

A Preliminary Conceptual Framework for the 303(d) Vision's Protection Goal



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*TMDL/303(d) Program National Training Workshop
Shepherdstown, WV ~ June 2016*



Session Content

- What is Protection? Examples
- A Conceptual Framework for Protection
- Preliminary Healthy Watersheds Assessments: A Progress Report
- Discussion: Common Questions we are Hearing from the States

What is Protection?

“An act of protecting or the state of being protected”

- Webster's Dictionary

PROTECT:

State implements actions that are expected to change the protection status of a water body for a definable time frame

- *What is meant by 'protecting'*
- *'Maintain WQS' for protected waters is reasonably parallel to 'restore WQS' expectation for impaired waters*
- *Will they be monitored or tracked?*

Some Example Protection Practices

Acquisition Techniques

- Fee Simple Acquisition
- Conservation Restriction (CR) Acquisition
- Agricultural Preservation Restriction (APR) Acquisition

Restriction/Protection Techniques

- Section 404 AIDS/SAMP
- WQS Outstanding State and National Resource Waters (antideg. Tier 2.5 and 3)
- Areas of Critical Environmental Concern
- Local wetland bylaws/ordinances
- Stream and Wetland buffer zone restrictions
- Local water supply and aquifer protection laws
- Local master plan or zoning restrictions

Protection: Clarifying Expectations

- Protection is “the new Goal on the block”
- Lots of interest, but with uncertainty as well
- Not a statutory requirement, but well grounded in CWA
- The 303(d) Program encourages protection approaches as part of the Vision
- We intend to clarify expectations under the protection goal and assist states in its implementation

A Conceptual Framework for Protection

Protection Approach: main elements

- *ASSESS*
- *PLAN/PRIORITIZE*
- *PROTECT*

ASSESS:

State compiles condition information on healthy waters or watersheds, either synoptically (all watersheds statewide) or on a selected subset.

Assessment should help the state identify candidate protection areas and provide useful information for considering protective actions.

- *Specific waters, watersheds*
- *Relatively healthy condition (meeting WQS)*
- *Magnitude and type of threats*
- *Plausible basis for protection priorities*

Insights from state responses (assessment)

- Most states are acting on good candidates for protection case by case to support action on individual waters
- Single-water approaches: part of existing processes, e.g., watershed scale TMDLs, informational TMDLs, nine-element watershed plans
- Some states are planning statewide approaches: four have Healthy Watersheds assessments, similar studies
- Opportunity for EPA assistance on statewide assessment: help states be more comprehensive, systematic

PLAN/PRIORITIZE:

State undertakes a planning process whose product identifies actions and their anticipated effects on specific waters.

State identifies and clearly describes priority water bodies for which 'protection approaches' are intended for development.

- *General strategy may convey purpose and goals*
- *Plan would contain sufficient waterbody-specific information to describe intended actions, desired results*

Insights from state responses (planning)

- There are several examples already of states' proposed interpretations of 'a protection plan', but there is much uncertainty about plans
- S. 319 nine-element watershed plans most frequently referenced so far
- Several states point to integration of protection and restoration elements in TMDLs, implementation plans and other plans

Insights from state responses (prioritizing)

- As of now, few states are identifying protection priorities. Examples:
 - Paired restoration and protection strategies prioritized in five themes (general health, stormwater, nutrients, bacteria, priority embayments)
 - Mentions protection plans within priorities
- Other states may consider protection priorities

PROTECT:

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Insights from state responses (protection)


- Early at this point to have existing examples of protection linked to Vision. Nevertheless:
 - Informational TMDLs
 - Protection elements in watershed TMDLs
 - Protection in 9-element watershed plans
 - Protection in other integrated state watershed plans
 - Protection plans done with other agency partners

Protection Assistance from EPA:
Preliminary Healthy Watersheds Assessments
(PHWA)

Healthy Watersheds: Protecting Aquatic Systems through Landscape Approaches

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Integrating watershed assessment and protection across EPA programs

Featured Programs/Projects/News:

- [Tour our updated website](#)
- [EPA Awards Healthy Watersheds Consortium Grant](#)
- **NEW: [Job Opening in Watershed Ecology/Data Systems and GIS Analysis through ORISE](#)** [Exit](#)

We all live in a watershed, and watershed condition is important to everyone and everything that uses and needs water. This website is about Healthy Watersheds – their importance to our waters, how they can be assessed and protected, what EPA is doing and watershed protection efforts that may be occurring in your area.

