction Associates

being generated, so you'll want to try to steer the members toward something positive. Try asking the group to state their issues in terms of what they would like to see. Make them lead off with the statement *"I would like to see . . ."*.

Example: *"This won't work because there are too many agency staff at the table."*

Restatement: *"I would like to see greater representation from non-profit groups and other organizations that should be participating in the process."*

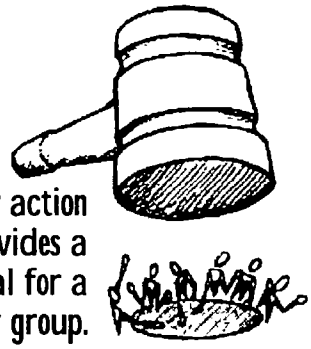


Focus on the positive.

This approach enables them to take one step toward a solution, instead of dwelling on all of the barriers. If you had the foresight to conduct an initial visioning exercise (☞see Section 4, Conducting the first meeting), it's a good idea to revisit the vision statement and talk about it again. Such a discussion can help to cast things in a new light and broaden the perspective on current issues under debate.

Focus on the common goals

The looming threat of regulatory or other legal action, though often viewed as a negative, sometimes provides a powerful impetus to seek consensual solutions. Focusing the group on the vision or overall goal expressed initially and seeking to accommodate interests



Regulatory action sometimes provides a common goal for a stakeholder group.

rather than positions can help spark creative, "outside-the-box" solutions that break through disagreement and past baggage.

For example, environmental groups in Kentucky and other states have actively lobbied for cost-share support for livestock waste treatment systems and other expensive management practices to help ease the burden for complying with clean water initiatives on the farm. Coalitions of groups that seemed to be at odds in the past are powerful forces for changing policies and building support for implementing management strategies in the watershed.

It should be noted that focusing on impending regulatory action as the sole (or most important) reason for developing a watershed management plan can backfire with stakeholders. Warnings that the planning process must proceed because "if we don't do it, the government will" can cause resentment and unnecessary ill will.

The Six Habits of Merely Effective Negotiators

James K. Sebenius, writing in the April 2001 Harvard Business Review, summarizes the "Six Habits of Merely Effective Negotiators:"

1. Neglecting the other side's problem: If you want to change someone's mind, you first have to learn where that person's mind is. Solving the other side's problem as a means to solving your own requires understanding and addressing your counterpart's problem.
2. Letting cost/price bulldoze other interests: While price/cost is an important factor in many transactions, it's rarely the only one. Wise negotiators put the vital issue of price in perspective and don't straitjacket their views of the richer interests at stake.
3. Letting positions drive out interests: Three elements are at play in a negotiation: issues are on the table for explicit agreement, positions are one party's stand on the issues, and interests are the underlying concerns that would be affected. The goal should be to meet both sets of interests through joint problem solving so that an agreement can be reached. Probing behind the positions to flush out interests makes that possible.
4. Searching too hard for common ground: Common ground helps in negotiating agreements, but differences will drive the details of the deal. Flushing out differences (especially in interests) related to the terms of an agreement can unbundle them so each can be dealt with individually within the context of the overall agreement.
5. Neglecting BATNAs: The "best alternative to a negotiated agreement" reflects the course of action a party would take if an agreement is not possible. BATNAs set the threshold that any acceptable agreement must exceed, i.e., both parties must do better than their BATNAs or an agreement is unlikely. Knowing the BATNAs of your side and those of your counterpart will help you to define the level of benefits that must come from the agreement.
6. Failing to correct for skewed vision. The psychology of perception can lead to major errors during a negotiation. Getting too committed to your own (probably exaggerated) point of view, i.e., being too self-serving in your analysis of the facts, and failing to accurately assess your counterpart's position are both common problems in negotiations. Seeking the views of outside, uninvolved parties is useful in addressing this phenomenon, as is reverse role-playing.

—Harvard Business Review, April 2001

Section 6:

Beyond the Stakeholder Group

What's in Section 6?

- Establishing independent watershed management groups
- Organization types
- Securing funding
- A final thought . . .

Many stakeholder involvement processes are initiated by public agencies to accomplish a specific task or fulfill a legal or other mandate. Once the initial objective has been satisfied, however, stakeholder groups often coalesce into long-term partnerships to implement watershed plans or otherwise assist with management efforts.

Establishing independent watershed management groups

Establishing a separate, self-supporting entity to conduct watershed assessment, planning, and management tasks has several advantages. These entities are by definition locally led, inclusive, and able to respond quickly to requests for information, support, training, or management assistance. Public agencies often find it difficult to provide close, on-the-ground support to the dozens—or even hundreds—of groups representing local interests. Providing assistance to establish and maintain these groups complements river basin-scale management activities and distributes the workload among more partners.

The most critical issues to consider when shifting from an agency-supported effort to a more inclusive, independent approach are organizational structure and funding. Watershed groups can range in structure from informal, ad hoc advisory groups to incorporated entities with hired staff and multiple programs. Obviously, the resources available to the watershed group will dictate its capacity for action. Money, volunteers, and donations of office space and other resources can support a broad variety of activities.

Defining the organizational structure and accessing resources are important considerations when moving from an agency-led approach with local support to a locally led approach with agency support. The following section outlines some issues to consider when establishing long-term watershed management programs.

Organization types

There are two basic types of organizations, formal and informal. Formal organizations are those established by law, initiated through formal public agency action, or incorporated under the laws of a state. Most watershed groups that are formally organized are nonprofit corporations; that is, they are incorporated under the laws of their state and meet the charitable, educational, scientific, or other requirements outlined for tax-exempt corporations under Section 501(c)(3) of the federal Internal Revenue Code.

Nonprofit corporations

Setting up a nonprofit corporation is not difficult, and many excellent books and web sites are available to help with the process. The first step, establishing the corporation, involves filing articles of incorporation with the secretary of state and paying a filing fee. The articles outline the purpose, membership, and other organizational aspects of the corporation, including the names and contact information for the officers. (Sample articles of incorporation are posted on the Minnesota Council of Nonprofits' Web site at http://www.mncn.org/articles.htm.)

The second step, securing tax-exempt status from the Internal Revenue Service, takes a little more time. Federal IRS reviewers conduct a thorough review of the application and supplemental materials to ensure that the organization will operate within the bounds of federal law. Up to 6 months—and longer in some cases—is needed for the review process, so applicants are urged to submit their materials long before their tax exempt status needs to be finalized.

Although some work is involved in setting up a nonprofit organization, there are significant benefits. Tax-exempt corporations are eligible for a wide variety of public and private grant and contract funding programs, and they can serve as the vehicle for funneling resources to smaller groups involved in monitoring, assessment, or implementing management practices. For example, nonprofit basin groups in many states operate mini-grant programs to fund projects conducted by smaller, unincorporated groups. These groups could not access grant funds without a nonprofit "sponsor."

Information on the specifics of forming a tax-exempt organization is available on the IRS's Internet site at http://www.irs.gov/bus_info/eo/exempt-req.html.

Ad hoc stakeholder groups

Although instituting a long-term watershed management program by establishing a nonprofit corporation builds quite a bit of capacity for action, ad hoc groups can still accomplish a lot. These groups can range from a handful of people who write letters or otherwise advocate improvements for a river or lake to large, highly organized watershed activist groups that conduct high-profile events, collect

and spend money, sponsor monitoring programs, and develop sophisticated basin management plans.

Ad hoc groups often "will themselves into existence" in response to some real or perceived threat to a water resource. Some function for years, expanding and receding in tandem with the ebb and flow of interest in the resource and the ongoing public assessment of whatever is threatening it. There is no established criterion or benchmark for deciding when to incorporate an ad hoc group and apply for tax-exempt status. The most frequently used yardstick is eligibility for funding. Nonprofit corporations qualify for support from public agencies, private foundations, and other sources. Ad hoc groups can solicit money from organizations and individuals, but there are no tax advantages for those who donate and many grant and other program funds are not available to ad hoc groups.

Though funds earmarked for nonprofit corporations are not directly available to ad hoc groups, such groups can often find a sponsor that will serve as a vehicle for funneling money to their projects. Unincorporated groups working on contaminated coal mine drainage, establishment of riparian buffers, streambank restoration, and other issues frequently attach themselves to an existing nonprofit or even a public agency (e.g., resource conservation district, county soil and water conservation board) to access funds for special projects. This approach avoids the bureaucratic hassles of setting up a separate corporation and applying for tax-exempt status and allows those involved to focus on the project rather than on organizational issues. The sponsoring organization benefits from the involvement of a group of energetic, motivated individuals and action on projects within its sphere of interest, making this approach a win-win approach for everyone. Support from ad hoc groups and citizen volunteers is often used as a cost-share or matching support for grant programs.

Ad hoc groups can access funding through existing nonprofit or public agencies.

Finally, don't ignore the value of convening informal focus groups or task forces when no formal or even ad hoc organization exists. Public agencies and statewide or regional nonprofits often call together small groups of citizens and stakeholders to review management proposals, assist with specific projects, provide information to

Minnesota nonprofit sponsors stakeholder river forums

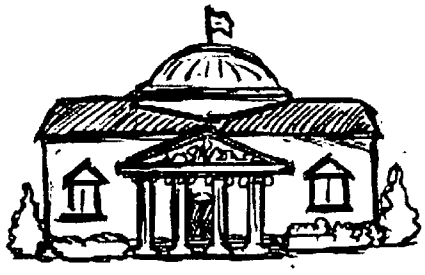
In 1992, the Land Stewardship Project, a nonprofit organization dedicated to sustainable agriculture and sustainable communities, set out to build a citizen constituency for the Minnesota River. With $44,000 from the McKnight Foundation, Clean Up Our River Environment (CURE) pulled together farmers, townspeople, community leaders, youth groups, and environmentalists to create one of the strongest and most influential grassroots organizations in the Minnesota River basin. After successfully intervening to prevent a river-straightening project on one tributary, CURE formed a partnership with other local groups to address similar problems in another tributary.

—Sylvia Paine, CURE, (612) 333-4220

The myth of "bottom-up" efforts

The University of Wisconsin found in its Four Corners Watershed Innovators Initiative that "there is a myth that the watershed movement consists of spontaneous 'bottom-up' local efforts that find alternatives to the rigidity of intransigent bureaucracies and one-size-fits-all solutions." Researchers noted that "the governmental role is generally critical to successful watershed approaches, particularly if plans and solutions proposed by watershed groups are to be implemented."

State agencies are important resources for funding and implementation of watershed projects.



others, or conduct similar activities. Nurturing these groups for a few months or years can lead to the establishment of a more self-sufficient ad hoc or incorporated entity in the long term and provides valuable information and service in the short term.

Securing funding

Regardless of the organizational type, watershed partnerships require coordinated action among state agencies, local interest groups, and other stakeholders. Many local organizations, however, lack the technical capacity, administrative assistance, and infrastructure to adequately support watershed outreach, protection, and restoration initiatives after the planning work has been completed.

State-funded support

States have stepped in to provide resources to local groups rich in commitment and interest but lacking financial support. For example, Massachusetts, Washington, California, Oregon, Kentucky, Maryland, Pennsylvania, and more than two dozen other states provide grants or other assistance to nonprofit groups so local efforts can be maintained over the long term. The Wyoming legislature created and funded a citizen monitoring program in the late 1990s, which is operated by county soil and water conservation districts. Regional water management districts in Florida support local stewardship group efforts to build technical capacity and coordinate activities.

These support programs pay rich dividends in providing volunteers for restoration projects, monitoring data, outreach efforts, educational initiatives, resource coordination, and identification of potential problems. This approach recognizes that agency staff cannot and should not be driving hundreds of local projects across a state simultaneously, and is viewed as an efficient, productive use of public funds.

States are discovering new, creative ways to develop flexible funding programs and management policies that support and enhance local stakeholder-driven watershed initiatives. In Washington, for example, a landmark 1998 law requires state agencies to adopt rules and ordinances that ensure locally developed watershed plans are implemented. In practice, such an approach means that management of state land—parks, wildlife refuges, conservation areas, and so forth—must be consistent, to the maximum degree possible, with watershed partnership plans and policies.

The USEPA Office of Water publishes a funding guide for watershed groups (see http://www.epa.gov/owow/watershed/funding.html), and most states provide assistance to organizations seeking funds for watershed projects. As the level of financial support and staffing increases, partnerships must be careful to avoid minimizing the role of volunteers. The energy and creativity of interested, committed

local residents bring a vitality and drive to a partnership that is difficult to replace.

Accessing non-cash resources

Although having staff and funds committed solely to the activities of the partnership may represent the ideal to some, many watershed groups have adopted creative and effective ways to access resources without dedicated funding. The rapid growth of volunteer monitoring programs over the past two decades has increased available water quality data by an order of magnitude in some states. Early concerns over data quality have diminished considerably over the years, though appropriate data quality objectives, program goals, design, training, and quality assurance/control remain critical to success.

The most effective approach for acquiring and deploying resources seems to be the case-specific cobbling together of available technical, financial, and human resources that characterizes most partnerships. Several states facilitate this approach by authorizing agencies to participate in monitoring programs, restoration initiatives, and local planning/management activities. More than a dozen states have created statewide watershed management frameworks designed to support and coordinate the actions of local partnerships. Creativity and cooperation remain the best assets for any watershed group seeking resources.

Of course, embracing this approach means things will be done differently. Risks will be taken at times, and some failures or at least setbacks are inevitable. A lot of activity will occur "on the fly," and some managers may initially be uncomfortable proceeding rapidly without the standard memoranda of agreement, committee meetings, and memos from upper management.

But "if you always do what you've always done, you'll always get what you always got," as the old saying goes. Government can take some guidance from the private sector when it comes to conceiving

Idaho "Adopt-A-Wetland" Program gains momentum

Idaho Fish and Game is using the Adopt-A-Wetland Program to protect the state's wetland area. Fish and Game Director Steve Mealey believes that the program provides "an opportunity to accomplish some tasks that we can no longer do, or cannot do well, because of budget and manpower cuts." Supporting and promoting local groups interested in wetland wildlife and habitat issues helps state outreach efforts and builds local capacity for wetland protection and restoration.

—Idaho Fish and Game, (208) 334-3700

Stretching monitoring resources in the Bluegrass State

The state of Kentucky adopted a five-stage watershed management framework several years ago, but like many states did not have the resources to conduct comprehensive assessments in each major river basin. A nonprofit citizens group obtained a small amount of funding from private sources and approached state agency officials to conduct a volunteer monitoring project outside the existing agency monitoring program. The volunteer monitoring program was a tremendous success: agency staff noted a tenfold increase in the amount of screening information available on the Kentucky River watershed. The volunteer program has been extended into the other basins under study, and state officials have successfully engaged additional agencies, public utilities, and organizations in its growing basin assessment program.

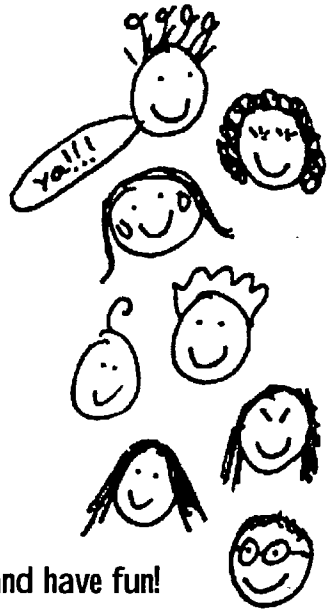
and implementing bold, creative projects supported by a wide variety of people. The philosophy statement at New England Securities is particularly instructive:

- Experiment, take risks. Don't play it safe.
- Make mistakes. Don't try to avoid them.
- Take initiative. Don't wait for instructions.
- Shoot for total quality. Don't shave standards.
- Focus on opportunities, not problems.
- Take personal responsibility for fixing things.
- Don't blame others for what you don't like.
- Try easier, not harder. Stay calm.
- Smile! Have fun!

A final thought . . .

Well that's it. As we said at the beginning of this guide, there is no one-size-fits-all approach to stakeholder involvement. Although engaging and involving stakeholders may be a long and sometimes frustrating process, it's still the best way to conduct comprehensive watershed assessments, identify and target problems, implement remediation strategies, and institute long-term management strategies.

Under the stakeholder approach, all the heavy lifting is moved to the front end of the process so things move more quickly later on. Remember: *go slow to go fast*. And smile! Have fun!



Smile and have fun!

Section 7:

Resources

This section provides resources, web sites, and contacts for finding more information about stakeholder activities. The resources are loosely grouped by topics.

Contacts

1999 State and Regional Watershed Contacts: Nonpoint Source
This directory lists more than 350 people from state and federal agencies who can answer nonpoint source water pollution questions. Agencies include Cooperative Extension, Natural Resources Conservation Service, State Soil and Water Conservation Districts, and US Fish and Wildlife Service. Available from the Conservation Technology Information Center, 1220 Potter Drive, Suite 170 W, Lafayette, IN 47906, (765) 494-9555 or visit their web site at http://www.ctic.purdue.edu.

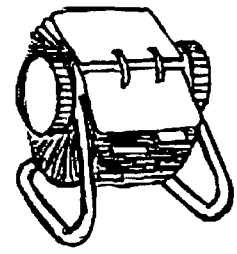
National Directory of Volunteer Environmental Monitoring Programs
This fifth edition publication highlights 772 volunteer programs located around the country engaged in monitoring stream, lakes, estuaries, ground water, coral reefs, wetlands, beaches, and adjacent land areas. Available from EPA's National Service Center for Environmental Publications and Information at USEPA/NSCEP, PO Box 42419, Cincinnati, OH 45242, (800) 490-9198 or visit their web site at http://www.epa.gov/ncepihom.

Case studies

Baton Creek and Springs: A Case Study
This 15-page handbook guides the reader through the successful protection campaign of Barton Creek and Springs, Texas. It creates a model for taking the watershed perspective, developing a campaign, and raising money. Available from the Rivernetwork, PO Box 8787, Portland, OR 97207, (800) 423-6747 or from their web site at http://www.rivernetwork.org.

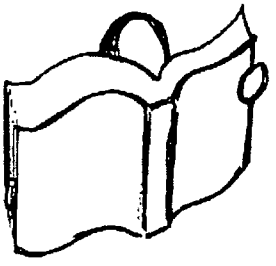
What's in Section 7?

- Contacts
- Case studies
- How-to guides
- Web sites



Wetland and Watersheds: Six Case Studies
This report include case studies from local governments in a variety of natural environments. The case studies provide ideas for restoration, funding, building partnerships, and working with regulatory agencies. Available from the International City/Council Management Association , 777 North Capitol Street, NE, Washington, DC 20002, (800) 745-8780 or visit the bookstore on their web site at http://www.icma.org.

How-to guides



Bridge Builder: A Guide for Watershed Partnerships
This handbook emphasizes the success of the watershed partnerships. It includes transparencies, checklists, and exercises designed make the facilitation of watershed planning and management easier. Available from the Conservation Technology Information Center 1220 Potter Drive, Suite 170 W, Lafayette, IN 47906, (765) 494-9555 or visit their web site at http://www.ctic.purdue.edu.

Chesapeake Bay Community Action Guide: A Step-by-Step Guide to Improving the Environment in Your Neighborhood
This guide includes ideas and information on watershed enhancement projects, including storm drain stenciling, reforestation and tree care, and much more. Contact the Metropolitan Washington Council of Governments Information Center, 777 North Capitol St. NE, Suite 300, Washington, DC 20002-4239, (202) 962-6270.

The Clean Water Act: An Owners' Manual
This valuable handbook explains the complex Clean Water Act in an easy-to-read manner and enables local watershed organizations to use the act to their advantage. It provides information on many sections of the act including National Pollutant Discharge Elimination System (NPDES) permits, Total Maximum Daily Loads (TMDLs), and the components of a state's water quality standards. Available from the River Network, 520 SW Sixth Avenue, #1130, Portland, OR, 97207, (503) 241-3506, or on the web at http://www.rivernetwork.org.

Community Culture and the Environment: A Guide to Understanding a Sense of Place
This is both a guidance document and training course developed by USEPA to support the social and cultural aspects of community-based environmental protection approaches. The Guide provides a process and set of tools for defining the human dimension of an environmental issue. Based on social science theory and methodologies (sociology, cultural anthropology, political science), the Guide and associated training modules can be used by government and communities to identify environmental issues of concern. U.S. Environmental Protection Agency, 2002. EPA 842-B-01-003.

Conflict Resolution Guidebook
Conflict is a part of any normal watershed partnership. This guidebook illustrates effective techniques for managing and resolving conflict situations. Through the use of six steps developed to resolve conflict, it helps to develop skills to manage and control conflicts. Available from the National Association of Conservation Districts, Service Center, PO Box 855, League City, TX 77574, (800) 825-5547.

Conservation Partners Field Guide
This guide is for partnering public and private organizations for natural resource conservation. It includes an overview of projects and partnerships and sections on funding partners and getting started. Available from the US Fish and Wildlife Service, Office of Training and Education, National Publications Unit, Rt. 1 Box 166, Shepherdstown, WV 25443, (304) 876-7203.

Cross Cultural Watershed Partners Activities Manual
This guidebook contains suggestions and activities to create a cross-cultural exchange using watershed themes. Available from Earth Force, Inc., 1908 Mt. Vernon Avenue, 2nd Floor, Alexandria, VA 22301 or from their web site at http://www.earthforce.org/green.

Culvert Action: How to Interest Your Local Media in Polluted Runoff Issues
This manual is geared toward anyone seeking to educate the public about polluted runoff. It describes methods of communication through newspaper, radio, and television. Available from the Lindsay Wildlife Museum, 1931 First Avenue, Walnut Creek, CA 94596, (925) 935-1978.

Designing an Effective Communication Program: A Blueprint for Success
This handbook helps watershed partnership leaders through each step involved in designing an effective communication program. It covers areas such as designing a program and increasing the effectiveness of communication materials. Available through the University of Michigan, School of Natural Resources and Environment, Ann Arbor, MI 48109, (734) 764-6453.

Direct Mail Guidebook
Direct mail marketing can be a powerful tool and a good form of communication. This manual contains guidance on how to tailor your messages to various audience and how to write an effective direct mail letter. Available from the National Association of Conservation Districts, Service Center, PO Box 855, League City, TX 77574, (800) 825-5547 or their web site at http://www.nacdnet.org/publications.

Essential Facilitation: Core Skills for Guiding Groups
This workbook is part of a training series sponsored by Interaction Associates. For more information about their workshops contact

them at Interaction Associates, 600 Townsend Street, Suite 550, San Francisco, CA 94103, (415) 241-8000.

Getting In Step: A Pathway to Effective Outreach in Your Watershed
The guide provides tools needed to develop and implement an effective watershed outreach plan. The guide provides information on developing an outreach plan, tips and examples for developing and enhancing outreach materials, and tips on working with the news media to accomplish outreach goals. To download a copy of the guide visit http://www.epa.gov/owow/watershed or call the Council of State Governments at (859) 244-8000.

Guide to Winning a River Protection Campaign
A clean, simple, and graphic outline for watershed organizations to use when creating and implementing a river protection campaign. Available from the Rivernetwork, PO Box 8787, Portland, OR 97207, (800) 423-6747 or from their web site at http://www.rivernetwork.org.

Handbook for Wetlands Conservation and Sustainability
This 220-page publication is filled with information on wetland ecosystems and how to start a wetland stewardship program. This guide offers information on case studies of volunteer conservation efforts nationwide. Available from the Izaak Walton League of America,.707 Conservation Lane, Gaithersburg, MD 20878, (800) 453-5463 or visit their web site at http://www.iwla.org.

How to Save a River
How to Save a River provides an overview of the resource issues involved in river protection. It defines the general principles of action, including getting organized, planning a campaign, building public support, and putting the plan into action. It also includes examples of successful river protection campaigns and suggested resources for further information. Available from the Rivernetwork, PO Box 8787, Portland, OR 97207, (800) 423-6747 or from their web site at http://www.rivernetwork.org.

Information Gathering Techniques Guidebook
Watershed partnerships need to understand their audience before attempting to market their project. This guidebook explains the mechanics of using several techniques, such as focus groups, interviews, and surveys for collecting useful information on a potential audience. Available from the National Association of Conservation Districts, Service Center, PO Box 855, League City, TX 77574, (800) 825-5547.

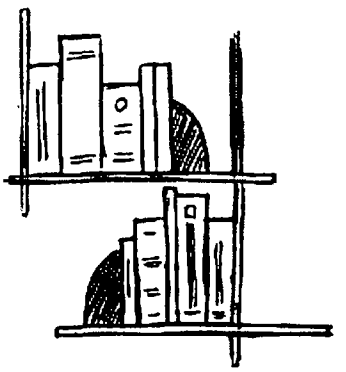
The Jossey-Bass Guide to Strategic Communications for Nonprofits
This workbook is for organizations and watershed campaigns that want to create successful communications strategies. It helps nonprofit organizations enhance their profiles, increase name recognition, boost

fund-raising, and recruit members. Available from Jossey-Bass/Pfeiffer, 989 Market Street, San Francisco, CA 94103, (415) 433-1740 or visit their web site at http://www.josseybass.com.

Lake Smarts: The First Lake Maintenance Handbook: A Do-It-Yourself Guide to Solving Lake Problems
This how-to manual describes many lake improvement projects that are field-tested, easy, and affordable. It also outlines common lake problems and solutions and how to find and cost out equipment. Available from the Terrene Institute, 4 Herbert Street, Alexandria, VA 22305, (800) 726-4853 or visit their web page at http://www.terrene.org.

Leadership Identification Guidebook
Leadership is an important part of any successful conservation partnership. This publication provides information on how to identify community leaders and to involve them in promoting the goals of a watershed partnership. It describes group dynamics and the facilitation skills required to get the most out of each meeting. Available from the National Association of Conservation Districts, Service Center, PO Box 855, League City, TX 77574, (800) 825-5547.

Marketing for Conservation Success
This brochure helps illustrate the need to strengthen partnership relationships and enhance a conservation program. It highlights examples of efforts across the country that are using marketing techniques to communicate their conservation messages. It also describes the seven stages of a marketing plan and how to get the most out of marketing efforts. Available from the National Association of Conservation Districts, Service Center, PO Box 855, League City, TX 77574, (800) 825-5547.

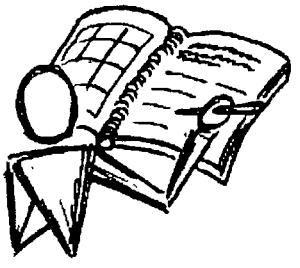


Marketing the Environment: Achieving Sustainable Behavior Change through Marketing
This guide uses commercial marketing techniques to create lasting behavior change. It includes tools, steps to develop a marketing plan, and lots of references. Available from the Huron River Watershed Council at (734) 769-5123.

Pennsylvania Department of Transportation Public Involvement Handbook
This handbook provides useful information on community participation and guidance for enhancing the public's trust, managing conflict that might arise, and developing and carrying out a public involvement program. Also included is a section of ideas and techniques that can be applied to a variety of situations. This handbook is available through the Pennsylvania Department of Transportation, Forum Place, 555 Walnut Street, Harrisburg, PA 17101.

Protecting and Restoring Watersheds: A Tribal Approach to Salmon Recovery
The Columbia River Inter-Tribal Fish Commission developed this guidebook to describe their effective approach to watershed restoration consistent with tribal restoration philosophy. It includes information on watershed assessments and protection, monitoring, and active and passive recreation. Available from The Watershed Department, Colombia River Inter-Tribal Fish Commission, 729 Northeast Oregon, Suite 200, Portland, OR 97232, (503) 238-0667.

Reaching Out to Minority Groups Guidebook
This publication helps to build productive relationships with minority groups. It describes some considerations and potential challenges to promoting a watershed program. Available from the National Association of Conservation Districts, Service Center, PO Box 855, League City, TX 77574, (800) 825-5547.



River Friendly Farmer Kit
This program was first developed for use in Minnesota and is ideal for almost any watershed partnership interested in helping farmers improve their watershed. The watershed organization sets the standard for the farmer who gets an award and presents that farmer a sign to celebrate his or her efforts. Available from the Conservation Technology Information Center 1220 Potter Drive, Suite 170 W, Lafayette, IN 47906, (765) 494-9555 or visit their web site at http://www.ctic.purdue.edu.

