

OKLAHOMA WATER QUALITY STANDARDS PRESENTATION OF PROPOSED REVISIONS FORMAL BOARD HEARING

Oklahoma Water Resources Board
January 17, 2017

Background

- **Desire to augment water supplies in response to extreme drought**
- **Aquifer Storage and Recovery (ASR) Workgroup formed in 2015**
- **Necessitated a change to groundwater quality standards**
- **Revision developed through the ASR workgroup**

ASR Workgroup

Oklahoma Department of Environmental Quality

Oklahoma Water Resources Board

Burns & McDonnell

Carollo Engineers

City of Ada

Ground Water Protection Council

Honorable Scott Martin—Oklahoma State Legislature

Oklahoma Department of Agriculture Food and Forestry

Oklahoma Corporation Commission

Oklahoma Geological Survey

Oklahoma Office of the Secretary of Energy and Environment

United States Geological Survey

Rulemaking Stakeholder Participation

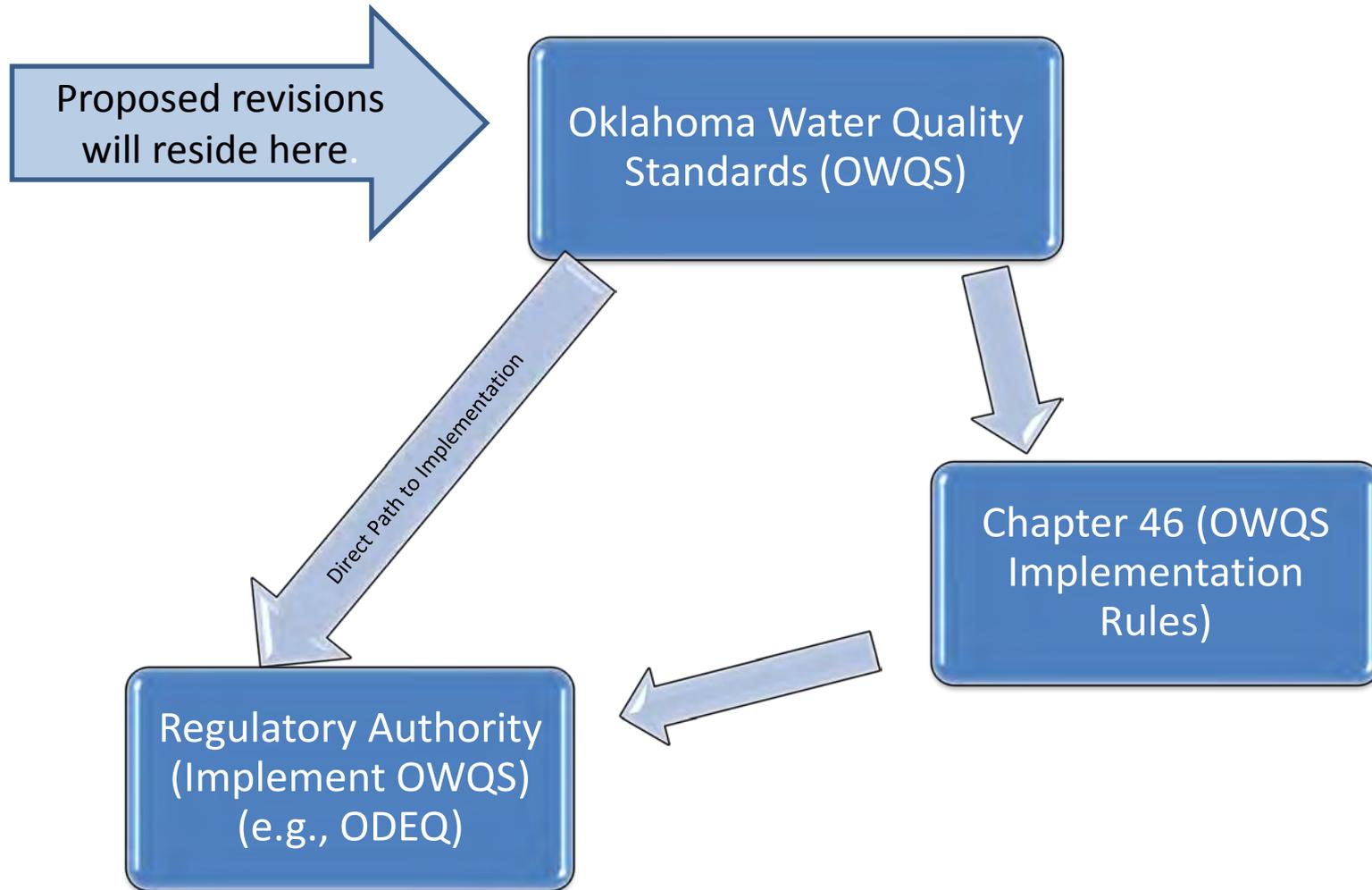
➤ **Three Informal Stakeholder Meetings**

