



# Virginia

## Department of Environmental Quality

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# Virginia Water Quality Standards Minimum Requirements

- Designated Uses
- Criteria
- Antidegradation Policy

Mandated by Clean Water Act  
40 CFR 131 WQS Regulation



# Clean Water Act “Uses”

40 CFR § 131.10 Designation of uses.

“Each State must specify appropriate water uses to be achieved and protected. The classification of the waters of the State must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation.”

# Definitions

Water Quality Standard = designated use + criteria

Designated Uses = uses specified in WQS for each water body, whether or not they are being attained.

Criteria = narrative or numerical. Criteria are designed to protect uses

# Designated Uses in VA WQS

Recreation (swimming and boating)

Aquatic Life

    balanced, indigenous population

Wildlife

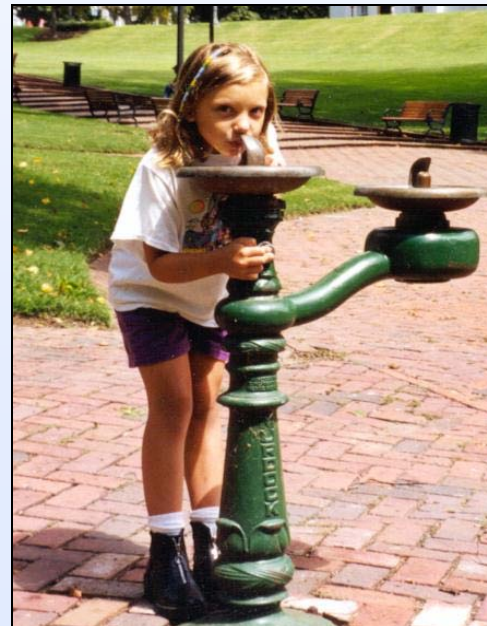
Edible natural resources

    Fish

    Shellfish

Trout Waters

**Public Water Supply**



# Criteria

- Criteria are intended to protect designated uses in surface waters
  - Freshwater aquatic life (acute & chronic)
  - Saltwater aquatic life (acute & chronic)
  - PWS (Human health)
  - Fish & shellfish consumption (Human health)
- Used to assess surface waters
- Also used to calculate permit limits for discharges to surface waters

# Criteria

- **Narrative**

9VAC25-260-20. General criteria.

A. State waters, including wetlands, **shall be free from substances** attributable to sewage, industrial waste, or other waste in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or **which are inimical or harmful to human**, animal, plant, or aquatic life.

# Criteria

- Numerical**

100+ Parameters w/ Public Water Supply criteria

9VAC25-260-140 Table of Parameters

PARAMETER CAS Number	USE DESIGNATION					
	AQUATIC LIFE				HUMAN HEALTH	
	FRESHWATER		SALTWATER		Public Water Supply <sup>3</sup>	All Other Surface Waters <sup>4</sup>
	Acute <sup>1</sup>	Chronic <sup>2</sup>	Acute <sup>1</sup>	Chronic <sup>2</sup>		
Arsenic (µg/l) <sup>5</sup> 7440382	340	150	69	36	10	



# Criteria

<sup>3</sup>Criteria have been calculated to protect human health from toxic effects through drinking water and fish consumption, unless otherwise noted and apply in segments designated as PWS in 9VAC25-260-390 through 540.

# WQS Criteria vs Safe Drinking Water Act Standards

- Many WQS Criteria for PWS = MCL

Antimony

Arsenic

Barium

Cadmium

# WQS Criteria vs Safe Drinking Water Act Standards

- Other WQS Criteria for PWS < MCLs

	WQS	MCL
Cyanide	140 ug/l	200 ug/l
Chlordane	0.0080 ug/l	2.0 ug/l
Benzo (a) pyrene	0.038 ug/l	0.2 ug/l

