



Maryland
Department of
the Environment

Maryland's Tier I and Tier II Antidegradation Policies

April 21, 2026

ACWA WQS Workshop Conference

Maryland Department of the Environment
Melinda Cutler



Overview

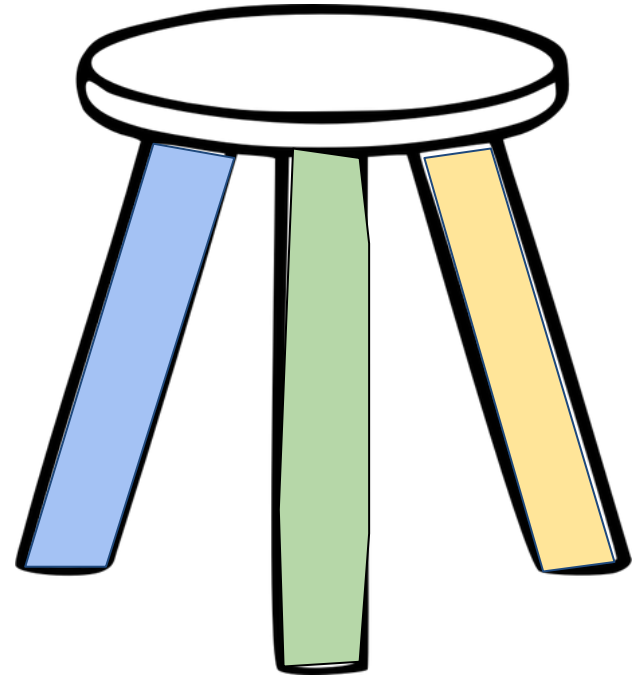
- **Tier I - Existing Uses**
 - Regulations and definition
 - Identification process
 - Work done to date
- **Tier II - High Quality Waters**
 - Regulations and definition
 - Designation process
 - Assimilative capacity
 - Tier II Review - Permits



Water Quality Standards 101

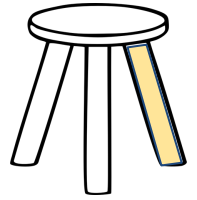
The 3 main parts are:

- Designated use(s)
- Water Quality Criteria
to protect those uses
- Antidegradation Policy
- “anti-backsliding”