- **Inter-agency WQS Workgroup (September 2016)**
- **Informal Public Meeting (October 2016)**
- **Informal Public Meeting (November 2016)**

➤ **Many informal conversations with various stakeholders**

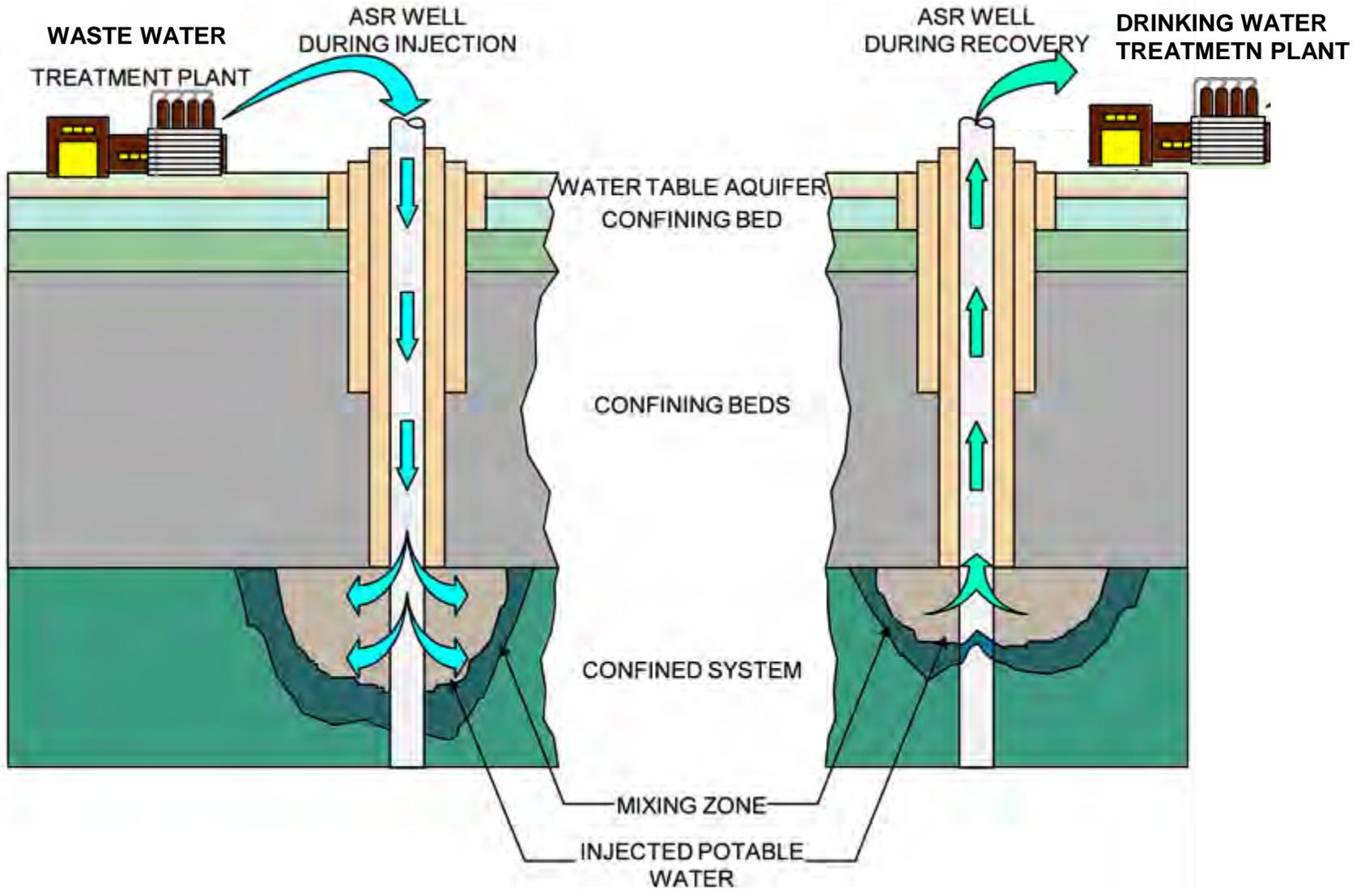
➤ **Formal Comment Period began on December 15**

