A RURAL REVOLUTION OF ENVIRONMENTAL COLLABORATION

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WATER, WATER
EVERYWHERE........
Sedimentation
Turbidity
Embeddedness
Acid Drainage
Aluminum Precipitation
Iron Precipitation
Saline water in oceans: 97.2%

Ice caps and glaciers: 2.14%

Groundwater: 0.61%

Surface water: 0.009%

Soil moisture: 0.005%

FIGURE 1.3 Distribution of world's water supply.
Governor’s Stream Restoration Committee:

• Environmental Groups;
• Government Agencies;
• Industry; and
• Academia.
STREAM RESTORATION
GROUP

Staff to conduct watershed characterizations to update historical data
Watershed Characterizations are assessments that:

- Characterize physical, chemical, and biological conditions of all water bodies that flow to a given stream;

- Identify sources of contamination; and

- Evaluate effectiveness of alternative management strategies and actions.
Stakeholder Involvement
How do we get stakeholders involved?
Address their needs!
Citizens’ Needs:

- Reduce risk of flooding;
- Restore fishery or other recreational activity;
- Improve aesthetics; and
- Simply improve overall quality of life.
Agencies’ Needs:

• Enforce Regulations; and

• Provide services to the public.
Industries’ Needs:

- Meet regulatory requirements;
- Be a good neighbor; and
- Make a profit.
Academia Needs:

• Promote learning through education; and

• Conduct research.
Limitations for addressing needs separately:

• Time;

• Cost;

• Knowledge; and

• Skills and Abilities.
Problems with addressing needs separately:

• Inconsistent planning and data collection; and

• Quality Assurance and Quality Control.
Solution?

Standard Operating Procedure
Holistic Watershed Approach Protocol
Gathering all the information at all the locations with all the interested parties to determine and evaluate all the problems and all the restoration efforts within a watershed!
Typical Watershed

Establish Monitoring Network

○ Sampling Location
Lower Cheat River Sampling Stations

112 Sampling Sites Selected
Typical Watershed

Determine Impact to Streams

- Sampling Location
- Non-impaired Stream
- Moderately-impaired Stream
- Severely-impaired Stream
Typical Watershed

Select Focus Areas

Sampling Location
Selected Focus Area
Non-impaired Stream
Moderately-impaired Stream
Severely-impaired Stream
Pre-Construction
Typical Watershed
Select New Focus Area

FA1

FA2

Sampling Location
Selected Focus Area
Non-impaired Stream
Moderately-impaired Stream
Severely-impaired Stream
Remediated Stream Segment
Typical Watershed

Select New Watershed

- Sampling Location
- Selected Focus Area
- Non-impaired Stream
- Moderately-impaired Stream
- Severely-impaired Stream
- Remediated Stream Segment

FA1

FA2
Integrated Application of Holistic Watershed Approach Protocol
These are the Partners:

- WV Division of Natural Resources
- WV Division of Tourism
- WV Division of Transportation
- WV Division of Highways
- WV Turnpike Commission
- WV Soil Conservation Agency
- WV Bureau of Public Health
- County Health Departments and Sanitarians
- WV Division of Environmental Protection, Office of Abandoned Mine Lands and Reclamation
- Office of Mining and Reclamation
- Office of Waste Management
- and Office of Water Resources
- U. S. Environmental Protection Agency Region III
- USACE
- USGS
- USDA NRCS
- Canaan Valley Institute
- The Hummer Club
- the River of Promise Task Force
- Upper Paint Creek Watershed Association
- Lower Paint Creek Association
- West Fork River Watershed Association
- Kellys Creek Watershed Association
- Cabin Creek Watershed Association
- Marsh Fork Watershed Association
- and the Clear Fork Watershed Association
Conclusions
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