River Talk! Communicating a Watershed Message
This manual assists river and watershed advocates interested in encouraging key sectors of their community to effectively design a watershed-friendly future together. It guides the reader through developing a communication plan, to identifying an audience, to creating and promoting a message. Available from the River Network, 520 SW Sixth Avenue, #1130, Portland, Oregon 97204, (503) 241-3506 or on the web at http://www.rivernetwork.org.

Sourcebook for Watershed Education
This tool is geared toward communities working to improve education and the environment. It helps to organize a self-sustaining watershed education program by providing information on recruiting volunteers, developing funding strategies, connecting community resources to program needs, and creating program assessment plans. Available from Earth Force, Inc., 1908 Mt. Vernon Avenue, 2nd Floor, Alexandria, VA 22301 or from their web site at http://www.earthforce.org/green.

Starting Up: A Handbook for New River and Watershed Organizations
Newly formed watershed organizations can use this tool to design an effective program. This 350-page handbook was based on the

experiences of dozens of leaders in the watershed conservation movement. It includes information on choosing a name, developing a mission statement, creating a budget, and much more. Available from the Rivernetwork, PO Box 8787, Portland, OR 97207, (800) 423-6747 or from their web site at http://www.rivernetwork.org.

Stormwater Strategies: Community Responses to Runoff Pollution
This report describes almost 100 case studies of communities that have demonstrated strategies to prevent and control urban stormwater pollution. Projects include urban retrofitting, volunteer monitoring, and storm drain stenciling. Available from the Natural Resources Defense Council Publications Department, 40 West 20th Street, New York, NY 10011, (212) 727-2700, or visit their web site at http://www.nrdc.org.

Top Ten Hints for Successful Watershed Management
This article is ideal for use in publications or newsletters. It lists 10 suggestions from successful watershed coordinators. Available from the Conservation Technology Information Center, 1220 Potter Drive, Suite 170 W, Lafayette, IN 47906, (765) 494-9555 or visit their web site at http://www.ctic.purdue.edu.

Walk Your Watershed Festival Organizing Kit
This kit outlines how to get started, choose activities, find volunteers, and secure financial support. Helpful tools include checklists, a model watershed festival program, a sample press release, and a Walk Your Watershed logo. Available from the Conservation Technology Information Center 1220 Potter Drive, Suite 170 W, Lafayette, IN 47906, (765) 494-9555 or visit their web site at http://www.ctic.purdue.edu.

Water Works: Your Neighbors Share Ideas on Working in Partnership for Clean Water
The idea behind this publication is to try to provide some useful information that may help you through the process of forming, building, and sustaining a community group to protect and improve water resources. Many success stories are showcased throughout the text. This resource, published in 1997, is available through the Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, TN, (423) 632-2101.

A Watershed Approach to Urban Runoff: Handbook for Decisionmakers Guide
This guide outlines the process for understanding your watershed and the watershed management approach to assessing, planning, implementing, and evaluating. It provides an overview of assessment and management tools as well as detailed insights into structural and nonstructural best management practices and sample site plans. Available from the Terrene Institute, 4 Herbert Street, Alexandria,

VA 22305, (800) 726-4853 or visit their web site at http://www.terrene.org.

Watershed Conflict Resolution: Some Guiding Principles
This 11-page booklet recognizes that conflicts with watershed policies are inevitable. This publication can help make a watershed policy conflict productive. Available from Cornell University Resource Center, 7 Business & Technology Park, Ithaca, NY 14850, (607) 255-2080 or order online at http://www.cce.cornell.edu/publications/soil-water.html.

Watershed Issues Resolution
This 16-minute video uses the experiences of six individuals to illustrate how they helped citizens and governmental agencies work together to protect a watershed. Available from Cornell University Resource Center, 7 Business & Technology Park, Ithaca, NY 14850, (607) 255-2080 or order online at http://www.cce.cornell.edu/publications/soil-water.html.

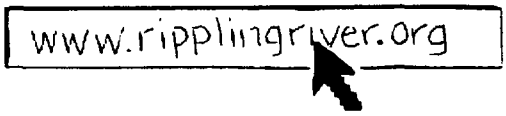
Watershed Management: A Policy-Making Primer
This guidebook includes information on how to address wildlife habitats, wetland preservation, development, and land-use impacts while managing a watershed. It also highlights questions that must be addressed in policy-making. Available from Cornell University Resource Center, 7 Business & Technology Park, Ithaca, NY 14850, (607) 255-2080 or order online at http://www.cce.cornell.edu/publications/soil-water.html.

Watershed Management Starter Kit
This complete kit includes five guides (*Getting to Know Your Watershed, Building Local Partnerships, Putting Together a Watershed Management Plan, Managing Conflict*, and *Leading and Communicating*) and a 13-minute video (*Partnerships for Watersheds*), 10 companion brochures, and an application to the National Watershed Network. In other words, it includes everything you need to get a watershed management partnership started. Available from the Conservation Technology Information Center, 1220 Potter Drive, Suite 170 W, Lafayette, IN 47906, (765) 494-9555 or visit their web site at http://www.ctic.purdue.edu.

Watershed Partnerships: A Strategic Guide for Local Conservation Efforts in the West
This guidance manual is targeted toward westerners interested in choosing and fine-tuning their watershed approach. It provides valuable information on how to organize, start, and maintain a watershed partnership. Available from the Western Governors Association, 1515 Cleveland Place, Suite 200, Denver, CO, 80202, (303) 623-9378 or visit their web site at http://www.westgov.org.

Watershed Protection: A Project Focus
This document provides a blueprint for designing and implementing

watershed projects. It includes sections on defining problems, setting goals, and measuring success. It illustrates how the broader principles of watershed management, including all federal, state, tribal, local, and private activities, can be brought to bear on water quality and ecological concerns. Publication number: EPA 841-R-95-003 (August 1995). Available from the National Center for Environmental Publications 11029 Kenwood Road, Bldg 5, Cincinnati, OH 45242, (800) 910-9198 or order online at http://www.epa.gov/OWOW/info/PubList/comments.html.



Web sites

Watershed Partnership Information

http://www.biodiversityproject.org
The Biodiversity Project. This web site contains useful outreach information for environmental projects, such as fact sheets on creating effective messages, obtaining grants, and public opinion research firms.

http://www.earthforce.org/green
Global Rivers Environmental Education Network. This web site contains valuable information and tools to educate a community about the benefits of a healthy watershed. The Network has many publications available to assist a watershed improvement program.

http://www.lwv.org/where/protecting/wetlands_cep.html
League of Women Voters Wetland Citizens Education Program. This site describes local wetlands education and enhancement projects developed and implemented by members of the League.

http://www.rivernetwork.org
The River Network. This web site is dedicated to supporting river and watershed advocates. It provides on-line resources and information for funding opportunities and fund-raising ideas. It also contains a comprehensive publication list for further information.

http://www.iwla.org/SOS
Save Our Streams. This program was developed by the Izaak Walton League of America 30 years ago. This valuable web site offers helpful informational tools for an effective watershed improvement project. Publications, videos, a stream monitoring and restoration database, curriculum ideas, and a newsletter are offered.

http://www.epa.gov/owow/watershed/lessons
Top Ten Watershed Lessons Learned. This site was developed by EPA's Office of Water. Drawn from the experiences of more than 100 watershed practitioners and those who support them, this valuable web site provides insight into important lessons learned and details about what works and what doesn't.

http://www.epa.gov/owow/wetlands/restore.htm
EPA Office of Water's River Corridors and Wetlands Restoration
This web site includes information on the benefits of a restoration project and an area to list your own project. It also describes different watershed improvement programs across the nation that are part of its Five Star Restoration Programs.

http://www.epa.gov/owow/watershed/wacademy/acad2000
EPA's Office of Water developed this web site to use the Internet as a classroom for watershed education. The site contains training modules on watershed science, effective communications, and organizational management and development. The modules address many important topics, including watershed management, monitoring, and restoration.

http://watershed.org/wmchome
The Watershed Management Council. Click on "Recommended Watershed Terminology" to view the proper words to use (and avoid) when crafting your outreach materials.

http://www.epa.gov/OWOW/watershed/focus
Watershed Protection: A Project Focus. Check out this site to view an interactive handbook that provides a blueprint for designing and implementing watershed projects. It includes sections on defining problems, setting goals, and measuring success. It illustrates how the broader principles of watershed management, including all federal, state, tribal, local, and private activities, can be brought to bear on water quality and ecological concerns.

http://www.westgov.org
The Western Governor's Association. The Western Governor's Association consists of governors from western states who identify and address key environmental and public issues. This site outlines current initiatives and provides access to the Association's many publications.

Information about Your Watershed

http://www.epa.gov/adopt
Adopt Your Watershed. Check out this site, developed by the USEPA, to learn more about watersheds, add your watershed group to their catalogue, use their helpful resources and links, and participate in a chat room.

http://www.ocrm.nos.noaa.gov/cpd/welcome.html
Coastal Programs Division. This site was created by the Office of Ocean and Coastal Resource Management, a division of the National Oceanic and Atmospheric Administration (NOAA), to summarize Coastal Zone Management Programs around the nation. It offers an interactive map to learn more about a coastal state's program.

http://www.endangered.fws.gov
Endangered Species. The U.S. Fish and Wildlife Service created this page to keep the public informed of the endangered species list and any applicable current events. This site contains the current list of endangered species searchable by state.

http://water.usgs.gov/nawqa
National Water Quality Assessment (NAWQA) Program. The U.S. Geological Survey monitors 59 study units in rivers and streams around the nation. Check out this site for their findings on many pollutants, including pesticides, nutrients, and volatile organic compounds.

http://water.usgs.gov/nwsum/index.html
National Water Summary on Wetlands. Check out this site, developed by the U.S. Geological Survey, to learn more about wetlands. It includes articles on wetlands, such as technical aspects, management and research, and restoration. It also lists state USGS representatives who can be contacted for more information.

http://www.epa.gov/305b
The Quality of Our Nation's Water, 305(b) Water Quality Report. This site was developed by the EPA's Office of Water and includes the National Water Quality Inventory reports to Congress. Reports from 1994, 1996, and 1998; fact sheets; and the report brochure are also included in this site.

http://www.epa.gov/owow/wetlands/restore
Rivers Corridors and Restoration. Check out this site to get information on other river restoration efforts in your state. New projects can also be posted on this site, and worthy projects are given a five star award.

http://www.epa.gov/safewater/protect/swap.html
State Source Water Assessment and Protection Programs: Guidance and Implementation. EPA's Office of Water developed this site to disseminate information on each state's source water assessment program to protect drinking water. This site includes information on background and general information on the program, the status of each state's program, and a contact list.

http://www.epa.gov/OWOW/STORET
The STORET web site was developed by EPA's Office of Water to disseminate raw water quality data, where and when it was obtained, sampling methods used, and the laboratory used to analyze the sample. This site also offers information on how to join and use the STORET database.

http://www.epa.gov/surf
Surf Your Watershed. The EPA created this site to enable citizens to locate and check on the health of their watersheds, identify current restoration efforts, obtain real-time water quality data for participa-

ting states, and much more. This site also offers state contacts for further information.

http://www.epa.gov/owow/tmdl
Total Maximum Daily Load (TMDL) Program. A TMDL is a calculation of the maximum amount of pollutant that a waterbody can receive and still meet water quality standards and the allocation of that amount to the pollutant's sources. This site includes general and state-specific information on TMDLs, provided by EPA's Office of Water.

http://www.epa.gov/win
Watershed Information Network. This site offers step-by-step interactive guide for watershed program coordinators to help them get started. It includes information on how to get started, offers avenues for financial and technical assistance, and explains important water-related laws.

Other Watershed Programs

http://www.centralcoastsalmon.com
Central Coast Salmon Enhancement's web page contains information on the organization, its accomplishments, and restoration efforts. Newsletters are also available on this site.

http://www.crcwater.org/crcwho.html
The Chehalis River Council was formed to lead the implementation of the Chehalis River Basin Action Plan. This web site describes the water quality issues and current events and provides background information.

www.chesapeakebay.net
The Chesapeake Bay Program is a regional watershed program aimed at restoring the bay. This site contains publications, information on the bay, and a data clearinghouse.

http://www.wgby.org/crei
The Connecticut River Education Initiative is a consortium of educational institutions working together to develop environmental education tools using the Connecticut River. This web page contains a description of the watershed, teacher and student journals tracking the project, and links to other resources.

http://www.hawriver.org
The Haw River Watch web page contains a calendar of events and information on the organization and the Haw River Festival.

www.epa.gov/glnpo
The Great Lakes National Program Office web site contains information on monitoring, the different partners, and pollution prevention.

http://www.mrba.org
The Mississippi River Basin Alliance links environmental justice organizations with conservation groups for the benefit of the Mississippi River. This site describes the Alliance's program and policy statements and contains the organization's newsletter.

http://www.epa.gov/owow/estuaries
The National Estuaries Program is designed to encourage local communities to take responsibility for managing their estuaries. This site contains information on the importance of estuaries, key management issues, example management structures, and the *Coastlines* newsletter.

http://www.geocities.com/Yosemite/Rapids/4604
Rockingham County Watershed Preservation Coalition is a regional effort to improve the waters of Rockingham County, North Carolina. This site contains information on river restoration efforts, pertinent state news, and important events.

http://nsccux.sccd.ctc.edu/~tcp
Thornton Creek Project's web page contains the organization's mission statement, a description of the watershed, monitoring efforts, and coming events. This site also offers a mapping tool for the watershed and educational resources.

Other Useful Information

www.neetf.org
The National Report Card is a survey on adult environmental attitudes, knowledge, and behaviors. This site is a good source of quick facts to include in outreach materials.

www.rcfp.org/foi_lett.html
This site provides a "fill-in-the-blanks" Freedom of Information Act (FOIA) request letter to be submitted to a federal agency.

www.fcn.gov

What Communicators are Saying About the Communicators Guide:

"The Communicators Guide is stunning ... it is so clear, so useful, so appealing .... I wanted you to know how much I enjoyed and appreciated it ... it will have favored-nation status on my reference shelf. I loved the quotations, the layout, the organization, and the plain language." Rosalie Maggio, author of *How to Say It, The Bias-Free Word Finder*, and *An Impulse to Soar*.

"Denver communicators have discovered your guide ... it's excellent and we intend to use it to refresh our skills in our office. Nice to know we have access to these materials." Craig Forman, USDA, Denver, CO.

"... am pleasantly surprised to see that you and FCN figured out a way to spend the time to do such a comprehensive, attractive book." Larry Teller, EPA, Region 3.

"... the guides were met with rave reviews and high praise! If you end up with any leftovers, our office would be thrilled to have them!" Cornelia Sorensen, National Institute of Justice, Washington, DC

"Looks like you've done an awesome job of providing a usefull resource for us Federal (and other) PAOs/spokepersons/media hacks." David Stell, IRS, Oklahoma City, OK.

"This guide is one of the most uselful tools that I have ever seen ... hats off to those responsible." Terri Daniel, USDA, NRCS, Stillwater, OK.

"Thanks so much for the Communicators Guide. It's beautifully done." Sondra Rester, CA

"... I've found your Communicators Guide invaluable – even sharing a copy with a daughter who is the Public Relations Director of the San Francisco Opera. She loves it, too." Marion Fitch Connell, Executive Director, Public Employees Roundtable, Washington, DC.

"Kansas thinks this guide is great and would like to furnish our Management Team and each field office with a copy." Deanne Lull, USDA, NRCS, Salina, KS.

"I've been using the Communicators Guide from the FCN as my reference point for putting together a communications seminar. It is an amazing resource!" Christina Doane, Conference Director, The Performance Institute, Alexandria, VA.

Communicators Guide

For Federal, State, Regional, and Local Communicators
by the Federal Communicators Network*

*www.fcn.gov

Printed December 2000
Reprinted January 2001
Slightly Revised June 2001
Revised December 2001

ORDERING INFORMATION:

IFAS/Extension Bookstore
Building 440, Mowry Road
PO Box 110011
Gainesville, FL 32611
352-392-1764 • 352-392-2628 fax
{800-226-1764 VISA/MasterCard orders only}

Shop our on-line catalog of educational resources at
http://ifasbooks.ufl.edu

$6.00 each plus shipping/handling & sales tax

The Communicators Guide is now available on audiotape for people with visual or cognitive disabilities. Copies are available from the U.S. Department of Agriculture TARGET Center at (202) 720-2600.

Table of Contents

"Vigorous writing is concise."
– William Strunk

Introduction 1
Are You a Bureaucrat? 2

Chapter 1 - Keeping Current 3
Latest Communication Trends 3
The Changing Media Landscape 3
Get Your Point Across 3
Networking 4
Make Your Job Vital – How to Market Your Work 6
Distance Learning 7
New Digital Technologies 8

Chapter 2 - Working With the Media 10
What Do Reporters Want? 10
Building Media Relationships 11
What to Do When a Reporter Calls 13
Media Interviews 14
Use Plain Language 15
Do These at the Interview 15
Never Do These 16
At the Interview 17

Chapter 3 - Planning 20
Writing Communications Plans 20
Strategic Planning – Preparing to Meet the Future 22
Crisis Communications: Planning to Attack the Crisis Before it Attacks You 24
Communicating Risk 27
Measuring Your Effectiveness 28

Chapter 4 - The Internet 32
Writing for the Web: Tricks of the Trade 32
Make Your Web Site Customer Friendly 36
Make Your Web Site Accessible. 36
Push versus *Pull* 37
Netiquette 37

Chapter 5 - How To Do It 39
Writing Awesome and Effective News Releases 39
Tip Sheets/Fact Sheets/Questions and Answers 40
Background Papers 41
Earned Media – Coverage on a Shoestring 41
Public Service Advertisements (PSAs) 43
Using a Newspaper's Editorial Board 46
Using the Editorial Pages. 47
Satellite Media Tours 48
Producing an Agency Newsletter 48
Editing Your Newsletter 49
Elements of Good Writing 51
Tailoring Your Message 52
Marketing 53
Product Marketing – Selling Your Stuff 54
Effective Meetings 56
Effective Speeches 57
Add Style to Your Next Speech 58
How to Deliver Effective Speeches 59
20 Tips to Overcoming Fear of Public Speaking. 62
Communicating with Diverse Audiences. 63
Disabilities. 64
Internal Communication During a Crisis 66
Emergency Evacuations 67

Chapter 6 - Tools of the Trade/Resources 69

Chapter 7 - Contributors 73

Introduction

"Communication is the essential life blood of organizational life."
– Ann Harriman

Communicators fill a unique role. We are career employees who are part journalist and part *flack*. Although we usually serve as advocates for journalism and a free press, we are not considered working journalists. Many times, our bosses don't want to trust us with sensitive information, because, after all, we often talk to reporters and correspondents.

Communicators have to negotiate the bureaucracy while translating gobbledegook into plain language. We are the ones who put news releases, publications, and Web sites to the test. If we can understand it, then perhaps the public—our customers—will greet our products by saying: "This is from the government. I'll be able to understand it."

Founded in 1996, the Federal Communicators Network, **www.fcn.gov**, has more than 700 members who are involved in disseminating information within and outside government. Our membership includes writers, editors, public affairs specialists, program managers, analysts, speech writers, Web masters, artists, photographers, graphic artists, and librarians. With this range of talent and expertise, we set out to create a guidebook for both new and seasoned communicators.

This guidebook, written, edited, and published by members of the Federal Communicators Network and other communicators, is our attempt to:

- offer some general guidance for other federal, state, regional, and local communicators;
- compile a list of sources and resources to help communicators refine and sharpen their skills; and
- improve the trust between government and the public by helping us communicate clearly to the public and by making government's message relevant to our customers.

Marci Hilt
Project Manager

Are you a bureaucrat? You might be if...

- Your FTE can't find the RFP on the IRP and the CRP for the EPA and the NWS or—even without the CDAs—the JIB and CENTCOM PAQ briefing shows there are 9 KIA, 6 WIA, and 2 MIA.
- An agency reorganization would negatively impact your functional capabilities to provide essential services.
- You ask for comments from interested people, but never tell those who aren't interested where to send theirs.
- You use your compensatory time to study beach renourishment in a coastal management area, rather than taking a vacation at the seaside.
- When someone asks you what you do for a living, you say you "develop and implement policy."
- There are *pavement deficiencies* in the streets, rather than potholes.
- Your program depopulates animals with contagious diseases, rather than killing them.
- Your agency repositions, reduces duplications, focuses reductions, downsizes, right-sizes, outsources human resources, or talks about the human side of downsizing, rather than firing or laying off employees.
- You used the words *program* and *procedure* more than 100 times each in your annual report.
- You're politically correct, but your temperamentally challenged supervisor thinks you have an attitudinal impairment and an intellectual deficiency.
- Moral: Not only does relying on jargon give you a wrong image—it makes you hard to understand. Use Plain Language **(www.plainlanguage.gov)**.

"We can lick gravity, but the paperwork is overwhelming."

– Wernher von Braun

chapter one

Keeping Current

"Any sufficiently advanced technology is indistinguishable from magic."

– Arthur C. Clarke

Latest Communication Trends

The new information highway runs right through your backyard. With Internet resources and online news services, every word ever written or broadcast about your agency is readily accessible to everyone. The Internet breaks down old barriers to information.

Americans have an ever-expanding appetite for new technology. In 2000, more than half owned a cell phone, up from 24 percent in 1995. One in five Americans (18 percent) has a satellite dish; 5 percent own a Palm Pilot or other PDA—Personal Digital Assistant. This revolution in communications technology is not only changing the way we live; it has created a highly competitive environment for those in the news business who are providing information to the public.

The Changing Media Landscape

In June 2000, the Pew Research Center for the People and the Press released a report that found that only 48 percent of Americans follow national news closely most of the time, a new low. Although daily newspaper readership was down slightly from 68 to 63 percent since 1998, TV network news viewership dropped from 65 percent in 1995 to 50 percent in 1999. One-third of adults now regularly get their news online; among those younger than 30, some 46 percent go online for news at least once a week.

News resources are dwindling. Media mergers and cost-cutting mean that there are fewer reporters who have the luxury of doing detailed, in-depth stories. Many times, the reporter doing a story about your agency is not familiar with what your agency does. This provides you with a golden opportunity to fill the information void.

But, because our society is experiencing *information overload*, it is crucial that you get your information out—in plain language—in easily digestible *chunks* and in a form that will be used. And, you have to do it using the very latest technology that works. Because of the immediacy of the Internet, reporters and writers no longer have daily deadlines—stories are often posted as soon as they are written.

Get Your Point Across

We communicate every day. Every time we smile at another person, say "hi" to them, have a conversation with them, or even ignore them, we are communicating. Getting your point across is very

important to successful business relationships. Good communication is difficult because it requires a lot of effort, time, and patience.

☞ Tips to help you get your point across:

- Be prepared.
- Be confident.
- Stay focused on your conversation and your listener.
- Maintain eye contact with your listeners.
- Make sure your listeners are following you by asking them for questions or feedback.
- Don't lose your temper or get over-emotional.
- Speak slowly and calmly; don't raise your voice.
- Speak clearly and concisely.
- Get to the point; don't ramble.
- Be kind, compassionate, and empathetic.
- Be honest. Don't play games.
- Be assertive, but tactful.

Networking

Today's workplace is a lot different from yesterday's. And, how you do your job is different, too. One big change is networking. By branching out, you can form relationships with colleagues who have information that you need to do your job or you can give them the information they may need to do theirs.

Networking is a dynamic process often resulting in outcomes that far exceed what you as an individual communicator could generate. You can come up with novel and unusual ideas and techniques by brainstorming and partnering with communications professionals outside your institution or agency. Networking is:

- A way to connect people.
- The open asking for and sharing of ideas, experience, and information.
- A working approach to get things done or to get things done better.

Networking can:

- Help you collaborate on projects of mutual interest and exchange information, taking full benefit of everyone's expertise.
- Foster supportive relationships that contribute to the increased quality of services or products.
- Broaden impact, both in terms of reaching more people and/or new audiences, and as a way of getting more for your investment in both time and money.

- Create a means to more effectively and rapidly pursue communications objectives, respond to changing communications practices, and solve problems.
- Provide access to expert guidance on skills, including writing, editing, design, marketing, Web design, distance education, and development of electronic products and audiovisuals.
- Provide remote access to technology and other information resources, such as databases, e-mail, bulletin boards, and shareware.
- Enable collaborative communication on the often complex range of subjects and issues packaged for your target audiences.
- Provide a springboard for marketing and distributing communications products, increasing visibility of your products and services to new audiences.
- Foster collaboration and create awareness of potential funding sources.
- Create opportunities for cost savings through choices to buy-in to press runs of products useful to your institution and clients, but developed by others.
- Help to achieve project success more readily. An indirect, but welcome, benefit is that your work might get recognition through various award programs.

Tips for Successful Networking

- Identify people who have what you want, such as mentors and experts, and those who need what you have. These relationships will enhance individual communications skills.
- Think locally; act globally. Sometimes it is easier to network on a local level—local chapters of professional communications societies, campus communications groups, one-on-one communication with colleagues in other departments. It is also important to branch out beyond your local resources to consult with communicators on a regional or national level. Serving on committees or on boards of national/regional communications associations can connect you with valuable future networks. You will likely earn trust and respect, and once you've done that, you will not only have business associates to call on when you need help or advice, you will also have good professional friends.
- Share information through e-mail, listservs, Web bulletin boards, and newsletters—all good networking tools.
- Keep up-to-date on the latest developments in communication technologies.
- Use computer networking to involve more people with diverse skills in problem-solving and innovation. New technologies help break down barriers between groups.
- Check the Internet to find out what others are doing. Information on the Internet is a constantly updated wealth of useful, timely, and sometimes in-depth material. Also, the Internet offers a forum through which you can raise questions, solve problems, and share your work. Check out Web-based video libraries and photo and graphic image archives.
- Create opportunities for collaboration among researchers, outreach specialists, and educators when networking activities make us aware of similar projects occurring in other geographic regions.

- When initiating projects, identify collaborators with whom you have a common mission or goals and build this into your implementation or action plan. Think pro-actively!
- Because networking can give you so many new opportunities and approaches, try to avoid getting derailed from your initial quest for information. When you are working with others to share information, try to avoid conflicts of demand and priority. This will help you avoid stress or work overload.

Where You Can Network

- Government or university settings: Formalized communications networks, informal gatherings of communications professionals, and professional development workshops.
- Local settings: Local chapters of professional communications societies; communications businesses in your community—public relations, information technology, marketing, and design firms, and fellow attendees at local workshops/seminars.
- Statewide, regional, national settings: Professional communications conferences and seminars, electronic listservs, bulletin boards, and discussion groups on Internet Web sites.

"I don't care what is written about me - so long as it isn't true."

— Katherine Hepburn

Make Your Job Vital—How to Market Your Work

Public affairs folks are dedicated to promoting their agencies—using the best resources available and working hard at the job. However, it is a good idea to make sure your boss and your boss' boss know about all the work that you, your co-workers, and your staff are doing. Don't assume they already know. Here are some tips you can use to help demonstrate the value of a public affairs program and how vital communications work is to your agency:

- Collect your recent communications success stories in one place. That way you can share them with your boss or other influential associates. This file is particularly useful when you and your boss do a yearly evaluation.
- Submit "How I Did It" articles about your successful projects to an outside trade magazine, or write a column for your in-house publication. Pretend you're describing what you did to a friend or a relative. Use plain language. Keep copies of your articles in your success file.
- Get involved with – and regularly speak before – professional, civic, and social organizations about your work.
- Have a *speaker's introduction* ready for others to use before your presentations or an *about the author* note that editors can use with your articles.
- Record the speeches you or your staff make. Use the tapes to help improve and as promotional tools.

- Give free communications advice to community groups.
- Teach an adult education class or offer to teach a class for another instructor. Encourage your staff to do the same.
- Get nominated for awards. Check the Internet to find out what awards are available. Offer to help a co-worker or your boss nominate you for the award by drafting it.
- Publicize the awards you and your staff receive. Don't forget in-house bulletins, your hometown weekly, your alumni magazine, and your society/association newsletter. Keep a copy of the clipping in your success file.
- Develop and distribute a newsletter with professional tips or a marketing newsletter that tells about the work and services you and your staff provide.
- Create a marketing kit for you or your staff that includes – among other things – bio sheets, photos, testimonial letters, copies of professional articles, a newsletter of professional tips, and a marketing newsletter. Be sure to keep it up-to-date.
- Start a focus group of professionals who meet periodically to share information and to help each other with career advancement.
- Add a personal promotional note to your voice mail message. It is OK to be humorous.
- Keep a reference list of people who are willing to give testimonials about your work, or that of your staff. Be ready to give testimonials for others.