Water Quality Management



Organization of Proposed Changes

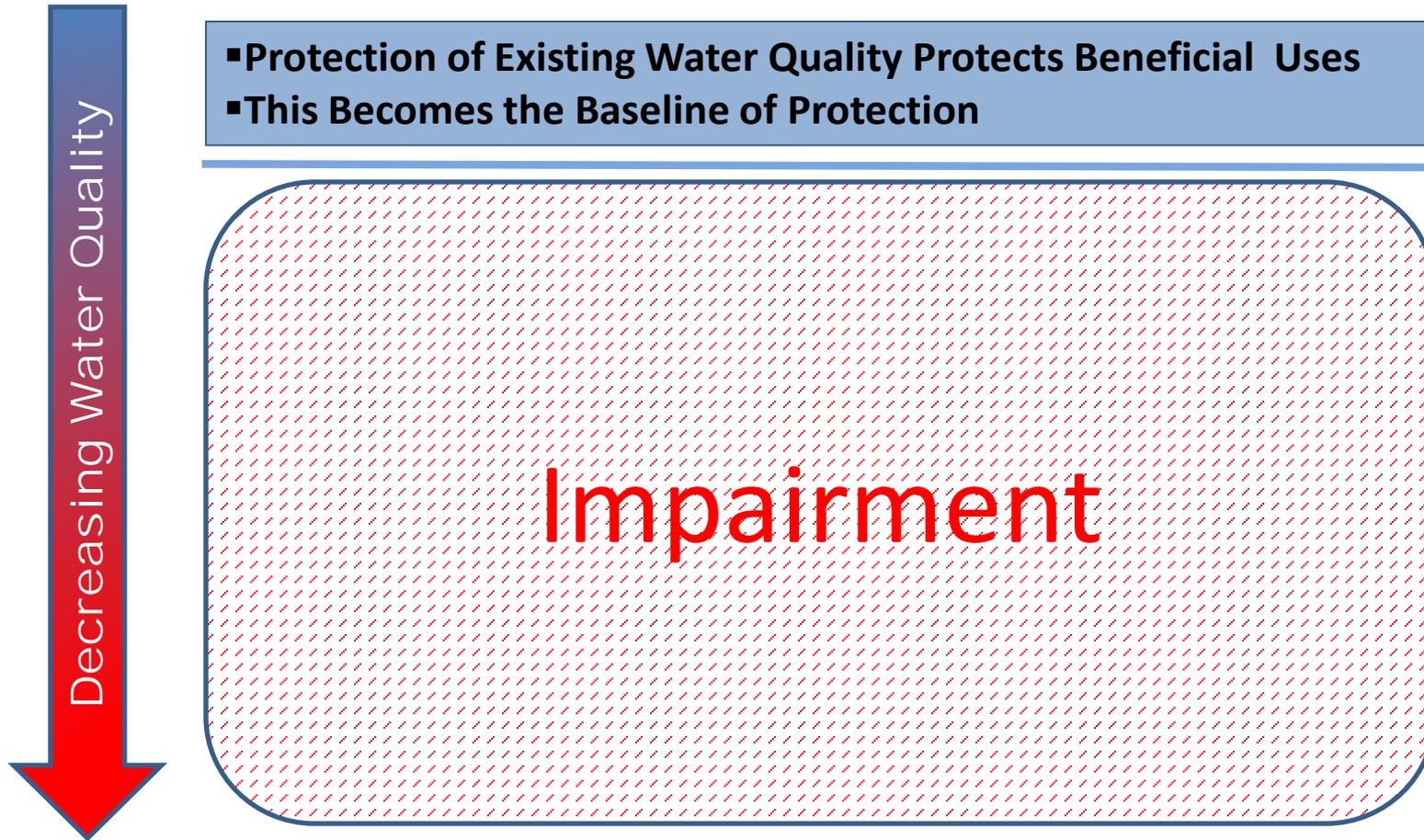
New or Substantive Change		Existing Language, but Moved	
Antidegradation Policy	45-7-2	Special Source Groundwaters	45-7-2
Classifications	45-7-3	Agency Responsibility	45-7-4
Beneficial Uses	45-7-3	Corrective Action	45-7-5
Criteria	45-7-4		