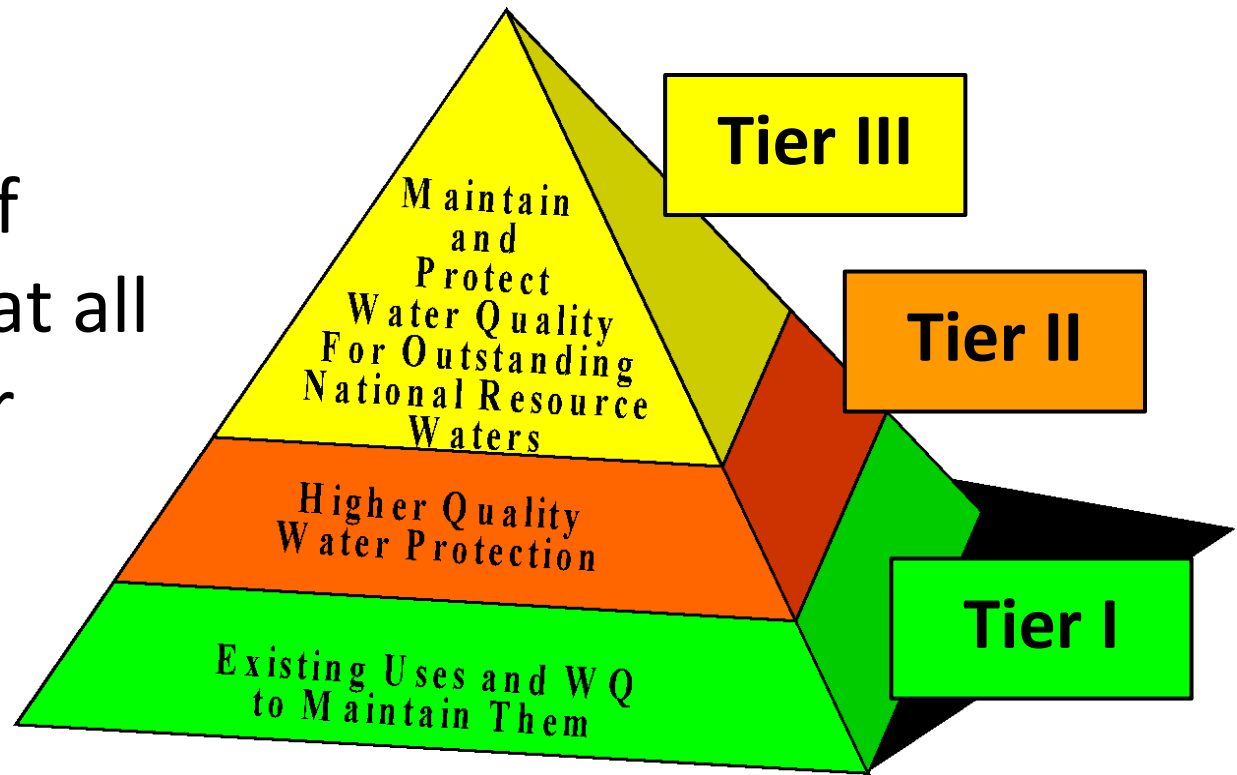


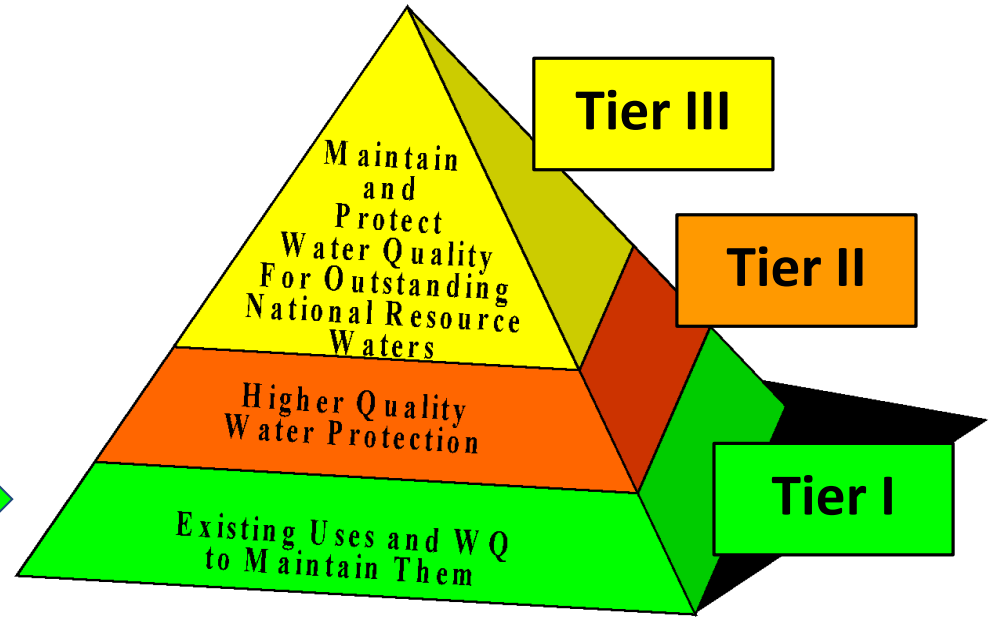


Antidegradation Policy: Three Tiers



- Designed to prevent the degradation of water quality at all levels of water quality.





Tier I Antidegradation - Existing Uses



Clean Water Act and MD Regulations

Clean Water Act

- **40 CFR 131.3:** existing uses are “...those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards”
- **40 CFR § 131.12(a):** “at a minimum...(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.”

Maryland Regulations

COMAR 26.08.02.04-1(B): “Waters that have demonstrated an existing use that is not protected by the water quality criteria specified by the current designated use for this water body shall be protected so as to maintain the existing use and the water quality necessary to protect the existing use.”



Tier I Existing Uses In a Nutshell

- Existing uses serve as baseline or “floor” of water quality that are required to be protected
 - Protects Use + Water Quality necessary to support those uses.
 - Made on a site-specific basis and can be expressed in very specific terms
-
- Where designated uses are a waterbody GOAL, existing uses are EXISTING conditions (occurring since 1975)



Maryland's Existing Use Determinations

- Used by Maryland to identify **cold water existing use** segments for thermal protection.
- These are waterways with **cold water biology** and **temperatures cooler** than afforded protection under current designated uses.