Distance Learning

Technology has radically altered education in our country. Today's students may not interact with their teachers at a specific place or time. In fact, they may not even be in the same city. Because we tend to change careers and relocate more often than our parents did, our educational methods are becoming portable and flexible enough to provide life-long learning opportunities for everyone.

You can adapt these new distance learning techniques for internal training projects, as well as to help get information about your agency out to the public. Distance education gives you more freedom and flexibility because you can deliver your product both in the workplace and at home.

To use distance education, you'll need to:

- Define your overall goal in broad terms.
- Define your audience; choose one primary audience.
- Develop learning objectives—include audience characteristics and define what they will do once they master the objective.
- Develop the content.
- Select the instructional method or strategy.
- Develop ways to evaluate and make changes to your program.

A number of new technologies are available:

- Compressed video, which uses digital technology to compress video images to save transmission bandwidth. With this technology, you can have video conferences over telephone lines, using two-way video and audio.
- Satellite transmission, which uses uplink transmitters to send a broadcast signal to an orbiting satellite that returns the signal to downlink sites.
- Audio-conferencing, which uses telephone lines to transmit audio. In this way, many people can participate using a teleconference bridge.
- CD-ROM (Compact Disc-Read Only Memory), which lets your students and customers interact with educational material via the CD-ROM player in their computer. CD-ROM supports multiple media, including text, audio, sound, pictures, graphics, animation and video, which can be linked to other programs and sites on the Internet.
- The Internet, which lets students or customers connect through Web sites to explore topics through various multiple media resources, including text, sound, pictures, graphics, animation, and video.

About the Internet: The Internet is rapidly gaining popularity as a distance-learning delivery tool because it can incorporate text, sound, pictures, animation, and video into instructional packages. Students or customers can access the material on their own schedule via a personal computer.

- However, this technique does require your student to have a high-speed connection to the Internet and browser software.
- If you are using a Web page to teach, make certain it loads quickly, displays in all Web browsers, is well-organized, and is easy to follow.
- Learning on the Web is not much different from learning in more traditional environments. However, to engage students, lessons must have a clear purpose and be tightly focused.

New Digital Technologies

New digital technologies will impact the viewing and listening public over the next few years because they will fundamentally change the way broadcasters program, produce, market, and distribute their programs. New in-home receivers will have more variety and the display devices will continue to get bigger, brighter, and sharper. Traditional TV programming will be enhanced with greater levels of interactive information and activities. The difference between TV sets and computers will become increasingly blurred and irrelevant. We can expect that new ways of advertising and marketing will emerge to take advantage of these new opportunites.

High Definition TV (HDTV)

While HDTV isn't taking off as fast as many expected, it is definitely making inroads. It will affect how we all watch TV in the future. Quality is the major factor that most likley will cause consumers to spend up to several thousand dollars for a wide-screen TV. The image on the HDTV screen will also be a third wider than conventional TV. It is capable of delivering high-quality sound and other data hundreds of times faster than conventional TV. By 2003, all stations are required to be HDTV ready and by 2006, stations are to return their analog licenses to the FCC.

Satellite Radio

As of late 2001, there were two major satellite radio stations – XM Radio and Sirius. XM Satellite Radio began offering 100 channels of music, news, and talk in November 2001 for about $10 a month. Sirius Satellite Radio expects to launch its service early in 2002 for about $13 a month. Both satellite radio stations beam signals up to satellites, which then bounce signals back to ground receivers. The first application for this new technology will be cars. A palm-sized receiver dish on the back window of your car currently costs around $300. One unit can plug into your home stereo.

The advantage is that you can listen to the same station as you drive across the country. But, that means there won't be any local programming on satellite radio – and local programming is considered to be one of radio's unique strengths.

chapter two

Working With the Media

"I believe in equality for everyone, except reporters and photographers."

– Gandhi

What Do Reporters Want?

Just what do reporters want? Why don't they quote us? Why don't they ask us? How can I find out? There aren't any easy answers, but there is an easy way to find out: ask the reporter.

But, before you ask, be ready to hear the answers. Call or schedule an appointment when the reporter or correspondent isn't on deadline and has time to give you some thoughtful answers. Ask what kinds of stories the reporter wants to do; what turns that reporter ***on***, which ***hot buttons*** to push; and when is the best time to call with your story idea.

Find out what he or she hates, what stories the company will or won't do, and what kinds of stories the reporter's editor likes. Not every story a reporter does or wants to do gets into print or on the air. Who runs the assignment desk? What producer might be interested? What does the bureau chief want? Who runs the futures desk? How many stories does the reporter or correspondent do every day?

What considerations go into the news mix of the day? What are the media demographics? Who are their readers? How old are they? How much time do they spend reading the paper or magazine? Who listens or watches? Is there a farm or business show? How old are average readers, listeners, or viewers? How good are the ratings?

Ask, Ask, Ask ...

How are features handled? Is your department or agency given top priority, or are you at the bottom of the heap? When and why do your stories get to the top? What kinds of stories should you spend time pitching?

What does the reporter want from you—stories or story ideas? By mail with a follow-up phone call? By fax? Phone? E-mail? On your Web site? When is the best time to call, fax, or e-mail? What are the deadlines? When do the reporters broadcast ***live?*** What hours do the reporters work? What other agencies/beats does your reporter cover? How can you tie your story into a current hot topic? Whom do you call if you can't get to your reporter and you have an urgent story? Does this reporter know what a wonderful source you are? What a great interview your boss gives?

Once you know the answers to these questions, you'll be in a much better position to get your story idea covered.

Why not give the reporter a list of contact folks at your agency including phone, fax, and e-mail addresses? Staple your business card to it. If there are areas your agency doesn't cover, let your reporter pal know where your agency ends and another one begins. Don't assume reporters know everything about your agency. Even if they did, they have forgotten; or they need you to refresh their memories. Even if you've already sent them 20 copies of your contact list or phone numbers, give them another. In fact, give them two or three—one for their assignment desk, one for their boss, and one for their backup.

You'll build even more credibility with your reporter if you can suggest other expert sources of information.

> "Journalism largely consists of saying 'Lord Jones is Dead' to people who never knew that Lord Jones was alive."
>
> — G.K Chesterton

Building Media Relationships

One of the keys to success with the media is to understand that you can be an ongoing resource for reporters. Your job is to build relationships with members of the media, not just pitch stories to them every now and then.

- To introduce yourself to local media, set up a series of initial meetings with editors at your community newspaper, and with producers and program or news directors at your local radio and television stations.
- Send out a press kit mailing that has general information, a few story ideas, and a cover letter introducing yourself to newspapers and radio and TV stations in your region.
- Join professional organizations such as the Public Relations Society of America and attend monthly meetings. Members of the media are frequently guest speakers at these events.
- Develop a monthly one-page bulletin, or tip sheet, with news about your agency. This is a good way to keep in regular touch with your local media. You can send this tip sheet by fax or e-mail.

☞ Tips for Even Better Media Relations:

- Keep a list of people in your organization who are willing to give an interview so that you're ready when a reporter wants someone to interview.
- In general, call reporters/editors/producers in midmorning. In late afternoon they're on deadline and won't have time to listen to your pitch. ***However, there are exceptions to this rule.*** As you begin to build relationships with members of the media, take the time to find out when the different reporters and editors are not on deadline and are able to talk. Depending on their beats, some may always be out of the office, or in a story budget meeting, at 10 a.m. ***Always*** ask at the beginning of your conversation, "Do you have time to talk?"

- The same rule applies to the day of the week. Make your pitch earlier rather than later. Unless you have breaking, hard news, don't make your pitch on Thursday or Friday.
- Make sure you know your reporters' beats before you make any calls. Know exactly what they do and do not cover, so you don't waste their time or yours.
- Be mindful of a newspaper's deadline structure, especially with features departments. A Sunday ***Lifestyle*** section probably has deadlines on Wednesday or Thursday, so make your pitch well before then.
- Most reporters prefer brief, concise faxes or e-mails over flashy press kits. Your brief, concise press releases should be one page, or no more than two pages. If you go over two pages, that's an indication that you should break your story into two separate pitches. Or break your oversized release into a release and a fact sheet. Many reporters prefer you send them fact sheets so they can develop their own stories.
- Once you've established a relationship and have a good contact in a newsroom, don't hesitate to turn to him or her for advice. If you have a story idea and aren't sure who to pitch it to—or if it's even a strong enough pitch—call your contact and ask if you can run it by him or her. Ask what they think of it, and who, if anyone, they would suggest you pitch it to. This approach works incredibly well—if they're not on deadline or otherwise swamped, reporters love to be asked for their opinion.
- Every paper has to write seasonal stories, such as Valentine's Day, Independence Day, and Thanksgiving, away from home on the holidays, and World AIDS Day. Find an angle that relates to your organization and develop it.
- Assume that anything you say to a reporter or a correspondent will end up in print, on the radio, or on TV. Nothing is *ever* off the record.
- Check your sources. Always talk to sources before you give their names and phone numbers to reporters. Look for interesting anecdotes that you can use to entice a reporter to interview your sources, and more importantly, find out what, if any, negative things your source might say. Caution your sources that their words can carry a lot of weight.
- If your job is to prepare people for media interviews and public speaking, consider doing some mock interviews for new hires—do the interviews yourself or invite a reporter friend to the office to help you with this training. Or, contract with commercial sources, such as the U.S. Chamber of Commerce, to provide this training.

"The difference between literature and journalism is that journalism is unreadable and literature is not read."

– Oscar Wilde

- When you're making follow-up calls to members of the media, don't ask whether they received the press release you just faxed. This will only annoy them. Instead, ask if they want more information or if they would like to set up an interview. If possible, add a new angle that tailors your release to their readership.
- Don't forget your local columnists. You will be surprised—they may pick up your story idea when the news and features desks won't. As always, familiarize yourself with their columns

and know what they write about before you make the pitch. If you don't, you risk insulting them and making yourself look foolish.

- Don't be afraid to go the extra mile for a story, especially a feature.
- Don't pitch the same story to two different assignment desks on one paper, or to competing newspapers, at the same time. If either editor finds out you've double-dipped, they may get upset with you and may kill the story completely.
- Remember, it takes two steps to start a new relationship with a reporter or editor. It takes 11 steps to repair a damaged one.
- Always offer visuals. Visuals define a feature story, and are essential to a television news package. Find out ahead of time what kinds of visuals you may have available (photos or videos, for example), and make sure you have plenty of stock photos and B-roll (extra footage) on hand to provide to your media contact.
- When you're creating press releases, write like a journalist. Use attention-grabbing headlines. Put your news first, use quotes, and localize as much as possible. Come up with creative leads. Today's readers want the most recent facts first; background later.
- Two of your most important assets are a sense of humor and a thick skin.

☞ **Media Tip:** Have up-to-date information about your organization near your phone so that you can rattle it off quickly to the media without leaving anything out. Hang your ***General Facts*** over your telephone.

☞ **Media Tip:** What should you do if you or your boss is misquoted in the media? If the error is substantial, you may want to call the editor or bureau chief and ask for a correction or retraction. If it's not a major error, and doesn't hurt the effectiveness of the article, you may decide to do nothing.

"Anyone nit-picking enough to write a letter of correction to an editor doubtless deserves the error that provoked it."

– Alvin Toffler

What to Do When a Reporter Calls

Reputable reporters will always identify themselves as reporters. Ask what they want. If you're not the person they need this time, tell them who is—if you know. Try to be helpful—take the time to get phone numbers and addresses right.

Ask what kind of story they're doing—who they've talked to and what they're looking for—what facts and figures they need.

☞ ***There are two basic rules for dealing with reporters: Always return their phone calls promptly and always tell the truth.***

☞ ***Always respond to reporters—even if you're just calling to tell them you don't know the answers to their questions. Reporters are like elephants. They never forget public officials who lie to them, don't return phone calls, or give them wrong information.***

Make sure you give media calls top priority. Media representatives are usually working on short deadlines. If you don't return their calls, you will give them a negative image not only of your agency, but of all public servants.

Media Interviews

What if the reporter wants an interview?

If the reporter wants an interview, find out the subject and scope ***before*** you agree—or ask your boss or spokesperson to agree—to be interviewed. Ask who else the reporter has interviewed or plans to interview. If this is a broadcast talk show, ask who the other guests will be and what topics will be discussed. Also, will it be taped or live?

You control the parameters for any interview—time, place, and length. Keep time with reporters short—that way you'll both be forced to focus on the issues you want to talk about. Fifteen minutes should be long enough for radio; 30 minutes for TV, including time for equipment set-up and breakdown; as long as an hour for print. If you allow too much time, you might end up saying things you didn't mean to say.

How do I get ready for a media interview?

Do your homework. Review all the materials you can get about your agency, not just the material the reporter is asking about. Decide what ***you*** want to talk about.

Refine your three positive talking points. These are the three main points you want to make. Keep them positive. Keep telling yourself this is an opportunity. With a little thought, you can anticipate the reporter's questions and tailor your answers according to the three main points you want to get across. From your point of view, the interview should be driven by these messages, not by the questions. Plan to use your three points as the foundation for all the questions you will be answering.

Practice talking in 20-second sound bites. Practice making your points clearly and briefly. Don't use doublespeak, government-speak, or jargon—phrases no one else understands. Talk in plain language. Organize your ideas logically. Use appropriate words. Speak in the active voice, rather than the passive.

Figure out how to personalize and humanize your information; tell how it affects the viewer or reader.

Get some show-and-tell materials ready—a book, a simple graphic to illustrate a complex statistic, or perhaps a model of what you're going to talk about. If you have videotape, get an extra copy ready to give to the correspondent.

Find out everything you can about the reporter or correspondent. What is his or her reputation for fairness? What stories has the reporter done? What types of stories has the publication or station done in the past? Are the stories long and in-depth, or short, and lacking details? What is the slant to most of the stories?

Scan the news of the day to make sure you're prepared for any last-minute questions. For a TV interview, watch the news show to see how much air time each story gets. If this is a print interview, scan the latest issue of the publication.

Use Plain Language

People will understand what you are writing or saying the first time if you use plain language. Speak so that everyone can understand—not just other government bureaucrats. Use natural expressions and common words. Organize your ideas from general to specific, or from specific to general, from positive to negative, step-by-step or from most important to least important.

Use appropriate words—simple, everyday words. If you can take advantage of a popular expression to illustrate a point, do it. Don't use technical words. If you're forced to use a technical term, explain what it means. Don't make verbs into nouns. Choose your words consistently and be very careful about using acronyms. If there is any doubt, spell the acronym out. Keep your sentences easy to understand.

What if my boss is scared to talk to reporters?

Work with your boss. To get what you both want out of an encounter with the media, you both need to do your homework. You prepare for everything else in life that is important. An interview affects not only your own reputation, but also that of your organization.

Put your boss in front of a video camera to practice giving the major talking points and answering questions. Pretend you're a correspondent for *60 Minutes* when you're asking questions. Let your boss critique his or her own video. If you don't think you can do this, hire a media consultant to help. Many government agencies hire outside help for this job.

But be honest. If your boss can't put two sentences together in front of a microphone and media training doesn't help, don't pitch your boss for on-air radio or TV interviews. Find someone else in your agency who is good at it.

Do These at the Interview

- Do your homework before you talk to a reporter. Be prepared for the reporter's worst questions with three positive points you want to get across. Practice what you want to say. Remember you're selling your activity. Talking to a reporter is an ***opportunity***.
- Speak in short sentences using plain language. For TV and radio, think in terms of 20- or 30-second answers. This assures the reporter will use what you say.
- Smile. Act like you enjoy what you're doing. Call reporters by their first name. Look interested and alert.
- Tell a ***positive*** story. You do a lot of good things; tell the reporter about your three positive points.
- If you don't know the answer, say, "I don't know." If you do know the answer and can't tell it now, tell the reporter when you can give him or her the answer. Refer the reporter to someone who does know the answer, or offer to find out who does.

- If a TV station offers you makeup, take it. The TV camera will add ten years and ten pounds. Remember, the TV pros all wear makeup.
- Dress conservatively and simply. Be remembered for what you said, not what you wore. Ignore this rule if you're a rock star.
- Stop talking when you've made your point. Don't ramble on and on. Don't speculate. Stick to your key message. Let the reporter worry about the empty air space.
- If a reporter asks several questions in a row, pick the one you want to answer. Or, ask the reporter to repeat the question.
- Have ***show and tell*** material. A simple pie chart works well. Have videotape? Take it, too.
- Take advantage of the opportunity at the end of the interview when the reporter asks if there is anything you'd like to add. Repeat your three talking points and summarize.

Never Do These

- Never say, "No comment." "No comment" means "guilty" to most people when they hear it.
- Never say anything "off the record." Assume all microphones are ***live.***
- ***The most important rule: Never say anything to a reporter you don't want to see on TV or read on the front page of a newspaper.***
- Never lie to a reporter.
- Never lose your temper. Be polite, but firm.
- Never use profanity or slang. Don't say anything that could even remotely be construed to be off-color, sexist, or racist. Don't comment on anyone's age, religion, or politics. Tell jokes *only* if they are self-deprecating.
- Never say *uh.* Drop all the *uhs* from your speech. Make your pauses *silent.*
- Never wave your hands. Don't *bob and weave* your head around. Sit still.
- Never answer hypothetical questions. Don't speculate. Be specific. Stick to what you know.
- Never comment on what others have said, particularly if you haven't seen or heard it. Don't verify something that might not be true.
- Never use doublespeak, government-speak, or jargon. Use numbers in an interesting way. Make your information easy to understand. Personalize your information. Relate it to the reporter. Humanize it.
- Never talk to a reporter without doing your homework. Prepare. Turn the interview into a *sales call.*
- Never stop talking after you've answered a "yes" or "no" question. Keep going. Say something like, "Yes, but you should also know ...." Or "No, but let me elaborate ...." But, keep your response very brief and to the point.

At the Interview

Smile and enjoy yourself. Relax the reporter and you'll be relaxed, too. Tell the reporter you're looking forward to the interview. The best way to diffuse a hostile situation is to be warm and accommodating.

When the interview begins, remember that you are the expert. Don't smile and nod your head as the interviewer asks a question—just look interested.

Make sure your body language and speech patterns back up your sincerity. To combat nervousness that an audience might interpret as insincerity or untruthfulness, sit up straight and take deep breaths. Don't sit back on soft seats. Sit on the forward portion of the seat cushion and keep your back as straight as possible. If your mouth is dry, bite the sides of your tongue—it will make you salivate. Stop talking when you've made your point. Many people say things they didn't mean to say after they've made their major point. Don't worry if there is silence. It isn't your job to fill it up.

Don't let the reporter put words in your mouth. If the reporter uses inaccurate facts when asking a question, correct the error. Don't fall into the black hole of "no comment." Instead say: "That's not the critical issue, this is ...." Or, "That's currently part of a law suit. Our policy is not to discuss ongoing litigation ...." Or, "We'll have an announcement about that later this week."

If this is a TV interview, remember that ***TV is not always fair***. TV's visual impact can make stories more emotional than any other media. You are not seeking the truth—don't let yourself get pulled into such a search. You are ***not*** there to answer questions; you're there to elaborate on your three talking points.

Never lose your temper. TV's visual impact will magnify your emotional response.

Let the reporter know you are keeping track of the interview. Ask if you can tape the interview and have a tape recorder ready. Turn it on when the interview starts. Tell the reporter that you want to evaluate how clearly you are answering the questions so that you can be a better source.

Never forget that the interview isn't over until the reporter leaves. TV correspondents commonly shoot ***B-roll,*** sometimes called ***cutaway footage,*** or ***cutaways.*** These are used to fill in the interview so it isn't just a ***talking head.*** B-roll also makes the final produced story more visually interesting. Camera crews usually leave the sound on while taping the B-roll. The reporter might ask you again how you really feel about an issue. Make sure you repeat only what was said earlier, as the mike is still live and anything you say is being recorded.

Sometimes, radio or print reporters will also leave their tape recorders running to capture any off-the-cuff remarks that you might make.

If you are giving a telephone interview, assume the reporter is taping the conversation. That way you won't have any regrets later.

At the end of the interview, thank the reporter for the opportunity.

The media world isn't equal: There are inequalities when you agree to a media interview. Reporters can cancel at the last minute. You can't. If you can't make the interview you've agreed to, you must provide a substitute. Reporters can be late, but you can't.

What if the reporter interrupts or tries to rush you?

Ask to finish your statement and begin what you were saying again. Don't start in the middle; make a complete, but succinct, statement.

What if a reporter catches you when you're not prepared and tries to interview you?

Smile and walk away—even if the video camera is rolling and the reporter is sticking a mike in your face. Tell the reporter you're glad to see him or her, but you don't have time to talk now. Give your phone number and suggest they call your office to set up an appointment. Never talk to a reporter unless you've taken the time to prepare.

What if the reporter asks how you "really feel" about an issue?

Give the same answer you gave before. There is no room for your personal opinion, only your professional one. If you don't say it, the reporter can't use it.

What if there is a silent, awkward pause after you've answered a question?

Smile and wait out the pause. The reporter is using one of the most effective techniques in interviewing—getting you to volunteer information. Stop talking when you've made your point.

What if you don't understand the question?

Ask the reporter for clarification. Some reporters don't ask clear questions.

What if you can't think of the answer to the question?

Smile. Be serene. Ask the reporter to repeat or clarify the question while you take a mental break. Buy time by saying, "That's a good question." If you really can't come up with an answer, tell the reporter you need to look it up or consult with someone else and offer to call the reporter later in the day with the answer.

What if you start to answer a question and make a mistake?

Start over. If this is a TV or radio interview, tell the reporter you are going to start over.

"Rock journalism is people who can't write interviewing people who can't talk for people who can't read."

— Frank Zappa

chapter three

Planning

"There cannot be a crisis next week. My schedule is already full."

– Henry Kissinger

Writing Communication Plans

An effective communication plan includes initiatives that truly reflect your organization's goals. At the same time, a good communication plan not only must target relevant primary and secondary audiences, but it must identify key messages and themes that will likely resonate with these groups.

Writing communication plans that are on target, and likely to be well received, requires a combination of careful planning and a strong understanding of the attitudes and opinions of the stakeholders you plan to reach. As you write, you need to focus your plan on solid, well-thought-out initiatives backed by a strong and compelling rationale, and you've got to hone your writing style to a fine edge. There is no room for writing that doesn't get right to the point.

☞ Tips for writing an effective communication plan:

- **Use a structure that lets you *chunk* information into main points and key headings.** A communication plan can be structured just like other kinds of strategic plans. A typical approach includes:
  - **Situation analysis**—the current background, history, circumstances and a clear statement of the problem or opportunity involved.
  - **Goals and objectives.**
  - **Target audiences**—including primary and secondary; demo and psycho graphics, if relevant.
  - **Strategy and rationale** for achieving your goals and objectives, as well as your arguments in favor of the approach you plan to take.
  - **Tactics**—specific executions or elements—the deliverables and products of the plan as well as talking points, budgets, and time lines, if appropriate.
  - **Evaluation**. How you will measure the effectiveness of your plan, along with the specific outcomes that will represent success or failure.
- **Do some research to make sure you are identifying the right audience—internal and external.** Conduct focus groups to evaluate public understanding of your intended messages and the information products you intend to use to communicate with those audiences. In addition to focus groups and opinion polling, check what other agencies or organizations like yours might be doing to find out what their constituencies are thinking and feeling. Maybe they have data from a poll they have run with an audience similar to yours, or know of someone who does.

The Web is a great place to find out what people are thinking. Try being an active surfer and you'll be amazed at how much you can pick up about your constituencies. If you have a Web site, adding an online feedback form is another good way of keeping your hand on the pulse and getting data to support your plan.

If the primary audience is internal, go to meetings, talk to people, set up informal ***listening sessions.*** Encourage feedback and input, all of which you can document and draw on as part of your rationale.

Don't rely on instinct or your own reactions. Very often, the audience you need to target will be enough unlike you that your instincts stand a good chance of being incorrect.

- **Spend time developing and defining your goals and objectives for yourself and your readers.** What are the outcomes, communication and otherwise, that should result from your plan? Have you articulated them well enough so that your agency understands the importance of what you are proposing?

Thread your goals and objectives through your plan. To keep these foremost in your readers' minds, a good trick is to re-state them as you outline your strategies and tactics ("to achieve the objective of...").

- **Identify key message themes, but don't get bogged down in the details.** Try to get a consensus from key players as to what the major communication points need to be. State these broadly, and make sure you explain the reasoning behind them.

Use visuals where possible to convey conceptual communication ideas involving media. Remember, a picture ***is*** worth a thousand words.

If the plan entails many tactical executions and/or messages, use flowcharts to graphically show how you'll execute it.

Consider presenting your plan as a polished "Power Point" briefing to agency decisionmakers.

- **Don't be afraid of using innovative strategic and tactical approaches.** As we know, not every communication problem can be solved by mass media. The most effective approaches are usually not one-way communication.

Use a range of elements, both media and non-media, to ensure both coverage of and responses from your targeted groups.

Think through the balance of reach and frequency as well as penetration and impact strategies. Is it better to reach more people, or more frequently reach fewer people? Do we want our audience to have more information, or to be more influenced by the information we give them?

Don't overlook the importance of grassroots campaigns and volunteer efforts. All politics may be local, but so is effective communication. Provide your grassroots affiliates with resource materials to help get the message out to the public. Where possible, have them localize the message.

- **Tie your evaluation plans to your goals and objectives.** If your goal is to enhance awareness of a new policy or program, use awareness-based measures like recall, exposure, and media impressions. If your goal is attitude/behavior change, then survey analysis may be in order.

Don't overstate what you think will be the outcomes. It's a natural tendency (and sometimes a management directive) to expect big results, but some objectives, such as attitude/behavior change, are complex and hard to achieve or measure.

- **Write your plan in plain language.** Like many other kinds of writing, communication plans are often written in a specific style and tone. To be most effective, your writing should be clear and direct – free of jargon. Make sure your readers can follow your line of reasoning with no distractions. Academic or creative writing styles are not nearly as effective as plain language.

To get that lean edge to your writing:

- Use active, action-oriented verbs and sentences that begin with subjects.
- Edit out clumsy, compound-complex sentence constructions and sentences that start with subordinate clauses and prepositional phrases.
- Be goal-directed. Write about your plan's elements in terms of benefits and outcomes. Strike a balance in favor of giving your readers reasons to support your ideas rather than just informing them about the details.

Strategic Planning—Preparing to Meet the Future

You've written your communication plan for a fiscal year full of exciting projects. Now your boss needs your communications office's input into the agency's strategic plan. Where do you begin?

Nearly the same place, but with a broader view. In the place of the situation analysis, substitute one that explores all the external factors that impose long-term limits or provide more than local opportunities. Involve your staff in this analysis, and include an inward look as well, because you need to know, before you begin planning, if your organization is prepared to respond to change. Will your staff need retraining or retooling to keep up with technology?

The next step is writing the vision statement. It describes, concisely, your organization as its members see it operating in the future. Include only important aspects:

> The Communication Services Office will be the preferred provider of communication services for all national and field office components within the XYZ Agency.
> or
> The Communication Services Group will support the mission of XYZ Agency by using telecommunications and information technologies to make access to public services faster and more convenient and efficient, thus better serving the agency's customers, stakeholders, and the public at large.

Goals, Strategies, and Objectives

A goal describes where you want to wind up; a strategy is a way to get there; and an objective is a specific step you can take to follow the strategy for reaching the goal. It may take more than one strategy to reach a goal, and it may require a number of objectives to implement a strategy.

One goal related to the vision statement above could be:

- XYZ Agency public service announcements will be enhanced by the use of multimedia.

Objectives should be specific (describe exactly what is to be accomplished) and measurable:

- "90 percent of companies receiving XYZ Agency publications rate them as useful by FY 2003." Note the specific completion date.

An objective under the goal above could be:

- 90 percent of the necessary multimedia technology and a fully trained staff will be in place by mid-FY 2001.

Another could be:

- Multimedia Public Service Announcement on the research benefits of XYZ Agency's genetic information initiative will be ready for distribution by September 2002.

Action Plans

A plan of action brings an objective down from the lofty realms of the planning world to the hard realities of actually doing something. For each objective, an action plan spells out the who, what, when, where, and how. This phase of planning, which leads directly to implementation, may be done by a team, with team members resolving the various details. Each step of the project should be known at the outset, even though there may be changes along the way. Without an action plan, you won't achieve many objectives. A time line is also usually required, as well as links to the organizational budget request.

