

Technical Memorandum: Local Water Quality Protection

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Scope

- Ensure that Trading/Offsets does not result in local water quality degradation
- Restricted to trading and offset programs in Chesapeake Bay Watershed
- Application of Appendix S and NPDES Permitting Regulations
- Implemented through NPDES Permitting Program

Useful Definitions

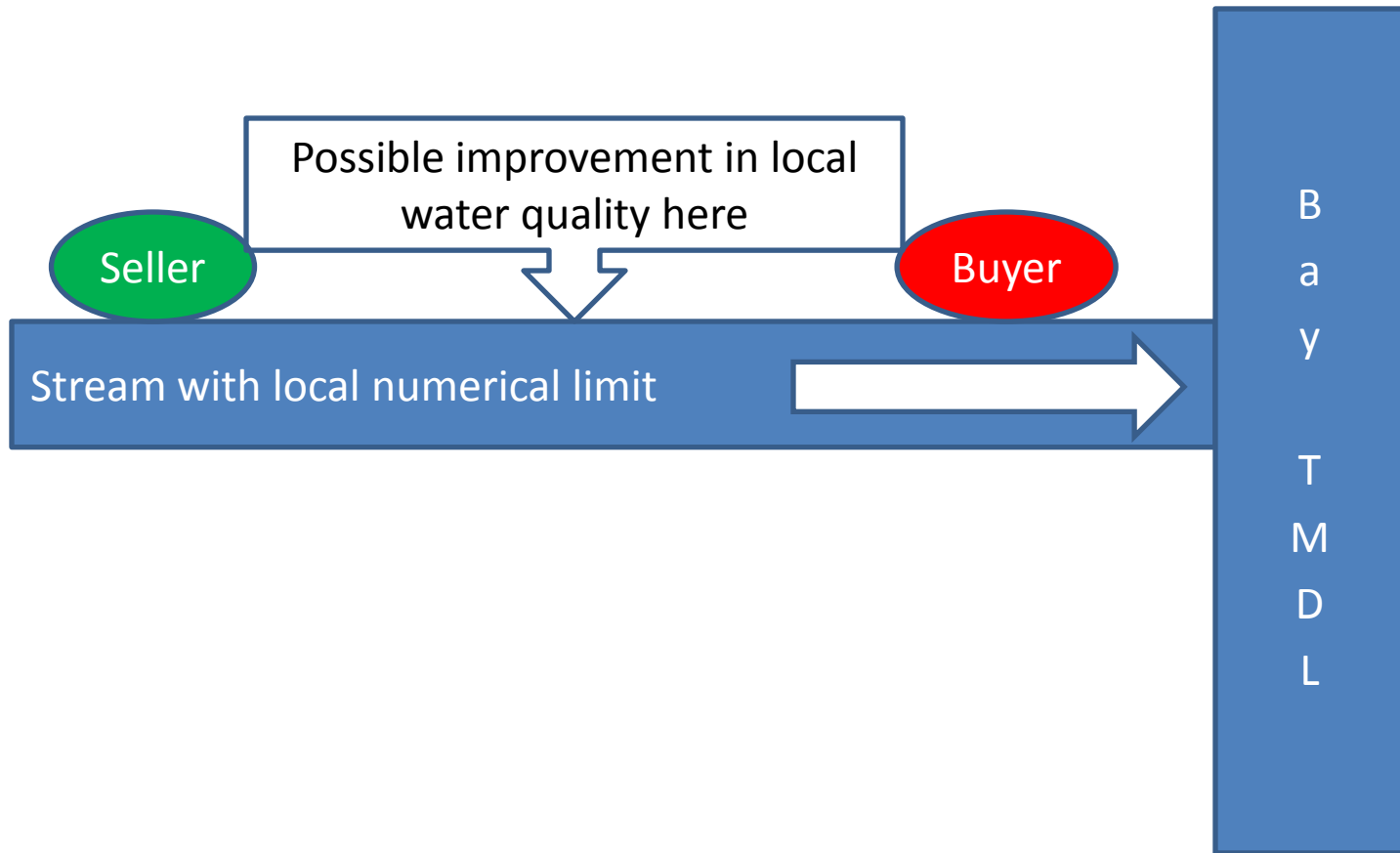
- Local Waters: Receiving Waters Adjacent to where
 - Credit is being generated; and
 - Credit is being used, point of discharge
- Local TMDL : TMDL to address impairment of local water body
- Local WQBEL : WQBEL consistent with
 - Local TMDL WLA; or
 - Sufficient to protect water quality standards
- Bay WQBEL: WQBEL consistent with Bay TMDL