Current Groundwater Protection Policy

- **Protect all beneficial uses—untreated drinking water most sensitive**
- **Protect existing water quality—Do not degrade**
- **Protective measures:**
 - ✓ **Adequate to preserve background**
 - ✓ **Sufficient to minimize impact of pollutants**

Current Groundwater Protection Policy



Existing Narrative Criteria

“The groundwaters of the state shall be maintained to prevent alteration of their chemical properties by harmful substances not naturally found in groundwater.”

“The concentration of any synthetic substances or any substance not naturally occurring in that location shall not exceed the PQL in an unpolluted groundwater sample using laboratory technology.”

Real World Impact of This Policy

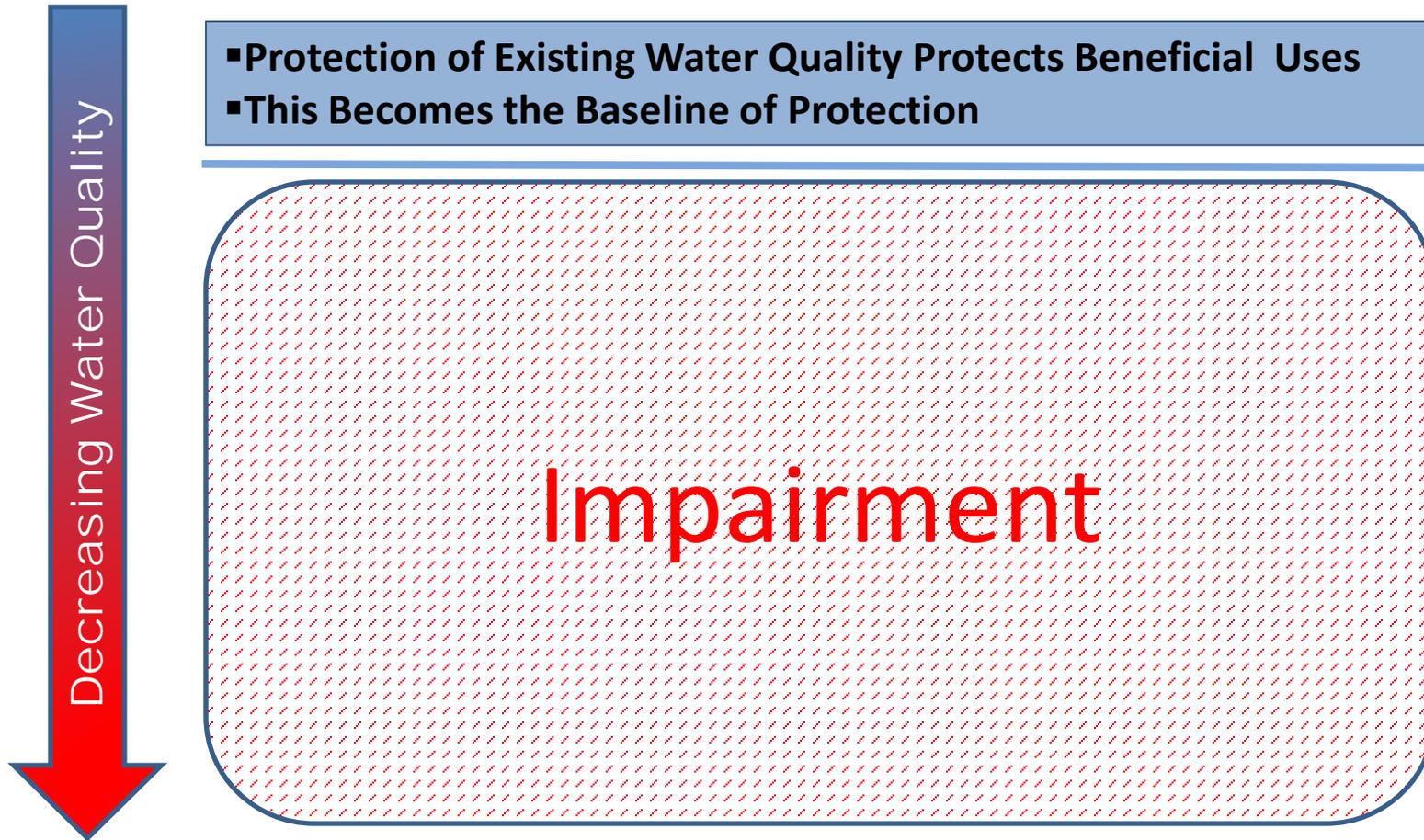
- **An extremely high level of protection**
 - Maintain existing water quality
 - No non-natural substances
- **Inflexibility—A “Just Say No” Policy**
- **Lack of clear targets to protect beneficial uses**