Performance Measurement

An important part of the planning process is to determine how you'll measure your performance.

To measure performance that involves public recognition, you can use customer surveys, Web site hit counts, and focus groups. The resources your communications unit can commit to such activities will determine how much you will learn from them. It's a good idea to meet with the officials in your agency who are managing the overall strategic planning effort, probably under the Government Performance and Results Act. Not only will they be able to spell out exactly what is required, but they'll also be able to share examples that are pertinent to your mission.

However, strategic planning should not be thought of as producing a report, but as an ongoing process. It is iterative, dynamic, and–above all–inclusive. A good strategic plan is the basis for all the important things communicators do each day in supporting their agencies' mission-related outcomes. If your staff is involved, as well as your clients inside and outside the agency, developing a strategic plan will help clarify your priorities and shared goals.

There is a great deal of help available if you need it. Private sector organizations and corporations have been doing strategic planning for years. Try key-wording ***strategic planning*** in any of the Internet search engines; you'll be surprised at the number of references. The General Accounting Office (**www.gao.gov**) has many reports and guidelines. There are strategic planning groups that

meet periodically in Washington, D. C., some sponsored by the Office of Personnel Management. But better still, seek out your agency's management gurus and ask lots of questions.

"We don't get offered crises, they arrive."

—Elizabeth Janeway

Crisis Communications: Planning to Attack the Crisis Before it Attacks You

Don't wait until your agency is in a crisis before you come up with a plan to deal with it. Crisis communications is sometimes called ***damage control.*** It's about protecting your agency's reputation and credibility when a major problem arises that could lead to public and media scrutiny. You can predict nearly 90 percent of the crises your agency could have. The other 10 percent include such sudden crises as natural disasters or product tampering. Since you can predict the majority of potential crises, you can plan for them.

The Five Types of Crisis

Facilities Crisis
Damage such as that caused by an explosion, fire, leakage, or natural disaster.

Community Crisis
Adverse condition created by the organization or outside organizations hostile to the agency or its mission.

Employee Crisis
Includes loss of life, sabotage, or a reduction in force.

Consumer Crisis
Includes defective products, contracts that can't be met, or an allegation against your agency.

Image Crisis
Includes unlawful or ill-perceived activities, such as sexual misconduct, drug use, or the indictment or arrest of a senior agency official. This is the most difficult crisis to counteract.

Pro-active versus Reactive

The best way to be pro-active about a crisis is to plan for it in advance and have a crisis management and communication plan in place and ready to go. It takes only one mishandled crisis to cause your agency to lose the respect and trust that it has been building for decades. There are seven phases that an agency in crisis usually goes through:

- Denial
- Wishful thinking
- Anger and aggression
- Spin
- Damage Control
- Reconstruction
- Recovery

With a crisis communication plan in place ***before*** the crisis occurs, your agency can skip the first four phases and move immediately to damage control. That makes you a lot closer to recovery

when you start. A crisis communication plan gives you time to formulate more comprehensive ideas and explanations. While you're in the midst of a crisis, stress reduces your field of vision, leaving you blind to alternatives that are obvious during a planning session done during a less stressful time.

How to do a Crisis Communications Plan

- Sell the idea. The hardest job is to sell top managers on their need for a plan. Brainstorm with them about the most likely crisis you could have. Ask them to assess how prepared you are to handle such a crisis.
- Once you've sold the idea, work with management to start mobilizing and training a response team that will be responsible for coordinating communications with each of your various publics in the event of a crisis.
  - Select the top manager who will head the in-house team to communicate with employees. Have workers from across your organization represented on the team.
  - Select the top manager and team to deal with the media. Train several people to be media spokespersons.
  - Select the manager and teams to communicate with customers, shareholders, and the key government and law enforcement agencies in your communities.
  - Select the manager and team to keep your Web site updated throughout the crisis.
- Arrange a central site and phone number where all team members will check in when a crisis arises. Also select a secondary site and phone number.
- Plan and tell employees how you will communicate quickly and effectively with each group. Make sure the teams know how to contact one another at all times by having current business and home telephone numbers, fax numbers, and e-mail addresses. Use an intra-net Web site to distribute information to employees.
- Establish separate points of contact for employees, media, customers, and others to call for information on the situation.
- Determine who will make final decisions when you are releasing sensitive information.
- Have each team review previous communications involving their publics. Look for strengths, weaknesses, and ways to improve relations. Begin working on those improvements.
- Be sure the crisis teams know how to reach their key contacts at all times. Make sure they have day and night telephone numbers for both primary and secondary contacts, and keep those lists up-to-date.
- Arrange for training and conduct simulations. All crisis team members need media and crisis training and regular refreshers. Keep everybody on their toes and constantly assess new potential problems.
- In some situations, you may need to rely on wireless communications between teams and law enforcement officers. Do your homework and training; locate equipment.

What to Do When Crisis Occurs

- Communicate. Don't hide behind "no comment." If you do that, you immediately lose control. Even if all you can say is that you don't know, say so, say why and when you think you will know. Reporters look favorably on people who are trying to be helpful.
- Never lie or speculate. Provide only factual, confirmed information.
- Put people first. Help the people most affected by the crisis. In the case of accidents, remember to deal with victims' families before any other group. If they want you to, intercede on their behalf with the news media. Be sensitive to legal restrictions regarding information, such as the Privacy Act and Freedom of Information Act. Know what kind of information is public and what must be withheld.
- Communicate your concern about the victims.
- Be available at all times to respond to your various publics. Know media deadlines and don't rely on news conferences alone.
- Don't be defensive. Be prepared for aggressive questioning. You might have to answer the same question several times.
- Provide brief, precise answers to questions. Don't ramble. Use plain language. Short answers also help alleviate nervousness.
- Take your time in explaining difficult issues to reporters.
- Monitor media accounts and quickly correct errors by contacting the reporter or correspondents.
- Don't attempt legal battles in the media. Express assurances that matters of litigation or potential litigation will be investigated thoroughly.
- Prepare key points you want to make ahead of time. Make them short and to the point. Try to repeat them several times during the news conference or interview.
- Stay with the crisis throughout its duration.
- Follow up with the news media to keep them updated about what preventive actions were taken after the crisis ended.

Remember, the public's immediate assessment of an agency in crisis is based on these four factors of earning trust and credibility:

- Empathy and/or caring (usually assessed within the first 30 seconds)
- Competence, expertise, and readiness
- Honesty and openness
- Dedication and commitment

Communicating Risk

Gauging how your audience will react to government messages about physical risk is tough. When many people hear the word ***risk*** they think ***danger.***

According to risk communication research, people can react to news about danger in one of two ways. They either:

- think about the justice of the situation or
- think about the physical hazard itself.

Frequently, people who are managing physical hazards think about the hazard. They focus on making people understand how large or how small the dangers—tire tread separation, low-level radiation, or cooking meat without a thermometer—really are. They ignore the justice of the situation.

People who are getting the messages, on the other hand, may be wondering about how competent the risk managers are and what their motives are. They aren't thinking about the physical hazard. Audiences can be highly skeptical of messages that say, on one hand, that genetically engineered food is safe but, on the other, that cooking meat without a thermometer is dangerous.

What is Your Audience Concerned About? The key to communicating risk is to find out what your target audience is concerned about. Are they mainly concerned about management issues or are they concentrating on trying to understand the physical hazard? When people trust and respect the risk managers, they can start listening to information about physical hazards.

There are a number of risk communication guidelines. Some deal with good listening and some deal with good explaining. Try the good listening techniques before you try to explain. It's tough for an audience to listen to Biotech 101 when they're wondering if the lesson is really an excuse for poor management or unethical practices.

One set of good listening and explaining techniques is presented in Vincent Covello and Fred Allen's *Seven Cardinal Rules of Risk Communication* (in an Environmental Protection Agency brochure). Here are their seven rules:

1. Accept and involve the public as a partner. Your goal is to produce an informed public; not to defuse public concerns or replace actions.
2. Plan carefully and evaluate your efforts. Different goals, audiences, and media require different messages and actions.
3. Listen to the public's specific concerns. People often care more about trust, credibility, competence, fairness, and empathy than about statistics and details.
4. Be honest, frank, and open. Trust and credibility are difficult to obtain; once lost, they are almost impossible to regain.
5. Work with other credible sources. Conflicts and disagreements among organizations make communication with the public much more difficult.
6. Meet the needs of the media.
7. Speak clearly and with compassion. Never let your efforts prevent your acknowledging the tragedy of an illness, injury, or death.

Don't Explain Until You've Listened: Listen to your audiences' concerns about the hazard before you try to tell them that their view is right or wrong. One way to gauge potential public reaction to your message is to call a few friends and ask them what they think about your message.

Make Your Message Easy to Understand: Here's a sample message: The Earth is weightless. The words in that statement are familiar. That's a short sentence, so it should be easy to understand, right? It's not the words that make the sentence hard to understand. It's the counter-intuitive idea that something as big as the Earth could somehow be weightless

Sometimes messages about risk are just as counter-intuitive. Here's one: "The only way to be sure a ground beef patty is cooked thoroughly is to use an accurate instant-read thermometer." That's a tough message to understand. But the words in that sentence, and the sentence's length, aren't the problem.

The problem is that lay theories make this message tough to believe. You might have cooked a hamburger just last night without using a thermometer. And, you feel fine today. So why should you use a thermometer?

When a risk message is hard to believe, acknowledge that. Try presenting your message this way.

- State the message.
- State the lay theory.
- Acknowledge that the lay theory is apparently reasonable.
- Describe a familiar experience that makes the lay theory questionable.
- Then explain the scientific account and the way it makes sense of that familiar experience.

Here's what you might say: "New data show that the only safe way to cook a ground beef patty is to use an instant, accurate-read thermometer. Many of you are probably thinking you didn't get sick the last time you cooked a hamburger and didn't use a thermometer. So, it's reasonable to assume you don't need to use a thermometer.

"But, some people—such as the young and the elderly—are more likely to get sick from harmful bacteria than others. And, it is possible to develop a resistance to harmful bacteria. People assume meat color is the key to its doneness and safety. But, meat color is a result of other factors such as oxygen exposure. At 160 degrees Fahrenheit, a ground beef patty can look either brown or pink. It's the cooking temperature that kills harmful bacteria. How can you know if your ground beef is hot enough to kill harmful bacteria? Use a thermometer to make sure your ground beef is safe — and tasty."

By listening and putting some thought into your messages, you can better gauge what kinds of messages your audiences want to hear about potential hazards.

Measuring Your Effectiveness

Too often, we measure our effectiveness only by counting the number of products produced in a given amount of time. But, measuring that way, we're really only evaluating productivity, not effectiveness.

If we don't measure our effectiveness in creating and delivering communications products, we'll never be able to let go of some of the routine tasks we've been performing for years. We need to demonstrate the added value of putting our energy into new, more meaningful projects. As resources become tighter, communicators are being asked, along with everyone else, to prove their worth.

Here are some ideas that you can use to measure your effectiveness:

- Accept that measuring effectiveness is your responsibility, just as you accept responsibility for creating products that are within budget and on deadline.
- Make planning and evaluation integral parts of your projects. Effective communication begins with effective planning and continues throughout the life of the project. Meet periodically with subject-matter specialists and your internal customers. That way you'll be aware of upcoming projects. Let them know that you are willing to help in the planning process so you can help identify communications objectives and shape the effort, including the products and the evaluation.
- At first, select only a few projects to measure for effectiveness. This will make the task seem less overwhelming. Once you've successfully planned and produced an effective product that you can prove accomplished your objectives, the process will become easier. Eventually you'll want to evaluate all your projects.
- Identify your communications objectives. Make sure everything you produce meets those objectives. These steps are the same as for program development. You'll need to answer these questions:
  - What problems are you addressing?
  - Who is your target audience?
  - What are your objectives? List the types and degree of behavioral or attitudinal change you want to see happen by a certain time; the effectiveness of the delivery method, or both.
  - What methods will you use? Fact sheets, phone contacts, or personal visits?
  - How will you evaluate your effectiveness? Will you measure changes in attitudes or behavior or measure impact on budget?
- Ask evaluation specialists within your organization to help develop a first-rate evaluation process. You don't have to do it alone.
- Track the use of your products. This measures whether your delivery techniques are effective, but not necessarily if your messages are effective. Here are some ways you can track use:
  - News clipping services. However, research shows that clipping services often find only half of the stories that actually make it into print.
  - Nielsen ratings or other broadcast monitoring services. These ratings let you know how many households are being reached with your program or video news releases, but not necessarily how many people are hearing your message or being moved to action.

- Quantity counts. Counting how many of a product you create—or better yet, how many you reprint or reproduce—might tell you something valuable. The question, however, is whether your product is really effective or whether it is the only thing available.
- Web tracking. A simple though not necessarily reliable method to measure effectiveness is simply to count the number of hits on your Web site. Some counting programs are better than others at tracking real users; they exclude multiple hits from the same person or hits from your staff.
- Readership surveys to measure reaction to periodicals you are producing.

- Explore more sophisticated ways to measure product effectiveness, such as:
  - User surveys and questionnaires can be effective for publications, videos, video news releases, Web sites—virtually everything you produce. Be sure to make them simple and easy to complete and return to you. Include a self-addressed, stamped envelope for mailed surveys. For audiences who have access to the Internet and are comfortable using the technology, you can use e-mail surveys.
  - Telephone surveys, if short and well crafted, can provide you with rich information on your customers' use of and feelings about your products and services.
  - Interviews and focus groups can also provide you with personalized information about your products and services.
  - User observation is an effective evaluation tool for such things as Web site navigation and Internet educational modules.
  - Participant evaluations are useful tools for evaluating workshops and programs. This is especially true if you also use a follow-up survey to evaluate whether participants have truly demonstrated the knowledge, attitude, or behavior changes you were targeting.
  - Business reply cards, or bounce-back cards, are good tools for getting feedback on mailed materials. If you don't get a sufficient response this way, however, you may need to make follow-up phone calls.
- Learn from others. Many organizations have extensive experience in measuring effectiveness. Check chapter 6 for some useful Web sites.

Once you've started, you'll find that measuring your products' effectiveness won't take nearly as much time as you thought it might. You'll find the rewards can be gratifying, not only in terms of recognition and increased support for your organization, but also in increased recognition of your expertise as a communicator.

chapter four

The Internet

"For a list of all the ways technology has failed to improve the quality of life, please press three."

– Alice Kahn

The lack of a Web page is far more obvious and potentially embarrassing than the lack of an e-mail address. The Web is more like TV than it is like e-mail. At first glance, the Web looks like a tool for untargeted, mass distribution. However, the Internet is a powerful research tool for the media.

It is crucial that your Web site maintain a consistent message and identity. Maintain and update it on a daily basis. Make it accessible to customers with cutting-edge technology like PDAs—Personal Digital Assistants, cell phones, and pagers that offer Web access. And, make it accessible to all. That means incorporating features to provide access to the hearing and visually impaired, and the learning disabled.

There are no "fixed" deadlines in the Internet—the information can change minute by minute. The possibilities for using the Internet are seemingly endless. Instead of a media event, you might want to try a web-cast announcement. Your agency representative can be in the middle of Iowa and the media reporters and writers can be anywhere in the country, but they can interact online or have an Internet chat. The Internet gives you the possibilities of new tools for reporters—Web-based press kits, Web casts, and digital information available online. Tomorrow will see more audio and video streaming on the Web as broad banding becomes more common.

Writing for the Web: Tricks of the Trade

On the Web, you have about eight seconds to capture your reader. Great information isn't enough. Glitzy graphics won't do it. And, hypertext—at its worst—provides appealing distractions that tempt your readers to move on. So, how can you make your Web pages alluring, attractive, and easy to read?

- Design for easy scanning.
- Provide visual navigation and accessibility aids.
- Be concise.
- Convey credibility.

How We Read Web Pages

To design Web pages that attract and keep customers, you have to understand that we read Web pages differently than we read paper.

- Reading rates slow by 25 to 40 percent on the Web.
- The monitor's flicker causes eyestrain.

- Almost 80 percent of Web readers scan Web text. That means only 20 percent read every word.
- Readers scan a site for only about 10 seconds before they move on.

Design for easy scanning. Do whatever you can to attract and keep your customers coming back to your Web site for more.

☞ Tips for attracting and keeping your customers:

- **Make your fonts legible.** Sans serif fonts are, in most cases, the best choice for publishing chunks of text on the Web. Letters look different on the computer screen than they do on paper. People usually don't read letter-by-letter as much as they recognize words by their shape. For example, a word typed in all capitals looks like a rectangle, which slows your reader down.

On paper, serif fonts, which have both thick and thin lines, increase legibility based on shape recognition. They also guide the eye between letters on paper. But on the monitor, serifs may cause letters to appear as blobs or make them look like they're running into each other.

- The smaller the type, the more important it is to use sans serif fonts.
- Italics decrease legibility; use them sparingly.
- Use serif fonts on articles that will be printed to be read.
- Dark type on a light background reads and prints much better than light type on dark.
- Writing on pictures or textures stands out when it's large and bold (check out magazine covers for ideas).
- Verdana, Arial, and Helvetica are good sans serif choices for monitors. Georgia, Times New Roman, and Times are good choices for serif fonts.
- Remember that browser settings, whether altered by the user or not, will determine what the user ultimately sees.
- **Use the journalist's tool: The inverted pyramid.** Journalists sell their content by bringing the conclusion to the top of the story. Although this may sound upside-down, it will work for the Web.

Web readers give you only a few seconds to persuade them that you've got what they're looking for. The inverted pyramid structure is the perfect device to grab readers who are looking for factual content.

Shape an inverted pyramid by starting with your conclusion and building down to the background information. Better still, link to detailed and background information. Web readers will pursue what they want. That's why it's called surfing.

- **Keep line lengths short.** Don't make your Web lines longer than 40 to 60 characters. Keep in mind that it's hard to read from a monitor. Font size on the screen should be a bit larger than what you might choose for paper publishing.

- **Use headlines and subheads to break up your text.** A good headline or subhead is brief, simple, and meaningful. Web surfers can come to your site from many different directions, particularly when they are using a search tool to look for key words. Thus, each page on your site should carry a meaningful headline—one that can stand alone out of the context of the rest of your pages.

Don't be overly clever or use puns when you're writing headlines. Users could misunderstand your topic.

- **Use bullets and numbered lists.** They're easier to read and scan. The format helps you more concisely shape your content. Numbered lists help your readers pinpoint the next step. When you bury the information in a paragraph, your readers get frustrated.
- **Highlight key words.** If you highlight key words, you'll help your readers scan more efficiently. Use a color—reserve blue for links—or simply use a bold face font. Remember, only 20 percent of Web readers read every word.
- **Provide visual navigation and accessibility aids.** The Web is a visual medium. Graphics and words work together, and the reader uses both to navigate. Experienced surfers expect a colored bar at the top or left of the page will have links to key sections of the site. Although it's common that the center of the page will attract attention first, most of your readers will instinctively look to the top and side for navigational cues.
  - Don't put more than three carefully chosen words in buttons or hyper text links.
  - If you can't succinctly describe an area of your site, break it down differently.
  - Don't squeeze jargon and abbreviations into small spaces. If your readers don't know what it is, they won't use it.
  - Don't use icons alone; use them only as supplements to a hyper text link.
  - Use hyper text links within text blocks carefully. They may tempt your reader away from the text flow. Consider a section of links in a block by themselves where they may also be easier for your reader to find again later.
  - Group hyper text links when you have a lot of them. Make these groups visually distinct.
  - Use **ALT** tags with all buttons and graphics.
  - Don't rely on colors for navigation.
  - Use graphics, but keep the file sizes small. Most Internet surfers have slow modem connections to the Web and won't wait for long screen downloads.
- **Be concise.** *Woman's Day* magazine warns that you should be aware of the "Fatigue Factor." For most in our culture, it's a driving force. Research on Web readers shows they prefer lean text. In one study, most readers thought they were getting a greater amount of information from concisely written pages than from wordy pages, even when they weren't. Writing concisely will brand your page as one that is packed with content. Here's how:
  - Limit each paragraph to one idea.

- Begin each with a topic sentence.
- Use three or four sentences per paragraph.
- Keep sentences short.
- Use simple sentence structure.
- Use plain language
- Use active sentences.

- **Chunk your content.** Help your audiences find the information they seek more efficiently. Your readers who scan don't like to scroll through long Web pages. Chunk your information into meaningful pieces. Then:
  - Size each chunk to fit on a single screen that carries a meaningful headline.
  - Reduce word count by 50 percent when you edit print documents for the Web.
  - Chunk each page into a few paragraphs.
- **Just the facts, ma'am...** Web readers want facts. Don't pollute your factual content with wordy embellishment. Take special care to avoid words and phrases that sound like marketing jargon.
- **Why rewrite something that's already on paper?** All the evidence points to the inevitable: People won't read your page when it's wordy, full of fluff or jargon, or not chunked into meaningful pieces. Remember that people will enter your site from many different points. You can't expect Web readers to read your content in a linear fashion.
- **Convey credibility.** Web readers look for marks of credibility when scanning a Web page. Here's how you can be credible:
  - Make it clear who is publishing your Web site. Web readers are skeptical about content when they can't identify who is sponsoring it.
  - Provide your credentials. You can use a link to give this information.
  - Link to high-quality, credible sites that support your content. Readers sometimes like to see links to opposing points of view, as well. Many interpret this as objectivity on the part of the author.
  - Consider the literacy of your audience. Rewrite for low literacy. Avoid jargon.
  - Before translating Web-based materials into another language, consult colleagues and customers to see if the materials have already been translated. Ask your customers what they want. Don't assume you already know what your customers want.

And finally, use your professional judgement. You know when your audience and subject matter may make it appropriate to break the rules. Apply a bit of the "less is better" principle. Ask for feedback from clients and co-workers, and you'll be on your way to having a Web site that is alluring, attractive, and easy to read.

Make Your Web Site Customer Friendly

- Break your information up into small bites.
- Label your Frequently Asked Questions (FAQ) "How do I ...?" Most people assume their question will not be in the FAQ section.
- Use common terms that people are familiar with. People think "I want to file a complaint," not "I want to file an incident report."
- Less is more. It is better to have a main page with category links that direct folks down a path than to put everything you have on the front page.
- The fewer clicks, the better. Don't make people search too much for what they want. If there is a logical progression, people will keep clicking. If they have to click more than four or five times in what seems a random manner, they will give up.
- Personalize your information whenever possible. Using Zip Code-driven searches or other ways to make the information apply to the constituent drives home why the information/agency matters to him or her.
- Be a station, not a destination. People are looking for information as part of a process. Often they aren't familiar with the structure of government. If they need to go to another agency (instead of yours), provide the link on your page. There is ***nothing*** worse than telling the customer, "It's not my department."
- Put your most sought-after services on the front page. People really want to find the information or complete their task quickly—a biography of your commissioner gets in their way and frustrates them. Your customers shouldn't have to hunt for your information.
- If you provide a public e-mail address and solicit comments or questions, be sure you have the time and resources to answer all of the inquiries you will undoubtedly receive.

Make Your Web Site Accessible

Twenty percent of Americans have disabilities. As our population ages, it is becoming more disabled. Design your Web site so that people who may be visually, hearing, or mobility impaired can access it. Use ALT tags. If your page doesn't have ALT tags, it will be a blank screen when someone with a visual impairment pulls it up.

- Use ALT text for all images and animation. Whenever possible, include supplemental information about the image that will enhance it for everyone. For graphics that display data, include a link to a text alternative page. If images convey nonessential or redundant information, consider using alt = "*."
- Use descriptive text links – two to five words; avoid *click here* links. If you have a series of links on the same line, separate them with a period or vertical lines. Use colored default links. Set tab order <tabindex="">.

- Make sure your fonts can be made larger. Use relative size and type of fonts, rather than absolute-size fonts. Use a consistent layout structure, and avoid frames. Include "DOC TYPE" in your header. Don't design for "best viewed with ...." Avoid scrolling or moving text.
- Use light backgrounds without patterns, and make sure there is contrast between foreground and background colors. Don't use red/green/brown/grey/purple next to, or on top of, or changing to red/green/grown/grey/purple.
- Use the latest technology sparingly. Don't disable the "back" button, don't use "pop up" boxes, and don't use music.
- www.cast.org/bobby/ will check your Web site for accessibility.
- www.lgta.org/accessibility/index.html has free online accessibility lessons.

Push versus *Pull*

Most traditional advertising and promotional media use a ***push*** system to deliver messages to potential customers. One example would be, "This program is interrupted for an important message from ...." Direct mail appeals fill your mailbox daily. The Internet has ***push*** technology too, but users can choose it or not. Ideally, the Internet is a ***pull*** system, because you ***attract*** Web surfers to your home page. If you get too pushy, by sending unsolicited e-mail, for example, it will earn you a bad reputation.

Netiquette

There are some special rules that apply to communicating on the Internet. The most important is to remember that you are communicating with real people, not a computer. Don't spam—that is, don't send unsolicited e-mail. Remember that the Internet is a ***pull*** system, where customers request information, rather than one where you send them information without being asked. A wise person once suggested you treat the Internet like a foreign culture—study it for a month or more, as an anthropologist would, before you participate.

chapter five

How To Do It

"Writing is not necessarily something to be ashamed of, but do it in private and wash your hands afterwards."

– Robert Heinlein

Writing Awesome and Effective News Releases

There are four basic steps to creating effective news releases – formatting, writing, getting noticed, and tracking your success.

☞ Formatting Tips:

- **FOR IMMEDIATE RELEASE:** These words should appear at the top, just under your letterhead. Be sure to capitalize every letter.
- **Contact Information:** Skip a few lines and then list your contact person, along with his or her title, phone and fax number, and e-mail address. You might also want to include home or cell phone numbers, since reporters work on deadlines and may be trying to call after normal work hours. Make sure your contact is available and capable of answering questions. Also include your agency's Web site address.
- **Headline:** Skip two lines and use boldface type. Don't make it longer than one line. Use caps and lower case.
- **Dateline:** This should include your city and the date you are issuing the release.
- **Lead paragraph:** The first paragraph needs to grab the reader's attention and should have the five W's and an H – who, what, where, when, why, and how.
- **Text:** Use 8-1/2 by 11 paper; with one-inch margins on each side. Keep it to one page, or no more than two. Reporters usually won't read more than one. If your release is longer than two pages, you have more than one news release. If you do need a second page, center the word "- more -" at the bottom of the first page.
- Center ***# # #*** or ***-30-*** at the end of the news release.

☞ Writing Tips:

- **Make it newsworthy:** Are you solving a problem? Pinpoint what the need is and write from that perspective.
- **Write a headline that gets to the point:** Immediately tell why this news is important. Avoid promotional-sounding words. What you say in the headline determines whether or not the reporter will read your release.

- **Write a strong lead paragraph:** Answer the who, what, where, when, why, and how. Use this graph to summarize the news. Make sure the first ten words of your release are effective, as they are the most important. Don't use fancy language or too many adjectives.
- **Once you have provided a brief description of the news,** then you can tell who is announcing it, not the other way around.
- **Give news details** so that the reporter or correspondent understands why it is important to read on. Add background, quotes, and comparisons to other products, services, or research to illustrate the importance of this news. If you're announcing a new product or service, mention when and where it is available and other points. Deal with the facts. Don't editorialize.
- **Include a short summary of your organization.** Especially include any information about what distinguishes your agency's expertise. Include your expertise and location, but keep it short—this isn't an annual report.
- **Make sure** your contact information is complete.

☞ Making News: Tips for Getting Noticed:

- Make sure your information is newsworthy and targeted to the appropriate audience.
- Find out the best way to contact reporters and correspondents who may be interested—mail, e-mail, fax, Web site?
- Don't include an attachment if you send an e-mail release. Put the release within the body of the message.
- Don't issue a news release until you have something of substance to say.
- Make it easy for the media to do their jobs—include tip sheets, background papers, or Q&As.
- Know the publication or station deadlines.

☞ How to Track Your News Release:

It's important to track your media coverage to make sure your news releases are being used. News clipping services can help you track how effective your news releases are by monitoring newspapers, magazines, and broadcast outlets across the country. See the suggestions in chapter 6.

Tip Sheets/Fact Sheets/Questions and Answers

Tip sheets, fact sheets, and question and answer sheets can be one- or two-page supplements to your news releases.