# WQS Criteria vs Safe Drinking Water Act Standards

- And Some WQS Criteria > MCL

	WQS	MCL
Selenium	170 ug/l	50 ug/l
Benzene	22 ug/l	5 ug/l

# WQS Criteria vs Safe Drinking Water Act Standards

- Some MCL Criteria for Parameters Not in WQS

Atrazine

Diquat

Dinoseb

Glyphosate

Styrene

# WQS Criteria vs Safe Drinking Water Act Standards

- Some PWS pollutant parameters driven by aquatic life criteria
  - Acute or chronic criteria more stringent than for PWS

	acute	PWS
Methoxychlor	0.03 ug/l	100 ug/l

# Where Do PWS Criteria Apply?

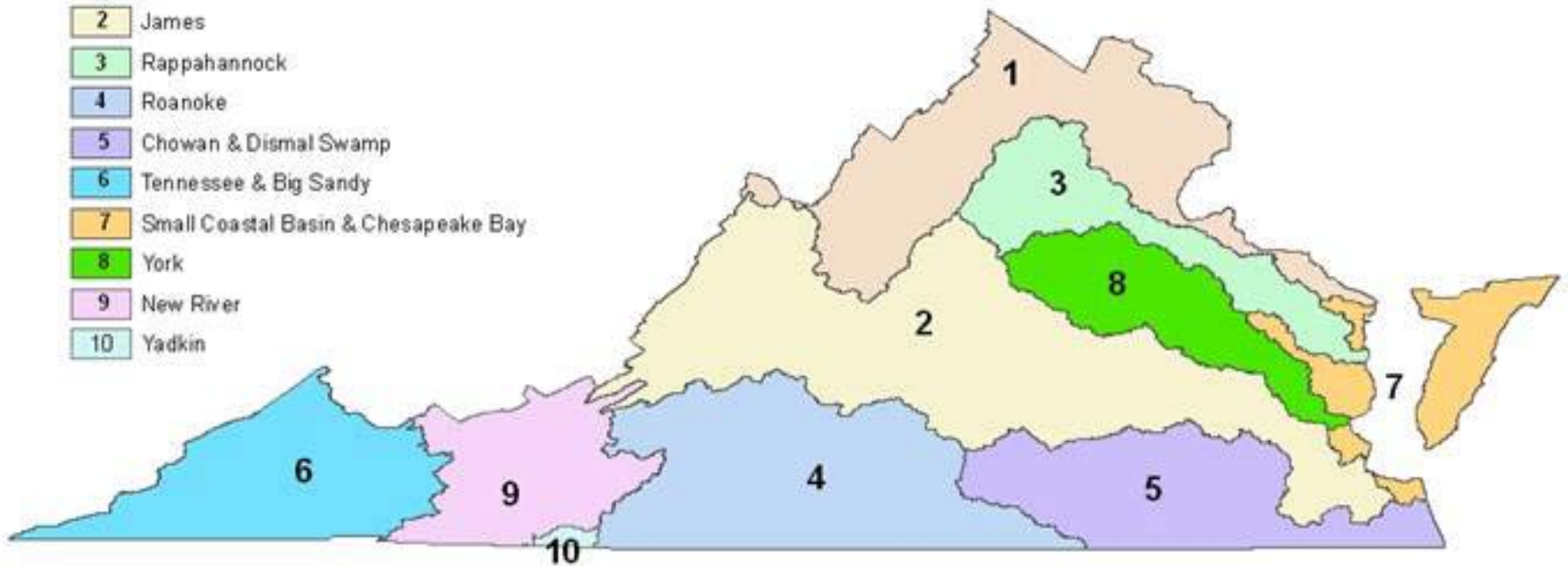
Special standards column of River Basin Tables  
WQS sections 9VAC25-260-390 through 540

- **Public water supply (PWS) notation in special standards column.**
- **Indicates that additional criteria are applicable in this waterbody.**
- **See 9VAC25-260-140 B (Parameter Table) for applicable criteria.**
- **Toxics criteria apply to surface waters 5 miles upstream of intake.**
- **Taste and odor criteria apply at the drinking water intake.**

# Where Do PWS Criteria Apply?

## RIVER BASINS IN VIRGINIA

- 1 Potomac-Shenandoah
- 2 James
- 3 Rappahannock
- 4 Roanoke
- 5 Chowan & Dismal Swamp
- 6 Tennessee & Big Sandy
- 7 Small Coastal Basin & Chesapeake Bay
- 8 York
- 9 New River
- 10 Yadkin