Cold Water Existing Use Determinations: Policy and Procedures

June 23, 2021



Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Ben Grumbles, Secretary



Cold Existing Uses: Data Types Used



Biological data (*Use*)

- Trout collection
 - Summer electrofishing surveys
 - Measure lengths to quantify Young of Year and adult year classes
- Benthic macroinvertebrate collection
 - Collected in Spring
 - Presence / absence of *Sweltsa* or *Tallaperla*

Continuous temperature data (*Water Quality*)

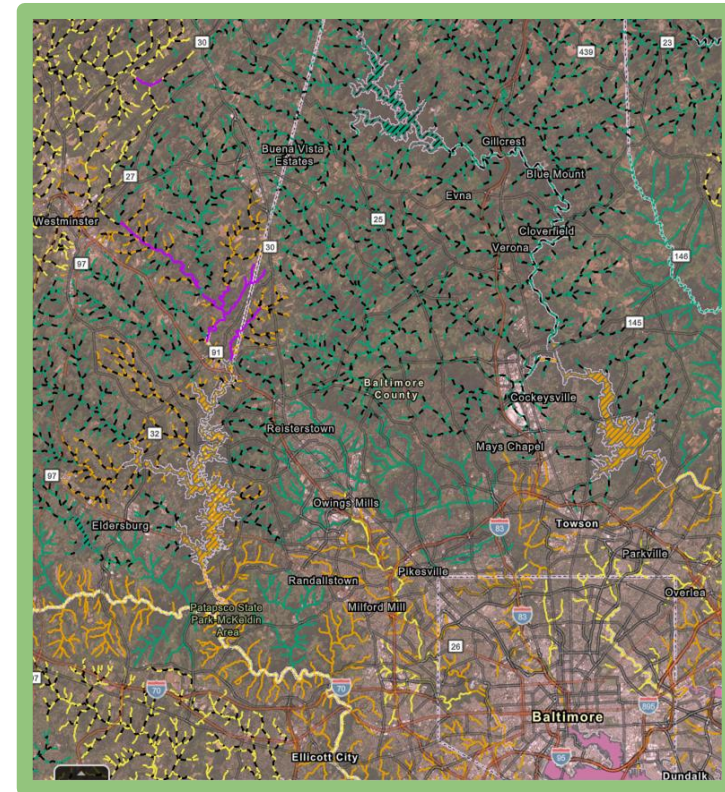
- 15- 20 min
- Summer index period
 - June 1 - August 31