- A tip sheet is generally a ***how to*** instruction list;
- A fact sheet may contain historical or general information about your organization or about a particular project;

- A Q&A sheet is a fact sheet in a question-and-answer format. It is often used successfully to correct misconceptions about your organization or project.

Here's the type of information you might use in a fact sheet about your agency:

- Your director's name.
- Your agency's mission.
- The history of your agency or project.
- Partners, customers.
- Information about your project, including its budget and staff size.
- Who you are; what you do; how long you've been around; notable accomplishments.

You can also use a Q&A to define common terms a reporter might come across when doing a story about your agency. These supplements should be no more than one page with an open layout that is easy to follow (bold section headers, bullets, and indents). Stay focused on one topic in each fact sheet. Fact sheets should complement the news release. Make sure fact sheets include your Web site address as well as contact names and phone numbers.

Background Papers

Background papers can be useful tools to get additional information to reporters and correspondents. Background papers delve more deeply into a subject area than news releases. You will increase your chance of media coverage if your pitch and materials are interesting and easy to understand. If you make your message consistent and accurate, you'll stand a better chance of being the media's primary source.

Don't let your background paper read like an academic paper or technical document, laden with acronyms and bureaucratic language. It should read more like a story—easy to read and understand. Make the reporter's job easy and you'll get better media coverage.

Earned Media—Coverage on a Shoestring

Can't afford to buy advertising? Then earn media coverage.

The best way to implement your communication strategy is to keep repeating your message to a target audience. When you buy advertising—online, radio, TV, print, outdoor, or any other media the ad industry creates—you know what you are getting. You control the message, you control the medium, and you know approximately who your audience will be. But it costs a lot of money to buy advertising. Most government agencies are prohibited from doing so with appropriated monies.

The good news is that you don't have to buy space and air time for news and feature articles—all it takes is a little savvy and a lot of determination to get those articles placed. You can ***earn*** media coverage by developing contacts with reporters, writers, and news directors, as well as by pitching news story ideas, holding news conferences, and using other creative techniques to get their attention. All this effort makes it ***earned media*** rather than paid-for publicity.

Make Your News Newsworthy. The biggest challenge with earned media is that your message must appeal to the media's audience. Often, what we think is newsworthy and exciting just makes reporters yawn. To get their attention, you'll need to frame the issue in an appealing way. Try to find a current news issue, event, or other news hook to hang your story on. Don't forget to provide a media link from the home page of your agency's Web site. If your Web page is updated daily, reporters will come every morning to check for news leads.

Get Your News to the Right Person. Make sure your information is getting to the right person at the newspaper, magazine, or broadcast station. Don't just fax news releases out and assume they'll get to the right person. Check media reference books to target your information. Call the media to see which reporter covers your agency or would be interested in your issue. When you send a news release, direct it to the right person. Follow up with a call to see if the reporter needs more information. Better yet, offer an additional bit of information of special interest to that publication's readers, listeners, or viewers.

☞ Other Ways to Earn Media Attention:

- Submit an opinion editorial (op-ed) with your position to the newspaper.
- Write a letter to the editor.
- Create a PSA (public service advertisement).
- Use banner ads to promote your Web site. Place these ads on sites that cater to your primary audience. Many big-name sites provide free banner ad space for non-profits.

☞ Freebies: Don't Forget Your Community

Your community may have many media resources available to you that are free:

- Many cable companies provide free production facilities and air time on their public access channel. For very little expense, you could develop programs on many topics.
- Local radio and TV talk shows are always looking for guests with interesting stories.
- Public transit systems often offer free PSA space on their buses or subways.
- TV stations may be willing to work with you to create and air an ongoing campaign, which gives your message better exposure than if you had done your own PSAs.
- Businesses might co-sponsor your campaign.
- Supermarkets might put your message on their grocery bags or milk cartons.
- Fast-food restaurants could put your message on their place mats, especially if the material is educational.
- Be creative and don't be afraid to ask for what you want. The worst they can say is, "no." More than likely, though, they'll say "yes."

Public Service Advertisements (PSAs)

Public Service Advertisements (PSAs) are one way to effectively broaden the reach of your message. There are five P's of PSAs: planning, promotion, packaging, performance assessment, and professional advancement.

☞ Planning

Don't do any creative work on PSAs until you've thought long and hard about your target audience.

Too many people launch public education campaigns without any thought or research about the target audience. By considering the various audiences you want to reach, you'll sharpen your campaign's focus. Consider the primary and secondary audiences, the media, and your internal partners.

If your budget permits, test your message with focus groups and gatekeepers. Also consider establishing a baseline of public attitude or behavior about your issue. Once you have a baseline, you'll be able to measure your campaign results. *The Art of Cause Marketing* by Richard Earle has more information about this topic.

If your subject is sensitive or aimed at minority audiences, use focus groups. These informal groups will help you sharpen your message and make sure that your target audience will understand it. Focus group will also help keep you from offending your audience by inadvertently using offensive stereotypes or inappropriate language.

After you've done your research, it's time to develop your formal, written plan. Involve your entire public affairs staff – this includes everyone who can make a contribution to the ultimate campaign. Having a formal, written plan keeps you from omitting a key element.

Here are some questions you should answer: What are your creative options? Will you do the campaign elements with your staff or will you hire producers? What is the cost vs. benefit for each option? What are the objectives of the campaign? What is its scope? TV? Multi-media? Different media reach different audiences and generate different results. Who will handle distribution and evaluation? Work in-house or hire a firm to do this? What's your timeline? Are there special events you can tie into?

Thinking through all your options now will help you save money and guide you through production and implementation.

☞ Promotion

Promotion is critical to the success of a PSA campaign. Don't overlook or skimp on it.

Here's how you can make a huge difference in the ultimate impact of your PSA:

- Cultivate contacts at the TV networks – primarily the *big four*: ABC, CBS, NBC, and Fox. Network requirements are fairly stringent. But the people there can be very helpful by giving you feedback on your campaign while it is still in the developmental stage. That way, you'll avoid costly mistakes in production. TV network requirements are less stringent for government agencies. If they approve your campaign, the networks will also feed your PSA to their affiliate stations. See more information at: www.psaresearch.com, under PSA Bibliography/Television, article titled: *Network Clearance – a Producer's Checklist.*

- If you're launching a new campaign that is particularly time sensitive or has some other compelling argument, consider a *pre-campaign alert.* These alerts can be blast faxes, postcards, telegrams, or some other creative approach to the media – typically aimed at TV public service directors. This gives them a *heads-up* on your new campaign. This helps them schedule your PSAs, particularly if they are keyed to a special event.
- If you are in the Washington, DC, metro area, launch your kick-off press conference at the National Press Club in downtown Washington. Many of the trade publications are located close by. Don't hold a press conference unless you have something particularly meaningful to announce. However, remember that some PSA campaigns meet this test.
- Develop a list of trade media contacts to send a storyboard and press release about your campaign. *Advertising Age* and *Broadcasting & Cable* might be interested in your campaign. Don't forget to include magazines and trade press that might be interested in your subject – such as those covering business, forestry, or conservation. These publications can be particularly useful in helping expand your network of community partners.
- For every issue the government has, there is an organization in the private sector working on that same issue. Know who these organizations are. Try to engage them in some meaningful way in your campaign. This can help you leverage your funding, scope, Web sites, and community resources.
- Check out *Broadcasters Café* at www.psaresearch.com. This newsletter is targeted to TV stations. The lead article is always about something that is of interest to broadcasters. The newsletter includes a synopsis of all current campaigns by Goodwill Communications. Develop similar techniques to help engage the media for your campaigns.
- Find a special commemorative event that you can associate with your campaign. There is a special event for just about every cause or concern. If you coordinate your campaign with a special event – create one if you have to – you'll get more publicity and public attention.
- Engage your community partners. Your regional or local public affairs staffs can help you engage your partners at the local level. Ask them to tag materials for local use, to make local media visits, or to give you feedback on local concerns – an important part of message development. There's more information at www.psaresearch.com: *Involving Your Community Partners in PSA Program Development.*

☞ Packaging

Since you'll be using direct mail to send your PSA packages to the media, why not package them same way the direct mail industry has been packaging them for years? Some of their successful techniques include:

- Color.
- Interesting graphics or photographs.
- A compelling benefit statement on the packaging to encourage a busy media person to open it.

As you design your packaging materials, remember that you have less than a minute to entice a harried TV public service director to open your PSA. These folks get hundreds of PSAs each week.

Always include a TV storyboard in your package. The public service director may make a snap decision about whether to use your PSA based solely on your storyboard. Many public service directors don't have playback equipment readily available. Put all your other information on a single sheet of paper.

Avoid overly elaborate packages. Media folks will think that if you have that kind of money, you should be paying for the airtime.

For print PSAs, send black and white repros in various sizes. Have smaller ads in both horizontal and vertical formats, as well as a single, full-page ad. For radio & TV, include at least three spots – 60, 30, and 15 seconds. ***Don't create only 30-second radio & TV spots.*** Research shows that 60-second PSAs will get the most use. For all media, remember that being flexible in your message will get you extra mileage. Local media folks don't give a hoot about your national cause – they want to know what's in it for them. Position and package your issue to emphasize the local relevance.

There are cost-effective ways to package your materials. You can use a *shared-reel* approach to reach cable TV, rather than sending individual TV PSAs. You can put PSA messages aimed at different audiences on the same reel or CD, instead of sending separate packages. Be sure to label them appropriately.

The smallest amount of videotape you can buy is five minutes long. The shortest CD is an hour. Since you already have to pay for that amount of time, why not find creative ways to use all of it? Consider including longer-form videos, VNRs or B-roll in your release to cable systems. Many will use these longer-length pieces.

☞ Performance Assessment

Documenting your success will give you credibility for your next campaign. Evaluation will show how you converted non-users to users. It will pinpoint where you program is strong or weak. It will help keep your community partners engaged. And evaluation will help sustain future funding, because your boss will want to know about your results.

PSA evaluation techniques are becoming increasingly sophisticated. You can find some of the latest technologies at: www.psaresearch.com under *How You Can Use Evaluation Data To Fine-Tune Your PSA Program.* You can use an electronic tracking system for TV called SIGMA, which is provided by A.C. Nielsen. For radio, you can use Arbitron and bounce-back cards. For print, use press clips.

Data for the sake of data collection, however, is meaningless. You've got to massage the data, look at it from various angles, and *merchandise* it to the fullest extent. Make sure your creative team knows what works and what doesn't. Send evaluation reports to your community partners. Break out materials by region. Make sure your bosses see your results, both good and bad. Bad news is not always bad. It's only bad when you don't have a plan to correct it. Evaluation gives you the basis for correcting and strengthening your campaign.

You can use evaluation to help demonstrate that you're meeting your organization's goals. You can use it to calculate cost-benefit ratios. It can help show how you've engaged the media in your issue. An analysis of phone calls or Web site visits can demonstrate public involvement. Over time (a lot of it), you can demonstrate how your campaign is achieving greater public awareness or changing attitudes.

☞ Professional Advancement

It takes time and effort to learn everything there is to know about producing PSAs that get used. Even experienced advertising agencies and consultants sometimes overlook the basics.

There's no excuse for creating PSA messages and campaigns that are off-target or in the wrong format.

Before you think about any campaign, talk to as many experienced people as you can. Call your distributor, go to workshops, call media people, talk to your advertising agency, and read about the subject. There are many articles on media and PSAs, as well as media links at: www.psaresearch.com that can help you stay abreast of the changing trends in the field.

When it comes to health and professional advancement, what you don't know *will* hurt you. What you don't know will cause costly mistakes and missed opportunities – which could be worth millions of dollars of exposure for your cause.

Tips for Producing PSAs that Get Used:

- Learn the latest PSA trends
- Understand what the media needs
- Provide the material in a flexible format
- Get professional, experienced help for production, distribution, and evaluation
- Develop creative, interesting packaging

Using a Newspaper's Editorial Board

A newspaper's editorial board and its upper level managers can be valuable allies in your organization's media efforts. These are the people who not only set the editorial direction for their papers, but they also make major story assignments. Making friends with them and telling them what your organization does will help you get better media coverage.

One of the most effective ways to do this is to set up a meeting with you, your boss or spokesperson, and the editorial board. Make sure the editorial page editor or the executive editor – whoever is in charge of the newspaper's editorial board – knows that your boss or spokesperson can help explain whatever your complicated issue is.

Show the newspaper's management that you respect them for their expertise and that you want to provide information and help them develop stories.

Never try to dictate the direction newspaper reporters should take with a story or the way they should develop it. Just supply information about the good things your agency is doing. After all, since you are highlighting your best projects, there really shouldn't be a question about the way the story will be written.

Since meeting with editorial boards is time and labor intensive, you'll probably want to save it for newspapers in larger metro areas. You'll get more return on your time investment with a newspaper with a circulation of 250,000 than with one with a 2,500 circulation.

But, don't hesitate to hold similar smaller scale meetings with staff members at smaller newspapers. Their staffs will also appreciate knowing that you are interested in getting their newspapers to cover your agency and that you want to cooperate with them.

When you go to meet with editorial boards, take along some news tips or summaries specifically tailored to the publication and its coverage area.

- Limit each tip to the equivalent of a good news lead and several follow-up sentences.
- Include complete contact information for each news tip – name, title, address, phone, and e-mail along with the same information for a back-up contact person.
- Make sure all the contacts – and everyone else in your agency – understands the importance of cooperating with the media.

Using the Editorial Pages

You can use a letter to the editor or an op-ed article to help frame your organization's message about a specific issue. Op-eds, so named because they are printed in the space opposite the editorials, are a good way to reach community leaders and to expand the reach of your agency's position. Sometimes a newspaper will begin writing stories about an issue after they've printed an op-ed about it. Editorial page editors are always looking for well-written, insightful commentary.

Here's how to use the editorial pages:

- Find out what the newspaper uses. Read their op-eds and letters.
- Check submission requirements and deadlines. Find out when and where they want materials and whether they should be mailed or faxed.
- Don't submit your op-ed or letter to more than one paper at a time if you are in a large metro area. Most large newspapers want your submission to be an exclusive. In smaller media markets, you can send your guest column or letter to several outlets at the same time. If there is any question, ask.
- Choose a subject that is current and appeals to a broad audience.
- Offer a real debate. Give your viewpoint a fresh perspective. Have an original point of view – or one that is contrary to popular opinion.
- Write clearly and engage your reader. Understand your audience. Organize your material for the reader. Use the active voice. Write to one person. Verify your facts. Mistakes will hurt your credibility.
- Be sure to include your name, title, phone number, and other information the newspaper requires. You can also send additional materials, such as fact sheets.
- Your op-ed or letter will probably be edited. Accept that fact. Ask to be notified when your op-ed or letter is going to be published.

Satellite Media Tours

Half of all Americans get ***all*** their news on TV. Since these folks don't read newspapers or magazines, you can't reach them through words—you need pictures, video footage, and broadcast interviews to reach them. A satellite media tour can help you deliver your message in a timely, credible, and cost-effective way.

Rather than having your spokesperson spend days or weeks on the road meeting your target media face-to-face, you can schedule all the interviews on one or two days from one local TV studio, for a fraction of the cost of air fare. By making sure you have a timely, interesting subject to discuss, some in-studio visuals and/or B-roll footage, a satellite media tour can reach a vast audience. And, unlike video news releases, station bookings let you know your results in advance. Local TV stations like satellite media tours because their own anchor or correspondent gets to interact personally with your spokesperson. The stations can broadcast the interview live or tape it for later use. A typical satellite media tour can cover 12 to 20 stations in two to three hours.

Here's how it works:

- Several days before your scheduled satellite media tour, you tell TV and cable stations about your topic and spokesperson.
- Stations can then reserve time to do a brief 3- to 10-minute interview with your spokesperson via satellite during a window of time.
- During the satellite media tour, your spokesperson remains in one TV studio while TV stations across the country are beamed in electronically to do their own interview.
- You can transmit a video news release or b-roll footage during your media tour.
- You can beam in spokespersons from several locations around the country.
- You can include a live demonstration of your product or service.

Be creative in setting up your media tours to make the best use of your time and financial resources. Also consider setting up radio press tours.

Producing an Agency Newsletter

Spend some time figuring out ***why*** you're publishing a newsletter. Talk with everyone involved—your boss, colleagues, and, most importantly, your potential readers. Ask these questions:

Purpose: What do you want the newsletter to do? Have you read the competition? Will your information be new or different? What will be your writing style? Is there enough material to do it weekly? Biweekly? Monthly? Quarterly? Is this newsletter being printed to make everyone feel warm and fuzzy about the organization? Who chooses the articles? Who edits? How much? Is the newsletter for information? For entertainment? For publicity? Is it official or unofficial?

Time: How much time will you have to produce each issue? Will it be on company time? Who will prepare and format the newsletter? Will you have a designer? Do you have desktop publishing equipment and software? Are you trained to do all the jobs? How many pages are you trying to fill? How will you proof your own work?

Budget: Do you have start-up money? Do you have a guaranteed budget for a specific time? Enough cash for equipment? Do you have or need a scanner for photos? Pencils, paper, furniture, phones? How are you going to promote the newsletter? How much will it cost?

Design: Do you have a design? A designer? Will the newsletter be full width, one column, two column, three? Will there be copy only, photos, line drawings? Where will graphics come from? Who does the layout? Black and white? Color?

Printing: Does your printer do newsletters? Can someone else give you a better deal? Will the printer mail or deliver your copies?

Internet: Who will put your newsletter in HTML? How quickly will it be posted? How frequently updated?

These are just a few questions to ask. Add your own. Make sure you have a good idea of what you are doing, before you start a newsletter.

Editing Your Newsletter

Most newsletter editors accept articles written and contributed by subject-matter experts, who unfortunately aren't usually communications experts. This poses challenges. Although it is often difficult to coax busy people into contributing articles, it is even harder to ask those people for rewrites when their work needs polishing. It does a tremendous disservice to the reader and to the publication, however, to merely plug an article into a publication without edits and revisions. Writers depend on good editors to make their work better and easier to read. Here's how you can ease the burden:

- Is the piece suitable for use? Is it well written, factual, informative, and interesting? Does it conform to the purpose of the publication, and does it target the intended audience? Has the author remembered to include necessary details that support the conclusion? If the content is on target, the writing style can be refined for publication. If the content isn't on target, rewrite or replace it.
- Don't be timid about asking the writer for either a revision or an interview to expand information needed for the article. The author has information you don't, and a quick e-mail or short phone call may complete the article. Explain any confusing or unclear statements so the author can fix them.
- If you have interns who write for you, be sure to give them plenty of guidance and review their drafts carefully.
- If you are soliciting an article, give the writer specific guidelines up front. If your authors know and understand the parameters before they begin writing, you should need to do very little editing. Be explicit about the purpose and the audience. Even better, give the writer written guidelines.

☞ Guidelines for Your Contributing Writers

- Give your writers background information about your publication and a recent copy. Let the author know who your target audience is and why they read the publication.

- Tell them how long the piece should be (word count). That way, you won't have to cut. It will also help the writer stay focused on the topic.
- Give the writer a deadline. Make sure you give yourself enough time before the production deadline to edit and ask for a rewrite, if you need it.
- Set parameters. Give the author a subject and a focus, or an angle for his or her article. Be specific in communicating your goal. Tell the author to keep the audience in mind.
- Include a list of things to avoid in your newsletter, such as political statements, jargon, acronyms, slang, long sentences, clichés, and redundancies.
- Give the author a copy of your agency's style manual.
- Let the author know that you reserve the right to edit all material for length, clarity, and style.
- Ask for written permission to use copyrighted materials.
- Tell the author to keep a copy of the work.

☞ Disclaimers:

If you accept submissions from outside writers or use materials created by non-staff, include a disclaimer. Here are some sample disclaimers:

> The opinions expressed in [your publication] are those of the authors and do not necessarily reflect the views of [your agency]. Previously published material appearing in this publication may not be reproduced in any form except with the express written permission of the copyright holder.
>
> [Your publication] is published by the [your organization]. Views expressed in [your publication] are those of the individual writers and do not necessarily represent the official views of [your organization].
>
> The [your publication] welcomes submissions. [types of submissions that will be accepted] will be considered. Submissions cannot be returned. We reserve the right to edit for style, clarity, and length. Black-and-white and color photos are also accepted. We regret, however, that we cannot return them. Please identify all photos clearly. [Your organization] reserves the right to use any writing, photos, and artwork in other publications. Inquiries and letters should be sent to: ....

"I can't write five words but that I change seven."

— Dorothy Parker

Elements of Good Writing

Your agency can maintain consistency in writing style and usage by using either an in-house style guide or a standard commercial guide, such as the *AP Stylebook* or the *Chicago Manual of Style*. But you should also simplify your language, streamline your text by eliminating unnecessary phrases that do not add to your message, and never go to print with a first draft. When you're revising your own text or editing someone else's work, keep these basic elements of good writing in mind:

☞ Logic:

- Is the purpose clear and relevant?
- Are all the necessary details there to support the conclusion?
- Is the tone right for the audience?
- Is the presentation balanced?
- Is all the important material presented?
- Is the material accurate and current?
- Are the transitions between thoughts in place?
- Can the reader follow the logic?
- Are the conclusions supported by facts or are they forced?

☞ Word Choice and Language/Style:

- Is it easy to read?
- Do the paragraphs have parallel construction (i.e., are the sentences balanced)?
- Is the language active, positive, and personal?
- Is it written in plain language (avoiding acronyms, technical terms, clichés, redundancies, colloquialisms, slang, and long sentences)?
- Are the spelling, grammar, punctuation, and format consistent with your agency's standards?

☞ Message:

- Is the message consistent with your agency's policies?
- Does the author refrain from bias and discrimination?

☞ Legal Issues:

- Have you verified the references?
- Are the text citations/attributions/copyright notices in place?

"Fighting clutter is like fighting weeds—the writer is always slightly behind."

— William Zinsser

Tailoring Your Message

One of the most common errors we make is to try to speak to everybody when we want to reach a target audience. As a result, we reach almost nobody. We can do better if we tailor our messages, rather than ***shotgunning*** to everyone. When we know our specific audience, we know why and how we are trying to reach them—and we can evaluate whether we were successful.

Unless you're giving them information about a hot issue or a crisis, most of your audience will be indifferent or only mildly interested in what you're trying to tell them. Some research shows that we are subjected to more than 1,500 competing messages every day. You can cut through to make your message a prominent one if you focus on what you want to see happen with your audience.

For each audience, you should have a set of objectives. Use terms that are clear and precise. You'll need to answer these questions:

- Who is the primary audience for this message?
- Why (for what cause, reason, or prospect) is the message being delivered? What is the general aim of this information? What is the need to be met?
- What obstacles must be overcome?
- What will the content be?
- How will the message be presented?
- What result will satisfy you? What outcome do you want?
- How will you measure what you've done?
- The objective—is it possible?
- The audience—can they change? What do you want them to do?
- The media—are they right for the audience? For the message?
- The message—does it fit your audience?
- Your techniques—are you constructing the message for some hoped-for result or impact?

Your message will reach your targeted audience in direct proportion to your writing skill. Keep a member of your audience in mind while you're writing your message. You need to know all you can about this person's interests, values, and lifestyle characteristics. By using demographics and psycho-graphics to profile and understand your audiences, you can discover what motivates them to respond to what you are offering.

Keep your expectations reasonable. Changing behavior and attitudes can be slow and time-consuming. The same message may have to be repeated often and regularly. Each time you repeat the message, you are creating awareness.

Sometimes, your message will be to teach or inform. Another time, it might be to ask questions you want your audience to consider. Still another time, it might be about their behavior—is it safe? Does it need to be changed? Do you want them to adopt a new idea, product, or service?

It may be useful to keep in mind how your audience adopts new ideas. Here are the stages involved and questions you should consider:

- **Awareness:** Create or develop awareness? Heighten or raise awareness? Inform about a new method, an idea? Warn? Alert community to a problem? Publicize a program?
- **Interest/Learning:** Stimulate or arouse interest? Teach specific information or skills?

Provide information? For the sake of knowledge? Leading to a behavior change? Leading to a one-time-only action? Leading to a long-term change in behavior? Identify sources of help, resources available? Create an understanding?

- **Evaluation/Desire:** Pose questions?
- **Trial:** Convince? Try something?
- **Adoption/Action:** Adopt an innovation, an idea, a new technique? Cause a change in behavior? Temporarily? Long-term? Cause an attitude or value change? Temporarily? Long-term? Take action? Seek help? Respond?

Why do audiences respond to messages?

- Information—they want to find out about relevant events and conditions in their immediate surroundings, in their society and the world; they are seeking advice on practical matters or opinions and decisions or choices; they are satisfying curiosity and general interest; they are learning, self-educating, gaining a sense of security through knowledge.
- Personal identity—they are finding reinforcement for personal values; finding models of behavior; identifying with valued others (in the media); gaining insight into oneself.
- Integration and social interaction—they are gaining insight into the circumstances of others; experiencing social empathy; identifying with others and gaining a sense of belonging; identifying a basis for conversation; having a substitute for real-life companionship; helping to carry out social roles; becoming enabled to connect with family, friends, and society.
- Entertainment—they are escaping or being diverted from problems; relaxing; getting intrinsic cultural or aesthetic enjoyment; filling time; undergoing an emotional release.
- Need—they need a product or a service.

Marketing

Marketing is much more than selling or advertising. It encompasses everything from what products or services you sell to how you get them to your customers. The traditional four Ps of marketing are product, place, price, and promotion.

Product, of course, refers to your services, including packaging, design, branding, trademarks, warranties, guarantees, product life cycles, and new-product development.

Place covers the physical distribution of goods.

Price is a factor in your customers' decision about whether to buy or use your product. Customers can't see your expertise, your insight, or your past experience. When they make a decision to buy a service, they will decide how much they like you or trust you, in addition to the price.

Promotion refers to all the marketing methods you use. Marketing must get your customer's attention. If people don't know that you or your programs exist, they can't do business with you.

When you do a marketing plan, this is what to consider:

- What benefits does your agency provide or offer?

- What happens to people if they don't use your services?
- What new segments or target audiences does it make sense for you to try to reach?
- What are you doing to enhance your relationship with your customers?
- Have you committed time and attention to regularly consider these questions?

☞ Marketing Musts:

- Get involved. Help develop your agency's marketing plan.
- Pay attention to your customers. Answer e-mail and return phone calls promptly.
- Integrate. Your Internet presence should be an integral part of your marketing efforts. Put your e-mail address and URL on your business cards and stationery. Use it on all your promotions.
- Don't get complacent. Make sure your approach is always fresh and bright.
- Market your Web site. Enter your site in all of the appropriate indices and search engines and make sure it stays there. Negotiate for reciprocal links. Consider banner advertising.
- Don't give up. Keep plugging away.
- Have goals. Delete the non-essentials and stick to your concrete marketing goals.
- Keep your standards up. Don't settle for anything less than high standards.

Product Marketing—Selling Your Stuff

Sometimes we produce educational materials that are aimed at many constituent groups—policymakers, businesses and industries, teachers, students, or the general public. Some government agencies can sell their products; others can't. If you can sell your materials, here's how to build a marketing system that includes working with wholesalers and retailers.

Wholesalers and retailers serve in the middle—they can expand your ability to get your valuable information into the hands of your customers. The income that these companies generate for themselves is their compensation and incentive to help you carry out your educational mission.

Here are some tips on how to build and implement a wholesale and retail sales system:

☞ Getting Started:

- Make sure your products don't duplicate or compete directly with ones already in the private sector. Selling government-produced items is not about cutting into private sales; it's about disseminating useful information that isn't already being produced.
- Identify constituent needs within the context of your agency's objectives and goals. Depending on your agency, there are many ways to identify these needs.
- Based on the needs you have identified, create marketable products. Looks count. Your products will compete for the attention of wholesalers, retailers, and customers. Make sure your products are not only useful but also attractive. If your product is printed, this requires good writing, editing, and graphic design.

- Create an attractive print catalog and one-page fliers and a Web site that features items you especially want to highlight.
- Give consumers as many options as possible to buy your product. Get a toll-free phone number for orders. Accept orders by fax, e-mail, regular mail, and over your Web site.