# Where Do PWS Criteria Apply?

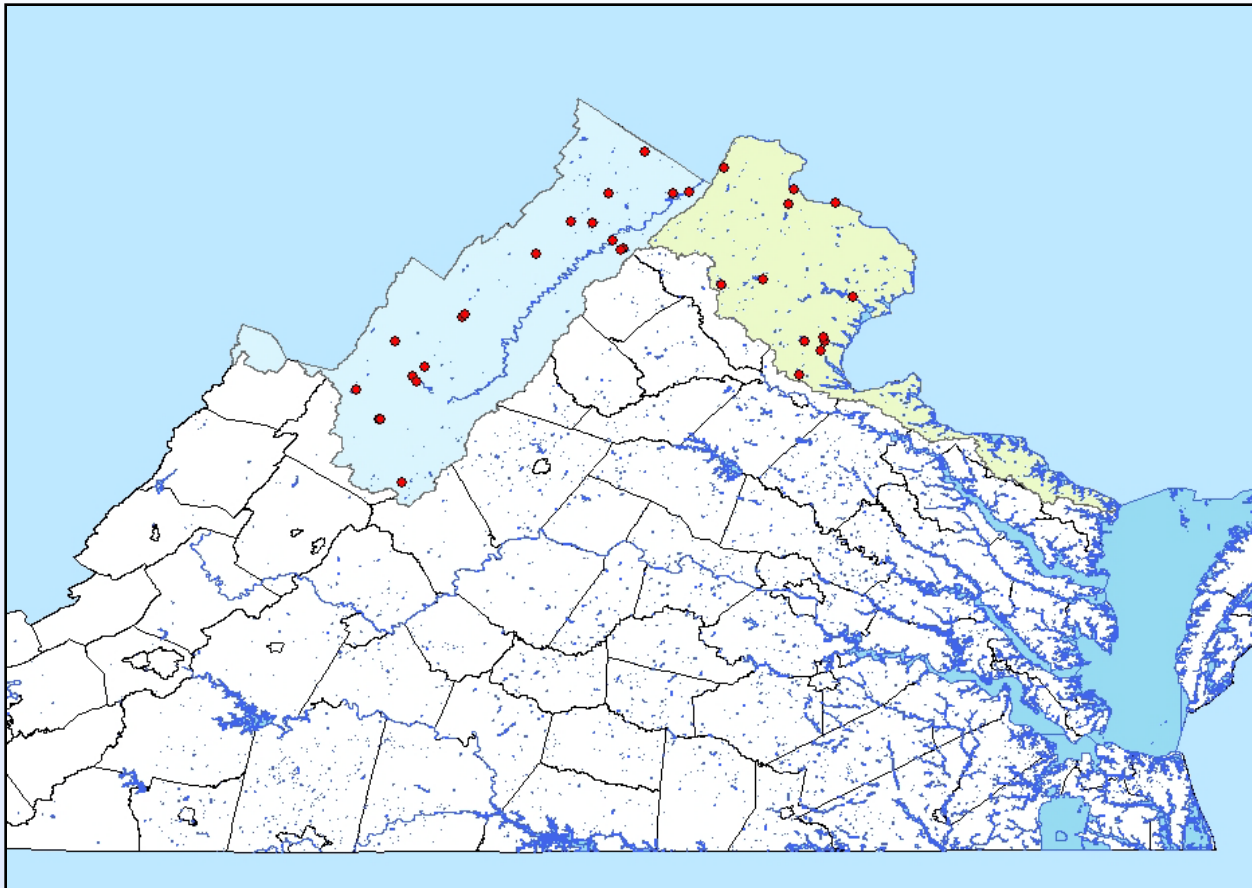
- Excerpt from Potomac section of Basin Tables

SEC.	CLASS	SP. STDS.	SECTION DESCRIPTION
1	II	a	Tidal tributaries of the Potomac River from Smith Point to Upper Machodoc Creek (Baber Point).
1a	III		All free flowing portions of tributaries to the Potomac River from Smith Point to the Route 301 Bridge in King George County unless otherwise designated in this chapter.
	VII		Swamp waters in Section 1a Pine Hill Creek and its tributaries from the confluence with Rosier Creek to their headwaters.
1b	III	b	All free flowing portions of tributaries to the Potomac River from the Route 301 Bridge in King George County to, and including, Potomac Creek, unless otherwise designated in this chapter.
<u>1c</u>	<u>III</u>	<u>PWS,b</u>	<u>Potomac Creek and its tributaries from the Stafford County water supply dam (Able Lake Reservoir) to their headwaters.</u>

# Where Do PWS Criteria Apply?

**18 PWS designations in Potomac River Basin Tributaries in VA**

**25 PWS designations in Shenandoah River Subbasin**



# Designating Waters as PWS

- Requires rulemaking to amend WQS regulation
  - Subject to Administrative Process Act (APA) procedures (COV Chap. 40 § 2.2-4000 et seq.)
  - Rulemaking may be initiated by DEQ or by petition
  - Typically 2 year timeline for standard rulemaking

# DEQ Rulemaking

- WQS regulation opened for review on regular basis (Triennial Review)
- VA Dept. Health consulted re: PWS updates as part of Triennial Review
  - Intake location changes
  - Accuracy of PWS segment description
  - Other

# DEQ Rulemaking

Suggestions/requests to amend the WQS may also come from DEQ regional staff, localities, and/or Public Service Authorities in early stages of Triennial Review.

