

Quantity and Quality: The Yin and Yang of Source Water Protection

Southeast Watershed Roundtable

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What is Source Water Protection?

- Inventory of water sources
- Susceptibility assessment
- Design of protection

Is Source Water Protection Required?

Safe Drinking Water Act



Virginia Department of Health



Local Implementation

What Are You Protecting Your Water Source From?

- Overuse



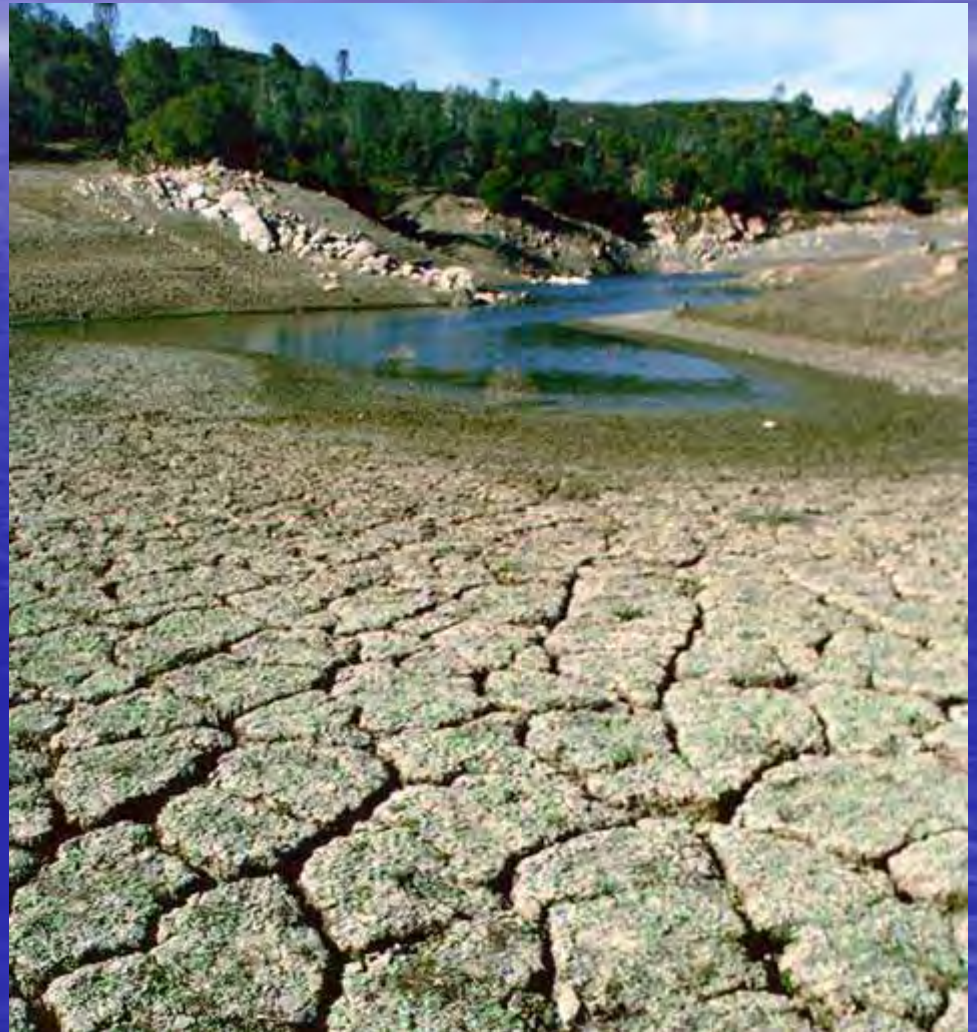
What Are You Protecting Your Water Source From?

- Contamination



What Are You Protecting Your Water Source From?

- Natural disaster
 - Drought
 - Climate change



What Tools Are Available?

- Safe Drinking Water Act
- Clean Water Act
- Local authorities
- Creativity

Overuse

- Riparian rights
- VWP permitting process
- Consumptive use restrictions
- Ground water/surface water management areas

Riparian Rights

- Disputes resolved through litigation
- What is a “reasonable use”?
- Source water use not always based on a riparian right

VWP Permitting Process

- Definition of beneficial use
- Riparian rights may trump
- Grandfathering provision negates the effectiveness

Consumptive Use Restrictions

- Enacted during 2007 General Assembly session
- Limited applicability (Potomac River)
- Requires low flow protection in the form of offstream storage of >500,000 GPD (consumptive use)

Surface Water Management Areas

- Allocates water withdrawals through a permit program
- May include withdrawal restrictions during low flow conditions
- May be an effective tool, but no political will to adopt

Contamination

- Land use
- MCLs
- Vulnerability assessment/counter terrorism measures
- Clean Water Act tools

Clean Water Act Tools

- Antidegradation
- VPDES permitting
- Pretreatment
- TMDLs

Antidegradation

- Tier 3 designation – no new discharges
- Designed to protect the water itself – not offstream users
- Must make sure there is an established standard for the constituent of concern

VPDES Permitting

- Participate in public process
- Must show concern about impact to water quality
- Request all new industrial discharges connect to local POTW
- Presumption is that permit will be issued if regulatory requirements are met

Pretreatment

- Same concerns as with VPDES permitting
- Difficult when POTW and water plant may be under different ownership, with competing interests

TMDLs

- Aimed at water quality
- Quality and quantity increasingly linked

Natural Disaster

- Long term planning
- Water banking/offline storage
- Reuse

Safe Drinking Water Act Tools

- Don't address other users
- Ineffective for addressing land use
- Don't address non-MCL contaminants
- Planning for the future
- Few tools are mandates – no ability to enforce

Clean Water Act Tools

- Controversial
- Adversarial
- May not be effective
- Likely to see more in the future

Water Supply Planning

- Required to plan for the future
- Must include water demand management and alternative sources
- Requires revisions to local comprehensive plans



**Source
Water
Protection**

**Water Supply
Planning**