☞ Using Wholesalers and Retailers:

- Set a wholesale discount of no less than 40 percent off suggested retail price.
- Anticipate packaging and shipping costs, and figure out how to recover those costs.
- Identify potential wholesalers and retailers. Look in the phone book listings. Get mailing lists from chambers of commerce and state offices of commerce or economic development. Copy addresses or get business cards or brochures when you chance on businesses that might sell your items.
- Check with the Government Printing Office to find out if your product is eligible to be sold through GPO's retail stores, which are located in major cities.
- See if your product is eligible to be listed in the federal government's master catalog of consumer information publications.
- Build an electronic database of wholesalers, retailers, and retail customers. Use a database program that will allow you to categorize and code your customers, track inventory, process orders, and generate invoices.
- Call, visit, or write each potential seller and describe your product.
- Follow up by mailing complimentary samples of your items. Include your price, discount schedule, and shipping instructions.
- If it's too costly to part with many free samples, send a promotional flier instead, along with any compelling supporting materials such as newspaper reviews of your product, kudos by credible people, and award citations.

☞ Selling Via Direct Mail:

- Do special promotional mailings at strategically determined times of the year. If your product is useful to summer tourists in Northern States, for example, send your promotional materials in February or March, when tourism retailers are stocking up for the summer season. If your items are useful to school teachers, find out when they generally write up their budgets for the coming year, and time your promotional mailing to precede that activity.
- Let the news media help you. If you are involved with public safety, tell news media about your safety-related products just before whatever season or event normally causes increased problems in that area.
- Make sure you have a system in place, including competent staff, to quickly fill orders and process payments. Don't overlook storage space for your products and mailing supplies, along with a budget for these expenses. Factor in shipping materials when you calculate prices for your products.

- Provide as many options as you can to make it convenient for your customers. Accept credit card orders and consider a toll-free telephone number. Accept orders by mail, fax, e-mail, and on your Web site. If your office is open to the public, be prepared for walk-in buyers.
- Track supply levels so you won't run out of inventory. This is important to good customer service.

☞ Selling on the Web:

- Create a catalog on your Web site that is attractive, compelling, logically organized, easy to understand, and easy to use. Copy approaches used by other successful online retailers. Include teaser color graphics of book covers. If you can, include clips of videos. And make sure your information loads fast on all computers.
- Have your Web master include keywords (or metatags) when coding for each item in the catalog. Search engines use metatags to find key information.
- Incorporate a keyword search function in your catalog.
- Make sure your ordering instructions are complete and easy to understand.
- Have a secure, online order form and a system that accepts credit card orders. Include a printable order form for customers who prefer to mail or fax their order.
- Find other agencies or businesses related to your agency's mission that have Web sites that contain links to other Web sites. Ask them to link to your home page or catalog.
- Always include your Web address on all of your print materials.

Effective Meetings

Most meetings are called to solve problems that might not exist if we didn't have meetings. There are some key questions you should ask before you call a meeting. Is this meeting essential? Can we do without it? Can it wait another month? Can we get things done with fewer meetings? Can we accomplish the task another way?

Accessibility: If you do decide to have a meeting, assume you will have attendees with disabilities. Make your meeting accessible for everyone. For people who are visually impaired, you may need to provide alternative formats, such as Braille, cassette tape, computer disk, and/or large print. Whenever possible, try to work with the vision-impaired attendee ahead of time to find out what format he or she prefers. To make your meeting accessible for people with hearing impairments, find out ahead of time if you need a sign language interpreter. Be sure your meeting location is accessible to people using wheelchairs. Ensure meeting space has 38-inch doorways and aisles, as well as no stairs.

☞ Tips for Holding More Effective Meetings:

- Start and end meetings on time.
- Have an ***open*** agenda on a chalkboard or flip chart. Participants can add items to the agenda, but they must be prepared to lead the discussion if they put an item on the agenda.

- If an item isn't on the ***open*** agenda, it can't be discussed. If it needs to be discussed, it must be on the agenda.
- Give each item on the agenda a time limit. Three minutes is a good amount of time. If action or discussion cannot be completed within the allotted time, it must be delayed until the end of the meeting.
- After all agenda items have been discussed, address the delayed items and estimate how long it will take the discuss them. Decide if the item can be discussed today or needs someone to perform an assignment or activity first. Maybe the item needs more research, details, data, or opinions.
- Any delayed item should be the first item on the next open agenda.
- Summarize and record action items before adjourning the meeting.

Effective Speeches

You don't have to be a polished speaker to share your agency's message, but you must be able to communicate effectively. It takes time and effort to craft an effective speech. Here's how to make your speeches more successful:

Know Your Audience. Find out who and how many will be present, their ages, interests, and occupations. Will they be friendly? If not, why not? What is the format of the meeting and the context of your speech? Will there be speakers before and after you? What will they discuss? Who will introduce you? Will there be a question and answer period? How long will you be expected to speak? What are the physical arrangements? What does the room look like? Where will you stand? Will you have a podium? Do you want one? Will you have a microphone? Will the speech be recorded? Will media be there? Can you have visual aids?

> "Make sure you have finished speaking before your audience has finished listening."
>
> — Dorothy Sarnoff

Know Your Subject. Public speaking is stressful under the best of conditions. But there is nothing worse than speaking to an audience without having a firm grasp of the material you're presenting. There is no substitute for knowledge of the subject. Don't speak unless you have that knowledge. If, in an emergency, you must speak on a subject you don't have a firm grasp of, immediately tell the audience you are not an expert.

Have a Clear Goal. What is your goal? Organize your presentation around it. Is your goal to inform or to persuade the audience? Appeals to reason and emotion can be effective, but a persuasive speech supported by sound evidence is more effective than a speech without it. You should restate your basic message more than once. Repetition helps audiences remember.

Prepare Thoroughly. If you don't have time to prepare thoroughly, don't accept the assignment. Public speaking is just like any other task—to do it successfully requires your time, effort, and preparation.

You can grab the audience's attention immediately with a startling fact or provocative opinion. You can use a concrete illustration, a quote, or a humorous incident. Or you can ask a rhetorical question that makes people think.

Convey no more than three or four main points. Your listeners won't remember more than this. Illustrate the points with examples. Guide the listeners clearly and easily from point to point.

Use your conclusion to stress the purpose of your talk. But leave no doubt about your central idea and what you've tried to say.

Take some time to prepare your own one-page introduction. Provide a copy to the person who will introduce you. Bring an extra copy with you just in case. Also, bring an extra copy or two of your speech in case anyone wants a copy.

"Talk low, talk slow, and don't say too much."

— John Wayne

Add Style to Your Next Speech

Some speeches linger in the hearts and minds of audiences. Others are forgotten as soon as the words have left the speaker's mouth. What makes a speech memorable? Style! Here's how you can add some style to your next speech:

- **Anecdotes.** Even the most sophisticated audiences like to hear anecdotes. Give them what they want; they'll remember the speaker who tells a good story.
- **Colloquial Language.** Consider the appeal of regional sayings, colorful proverbs, and casual slang.
- **Definitions.** Ever notice how frequently speakers say, "According to Webster ..." and then proceed to bore the audience with a long, technical definition they lifted straight from the dictionary? If you want to define something, look in a book of quotes or come up with something interesting. For example, here's how Edmund Burke defined government: "compromise and barter."
- **Parallel Structure.** Use parallel structure to provide a sense of balance and create the appeal of harmony. Examples: President Johnson said, "Aggression unchallenged is aggression unleashed." President Kennedy said, "If a free society cannot help the many who are poor, it cannot save the few who are rich."
- **Repetition.** Repetition is crucial. Audiences get restless. Their minds wander. Distractions pop into their heads—deadlines, budgets, kids, you name it. Whole sections of a speech can pass right by their ears. So, if you have a particularly good phrase, slogan or line, repeat it. Again and again.
- **Rhetorical Questions.** One way to involve your audience is to ask rhetorical questions. They encourage the audience to think about your topic. When you pose a rhetorical question, be sure to pause afterward—that gives the listeners some quiet time to answer the question in their own minds.

- **Short Sentences.** Short sentences pack a big punch. They're easy for speakers to deliver and easy for audiences to grasp. Timed properly, a four-word sentence following a long one can deliver a memorable punch.
- **Sounds of Words.** Use rhyme, alliteration, and word games—they all add style to your presentation.
- **Statistics.** If you think statistics are boring, you haven't heard the right ones. Follow these guidelines: Round off the numbers, because your audience is listening, not reading. And put numbers in everyday terms and personalize them.
- **Titles.** Choosing a good title will help you focus your speech. More importantly, it will help the audience grasp your main message and remember your main point. Be clever—use popular songs, movies, or best sellers as springboards. Be irreverent, if you want. Be daring. Just don't be boring.
- **Triads.** Putting items in groups of three creates a compelling rhythm.
- **Visual Imagery.** Who can forget the *iron curtain* of Winston Churchill? Or the *big stick* of Teddy Roosevelt?

How to Deliver Effective Speeches

Most of us fear speaking in public more than anything else. We often get a weak, queasy feeling, often accompanied by shaking, sweating, or a pounding heart. Excessive nervous energy causes these feelings. But your nervous energy can help give vitality to spark your presentation. Without it, your speech would be flat, dull, and lifeless. The key is to take your nervous energy and control and channel it.

Be Prepared: Being prepared will help remove your fear. The more prepared you are, the more confident and less nervous you will feel. Try to breathe deeply and exhale fully between breaths. Try to consciously slow down your breathing rate. When you are introduced, walk briskly to the podium. Take a step toward the listeners on one side of the room as you talk to them.

Your Appearance: How you appear will either enhance or negate your message. Project earnestness, sincerity, and enthusiasm. Try to be well rested before a speech. Rehearse the night before, but get a good night's sleep. You'll come across better and will be less prone to make mistakes.

Your clothing should not be so casual or so bold that people focus on it instead of your message. Wear an outfit that makes you feel confident and comfortable. If possible, check yourself in a full-length mirror before you start.

Stand straight but not rigid. Balance your weight on both feet, and hold your stomach in—it'll improve your posture. Avoid nervous body movements, even if you feel uncomfortable. Vary your stance occasionally, but don't fidget. Unnecessary or annoying activity detracts from your message. Keep your hands away from your face and out of your pockets.

Look Them in the Eye: Eye contact with your audience is a powerful tool to connect with them. Try to include everyone in the audience equally when you look out over the crowd. Good eye contact increases your credibility as a speaker.

Smile, Smile, Smile: Remember to smile—convey a sense of comfort, relaxation, and confidence. Even if you don't feel that way initially, it'll get easier with experience.

Gestures should appear to be a natural extension of your voice, neither contrived nor artificial. Avoid a white knuckle grip on the podium—relax your hands and it's easier to relax the rest of you.

Move smoothly, not abruptly—the way you would do in a conversation with a friend. And vary your stance occasionally. If you're not using a stationary microphone, you have more freedom to walk about and create some visual variety for your audience.

It's fine to have notes to speak from—but don't let your notes be a distraction. It's usually apparent from your tone of voice and your appearance when you are reading from a script. But no one objects to a few index cards in your hand with the main points you want to remember to make.

Visuals: Visual props—a book, poster, exhibit, video, photos, or overhead transparencies/slides—can enhance your speech. They can help reinforce your points, but choose them carefully. They should be visible to everyone in the audience, and you should be able to handle them smoothly with no fumbling. Remember to keep your mouth near the microphone when you're talking about your props. Pre-test any equipment to be sure that it works—and that you know how to run it. Check your visuals for accuracy and readability from a distance equal to the last chair in the room. Faulty visuals—or good visuals poorly displayed—are worse than none at all.

Overheads: With overheads/slides, the rule is ***less is more***. The best and most effective overheads are short and to the point. You'll lose your audience if they're busy trying to figure out poor overheads. The type should be of a size and font that is easy to read. Check the readability of your overheads from the back of the room to make sure everyone can see them easily. If the audience is older, they'll be less able to read the print. Also, be sure to leave the overheads up long enough for the audience to read them. Make sure your position is not blocking anyone's view.

"Tell 'em what you're gonna tell 'em. Then tell 'em. Then tell 'em what you told 'em. And then sit down."

— John Holliman, Jr.

☞ More Tips for Overheads/Slides:

- Think about your audience. Slides/overheads should highlight important points, not duplicate your entire presentation. Slides or overheads are meant to support your talk, not overpower it. ***Never read to the audience from the slides.*** It's okay to pause and let them read it themselves.
- Think about composition. Aim for a visual balance between all the text and graphic components. Don't crowd your information too close to the edges. Leave space between lines of type to ensure legibility.
- Be consistent. Make the colors and styles of elements the same on all overheads or slides. Put all titles and subtitles in the same location, same color, and same type face.

Your Voice: A good speaking voice is essential for delivering an effective speech. Your voice should be pleasant, conveying a sense of warmth. It should be natural, reflecting your true personality and sincerity. It should be dynamic, giving the impression of force and strength, even when it isn't espe-

cially loud. Here are some ways, other than increasing volume, to give the impression of force or strength:

- Pitching your voice higher or lower.
- Using emphatic gestures.
- Reducing or increasing your rate of speech.
- Pausing for effect.

Your voice should be expressive—portraying subtle shades of meaning and never sounding monotonous or without proper emotion. It should be easily heard—with proper volume and clear articulation.

Be sure you can be heard clearly. Pause to let brief interruptions (such as an airplane going over or a waiter dropping a tray) subside. Also pause when your audience is moved to laugh or applaud—you don't want them to miss anything. When you are making a natural transition in your speech, pause to let your words have a chance to ***soak in.***

Vocal Variety: Vary your voice for a successful speech. Be sure to vary:

- Your rate (speed up or slow down to make a point).
- Your pitch (work within a comfortable range, but not all on the same level).
- Your tone (match your tone to your message—humorous, serious, inspiring, or comforting).
- Your volume (but don't under- or over-power the microphone).

Project your voice to the farthest person in your audience. Watch the audience to determine if they are receptive or if they are straining to hear.

Don't over-memorize or over-rehearse your speech so much that you sound like you're doing it on automatic pilot. You want to sound confident, but also fresh. Attempt to sound conversational, certainly not pedantic or strident.

Effective Pauses: Even though many speakers are afraid of them, effectively used pauses attract listener attention. Pause when you want a point to soak into the minds of the audience before you go to the next point. Brief pauses are also effective when you're building to a climax with your message. Pause as a sign of transition—this tells your audience that you intend to shift to a new point.

Articulate: Pay attention to your articulation. Don't mumble or slur your words together. Avoid lazy utterances, like *gonna* for *going to,* or *wanna* for *want to.* Some people rehearse with a tape recorder – and then listen to themselves to find ways to improve their articulation.

Avoid Fillers: Avoid audible *fillers* (especially *uh*)—short, silent pauses are much better. Using *uh* between thoughts is, unfortunately, a common problem, even among experienced speakers. Listen for it on your speech tapes, or ask a friend or family member to listen to you rehearse and tell you if you're using audible fillers that are distracting. Practice *silent pauses* so your *uhs* will be silent. Train your mind to set off a little warning bell whenever you say *uh* and then work to eliminate this annoying habit from your speech.

Keep Your Head Up: It is harder for your audience to hear you when you're looking down at your notes or facing your visuals or props instead of the audience. Keep your head up and face your audience as much as possible.

Applause: Finally, wait for and acknowledge applause (if it's appropriate to the occasion) with a smile or nod. But don't leave the podium unattended—if you're introducing another speaker, or if there's a master of ceremonies or host, wait for that person to come back to the podium before you step aside.

20 Tips for Overcoming Fear of Public Speaking

1. Nearly everyone is nervous about public speaking—you're not alone in your fear. Effort and practice will help you overcome your fear.
2. Public speaking is a skill to develop—not an inherent talent.
3. Your audience wants you to succeed; they are almost always on your side.
4. Be glad that you care enough about succeeding that you're nervous. It can be a good sign.
5. Think of public speaking as an opportunity—not a chore.
6. It isn't a ***speech.*** It's an opportunity to share information you have with those who have an interest in hearing it.
7. Believe in yourself, but not so much that you try to ***wing it*** without adequate preparation.
8. Envision success—***act*** the part. Think about what success would look like and then go for it.
9. Assume you will do all right, and you probably will. Assume you will fail, and you probably will.
10. Know your subject well, and thoroughly prepare yourself to talk about it.
11. Control nervous responses:
    - Quaking hands—use them constructively with natural gestures and props.
    - Quaking voice—take a deep breath or a sip of water.
12. Channel your nervousness into enthusiasm; if your nervousness is apparent, joke about it to ease the tension.
13. Rehearse and time your speech (with a friend, tape recorder, and/or mirror).
14. Dress at least as well as you think your audience will—or maybe a step better. Looking more casual than your audience will work against your self-confidence and detract from your credibility.
15. Have a written outline handy in case your mind goes blank.
16. ***Fake*** eye contact if you must (look at hairlines or mouths instead).
17. Have a glass of water handy. You can't talk well when your mouth is dry, and your audience will notice.
18. Don't sweat small mistakes—everyone makes them, even experienced broadcasters.

19. Afterwards, ask selected listeners for sincere feedback. People don't usually like to force it on you, but they like to be asked. Then attempt to incorporate this feedback into your next speech.
20. Seek out and accept ***every*** opportunity to speak before an audience. It ***does*** get easier over time—and for many, even enjoyable.

Communicating with Diverse Audiences

To serve your customers better, you must consider their values, environment, social and cultural customs, and language. Shifts in birth and death rates, immigration rates and patterns, as well as the number of people moving within the country, are leading to an older and much more culturally diverse, multi-racial population in the United States.

In 2001, there were 57,000 Americans who were at least 100 years old. By 2040, it is likely that our population will have more seniors than preschoolers.

Many of our customers have limited resources or are socially disadvantaged. They may have less formal education and may lack access to new communication technology. They may be faced with such barriers as limited finances, discrimination, and language and cultural differences that make communication difficult.

In addition, many people distrust the government because they've had negative experiences. Here are some tips to help build trust:

- Be careful about what you assume about groups of people and how to communicate with them. Don't assume they all want to receive your messages.
- Establish a community contact. Learn as much as you can about your customers. Introduce yourself to the community's leaders. Ask community members whom you should contact, if you don't know. Ask the leaders about their needs, goals, and operations. Acknowledge and respect their existing knowledge and expertise. Establishing a relationship of mutual respect and dialogue is the single most-effective thing you can do to improve communication.
- Take to the field. Ask your contacts to go with you on site visits and demonstrations in the targeted community. Having your contact person with you will increase your credibility with members of the community.
- Keep your language plain, simple, and concise. Avoid using slang, agency jargon, technical terms, or acronyms. Give clear *how to* instructions. Make sure written information is in plain, easy to understand language. Target your messages to specific audiences. There are no broad messages that everyone can understand.
- Use appropriate language. If you need to translate your information into another language, ask someone from that community to translate it for you. Schools, local governments, and religious and civic organizations may also be able to help you. You can hire a professional translator. You may need to provide your materials in large type, Braille, or on a cassette tape. Ask your customers what alternative formats they might prefer.
- Listen carefully. Use two-way communications. Encourage your customers to tell you their needs. Rephrase their statements to make sure you're avoiding any misunderstandings.
- Be realistic. It takes time to overcome cultural differences and build trust.

Disabilities

Communicating about People with Disabilities

More people have disabilities than we commonly realize. Many disabilities are ***hidden*** or not apparent, such as epilepsy, arthritis, or diabetes. As we age, we become more disabled. About one in six Americans have some degree of disability. Half of seniors 65 and older have a disability.

Words can hurt. The way we describe people shapes our perceptions. Positive language empowers people. When you write about people with disabilities, it is important to put the person first.

☞ Tips:

- Don't use catch-all phrases such as "the blind," "the deaf," or "the disabled." Use nouns like "employees" and "people."
- Focus on the individual, not the disability. The disability is only one facet of the person.
- Show successful people with disabilities as successful people, not as super-humans. Don't overstate their achievements, as this may imply that other people who have disabilities aren't competent.
- Don't use stereotypes. Many people with hearing impairments can talk and have some degree of hearing.
- Emphasize abilities, not limitations. Don't say "confined to a wheelchair." The wheelchair provides mobility; people would be confined if they didn't have a wheelchair. Say instead, "uses a wheelchair."
- Be accurate in describing disabilities.
- Don't be afraid to ask questions. People with disabilities are generally used to questions and don't mind answering them.

Communicating with People with Disabilities

As more and more people with disabilities become your customers and enter your workforce, you must be prepared to put your agency's communications materials in such alternative formats as Braille, captioned video, and tape. In addition, your Internet Web site should be designed so it provides easy access to people with disabilities. If you run your Web site through **www.cast.org/bobby/**, it will tell you which areas are inaccessible and suggest improvements.

☞ Tips:

- When talking with a person with a disability, speak directly to that person, rather than through a companion or sign language interpreter.
- When introduced to someone with a disability, offer to shake hands. People with limited hand use or who wear an artificial limb can usually shake hands. Shaking hands with the left hand is an acceptable greeting.
- When meeting a person who is visually impaired, always identify yourself and others who are with you. When talking in a group, remember to identify the person you are talking to.

Positive Phrases	Negative Phrases
person who is blind; visually impaired	the blind
woman who uses a guide dog	blind woman
person who is deaf; hard of hearing	the deaf
person who has multiple sclerosis	afflicted or stricken by MS
person with cerebral palsy	CP victim
person without disabilities	normal person
person who uses a wheelchair	confined or restricted to a wheelchair
person with psychiatric disability	crazy, nuts
person who no longer lives in an Institution	deinstitutionalized
unable to speak	dumb, mute
seizure	fit
successful, productive	has overcome his or her disability
says he has a disability	admits he has a disability

- If you offer help, wait until the offer is accepted. Then, listen to or ask for instructions.
- Treat adults as adults. Address people with disabilities by their first names only when you are being that familiar with others. Never patronize people who use wheelchairs by patting them on the head or shoulder.
- Don't lean on or hang on to a person's wheelchair. This is like hanging on to a person and most people don't like it. The chair is part of the personal body space of the person who uses it.
- Listen carefully when you're talking with a person who has difficulty speaking. Be patient and wait for the person to finish, rather than correcting or speaking for the person. If you need to, ask short questions that require short answers, a nod, or a shake of the head. ***Never pretend to understand if you don't.*** Instead, repeat what you have understood and let the person respond. The response will clue you and guide your understanding.
- When you're talking to a person who uses a wheelchair, or a person who uses crutches, put yourself at eye level in front of the person. That will help the conversation.
- How should you get the attention of people who are deaf? Tap them on the shoulder or wave your hand. Look directly at the person. Speak clearly, slowly, and expressively to see if they can read your lips. Not all deaf people can read lips. Be sensitive to the person who can read lips by positioning yourself so that you face the light source. Keep hands and food away from your mouth when speaking.
- Relax. Don't be embarrassed if you use common expressions like "see you later" or "did you hear?" Don't be afraid to ask questions when you don't know what to do.

Internal Communication During a Crisis

What was your workplace like on Sept. 11, 2001? Was information flowing freely or was everyone left wondering what to do, when to do it, and how to do it?

What about later? Did you have a clear understanding of when to report back to work? Did you know whom to call to find out if your office was open? Was there a lot of inaccurate information and half-truths? Did you feel safe? Were you afraid of anthrax exposure? Did you know that your paychecks would be on time?

Definition of a crisis: an event or sustained situation that causes an organization to devote inordinate resources to resolving the situation. The organization's normal operations are severely disrupted.

During a crisis, an organization usually worries about the impact on its external reputation. Internal communication is not a priority. That's why Sept. 11, 2001, caught most organizations off guard. External concerns became much less important and internal communication became crucial.

If you don't have an internal crisis communication plan in place ahead of time, you'll end up devoting too many resources trying to respond to the crisis. Institutional and individual paralysis - the inability to make decisions or to do anything - is the biggest enemy during a crisis. Having a plan in place is the key to getting moving - you don't have to think about it, just act and follow the plan. Once you've taken the basic steps, you'll be past the initial paralysis.

Employees are starving for information during a crisis. Brief, accurate, and understandable information is the key to good internal crisis communication. There should be open communication from the agency head, as well as follow-up communication from direct supervisors.

Employees don't expect all the answers; they just want to know how the crisis affects them personally. E-mail and small group meetings with direct supervisors are the most effective ways to communicate because they give employees a chance to ask questions and provide feedback.

In your plan, don't rely on just one means of communication; circumstances may render one method impossible. Also, it is important to co-opt the agency's gossip network, especially during the early stages of a crisis.

Here are some tips for putting together an internal crisis communication plan:

- Consider all possible scenarios. After Sept. 11, 2001, nothing should be considered impossible or too far-fetched.

- Don't keep your plan a secret. Provide periodic training for employees, even if they've heard it all before.

- Make sure your staff knows the actions and steps they'll need to take during a crisis.

During a crisis they won't have time to look in a manual. Have a one-page summary sheet as an action check list. The biggest enemy is paralysis of action. Be prepared to act immediately.

- Your plan must list who performs each step. Be clear who has responsibility. Have backups for when staff are out.
- Have an evacuation plan and a way to confirm that everyone is out of the building.
- Have a phone number for staff to call for the latest updates.
- Have multiple communication systems. Don't rely on just one.
- Back up important documents and files–frequently–in a secure place.
- Have a plan for where and how you can continue operations if you can't return to your building.

For the period after the crisis, learn to recognize the signs of stress (such as confusion, difficulty in concentrating, disbelief, inability to make decisions, anxiety, panic, grief, loss of emotional control, helplessness, apathy, boredom, fatigue, insomnia, headaches, elevated blood pressure, rapid heartbeat, weakness, nausea). Also learn how to avoid additional stress and how to help each other cope, focus on tasks, and reconnect with each other.

Emergency Evacuations

When an emergency alarm sounds, or if you're told to evacuate the building, get out – regardless of your situation. Just because you can't see the danger, doesn't mean it doesn't exist or won't hurt you. There may not be time to tell everyone the nature of the emergency. If you ignore the alert and elect to stay in your office, you're putting yourself, and emergency rescue people, in danger.

- Never stay in a building after an evacuation alarm sounds.
- Never take an elevator during an emergency evacuation.
- Know where the nearest exit, fire alarm manual station, and fire extinguisher are located.
- Don't panic.
- If you have a cell phone or pager, keep it with you.

What should you do if you have a disability or if you want to help someone with a disability during an emergency situation? If you know what to do in an emergency, you'll be less likely to panic. Here are some tips:

- Meet with your supervisor to find out what people with disabilities should do to get out of the building during an emergency. In addition, learn where there is an alternate route out of the building if the primary exit is blocked.

- If you can't hear or are hard of hearing, strobe lights and vibrating pagers can tell you that you need to leave the building.
- If you use a wheelchair or have mobility disabilities, you should have access to a special telephone to use to call for instructions. Evacu-Track chairs can be used to take people down stairs. Emergency teams are trained to use these chairs.
- Never let go of your service animal, if you use one. That animal is your lifeline.
- Consider using a ***buddy*** system, where a co-worker is responsible for helping you get out of the building safely. If the person with the disability chooses to use a buddy, he or she must train the buddy to help. The buddy needs to be familiar with the guide dog or other service animal so that he or she doesn't waste valuable time trying to form a working relationship during the emergency. Get and train a back-up buddy, in case the primary buddy is unavailable.
- Practice getting out of the building using one of the emergency exit routes every six months. That way you won't forget the procedures and if you have a service animal, the animal will be accustomed to the route.
- When the emergency alarm sounds, if you have a service animal, always leave the building. If you don't, your service animal will learn to disregard the alarm.
- If you work in a different area for an extended time, get a temporary buddy.

chapter six

Tools of the Trade/Resources

"Seek not, my soul, the life of the immortals; but enjoy to the full the resources that are within thy reach."

– Pindar, 518-438 B.C.

Organizations:

ACE (Agricultural Communicators in Education): **www.aceweb.org**

Association of Women in Communications: **www.womcom.org**

Executive Women in Government: **www.execwomeningov.org**

Federal Communicators Network: **www.fcn.gov**

International Association of Business Communicators: **www.iabc.com**

National Association of Government Communicators: **www.nagc.com**

Public Relations Society of America: **www.prsa.org**

Society of Government Meeting Professionals: **www.sgmp.org**

United States Distance Learning Association: **www.usdla.org/**

Books:

Bias-Free Word Finder, Rosalie Maggio, Beacon Press, Boston

Designing Web Usability: The Practice of Simplicity (Neilsen, J), Indianapolis: New Riders

Guidebook: Communicating Public Risks and Benefits (Pat Melgares), Kansas State Research and Extension.