# Petition to Amend Rulemaking outside of TR

- § 2.2-4007 of APA allows for citizens, localities, or other entities to petition DEQ to amend the WQS
- Requests to amend could include:
  - Standard 5-mile PWS designation for new or relocated intake
  - Increase scope of existing PWS designation
  - Criteria change in WQS

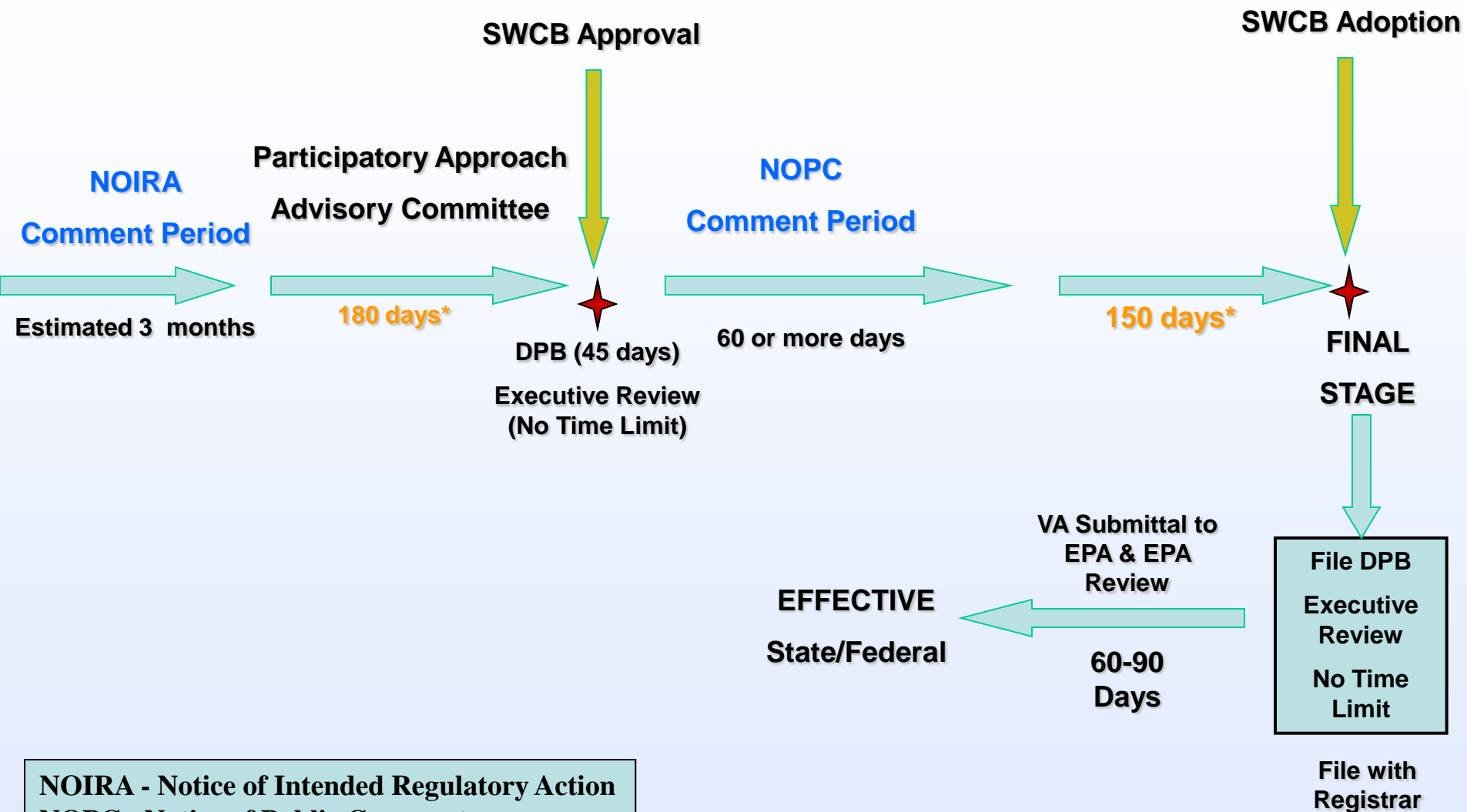
# The Rulemaking Process

or