Goal of the Chapter 45 Revision...

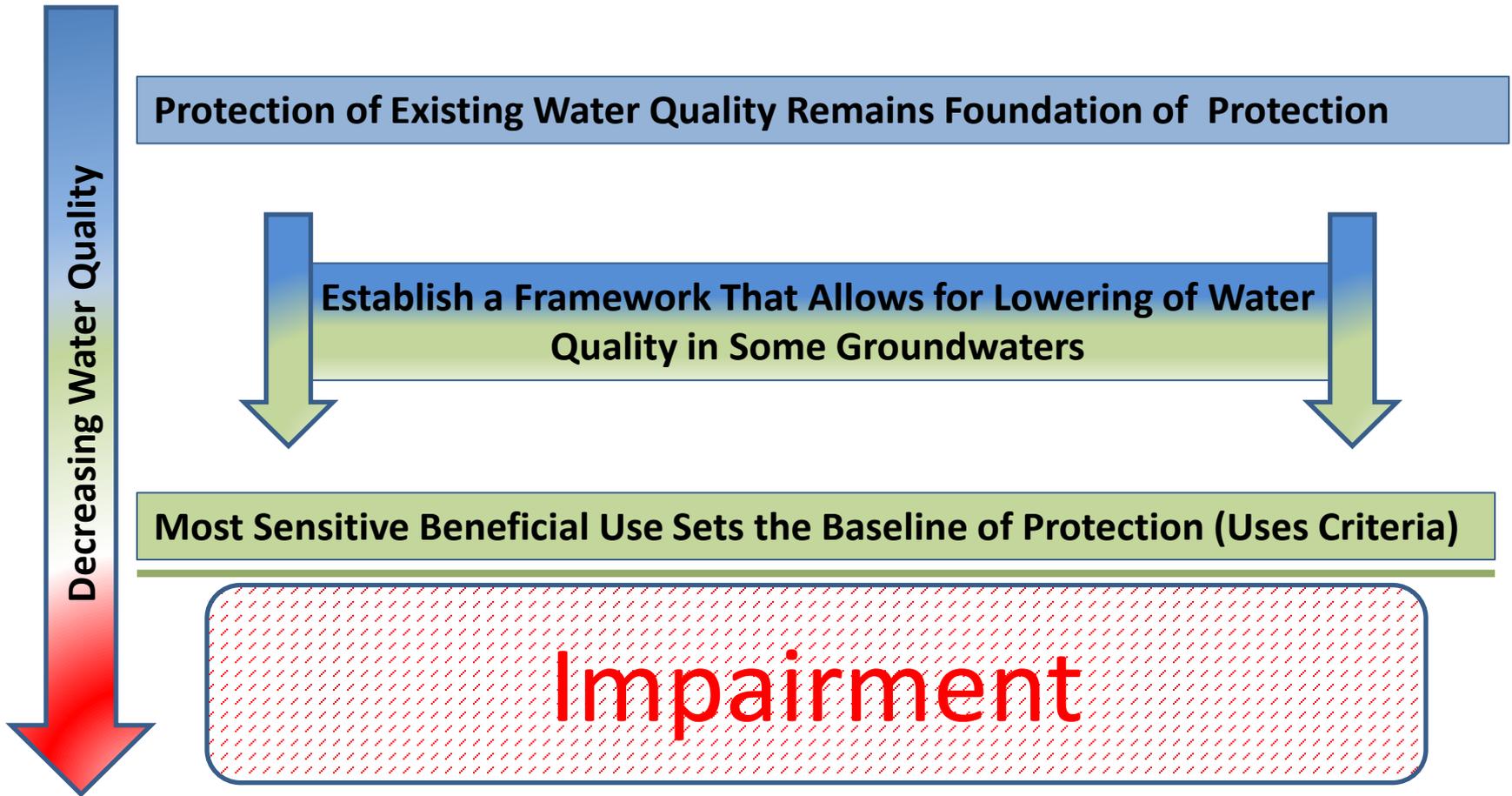
Protection and Utilization of Groundwater