How to Say It, Rosalie Maggio, Prentice Hall, Paramus, NJ

On Writing Well, William Zinsser, HarperCollins

The Art of Cause Marketing, Richard Earle, NTC Business Books

The Associated Press Broadcast News Handbook: Incorporating the AP Libel Manual, Brad Kalbfeld, AP

The Associated Press Stylebook and Briefing on Media Law, Norm Goldstein, Editor, AP

The Chicago Manual of Style, 14th Edition, University of Chicago Press

The Elements of Style, William Strunk, Jr., and E.B. White, MacMillan Publishing Co.

The New York Times Manual of Style and Usage, Allan M. Siegal and William G. Connolly, Revised and Expanded Edition, Times Books, Random House

The Word, An Associated Press Guide to Good News Writing, Rene J. Cappon, AP

UPI Stylebook: The Authoritative Handbook for Writers, Editors & News Directors, UPI

Writing News for Broadcast, Edward Bliss, John M. Patterson, Columbia University Press

Internet Clipping Services: These are only a few of the many clipping services now available on the Internet:

Bacon's Clipping Bureau: **www.bacons.com**

Dow Jones Interactive: **www.dowjones.com**

Hoover's Online: **www.hoovers.com**

JournalismNet: **www.journalismnet.com/choose/clippings.html**

LEXIS-NEXIS: **LEXIS-NEXIS.com**

NewsDesk: **www.newsdesk.com**

NewsEdge: **www.newsedge.com**

Web Sites by Subject: Web sites seem to change on an almost daily basis. These Web sites were active when we went to press:

Accessibility: **www.cast.org/bobby/, www.section508.gov, www.access-board.gov, www.w3c.org,** and **www.lgta.org/accessibility/index.html**

Agricultural Communications Documentation Center: **web.aces.uiuc.edu/agcomdb/docctr.html**

Copy Editors' Site: **www.theslot.com**

Choosing Web Fonts: **www.will-harris.com/typoscrn.htm**

Crisis Communications: **www.oklahoma.feb.gov/emergencyplan.html#Purpose**

Distance Education: **www.uidaho.edu/evo/distglan.html**
see also The Distance Education Handbook: A Guide for University Faculty (Telg, R.W. & Irani, T.).

Good Business Documents: **www.gooddocuments.com**

Government-Wide Information: **www.firstgov.gov**

How People Read Web News: **www.poynter.org/centerpiece/071200.htm**

Instructional Design and Teaching Strategies for Online Course Development:
Illinois.online.uillinois.edu/model

Journalism/content/publishing: **www.content-exchange.com**

Jeff Kagan's weekly column: **www.newsbytes.com**

Marketing online: **www.emarketer.com**

Measuring effectiveness: Journal of Extension Web site. **www.joe.org/joe/** or
Journal of Applied Communications Web site **www.aceweb.org/JAC/jac.html**

Pew Research Center for the People & the Press: **www.people-press.org**

Plain Language: **www.plainlanguage.gov**

Public Service Advertising Research Center: **www.psaresearch.com**

PSAs: **www.psaresearch.com** and **www.goodwillcommunications.com**

Risk Communications: **aesop.rutgers.edu/%7ces/PUBS/publist.html**

Successful Online Student Profile: **Illinois.online.uillinois.edu/model/Studentprofile.htm**

Section 508: **www.section508.gov**

Usable Web: **www.usableweb.com/**

Web Design and Usability: **www.abeleto.com/**

Web Writing (evaluating): **www.oznet.ksu.edu/prev/** and click on "Summary of Data Collection Methods and Procedures."

Web Writing: **www.useit.com/papers/webwriting/writing.html**
www.useit.com/alertbox/whyscanning.html
www.useit.com/alertbox/980906.html

Yale Style Manual for Website Design: info.med.yale.edu/caim/manual/contents.html

Media Directories:

Bacon's Media Directories: **www.bacons.com**

Burrelle's Media Directory: **www.burrelles.com**

Gebbie Press: **www.gebbieinc.com**

The Capital Source, (Washington, DC): **nationaljournal.com/about/capitalsource/**

Media Web Sites:

ABC: **www.abc.go.com**

AP: **www.ap.org**

Atlanta Journal Constitution: **www.ajc.com**

BusinessWeek: **www.businessweek.com**

CBS: **www.cbs.com**

CNN: **www.cnn.com**

Federal Times: **www.federaltimes.com**

Forbes: **www.forbes.com**

FOX News: **www.foxnews.com**

Government Executive Magazine: **www.govexec.com**

Los Angeles Times: **www.latimes.com**

MSNBC: **www.msnbc.com**

NBC: **www.nbc.com**

Newsweek: **www.newsweek.com**

New York Times: **www.nyt.com**

Salon Magazine: **www.salon.com**

Time Magazine: **www.time.com**

USA Today: **www.usatoday.com**

U.S. News & World Report: **www.usnews.com**

Wall Street Journal: **www.wsj.com**

Washington Post: **www.washingtonpost.com**

All resources are for information and do not imply endorsement.

chapter seven

Contributors

"Some editors are failed writers, but so are most writers."

– T. S. Eliot

Susan Bale, Web master, Kansas State University, 307 Umberger Hall, Manhattan, KS 66506-3402, sbale@oz.oznet.ksu.edu, (785) 532-6379.

Linda Foster Benedict, Assistant Director, Communications, Louisiana State University Ag Center, PO Box 25100, Baton Rouge, LA 70894-5100, lbenedict@agcenter.lsu.edu, (225) 578-2937.

Lew Brodsky, Director of Public and Congressional Affairs, Selective Service System, 1515 Wilson Blvd., 4th Floor, Arlington, VA 22209, lbrodsky@sss.gov, (703) 605-4191.

Susan Buchanan, Publications Editor, Office of Communications, Peace Corps, 1111 20th St., N.W., Washington, DC 20526, sbuchanan@peacecorps.gov, (202) 692-2214.

Kurt Byers, Communications Manager/Editor, University of Alaska Sea Grant College Program, PO Box 755040, Room 203 O'Neill Bldg., Fairbanks, AK, fnkmb1@uaf.edu, (907) 457-2231.

Donise Cheeks, Senior Analyst, Office of Research, Internal Revenue Service, Washington, DC 20224, donise.cheeks@irs.gov, (202) 874-4099.

Dr. Denise Decker, Human Resources Manager, Natural Resources Conservation Service, U.S. Department of Agriculture, Room 6210-S, Washington, DC 20250, denise.decker@usda.gov, (202) 690-0648.

Joan Detz, Joan Detz Speechwriting, 73 Harvey Ave., Doylestown, PA 18901, jdetz@joandetz.com, (215) 340-9752.

Dr. LaRae M. Donnellan, Professor and Section Leader, Extension Communications, P.O. Box 1071, The University of Tennessee, Knoxville, TN 37901-1071, lmdonnellan@ext1.ag.utk.edu, (865) 974-7363.

Wendy Douglass, Marketing Director, Colorado State University Cooperative Extension, 235 Aylesworth Hall, N.W., Fort Collins, CO 80523-4050, douglass@coop.ext.colostate.edu, (970) 491-6430.

Sareen R. Gerson, Chief, Classification and Performance Management, Occupational Safety and Health Administration, U.S. Department of Labor, Room N3308, 200 Constitution Ave., Washington, DC 20210, sareen.gerson@osha.gov, (202) 693-2468.

Robin G. Goettel, Communications Coordinator, Illinois-Indiana Sea Grant College Program, University of Illinois, 63 Mumford Hall, 1301 W. Gregory Dr., Urbana, IL 61801-3605, goettel@uiuc.edu, (217) 333-9448.

Bill Goodwill, CEO, Goodwill Communications, 9829 Summerday Dr., Burke, VA 22015, (703) 426-0881, bgoodwill@goodwillcommunications.com.

Donald R. Hannaford, Senior Vice President and Chief Operating Officer, Manning Selvage & Lee/DC, 1100 17th St., NW, 12th Floor, Washington, DC 20036, donald.hannaford@mslpr.com, (202) 467-6600.

Marci Hilt, Public Affairs Specialist, Office of Communications, U.S. Department of Agriculture, Room 421-A Whitten Building, Washington, DC 20250, marci.hilt@usda.gov, (202) 720-3088.

Dr. Tracy Irani, Assistant Professor, University of Florida, 213 Rolfs Hall, Gainesville, FL 32611, irani@ufl.edu, (352) 392-0502 x225.

Tom Knecht, Head, Office of Agricultural Communications, 110-J Bost Bldg., University Drive, Mississippi State University, PO Box 9625, Mississippi State, MS 39762, tomk@ext.msstate.edu, (662) 325-1716.

David McAllister, Writer/Editor, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, Waterfront Centre, 800 9th St., S.W., Washington, DC 20250 dmcallister@reeusda.gov, (202) 720-7185.

Tom Merrill, News Specialist, Louisiana State University Ag Center, PO Box 25100, Baton Rouge, LA 70894-5100, tmerrill@agcenter.lsu.edu, (225) 578-5896.

Dr. James J. Onder, Highway Safety Specialist, National Highway Traffic Safety Administration, U.S. Department of Transportation, Traffic Law Enforcement Division, Room 5130 (NTS-13), Washington, DC 20590, jonder@nhtsa.dot.gov, (202) 366-9785.

Katherine E. ("Kathy") Rowan, Associate Professor, Dept. of Communication, George Mason University, Fairfax, VA 22030, krowan@erols.com or krowan@gmu.edu, (703) 993-1090.

Dennis Senft, Public Affairs Specialist (Retired), Agricultural Research Service, U.S. Department of Agriculture, 319 Amber Dr., San Francisco, CA 94131, dhsenft@aol.com, (415) 641-9355.

Dann Stuart, Chief, Communications Services, Farm Service Agency, U.S. Department of Agriculture, Room 3633-S, Washington, DC 20250, dann_stuart@wdc.fsa.usda.gov, (202) 690-0474.

James Vaughn, Senior Manager for e-government Programming and Products, America Online GovernmentGuide.com, AOL, 22070 Broderick Dr., Dulles, VA 20166, vaughnj99@aol.com, (703) 265-2966.

Jeanne Wiebke, System Support Specialist, Extension Information Technology Unit, 110 EES Bldg., Haber Rd., Ames, IA 50011-3070, jwiebke@iastate.edu, (515) 294-8658.

Kathy Wright, Associate Information Technology Specialist, 211 Umberger Hall, Kansas State University, Manhattan, KS, 66506-3402, kwright@oznet.ksu.edu, (785) 532-6270.

Special Thanks to:

Dennis Carroll, Senior Publications Clearance Editor, Office of Communications, U.S. Department of Agriculture, Room 428-A Whitten Building, Washington, DC 20250, dennis.carroll@usda.gov, (202) 720-3298.

Patricia B. Wood, Communications Advisor, FirstGov.gov, General Services Administration, 750 17th St., NW, Suite 200, Washington, DC 20006, pat.wood@gsa.gov, (202) 634-0060.

Ashley Wood, Director, IFAS Communication Services, University of Florida, Gainesville, FL 32611-0810, amwood@mail.ifas.ufl.edu, (352) 392-7228.

Style Note: The stylebook for the "Communicators Guide" was *"The Associated Press Stylebook and Briefing on Media Law,"* AP, Norm Goldstein, Editor, 2001.

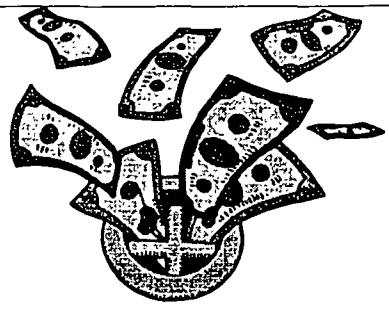
The federal government is committed to ensuring the civil rights of all customers and employees. Every customer and every employee must be treated fairly and equitably and with dignity and respect. The federal government prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. By our words and actions, each of us must demonstrate a commitment to equal opportunity for all individuals. To be successful, we must embrace and value diversity and strengthen our commitment to an equitable and discrimination-free workplace.

M F

Interviewer	Checked by	Red checked by	Re-checked by	Corrected by	Correction Checked by	Coded by	Coding Checked by

JDFR #339
FINAL.1
7/17/03
RED CHECK ☑

CITY OF SAN DIEGO



JULY 2003 FOLLOW-UP SURVEY

Introduction

Hello, this is _____ calling for the City of San Diego. We are doing a survey of our residents about some issues of importance to our community and would like to include the opinions of your household.

Screening

A. First, is this household in the City of San Diego?

YES – CONTINUE
NO – THANK AND TERMINATE

B. I would like to interview the youngest male adult aged 18 **or older** who is at home now.

IF NO MALE ADULT IN HOUSEHOLD OR MALE ADULT NOT AVAILABLE, SAY:

C. Then I would like to interview the youngest female adult aged 18 **or older** who is at home now.

IF NO ADULT AVAILABLE, SCHEDULE AND RECORD CALLBACK.

IF NO ADULT IN HOUSEHOLD, THANK AND TERMINATE.

WHEN YOU HAVE ELIGIBLE ADULT, CONTINUE.

Interview **Time Started: ___ ___:___ ___**

1. First, I am going to read you a list of some issues the City of San Diego is dealing with. As I read each one, please tell me whether you feel it is very important, somewhat important, not very important, or not at all important. Here's the first one ... START WITH STATEMENT CHECKED ☑.

	Very	Somewhat	Not Very	Not at All	Don't Know
☐ a air pollution	4	3	2	1	9
☐ b quality of the public schools	4	3	2	1	9
☐ c traffic congestion	4	3	2	1	9
☐ d pollution of the ocean, bays, and beaches	4	3	2	1	9
☐ e crime	4	3	2	1	9
☐ f littering	4	3	2	1	9

2. Now I would like to ask you about some things you may have or own ... Do you (own) (have) a _____? How about a _____?

	YES	NO
a. car, truck, or van	1	2
b. motorcycle	1	2
c. garden	1	2
d. dog	1	2

➢ASK Q #3 - 8 IF PERSON HAS CAR/TRUCK/VAN OR MOTORCYCLE.

3. Thinking first about your (car, truck, or van) (motorcycle) ... Do you ever wash your vehicle or vehicles at home?

YES (CONTINUE) 1
NO (SKIP TO Q #5) 2

☞**IF YES, ASK:**

4. And where does the wash water from the vehicle run?

_____

ONTO PAVEMENT LIKE DRIVEWAY, STREET, GUTTER 1
ONTO DIRT 2
ONTO GRASS, LAWN, GARDEN 3
OTHER _____ 8

5. (And) do you personally ever change the oil in your vehicle or vehicles?

YES (CONTINUE) 1
NO (SKIP TO Q #7) 2

☞**IF YES, ASK:**

6. (And) what do you do with the used oil?

_____

POUR DOWN INSIDE DRAIN 1
POUR DOWN STORM DRAIN 2
POUR ONTO GROUND 3
THROW IN TRASH/GARBAGE 4
KEEP AROUND THE HOUSE 5
USE AS WEED KILLER 6
TAKE TO HAZARDOUS WASTE EVENT/ROUNDUP 7
TAKE TO RECYCLING CENTER 8

7. (And) do you ever drain your vehicle's radiator or radiators?

YES (CONTINUE) 1
NO (SKIP TO Q #9) 2

☞**IF YES, ASK:**

8. (And) what do you do with the radiator fluid?

_____

POUR DOWN INSIDE DRAIN 1
POUR DOWN STORM DRAIN 2
POUR ONTO GROUND 3
THROW IN TRASH/GARBAGE 4
KEEP AROUND THE HOUSE 5
USE AS WEED KILLER 6
TAKE TO HAZARDOUS WASTE EVENT/ROUNDUP 7
TAKE TO RECYCLING CENTER 8

➢**ASK Q #9 - 17 IF PERSON HAS A GARDEN.**

9. (Now thinking about) (Thinking first about) your garden. How do you dispose of your lawn clippings or other green waste? (IF PERSON DOESN'T DISPOSE OF OWN, ASK: What does your gardener do with the green waste?)

_____

THROW IN TRASH/GARBAGE 1
GREEN WATER CAN/CURBSIDE RECYCLING 2
TAKEN AWAY BY GARDENER/LAWN SERVICE 3
PUT IN COMPOST PILE/USE AS MULCH 4
LEAVE ON LAWN 5
TAKE TO COMPOST FACILITY 6
TAKE TO LAND FILL/TRANSFER STATION 7
OTHER: _____ 8
DON'T KNOW WHAT GARDENER/OTHER FAMILY MEMBER DOES 9

10. And how do you **clean up** the clippings that are on walkways, patios, and the driveway? (IF PERSON DOESN'T MOW OWN LAWN, ASK: What does your gardener do to clean up after mowing?)

_____

SWEEP UP AND PUT INTO TRASH 1
BLOW INTO YARD (LEAF BLOWER) 2
SWEEP INTO STREET/GUTTER 3
HOSE INTO STREET/GUTTER 4
GREEN WASTE CAN/CURBSIDE RECYCLING 5
NOT APPLICABLE - NO LAWN 6
NOT APPLICABLE - NO CLIPPINGS 7
OTHER: _____ 8
DON'T KNOW WHAT GARDENER/OTHER FAMILY MEMBER DOES 9

11. When you water your garden, does water always, usually, sometimes, rarely, or never run into the gutter or street?

ALWAYS 5
USUALLY 4
SOMETIMES 3
RARELY 2
NEVER 1
DON'T KNOW 9

12. Do you ever use pesticides, herbicides, or fungicides in the garden?

YES (CONTINUE) 1
NO (SKIP TO Q #16) 2

☞**IF YES, ASK:**

13. As far as you know, when pesticides, herbicides, or fungicides are used in your garden, are the instructions read and followed very carefully, somewhat carefully, not too carefully, or not at all?

VERY CAREFULLY 4
SOMEWHAT CAREFULLY 3
NOT VERY CAREFULLY 2
NOT AT ALL 1
IT DEPENDS ON WHO DOES IT 7
DON'T KNOW 9

14. After you apply pesticides, herbicides, or fungicides, would you say some of them wash off into the street due to watering always, usually, sometimes, rarely, or never?

ALWAYS 5
USUALLY 4
SOMETIMES 3
RARELY 2
NEVER 1

15. And when you have leftover pesticides or herbicides, how do you dispose of them?

_____

PUT IN TRASH/GARBAGE 1
PUT DOWN INDOOR DRAIN 2
PUT DOWN OUTDOOR DRAIN 3
PUT INTO GUTTER/STORM DRAIN 4
TAKE TO HAZARDOUS WASTE COLLECTION 5
TAKE TO LANDFILL OR DUMP 6
BURY IT 7
NOT APPLICABLE/DON'T HAVE LEFTOVERS 8
OTHER _____ 88

16. Now thinking more specifically about methods for controlling insects ... Do you, other household members, or your gardener ... START WITH STATEMENT CHECKED ☑.

❒ mainly use traditional synthetic chemicals (CONTINUE) 1
❒ mainly use alternative, non-chemical methods (SKIP TO Q #18) 2
or use a combination of traditional and alternative methods? (CONTINUE) 3
USES NO INSECT CONTROL METHOD (SKIP TO Q #18) 7
DON'T KNOW (CONTINUE) 9

➢**IF USES TRADITIONAL CHEMICALS OR DOESN'T KNOW, ASK:**

17. Now I am going to read you five things that are important to some people in choosing between traditional and alternative methods of insect control. After I have read all five, please tell me which **one** is **most** important to you. START WITH STATEMENT CHECKED ☑.

❒cost 1
❒method of application 2
❒potential for toxic side effects 3
❒speed of results 4
or some other factor? (And what would that be?) _____ 5

➢**ASK Q #18 - 19 IF PERSON HAS A DOG.**

18. (Now thinking about) (Thinking first about) your dog ... Do you always, usually, sometimes, rarely, or never "pick up the droppings" when you walk the dog?

ALWAYS 5
USUALLY 4
SOMETIMES 3
RARELY 2
NEVER 1

19. And do you clean up any dog droppings in your yard every day, every few days, once a week, or less than once a week?

EVERY DAY 1
EVERY FEW DAYS 2
ONCE A WEEK 3
LESS THAN ONCE A WEEK 4
NOT APPLICABLE - NO YARD OR NO DROPPINGS IN YARD 7

➢**CONTINUE HERE WITH ALL RESPONDENTS.**

20. Now thinking about cooking ... When you have a pot or pan with grease in it, do you ... START WITH STATEMENT CHECKED, INSERTING THE WORD "or" BEFORE THE LAST CHOICE.

- ❑ wipe the grease out of the pan into the garbage.. 1
- ❑ wash the grease down the drain with hot water 2
- ❑ wash the grease down the drain with cold water 3
- ❑ pour the grease into a container and throw the container in the garbage..... 4
- ❑ put the pot or pan in the dishwasher with the grease in it..... 5

NEVER COOKS 7
OTHER (VOLUNTEERED) _____ 8

21. Do you ever do any painting around the house, either inside or outside?

YES (CONTINUE) 1
NO (SKIP TO Q #24)..... 2

➢**IF YES, ASK:**

22. Where do you clean out your paint brushes, rollers, and pans? IF BUCKET OR PAIL, PROBE FOR WHERE WATER IS POURED.

INSIDE SINK..... 1
OUTSIDE SINK..... 2
GRASS/DIRT/YARD 3
DRIVEWAY/GUTTER/STREET..... 4
THROW AWAY/TRASH/USE DISPOSABLE ONES ... 5
OTHER _____ 8

23. And how do you dispose of any extra paint you may have?

PUT IN TRASH/GARBAGE 1
PUT DOWN INDOOR DRAIN 2
PUT DOWN OUTDOOR DRAIN 3
PUT INTO GUTTER/STORM DRAIN 4
TAKE TO RECYCLING CENTER 5
TAKE TO HAZARDOUS WASTE COLLECTION 6
TAKE TO LANDFILL OR DUMP 7
BURY IT 8
NOT APPLICABLE/DON'T HAVE LEFTOVERS/NEVER DISPOSE OF IT 77
OTHER_____ 88

24. Have you ever experienced a blocked sewer where you live now?

YES (CONTINUE) 1
NO (SKIP TO Q # 26) 2

☞**IF YES, ASK:**

25. And was that blockage caused by grease, roots, a break in the line connecting your house to the street, or a break in the main sewer line?

GREASE 1
ROOTS 2
BREAK IN CONNECTING LINE 3
BREAK IN MAIN LINE 4
NOT APPLICABLE – APARTMENT/CONDO/RENTAL 7
DON'T KNOW 9

26. How often do you clean out the sewer line that connects your home to the main sewer line in the street?

_____

MORE THAN ONCE A YEAR 1
ONCE A YEAR 2
ONCE EVERY TWO-THREE YEARS 3
ONCE EVERY FOUR-FIVE YEARS 4
ONCE EVERY SIX-TEN YEARS 5
LESS THAN ONCE EVERY TEN YEARS 6
NEVER 7
NOT APPLICABLE – APARTMENT/CONDO/RENTAL 77
DON'T KNOW 99

27. Now thinking about litter … Would you say that you never, rarely, occasionally, or often litter?

NEVER 4
RARELY 3
OCCASIONALLY 2
OFTEN 1

28. And would you say that you never, rarely, occasionally, or often empty trash or the ashtray from your car at freeway on- or off-ramps?

NEVER 4
RARELY 3
OCCASIONALLY 2
OFTEN 1

29. In the neighborhood where you live, would you say there is a lot of litter, some litter, not very much litter, or no litter at all?

LOT 4
SOME 3
NOT VERY MUCH 2
NONE 1

30. And would you say you are very, somewhat, not very, or not at all likely to pick up litter you see in your neighborhood?

VERY 4
SOMEWHAT 3
NOT VERY 2
NOT AT ALL 1

31. Now thinking about the beaches ... About how often do you visit a San Diego beach?

_____

EVERY DAY (CONTINUE) 1
EVERY FEW DAYS (CONTINUE) 2
ONCE A WEEK (CONTINUE) 3
ONCE EVERY TWO TO THREE WEEKS (CONTINUE) 4
ONCE A MONTH (CONTINUE) 5
ONCE EVERY TWO TO THREE MONTHS (CONTINUE) 6
EVERY FOUR TO SIX MONTHS (CONTINUE) 7
EVERY SEVEN TO TWELVE MONTHS (CONTINUE) 8
LESS THAN ONCE A YEAR (SKIP TO Q #34) 9
NEVER (SKIP TO Q #34) 10

☞IF ONCE A YEAR OR MORE OFTEN, ASK:

32. Do you ever feed the birds at the beach?

YES 1
NO 2

33. As far as you know, when San Diego beaches are closed due to contamination, is the contamination usually due to sewage spills or to runoff from homes and businesses?

SEWAGE 1
RUNOFF 2
DON'T KNOW 9

34. What is the Zip Code where you live? ___ ___ ___ ___ ___

35. Now thinking about water bodies in general … What water bodies would you say are part of the community where you live? PROBE FOR SPELLING. RECORD VERBATIM. CODE ALL THAT APPLY.

_____

_____

Mission Bay	1
Penasquitos	2
San Diego Bay	3
San Diego River	4
San Dieguito River	5
Tijuana River	6
The Pacific Ocean/The Ocean	7
Coronado Bay/Coronado Beach	8
Lake Miramar	9
Lake Hodges	10
Lake Murray	11
La Jolla Beach	12
Dog Beach	13
Lake Poway	14
Imperial Beach	15
Colorado River	16
San Diego Harbor	17
Ocean Beach/Pacific Beach	18
Del Mar	19
Lake Cuyamaka	20
Chollas Lake	21
None	77
Other:_____	88
Don't Know	99

36. And what water bodies do you visit or use for recreational purposes? PROBE FOR SPELLING. RECORD VERBATIM. CODE ALL THAT APPLY.

_____

_____

Mission Bay	1
Penasquitos	2
San Diego Bay	3
San Diego River	4
San Dieguito River	5
Tijuana River	6
The Pacific Ocean/The Ocean	7
Coronado Bay/Coronado Beach	8
Lake Miramar	9
Lake Hodges	10
Lake Murray	11
La Jolla Beach	12
Dog Beach	13
Lake Poway	14
Imperial Beach	15
Colorado River	16
San Diego Harbor	17
Ocean Beach/Pacific Beach	18
Del Mar	19
Lake Cuyamaka	20
Chollas Lake	21
None	77
Other:_____	88
Don't Know	99

☞IF ZIP CODE IN QUESTION #34 IS ON THE LIST BELOW, ASK QUESTION #37 FOR THAT ZIP CODE. OTHERWISE, SKIP TO QUESTION #38. IF TWO WATERBODIES, ASK ABOUT: ❒FIRST ❒SECOND.

37. Would you say that _____, which is in your area, is very, somewhat, not very, or not at all healthy?

91902	San Diego Bay
91911	San Diego Bay
91913	San Diego Bay
91915	San Diego Bay
91932	Tijuana River
91942	San Diego River
91945	San Diego Bay
91950	San Diego Bay
91977	San Diego Bay
92014	Penasquitos and San Dieguito River
92020	San Diego River
92025	San Dieguito River
92027	San Dieguito River
92029	San Dieguito River
92037	Mission Bay
92064	Penasquito
92065	San Dieguito River
92067	San Dieguito River
92075	San Dieguito River
92101	San Diego Bay
92102	San Diego Bay
92103	San Diego River and San Diego Bay
92104	San Diego Bay
92105	San Diego Bay
92106	San Diego Bay
92107	San Diego Bay
92108	San Diego River
92109	Mission Bay
92110	Mission Bay
92111	San Diego River
92113	San Diego Bay
92114	San Diego Bay
92115	San Diego River and San Diego Bay
92116	San Diego Bay
92117	Mission Bay
92118	San Diego Bay
92119	San Diego River
92120	San Diego River
92121	Penasquitos
92122	Mission Bay
92123	San Diego River
92124	San Diego River
92126	Penasquitos
92127	San Dieguito River
92128	Penasquitos and San Dieguito River
92129	Penasquitos
92130	Penasquitos
92131	Penasquitos
92133	San Diego Bay
92134	San Diego Bay
92135	San Diego Bay
92136	San Diego Bay
92139	San Diego Bay
92140	San Diego Bay
92145	Mission Bay and San Diego River
92152	San Diego Bay and Tijuana River
92173	Tijuana River

VERY 4
SOMEWHAT 3
NOT VERY 2
NOT AT ALL 1
DON'T KNOW/NOT SURE 9

38. Are you familiar with the concept of a watershed?

YES (CONTINUE) 1
NO (SKIP TO Q #41) 2

☞**IF YES, ASK:**

39. And how would you define a watershed? PROBE FOR CLARITY AND SPECIFICS. RECORD VERBATIM.

_____

_____

_____

40. As far as you know, do you live in a watershed, or not?

LIVE IN WATERSHED 1
DO NOT LIVE IN WATERSHED 2
DON'T KNOW/NOT SURE 9

41. In the past six months, have you heard anything about San Diego's storm drain system?

YES 1
NO 2

42. As far as you know, where do things that enter the storm drains go? IF TO WATERWAYS, ASK: And do they go to a treatment plant first, or not?