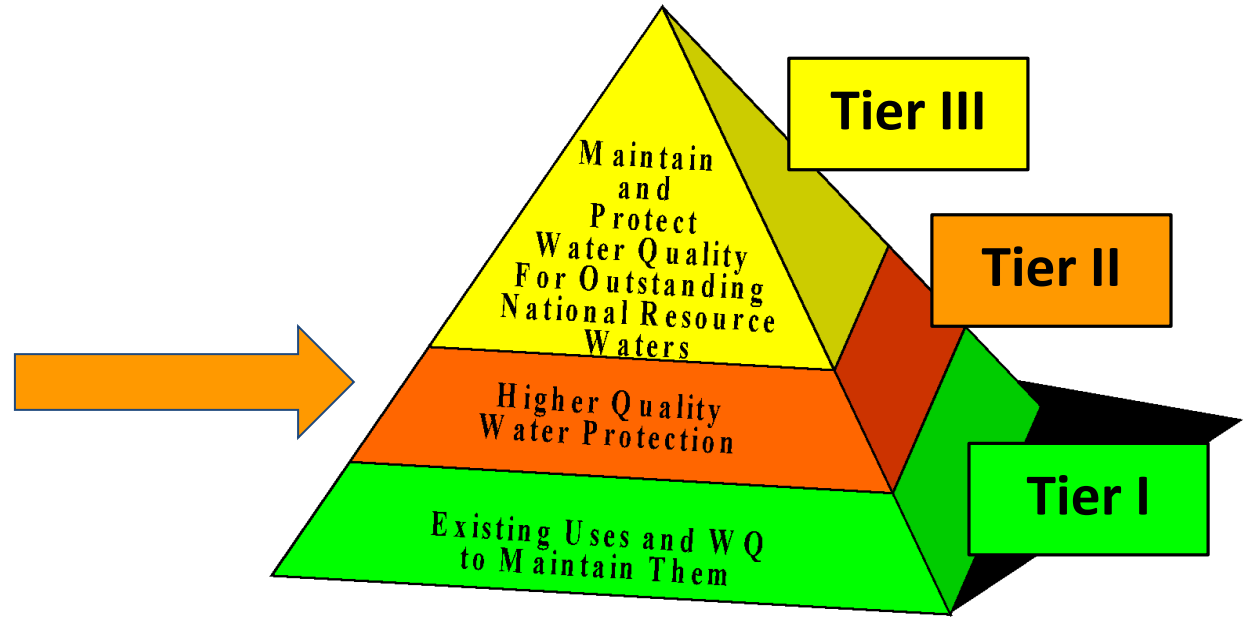




Recognized Cold Water Existing Uses

- **19 cold water existing use determinations finalized 2019**
 - 3 segments redesignated to Maryland's Nontidal Cold Water (Class III)
 - Total **55.3** stream miles protected
- **7 cold water existing use determinations proposed Fall 2024**
 - 4 out of 7 segments finalized April 2026
 - Total **10** stream miles protected