## “How to Make A Baby Elephant”



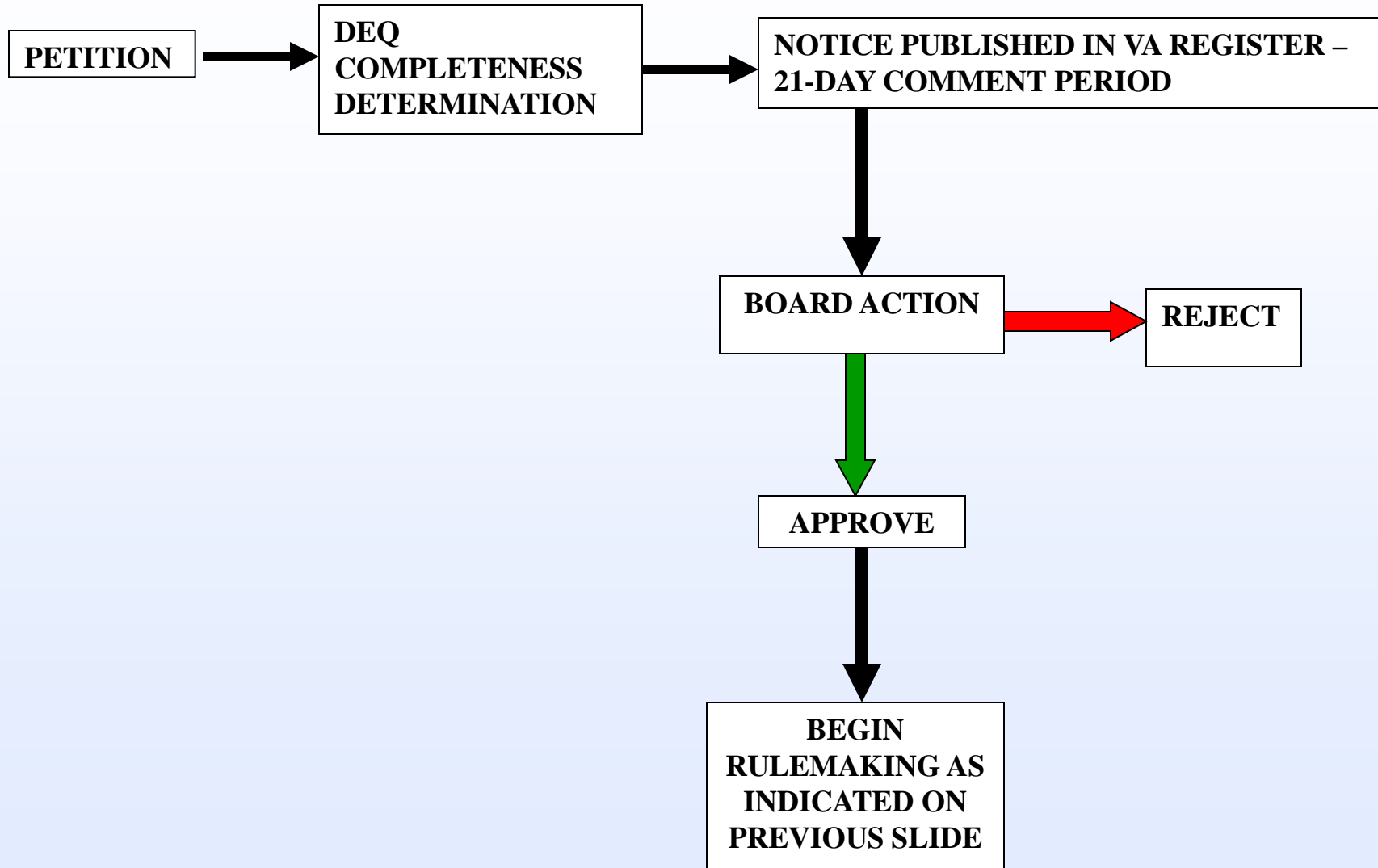
# APA Regulatory Process Timeline



**NOIRA - Notice of Intended Regulatory Action**  
**NOPC - Notice of Public Comment**  
**SWCB - State Water Control Board**  
**DPB - Department of Planning and Budget**



# If A Petition Is Received



# CONTACT INFORMATION

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