Learn About Watersheds:

[Healthy Watersheds Overview](#)

[About Healthy Watersheds](#)

[Frequent Questions](#)

[What EPA Is Doing](#)

Assessing Watershed Condition:

[Healthy Watersheds Assessment](#)

[Watershed Health Index](#)

[Watershed Vulnerability Index](#)

[Reports and References](#)

Protecting Watersheds:

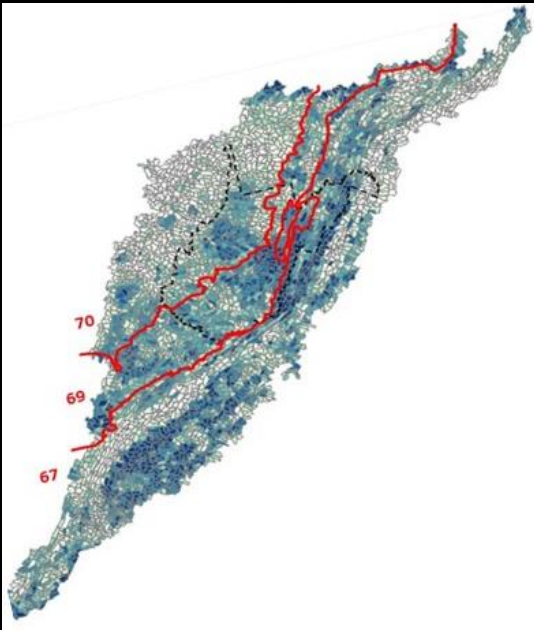
[Healthy Watersheds Protection](#)

[Healthy Watersheds Grants](#)

[What You Can Do](#)

[Contact Us](#) to ask a question, provide feedback, or report a problem.

EPA Assistance on Assessments



- 2016: Individual Assessments for lower 48 states & level 3 ecoregions at HUC12 scale
 - Ecoregional scores
 - Statewide scores

• Index of Watershed Health

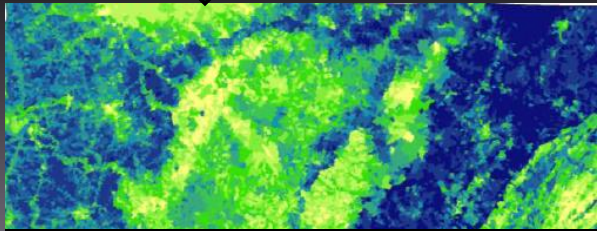
- Landscape condition
- Hydrology
- Geomorphology
- Habitat condition
- Biotic condition
- Water quality

• Index of Watershed Vulnerability

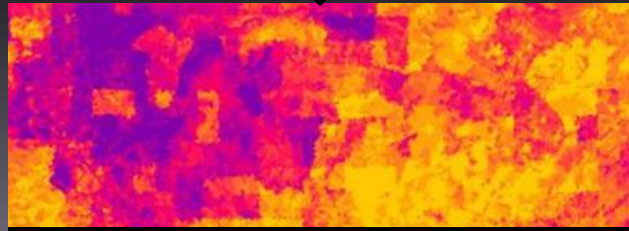
- Landscape change
- Water use change
- Fire risk
- Others TBD

Example Outputs from Preliminary Healthy Watersheds Assessment

HUC12 ID	Name HUC12 Watershed	HEALTH INDEX		LANDSCAPE		HYDROLOGY		GEOMORPHOLOGY		HABITAT CONDITION		WATER QUALITY		VULNERABILITY INDEX		LAND USE CHANGE		WATER USE	
		state	ecoregion	state	ecoregion	state	ecoregion	state	ecoregion	state	ecoregion	state	ecoregion	state	ecoregion	state	ecoregion	state	ecoregion
020700040205	Lower Sleepy Creek	54	70	25	59	80	44	33	57	44	79	73	53	34	46	35	41	40	58
020700040401	Mine Spring Run-Back Creek	25	49	29	63	68	23	10	16	19	60	67	49	42	56	44	51	47	65
020700040402	Isaacs Creek-Back Creek	19	46	18	49	79	31	10	20	18	57	64	48	42	62	81	85	27	44
020700040404	Brush Creek-Back Creek	57	73	41	73	74	35	49	71	55	83	50	39	33	41	31	35	58	76
020700040405	Babbs Run	8	22	6	24	94	74	7	11	5	27	36	32	41	62	55	74	28	45
020700040406	Warm Springs Hollow-Back Creek	56	71	37	70	92	65	34	58	32	72	54	41	36	50	41	46	35	52
020700040407	Elk Branch-Back Creek	47	66	36	69	81	29	46	68	24	66	62	46	23	29	24	27	26	44
020700040408	Tilhance Creek	40	63	22	54	84	48	23	47	38	76	54	41	27	36	29	32	30	48
020700040409	Outlet Back Creek	46	64	23	54	90	54	39	63	30	71	55	42	30	54	36	62	22	38
020700040502	Sir Johns Run-Potomac River	31	54	19	49	89	58	9	16	20	60	76	58	25	37	24	31	53	71
020700040503	Warm Spring Run	5	18	9	33	72	33	0	1	9	39	76	57	35	55	81	85	19	32
020700040504	Ditch Run-Potomac River	29	53	12	37	91	61	31	55	16	54	72	52	31	57	33	58	33	51
020700040505	Cherry Run-Potomac River	33	57	17	46	93	66	10	21	31	71	58	43	32	47	41	46	23	41
020700040904	Turkey Run-Opequon Creek	8	18	1	7	100	92	21	38	1	12	55	41	32	50	86	86	15	24
020700040905	Mill Creek	9	24	3	15	98	80	25	49	3	20	43	35	20	39	44	68	9	15
020700040906	Middle Creek-Opequon Creek	6	17	2	11	97	74	18	41	2	16	41	35	15	31	28	52	8	11
020700040907	Tuscarora Creek	2	10	1	7	96	75	6	18	1	11	40	34	2	11	9	29	2	4
020700040908	Evans Run-Opequon Creek	4	12	1	8	97	75	11	24	2	16	28	27	9	25	19	43	8	9
020700040909	Hoke Run-Opequon Creek	5	13	1	5	99	88	10	23	2	14	35	31	9	22	21	45	5	7
020700041101	Harlan Run	5	16	1	4	97	83	26	50	3	18	42	35	22	43	31	57	13	21
020700041103	Camp Spring Run-Potomac River	7	16	2	10	99	86	3	6	6	32	31	29	15	32	39	52	6	12