- See finalized determinations on Maryland's [Existing Uses webpage](#)





Tier II Antidegradation - High Quality Waters



Clean Water Act and MD Regulations

Clean Water Act - 40 CFR § 131.12

- Require states to maintain the condition of high quality (i.e. Tier II) waters that have water quality that is better than the minimum standard necessary to meet designated uses.

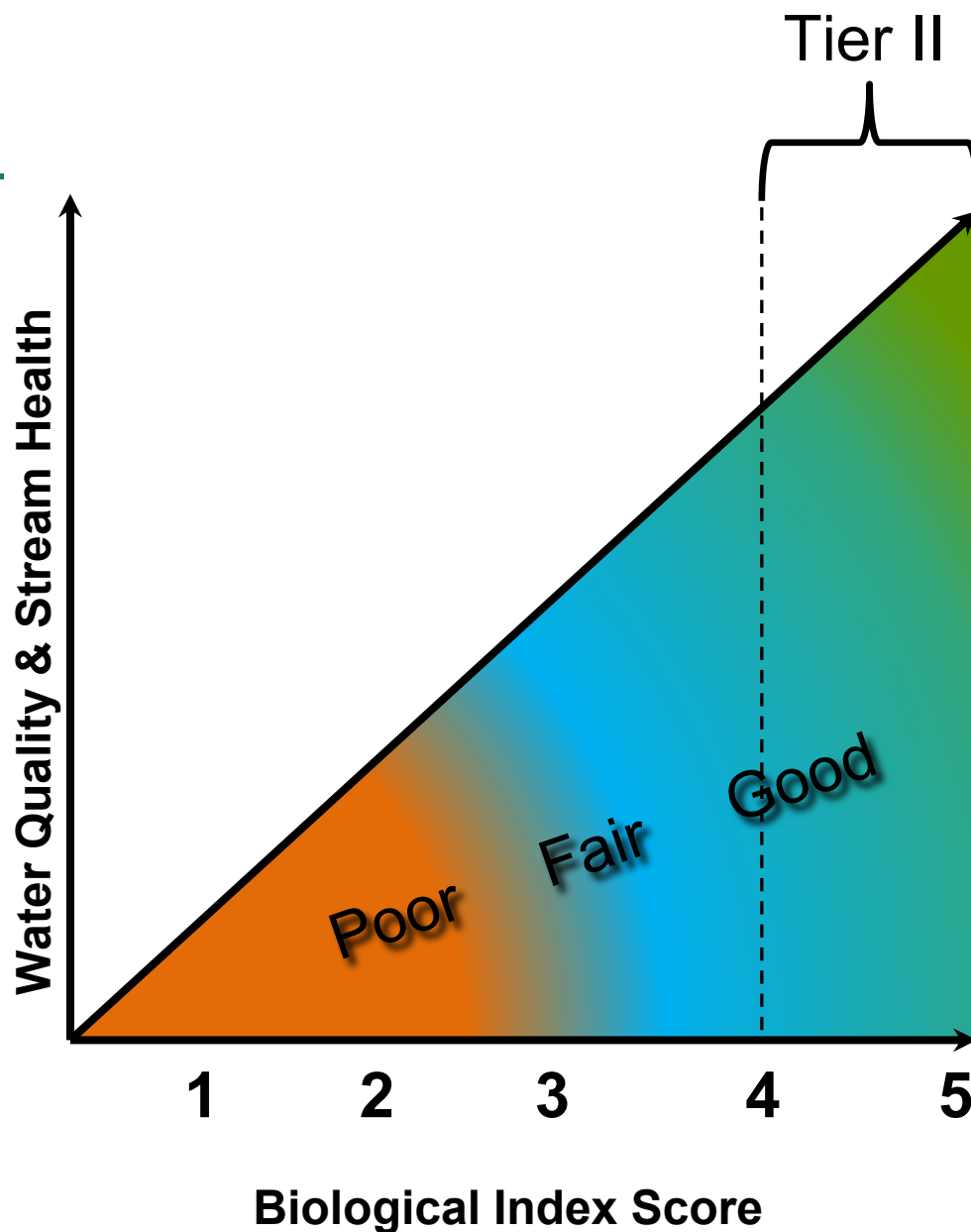
Maryland Regulations - COMAR 26.08.02.04-2 (est 2004)