_____

TREATMENT PLANT 1
TO WATERWAY BUT TREATED FIRST 2
TO WATERWAY BUT NOT TREATED 3
TO WATERWAY, NOT SURE IF TREATED 4
TO SEWER 5
OTHER _____ 8
DON'T KNOW 9

43. Have you ever heard the slogan "Think Blue"?

YES (CONTINUE) 1
NO (SKIP TO Q #49) 2

☞**IF YES, ASK:**

44. And did you hear that slogan on the radio, on television, on both radio and television, or somewhere else? (And where would that be?)

RADIO (ASK Q #45) 1
TELEVISION (ASK Q #46) 2
BOTH (ASK Q #45 AND Q #46) 3
SOMEWHERE ELSE (SKIP TO Q #47): _____ 8
DON'T RECALL (SKIP TO Q #47) 9

☞**IF ON RADIO, ASK:**

45. (And) what radio station or stations did you hear it on? PROBE FOR OTHER STATIONS: Where else? CODE ALL THAT APPLY.

88.3 FM KSDS JAZZ CITY COLLEGE 1
89.5 KPBS 2
92.1 FM KFSD 3
92.5 FM MAGIC XHRM 4
93.3 FM KHTZ CHANNEL 933 5
94.9 FM KBZT 6
98.9 FM MORE ESPANOL 7
100.7 FM KFMB STAR 8
101 FM KGB 9
102.1 FM KPRI SETS 10
102.9 FM K LOVE ESPANOL 11
103.7 FM THE PLANET OR CLASSIC HITS 12
106.5 FM LA NUEVA ESPANOL 13
600 AM KOGO 600 NEWS RADIO 14
760 AM KFMB CBS 15
1360 AM KPOP 16
PREMIER TRAFFIC 17
WESTWOOD TRAFFIC 18
OTHER: _____ 88
DON'T RECALL 99

1		
Station Number	Call Letter	Nickname
2		
Station Number	Call Letter	Nickname

☞IF ON TELEVISION, ASK:

46. (And) what television station did you hear it on? PROBE FOR OTHER STATIONS: Where else? CODE ALL THAT APPLY.

4 COX- Padres 1
5/69 KSWB The WB 2
6 FOX 3
7/39 KNSD NBC 4
8 TV KFMB CBS 5
9/51 KUSI 6
10 KGTV 7
11/15 KPBS 8
12 XEWT TELEVISA Energy Communications Espanol 9
13 UPN 10
17 KBNT UNIVISION 11
24 CITY CABLE ACCESS 12
TELEMUNDO-Espanol 13
TIME WARNER USA,TLC,LIF 14
OTHER: _____ 88
DON'T RECALL 99

1		
Channel Number	Station	Network
2		
Channel Number	Station	Network

47. What does that slogan mean to you? PROBE FOR CLARITY AND SPECIFICS. PROBE FOR OTHER THINGS: What else? RECORD VERBATIM.

_____

_____

_____

_____

48. In general, would you say that your reaction to the "Think Blue" slogan is very positive, somewhat positive, somewhat negative, or very negative?

VERY POSITIVE 4
SOMEWHAT POSITIVE 3
SOMEWHAT NEGATIVE 2
VERY NEGATIVE 1
DON'T KNOW/NOT SURE 9

49. Now suppose the City of San Diego wanted to provide you with information on how to prevent the contamination of our ocean, bays, and beaches. Would you definitely, probably, probably not, or definitely not pay attention to this information if it was _____? How about _____?

	Definitely	Probably	Probably Not	Defintely Not	Don't Know
a. on television	4	3	2	1	9
b. on the radio	4	3	2	1	9
c. in the newspaper	4	3	2	1	9
d. mailed to your house	4	3	2	1	9
e. sent to you by e-mail	4	3	2	1	9
f. available on the Internet	4	3	2	1	9
g. available in public places	4	3	2	1	9
h. given to children at school to take home	4	3	2	1	9
i. discussed at community meetings	4	3	2	1	9
j. on Community Access television	4	3	2	1	9

Now in order to classify your responses along with others, I need to ask a few questions about you ...

50. Do you live in a single family home, a duplex or triplex, a townhouse, or an apartment or condominium?

SINGLE FAMILY 1
DUPLEX/TRIPLEX 2
TOWNHOUSE 3
APARTMENT/CONDOMINIUM 4
REFUSED 0

51. Do you own your home, or are you renting or leasing it?

OWN 1
RENT/LEASE 2
REFUSED 0

52. What was the last grade you completed in school?

LESS THAN HIGH SCHOOL 1
HIGH SCHOOL GRADUATE 2
VOCATIONAL/TRADE CERTIFICATE 3
SOME COLLEGE 4
TWO-YEAR DEGREE 5
FOUR-YEAR DEGREE OR HIGHER 6
REFUSED 0

53. What is your age, please? ___ ___

54. We would also like to know your racial or ethnic background. Are you Caucasian, African-American, Asian-American, Latino or Hispanic, or some other ethnicity? (And what would that be?)

CAUCASIAN/WHITE 1
AFRICAN-AMERICAN 2
ASIAN-AMERICAN 3
LATINO/HISPANIC 4
OTHER _____ 8
REFUSED 0

55. Was your total annual household income before taxes in 2002 under or over $50,000?

UNDER ($0-$49,999) (ASK 56) 1
OVER ($50,001+) (ASK 57) 2
EXACTLY $50,000 (END INTERVIEW) 6
DON'T KNOW (END INTERVIEW) 99
REFUSED (END INTERVIEW) 10

☛IF UNDER $50,000 ASK:

56. And was it under or over $25,000?

UNDER ($0-24,999) 03
OVER ($25,001-49,999) 05
EXACTLY $25,000 04
DON'T KNOW 99
REFUSED 20

☛IF OVER $50,000 ASK:

57. Was it under or over $75,000?

UNDER ($50,001-74,999) 07
EXACTLY $75,000 08
OVER ($75,001+) 09
DON'T KNOW 99
REFUSED 30

THANK RESPONDENT!

58. RECORD GENDER:

MALE 1
FEMALE 2

TIME ENDED: __ __ : __ __

ELAPSED TIME: __ __

DATE: __ __ / __ __ /03

INT ID #: __ __ __ __

REP: _____

PAGE: _____

LINE: _____

✂

PHONE #: ( ) _____ - _____

CHECKER ERROR ❐1

Attendees List

Getting in Step with Phase II

A Workshop for Storm Water Program Managers
June 22-23, 2004
Philadelphia, Pennsylvania

Francis Albright
Gannett Fleming
P.O. Box 67100
Harrisburg, PA 17106-7100
Phone: 717-763-7211
Fax: 717-763-8150
E-mail: falbright@falbright@GFNET.com

Robert Anderson
Maryland Transportation Authority
300 Authority Drive
Baltimore, MD 21222
E-mail: randerson3@mdtransportationauthority.com

Chris Bartleson
Assistant Planning Director
Bethlehem Township
4225 Easton Avenue
Bethlehem, PA 18020
Phone: 610-814-6433
Fax: 610-814-6445
E-mail: cbartleson@bethlehemtwp.com

John Beswick
Stormwater Inspector
West Goshen Township
1025 Paoli Pike
West Chester, PA 19380
Phone: 610-696-5266
Fax: 610-429-0616
E-mail: twp@westgoshen.org

Matt Bonnano
Engineer
Herbert, Rowland & Grubic, Inc.
369 East Park Drive
Harrisburg, PA 17111
Phone: 717-564-1121
Fax: 717-564-1158
E-mail: mbonanno@hrg-inc.com

Ira Bortnick
Environmental Engineer
SEPTA
1234 Market, 6th Floor
Philadelphia, PA 19107
Phone: 215-580-7914
Fax: 215-580-3507
E-mail: ibortnick@septa.org

Lisa Boyd
Borough Manager
Strasburg Borough
145 Precision Avenue
Strasburg, PA 17579
Phone: 717-687-7358
Fax: 717-687-6599
E-mail: lmboyd@comcast.net

Patrick Boyle
USEPA Region III
1650 Arch Street
Mail Code: 3CG00
Philadelphia, PA 19103
Phone: 215-814-5533
E-mail: boyle.patrick@epa.gov

Eileen Bradley
Township Administrator
Wrightstown Township
738 Penns Park Road
Wrightstown, PA 18940
Phone: 215-598-3313
Fax: 215-598-0529
E-mail: wrightstown7@aol.com

Richard Breitenstein
Compliance Specialist
Pennsylvania Department of Environmental Protection
2 E. Main Street
Norristown, PA 19401
Phone: 484-250-5140
Fax: 484-250-5971
E-mail: rbreitenst@state.pa.us

Attendees List

Getting in Step with Phase II

A Workshop for Storm Water Program Managers
June 22-23, 2004
Philadelphia, Pennsylvania

Sarah Brennan
Special Projects Coordinator
Doylestown Township
425 Wells Road
Doylestown, PA 18901
Phone: 215-348-9915
Fax: 215-348-8729
E-mail: sbrennan@doylestownpa.org

Graham Bryant
Hydroworks
525 Boulevard
Kenilworth, NJ 07033
Phone: 908-272-4411
Fax: 908-272-3633
E-mail: gbryant@hydroworks.org

Chad Camburn
Engineer
Bursich Associates, Inc.
2129 East High Street
Pottstown, PA 19464
Phone: 610-323-4040
Fax: 610-323-8240
E-mail: camburn@bursich.com

Ann Carkhuff
Environmental Scientist
USEPA Region III
1650 Arch Street
Philadelphia, PA 19103
Phone: 215-814-5735
Fax: 215-814-2301
E-mail: carkhuff.ann@epa.gov

Kevin Chimics
Project Engineer
Spotts, Stevens & McCoy, Inc.
3722 Lehigh Street, Suite 401
Whitehall, PA 18052
Phone: 610-433-4188
Fax: 610-433-3499
E-mail: kevin.chimics@ssmgroup.com

Brandy Culbertson
Marketing Manager
BaySaver Technologies, Inc.
1302 Rising Ridge Road, Unit 1
Mt. Airy, MD 21771
Phone: 301-829-6470
Fax: 301-829-3747
E-mail: BCulbertson@BaySaver.com

Kelly Deluca
Safety Officer
SEPTA
1234 Market Street, 6th floor
Philadelphia, PA 19107
Phone: 215-580-8033
Fax: 215-580-3507
E-mail: kdeluca@septa.org

Kelley Dinsmore
Stormwater Program Coordinator
City of Newark
220 Elkton Road
Newark, DE 19711
Phone: 302-366-7040
Fax: 302-366-7160
E-mail: kdinsmore@newark.de.us

Joseph D'Onofrio
Senior Civil Engineer
Pennsylvania Department of Environmental Protection
Water Supply Management Program
2 Public Square
Wilkes-Barre, PA 18711
Phone: 570-830-3080
Fax: 570-830-3016
E-mail: jdonofrio@state.pa.us

Paula Estornell
NPDES Storm Water Coordinator
USEPA Region III
1650 Arch Street, Mail Stop: 3WP13
Philadelphia, PA 10103
Phone: 215-814-5632
Fax: 215-814-2301
E-mail: estornell.paula@epa.gov

Attendees List

Getting in Step with Phase II

A Workshop for Storm Water Program Managers
June 22-23, 2004
Philadelphia, Pennsylvania

Jennifer Fields
Permits Chief
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401
Phone: 484-250-5192
E-mail: jefields@state.pa.us

Deborah Fries
Community Relations Supervisor
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401
Phone: 484-250-5808
Fax: 484-250-5943
E-mail: defries@state.pa.us

Suzanne Hall
Biologist
USEPA Region III
1650 Arch Street
Philadelphia, PA 19103
Phone: 215-814-5701
E-mail: hall.suzanne@epa.gov

Desiree Henning Dudley
Regional Watershed Manager
Pennsylvania Department of Environmental Protection
Southeast Region
2 East Main Street
Norristown, PA 19401
Phone: 484-250-5826
Fax: 484-250-5943
E-mail: dhenningdu@state.pa.us

Richard John
Director of Operations
Doylestown Township
425 Wells Road
Doylestown, PA 18901
Phone: 215-348-9915
Fax: 215-348-8729
E-mail: rejohn@doylestownpa.org

Denis Forrest
Assistant Township Manager
West Caln Township
721 West Kings Highway, P.O. Box 175
Wagontown, PA 10376-0176
Phone: 610-384-5643
Fax: 610-384-9035
E-mail: denis.forrest.prof.engr@rcn.com

Falzetta Gregory
Environmental Engineer
Federal Aviation Administration Technical Center
ACX-42, Building 270
Atlantic City, NJ 08405
Phone: 609-485-5787
Fax: 609-485-6102
E-mail: greg.falzetta@faa.gov

Katrina Harding
Special Projects Coordinator
Warwick Township
1733 Township Greene
Jamison, PA 18929
Phone: 215-343-6100
Fax: 215-343-4407
E-mail: kharding@warwick-township.org

Henry Hilgartner
SepTech Solutions, Inc.
P.O. Box 231
Perkasie, PA 18944
Phone: 215-453-3007
Fax: 215-453-3008
E-mail: Inspect@septechinc.com

Robert Keane
Project Manager/Village Stormwater Representative
Village of Port Washington North
c/o Walden Associates
16 Spring Street
Oyster Bay, NY 11771
Phone: 516-624-7200
Fax: 516-624-3219
E-mail: waldenrsk@netscape.net

Attendees List

Getting in Step with Phase II

A Workshop for Storm Water Program Managers
June 22-23, 2004
Philadelphia, Pennsylvania

Timothy Kelly
Hydrogeologist III
Nassau County Department of Public Works
Water Resources Unit
170 Cantiague Rock Road
Hicksville, NY 11801
Phone: 516-571-6850
Fax: 516-571-6858
E-mail: kelly.tim@mail.co.nassau.ny.us

Julie Kollar
Program Manager, Source Water Protection Promotion
Water Resources Education Network
League of Women
116 Chestnut Lane
North Wales, PA 19454
Phone: 267-468-0555
Fax: 215-643-1512
E-mail: juliek@voicenet.com

Gary Kulhan
Environmental Scientist
Conestoga-Rovers & Associates
8615 West Bryn Mawr Avenue
Chicago, IL 60638
Phone: 773-380-9933
Fax: 773-380-6421
E-mail: gkulhan@craworld.com

Steve Long
Engineer
BCHD
P.O. Box 1154
Niwot, CO 80544
Phone: 720-201-2191
E-mail: sl@viawest.net

Lynn Manahan
Conservation Program Specialist
Pennsylvania Department of Environmental Protection
Bureau of Water Management
400 Market Street, 10th Floor, P.O. Box 8555
Harrisburg, PA 17105
Phone: 717-772-4048
Fax: 717-787-9549
E-mail: lmanahan@state.pa.us

William Kochersperger
Supervising Road Inspector
Burlington County Highway Department
P.O. Box 6000
Mount Holly, NJ 08060
Phone: 609-726-7303
Fax: 609-726-7333
E-mail: wkochersperg@co.burlington.nj.us

Ellen Koplin
Administrator
Lower Milford Township
7607 Chestnut Hill Church Road
Coopersburg, PA 18036
Phone: 610-967-4949
Fax: 610-967-1013
E-mail: lowermilfordts@enter.net

David Levandoski
Assistant Director
University of Delaware
222 South Chapel Street, Room 132 GSB
Newark, DE 19716
Phone: 302-831-8475
Fax: 302-831-1528
E-mail: davelev@udel.edu

Andrew Lowe
Urban Conservation Specialist
Thomas Jefferson Soil and Water Conservation District
2134 Berkmar Drive
Charlottesville, VA 22901
Phone: 434-975-0224
Fax: 434-975-1367
E-mail: andy.lowe@vaswcd.org

Robert May
Councilperson
St. Lawrence Boro
3531 Jacksonwald Avenue
Reading, PA 19606
Phone: 610-478-2262
Fax: 610-478-2217
E-mail: rjma@synergyenvinc.com

Attendees List

Getting in Step with Phase II

A Workshop for Storm Water Program Managers
June 22-23, 2004
Philadelphia, Pennsylvania

Rob Merrick
Public Works Assistant Director
Warwick Township
1733 Township Greene
Jamison, PA 18929
Phone: 215-343-6100
Fax: 215-343-4407
E-mail: rgm@pwz.netscape.com

Kenneth Murin
Chief, Technical Support Section
Bureau of Watershed Management
400 Market Street, 10th Floor
PO Box 8775
Harrisburg, PA 17105-8775
E-mail: kmurin@state.pa.us

Erin Nooney
Wetlands Specialists
Burlington County Highway
P.O. Box 6000
Mount Holly, NJ 08060
Phone: 609-726-7301
Fax: 609-726-7333
E-mail: PWnek@co.burlington.nj.us

Marissa Pappas
Watershed Programs Assistant
Pennsylvania Environmental Council
117 South 17th Street, Suite 2300
Philadelphia, PA 19103
Phone: 215-563-0250
Fax: 215-563-0528
E-mail: Mpappas@pecphila.org

Stephen Pierce
Doylestown Township E.A.C.
425 Wells Road
Doylestown, PA 18901
Phone: 215-572-3456
Fax: 215-572-3460
E-mail: spierce@spstech.com

April Mullock
Township Engineer
LTL Consultants
One Town Centre
Oley, PA 19547
Phone: 610-987-9290
Fax: 610-987-9288
E-mail: amullock@ltlconsultants.com

Susan Myerov
Community Planner
Heritage Conservancy
85 Old Dublin Pike
Doylestown, PA 18901
Phone: 215-345-7020
E-mail: smyerov@heritageconservancy.org

Jason Papacosma
Arlington County Department of Environmental Services
2100 Clarendon Blvd, Suite 801
Arlington, VA 22201
Phone: 703.228.3613
E-mail: jpapacosma@arlingtonva.us

Bernice Pasquini
Geologist
USEPA Region III
1650 Arch Street
Philadelphia, PA 19103
Phone: 215-814-3326
Fax: 215-814-2301
E-mail: pasquini.bernice@epa.gov

Eric Poulson, P.E.
Consultant
Poulson & Associates
5 Camby Chase
Media, PA 19063
Phone: 610-299-3470

Attendees List

Getting in Step with Phase II

A Workshop for Storm Water Program Managers
June 22-23, 2004
Philadelphia, Pennsylvania

Patricia Quigley
Vice Chairman
Worcester Township Planning Commission
1080 Quarry Hall Road
Norristown, PA 19403
Phone: 610-584-1829
Fax: 610-584-6331
E-mail: paqinc@aol.com

Adam Sapp
Stormwater Management
12021-B NE Airport Way
Portland, OR 97220
Phone: 610-998-0537
E-mail: adams@stormwaterinc.com

Paul Scheider
Public Works Employee
Warwick Township
1733 Township Greene
Jamsion, PA 18929
Phone: 215-343-6100
Fax: 215-343-4407
E-mail: rgmpwz@netscape.com

Beth Shuman
Assistant Counsel
Pennsylvania Department of Environmental Protection
909 Elmerton Avenue, 3rd Floor
Harrisburg, PA 17110
Phone: 717-787-8792
Fax: 717-772-2400
E-mail: BShuman@state.pa.us

James Slater
Deputy Director for Environmental and Resource Protection Programs
Carroll County Department of Planning
225 North Center Street
Westminster, MD 21157
Phone: 410-386-2756
Fax: 410-386-2924
E-mail: jslater@ccg.carr.org

Jon Steenson
Project Engineer
Upper Darby Township
100 Garrett Road, Room 301
Upper Darby, PA 19082
Phone: 610-734-7635
Fax: 610-734-7775
E-mail: jsteenson@upperdarby.org

Cheryleen Strothers
Sr. Project Manager
Cowan Associates, Inc.
120 Penn Am Drive, P.O. Box 17
Quakertown, PA 18951
Phone: 215-536-7075
Fax: 215-536-1582
E-mail: jcs@cowanassociates.com

Donna Suevo
Watershed Manager
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401
Phone: 484-250-5823
Fax: 484-250-5943
E-mail: dsuevo@state.pa.us

Fred Suffian
NPS Program Manager
USEPA Region III
1650 Arch Street, Mail Code: 3WP12
Philadelphia, PA 19103
Phone: 215-814-5753
Fax: 215-814-5753
E-mail: suffian.fred@epa.gov

James Talian
Senior Design Engineer
City of Lynchburg, Virginia
900 Church Street
Lynchburg, VA 24503
Phone: 434-455-3953
Fax: 434-847-1436
E-mail: james.talian@lynchburgva.gov

Attendees List

Getting in Step with Phase II

A Workshop for Storm Water Program Managers
June 22-23, 2004
Philadelphia, Pennsylvania

Barry Tonning
Tetra Tech, Inc.
10306 Eaton Place, Suite 340
Fairfax, VA 22030
Phone: 703-385-6000
Fax: 703-385-6007
E-mail: barry.tonning@tetratech-ffx.com

Aaron Walker
SAIC
21000 Brookpark Road, MS 6-4
Cleveland, OH 44135
Phone: 216-433-8764
Fax: 216-433-3015
E-mail: Aaron.M.Walker@grc.nasa.gov

Chris Watkins
GIS Technician/Analyst
Pickering, Corts & Summerson, Inc.
828 B Newtown-Yardley Road
Newtown, PA 18940
Phone: 215-968-9300
Fax: 215-968-3649
E-mail: cwatkins@pcs-inc.biz

Dan Welker
Environmental Protection Specialist
USEPA Region III
1650 Arch Street
Philadelphia, PA 19106
Phone: 215-814-2744
Fax: 215-814-2318
E-mail: welker.dan@epa.gov

John Whitescarver
Director
National Stormwater Center
7000 SE Federal Highway, Suite 205
Stuart, FL 34997
Phone: 772-288-6852
Fax: 772-288-9914
E-mail: stormwater@aol.com

Andrew Travaglini
Senior Civil Engineer
Pennsylvania Department of Environmental Protection
Bureau of Water Management
400 Market Street, 10th floor, P.O. Box 8555
Harrisburg, PA 17105
Phone: 717-772-4048
Fax: 717-787-9549
E-mail: atravaglin@state.pa.us

Harry Warfield, Jr.
Public Health Engineer III
Maryland Department of the Environment
3517 Orchard Avenue
Baltimore, MD 21244
Phone: 410-537-3695
Fax: 410-537-3163
E-mail: hwarfield@mde.state.md.us

Thomas Weaks
Environmental Resource Specialist Supervisor
West Virginia Department of Environmental Protection
2031 Pleasant Valley Road, Suite 1
Fairmont, WV 26554
Phone: 304-368-3960
Fax: 304-368-3953
E-mail: aweaks@wvdep.org

Terri White
Environmental Protection Specialist
USEPA Region III
1650 Arch Street, (3WP10)
Philadelphia, PA 19103
Phone: 215-814-5523
Fax: 215-814-5523
E-mail: white.terri-a@epa.gov

Christy Williams
Tetra Tech, Inc.
10306 Eaton Place, Suite 340
Fairfax, VA 22030
Phone: 703-385-6000
Fax: 703-385-6007
E-mail: christy.williams@tetratech-ffx.com

Attendees List

Getting in Step with Phase II

A Workshop for Storm Water Program Managers
June 22-23, 2004
Philadelphia, Pennsylvania

Robert L. Williams
Public Works Director
City Of Lewisburg
926 5th Avenue, North
Lewisburg, TN 37091
Phone: 931-359-6383
Fax: 931-270-0657
E-mail: rlwilliams@tnweb.com

Paul Wnek
County Supervisor Highways & Bridges
Burlington County
P.O. Box 6000
Mount Holly, NJ 08060
Phone: 609-726-7301
Fax: 609-726-7333
E-mail: PWnek@co.burlington.nj.us

Larry Young
Municipal Engineer
Upper & Lower Southhampton Township
801 West Street Road
Feasterville, PA 19053
Phone: 215-357-5950
Fax: 215-357-2836
E-mail: larry.young@verizon.net

Vincent Williams
Environmental Program Manager
NASA Goddard Space Flight Center
Bldg. 25 Room S080, Mail Stop 250.1
Greenbelt, MD 20771
Phone: 301-286-8734
Fax: 301-286-8884
E-mail: vwilliam@pop200.gsfc.nasa.gov

Diana Wogan
Clean Water Action
100 North 17th Street
Philadelphia, PA 19103
Phone: 215-640-8800
Fax: 215-640-0930
E-mail: dwogan@cleanwater.org

Evaluation Form

GETTING IN STEP WITH PHASE II:
A Workshop for
Stormwater Program Managers

June 22-23, 2004 – Philadelphia, Pennsylvania

Please take a few minutes to fill out the evaluation form. Your feedback will help us to continually enhance and refine our presentations. Thank you!

****

Participant Information

Name (optional) _____

Please indicate your affiliation:

❑ Environmental Group ❑ Academia ❑ Consultant ❑ Utility

Government: ❑ City/County ❑ Regional ❑ State ❑ Federal

❑ Other _____

****

Part I. Overall Evaluation

Did this workshop meet your expectations? 1 2 3 4 5

(Fell short of expectations) (Exceeded expectations)

What were the most valuable aspects of this workshop?

What were the least valuable aspects of this workshop?

Did you feel that the group exercises were useful? If not, how could they be improved?

Part II. Presentation Evaluation (please rate overall content)

Day 1

Overview of Phase II Program

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Illicit Discharge Detection and Elimination

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Illicit Discharge Detection and Elimination: Field Application of Program Principles

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Quick and Dirty Outfall Reconnaissance Inventory Exercise

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments

Post Construction Runoff Control: Basic Program Requirements

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Case Study: Post Construction Stormwater Management

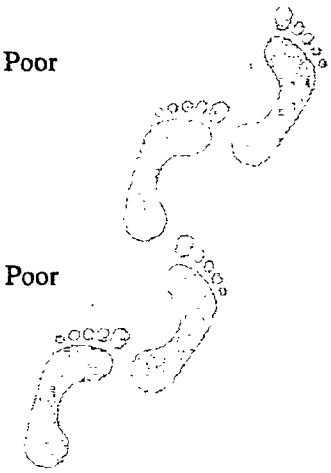
❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Post Construction Design and Performance Standards

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:



Case Study: Stormwater Controls for Challenging Situations

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Day 2

Building Blocks for Effective Stormwater Education and Outreach

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Engaging and Involving Key Stakeholders and the Public in Your Program

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

What it Takes to Change Behavior

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Problems and Solutions Implementing the Stormwater NPDES Program

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Integrating Storm Water Programs with Other Water Resource Programs

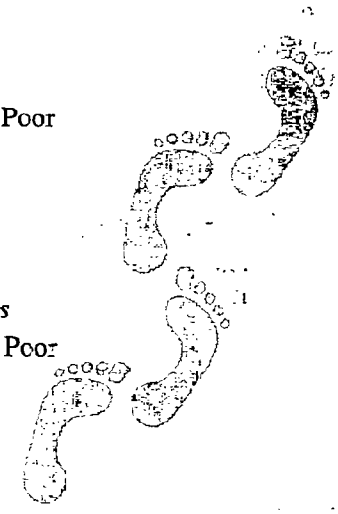
❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Working with the News Media to Enhance your Outreach/Involvement Efforts

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:



Group Discussion: Don't Reinvent the Wheel!

❑ Excellent ❑ Good ❑ Average ❑ Poor

Comments:

Part III. Please provide a brief response to the following questions.

What TWO stormwater subjects do you feel you still need help with?

What topics would you like to see USEPA develop guidance on?

Are you interested in additional training? If so, what subjects? What form? (e.g., live classroom, web-based, teleconference/web cast)

Have you found the USEPA Stormwater Web site (www.epa.gov/npdes/stormwater) useful? Why or why not? If not, how would you improve it?

Any other comments or suggestions?

Please return evaluation forms to the registration desk or mail or fax to:

Ashley Moats
10306 Eaton Pl., Ste. 340
Fairfax, VA 22030
(P)703.385.6000; (F)703.385.6007, email: ashley.moats@tetratech-ffx.com