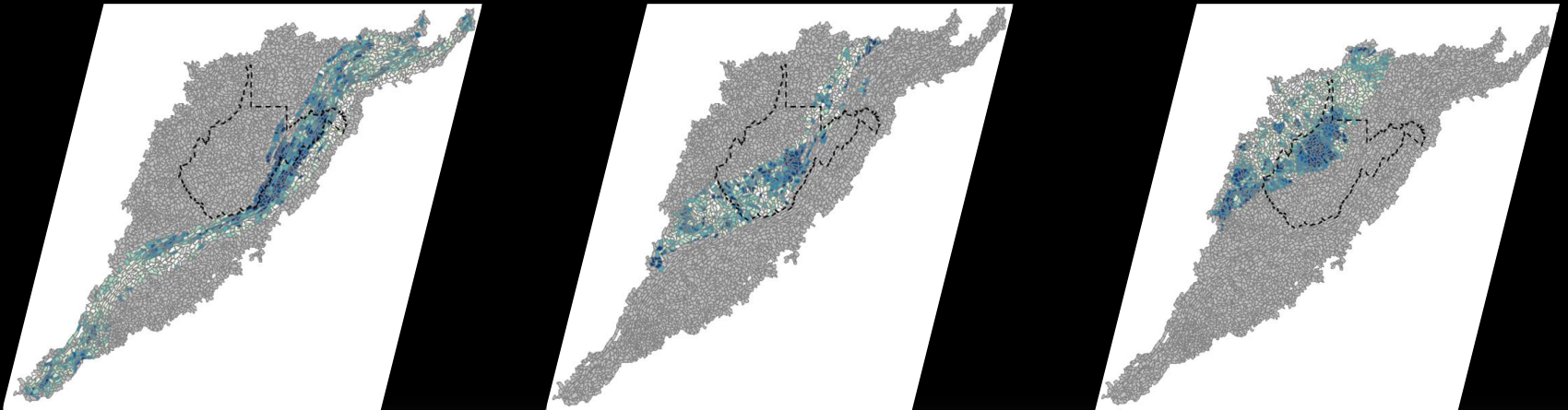
Watershed Health Index



Vulnerability Index

Intended PHWA Applications

- Help states set priorities, leverage programs and partners
- More comparable national health data
- Inform Regional/State dialogue
- Increase public awareness and support
- Build on PHWA with additional state data and analyses



Statewide gradients of watershed health and vulnerability can be useful to many other programs

- Water-specific (Permitting, Wetlands, SWPAs)
- Other agencies (DOT, USDA, USFWS LCCs)

Discussion:
Common Questions on Protection

Some Common Questions on Protection

What should a state action 'protect' in WQS terms, parallel to how a TMDL 'restores' WQS?

Some Common Questions on Protection

What is considered 'planning' or a 'plan' in a protection approach?

Some Common Questions on Protection

What is EPA's role in evaluating state-submitted protection approaches?

Some Common Questions on Protection

What time frame should a protection approach address?

Some Common Questions on Protection

What 'counts' for WQ27 vs WQ28?



Computational guidance 2016

Protection approach: **A planning process** and/or a **set of practices** pursued in the near-term that are **designed to maintain water quality standards** for waterbodies that have been assessed and are attaining...

WQ27

Computational guidance 2016

This measure will also track **actions that are part of the process that leads to a.... protection approach**

WQ28

Some Common Questions on Protection

How should protection and restoration relate/interact?

Some Common Questions on Protection

Other questions or concerns?

Next Steps

- Continue refining the Protection Approach materials and message
- Develop and answer state FAQs as needed
- Provide EPA assistance in developing state healthy watersheds assessments through 2016
- Possible white paper development to address and clarify main elements of interest