- Defines how to designate Tier II waters
- Defines when an Antidegradation Tier II Review is required
- Defines when there is no assimilative capacity, e.g., Tier II conditions are not maintained
- Lays out the social and economic justification procedure when approval is granted, and water quality will be lowered

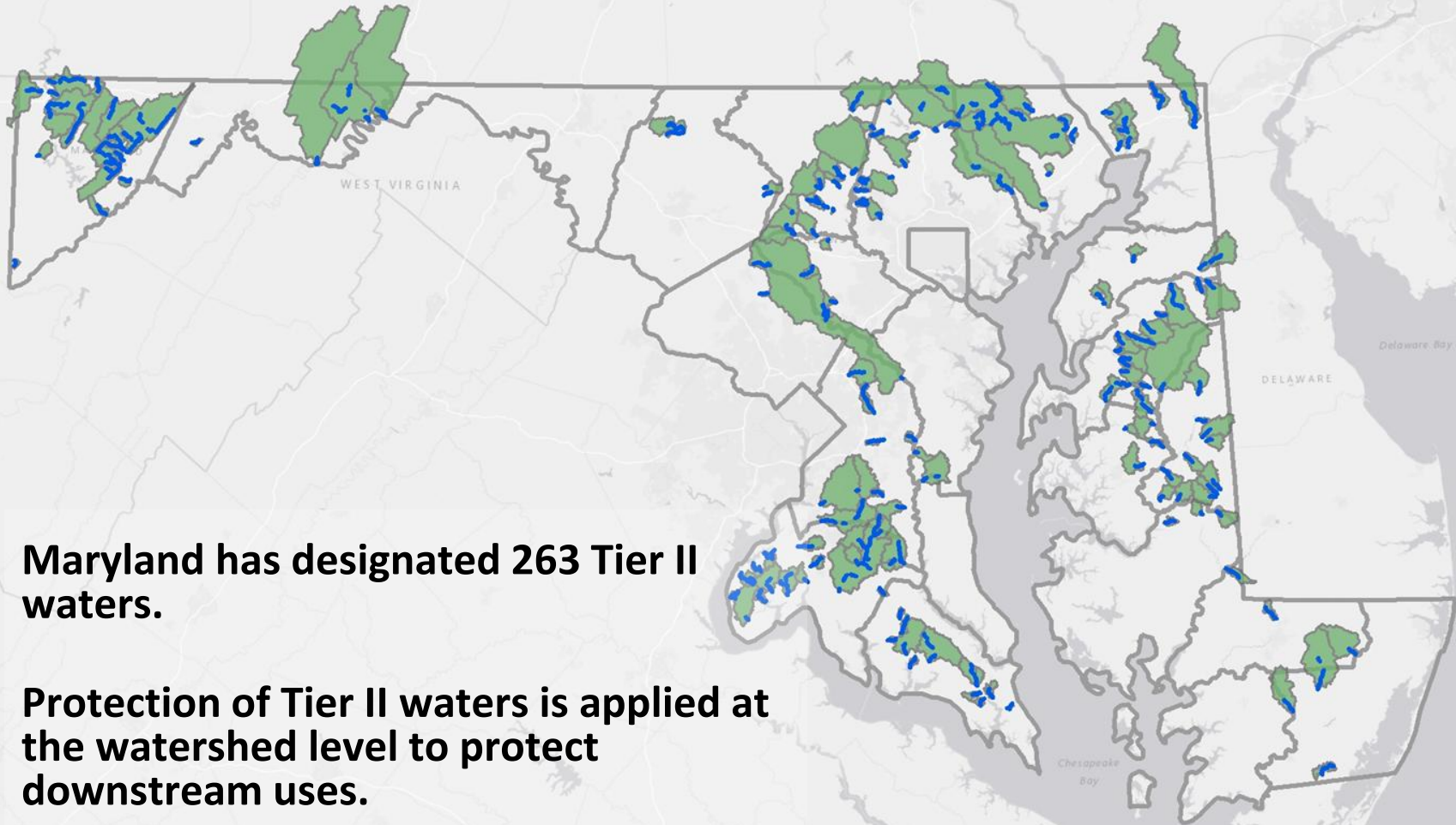


Tier II Waters: Designation

- Streams are sampled using the Maryland Biological Stream Survey (MBSS) protocols
- MBSS assigns scores for stream benthic (bug) and fish assemblages
- To be designated Tier II, both scores must be ≥ 4.00



DESIGNATED TIER II WATERS



Maryland has designated 263 Tier II waters.

Protection of Tier II waters is applied at the watershed level to protect downstream uses.

Tier II watersheds cover approximately 20% of the State.



Maryland
Department of
the Environment

Assimilative Capacity

- Assimilative Capacity is a quantitative way to determine if a designated Tier II stream is still of high quality, or if it has degraded.
- An assimilative capacity threshold IBI score accounts for natural variability. One threshold is developed for fish while a second is developed for benthics.
- If new data indicates that either the fish or benthic score falls below their perspective thresholds, the stream has no AC.
- Streams with no remaining AC are still Tier II streams. The stream never lose their designation.



Maryland
Department of
the Environment

ASSIMILATIVE CAPACITY STATUS

In January of 2020, 62 (24%) of all Tier II streams had no remaining assimilative capacity.

In June 2024, 121 (46%) of all Tier II streams have no remaining assimilative capacity.

As of February 2026, 139 (53%) of all Tier II streams have no remaining assimilative capacity.