- **Protect Human Health and other Beneficial Uses**
- **Clarify protection policy; create functionality and flexibility**
- **Clarify criteria**

Current Groundwater Protection Policy



Standards Conceptual Approach



Groundwater Criteria

➤ Existing narrative criteria

“groundwaters shall be maintained to prevent alteration of their chemical properties by harmful substances...”

“The concentration of any synthetic substances...shall not exceed the PQL...”

➤ Proposed New Narrative & Numeric Criteria

➤ Group and list the *“harmful substances”* & *“synthetic substances”* for clarity and function

Groundwater Criteria

- Proposed Narrative Criteria

- Protect all beneficial uses
- Applies to any activity

Narrative Criteria

Taste & Odor

Chemical Constituents

Toxicity

Geochemical & Physical
Composition

Minerals

- Proposed Numeric Criteria

- Protect drinking water beneficial uses
- Most only apply to ASR & AR Projects

Numeric Criteria

Microorganisms (all activities)

Radioactivity (all activities)

Primary & Secondary MCLs

Human Health Criteria (modified)

- Consideration for naturally occurring constituents

Frequently Asked Questions

Do these rules create new regulatory responsibilities for existing programs?

- **No new regulatory responsibilities are created. The current GWQS are more stringent, but less functional & flexible than the proposed standards.**
- **New regulatory programs for ASR and AR will be created, as these projects are currently not allowed.**

Do these rules create new regulations for natural waterbodies (e.g. farm ponds) or sub-surface structures (e.g. septic tanks)?

- **Natural waterbodies, such as ponds or reservoirs, have a natural hydrologic connection to surficial groundwater. This hydrologic connection is not regulated by the current GWQS and will not be regulated by the proposed revisions.**
- **The proposed revision to GWQS will not alter the current regulatory framework for septic tanks.**

Numeric Criteria: Why are they necessary; Where do they apply; How were they developed?

- **Protect drinking water beneficial uses, while allowing utilization and recharge of groundwater. Numeric criteria provide clarity and certainty in the regulatory process.**
- **Only apply to groundwaters with a drinking water beneficial use. Most only apply to ASR & AR projects**
- **Developed or incorporated from existing programs, including the Safe Drinking Water Act maximum contaminant levels (MCLs) and surface water human health criteria.**

How will the new revision be implemented?

- **Specifically for ASR & AR, the ASR Workgroup is turning its attention to focus on implementation. Early discussions regarding implementation approaches have begun. The ASR Workgroup welcomes continued & additional stakeholder participation.**
- **OWRB discussed the proposed revision with sister agencies and substantive changes to current programs are not expected.**

Questions

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