Maryland
Department of
the Environment

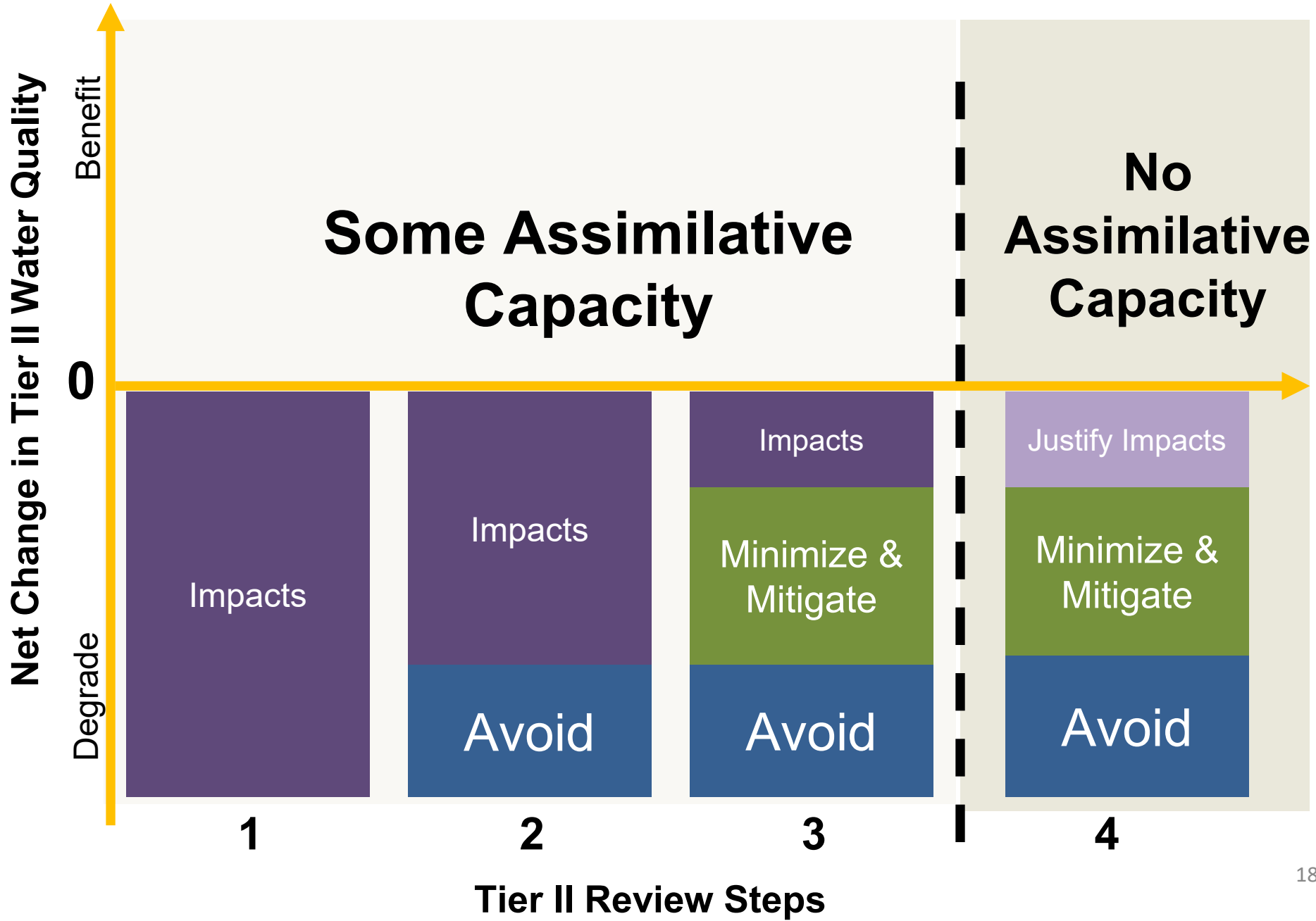
Processes Screened for Tier II Review

- Water and Sewer Plan Amendments
- State Clearinghouse
- New NPDES permits or major modifications of an existing discharge permits
 - WWTP
 - General Permit for Stormwater Associated w/Construction Activity (NOI)
- Nontidal Wetlands and Waterways Construction Permits
- Surface Mining
- PPRP (solar, powerlines, other energy projects)



Maryland
Department of
the Environment

Overall Tier II Review: Reduce 'Impacts'



Tier II 2025 Metric Values

Forest Conserved Onsite

0 Acres

Due to Tier II reviews following project redesign.

Impervious Surface Treatment

26.33 Acres

From additional treatment and retrofits.

Total Forest Conserved

103.34 Acres

Acres of forest conserved due to Tier II reviews.

Total Forest Planted

29.41 Acres

Acres of forest planted due to Tier II reviews.



Maryland
Department of
the Environment

MD Antideg Resources

Tier I - Existing Uses

- For Screening: [Designated Uses Map](#)
- For Additional Information:
 - [Maryland's Existing Use Determinations Webpage](#)
 - [Protecting Cold Water Resources MD Webpage](#)
- **Contact:** Melinda Cutler
melinda.cutler@maryland.gov

Tier II - High Quality Waters

- For Screening: [Tier II Web Map](#)
- For Additional Information:
 - [Maryland's High Quality Waters Webpage](#)
 - [Maryland's High Quality Waters Outreach Webpage](#)
- **Contact:** Angel Valdez
angel.valdez@maryland.gov

Questions?

Melinda Cutler

MDE WQS&A Division
melinda.cutler@maryland.gov

Angel Valdez

MDE WQS&A Division - Tier II
angel.valdez@maryland.gov