Local Water Quality Considerations for NPDES Permit Writers

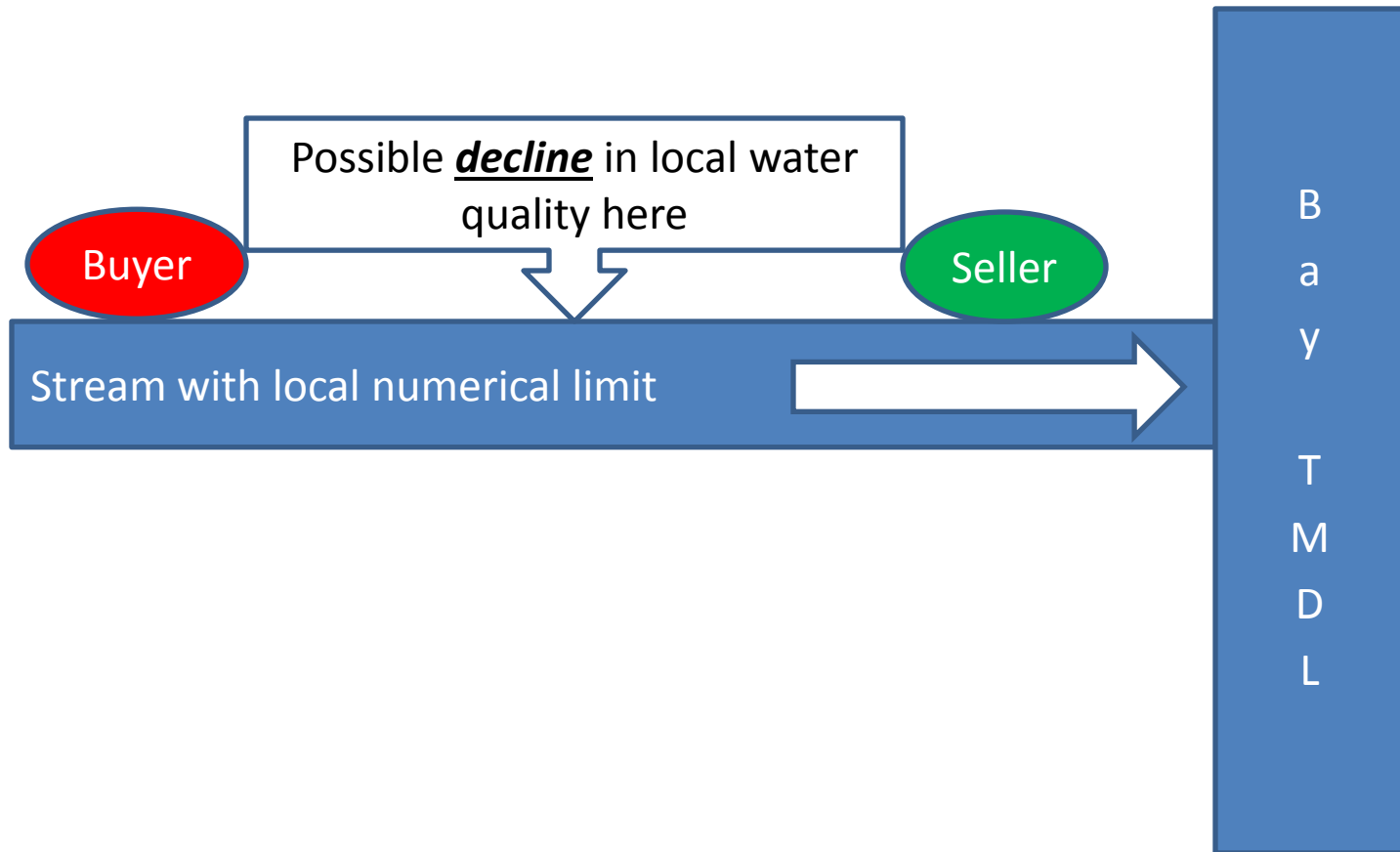
- Nutrient Transport
 - Fate and transport characteristics can be accounted for by delivery factors
- Timing
 - Consider difference between time of releases from the credit buyer and seller.
- Coordination among different jurisdiction's regulatory authorities
 - For interstate trading, develop a coordination plan
- Impact on aggregate load
 - Multiple sources must balance the WLA among all of the sources.
 - For each individual permit issued, assess anew the cumulative impact of all trades
- ***AND THE KING OF ALL PRINCIPALS***

Location, Location, Location

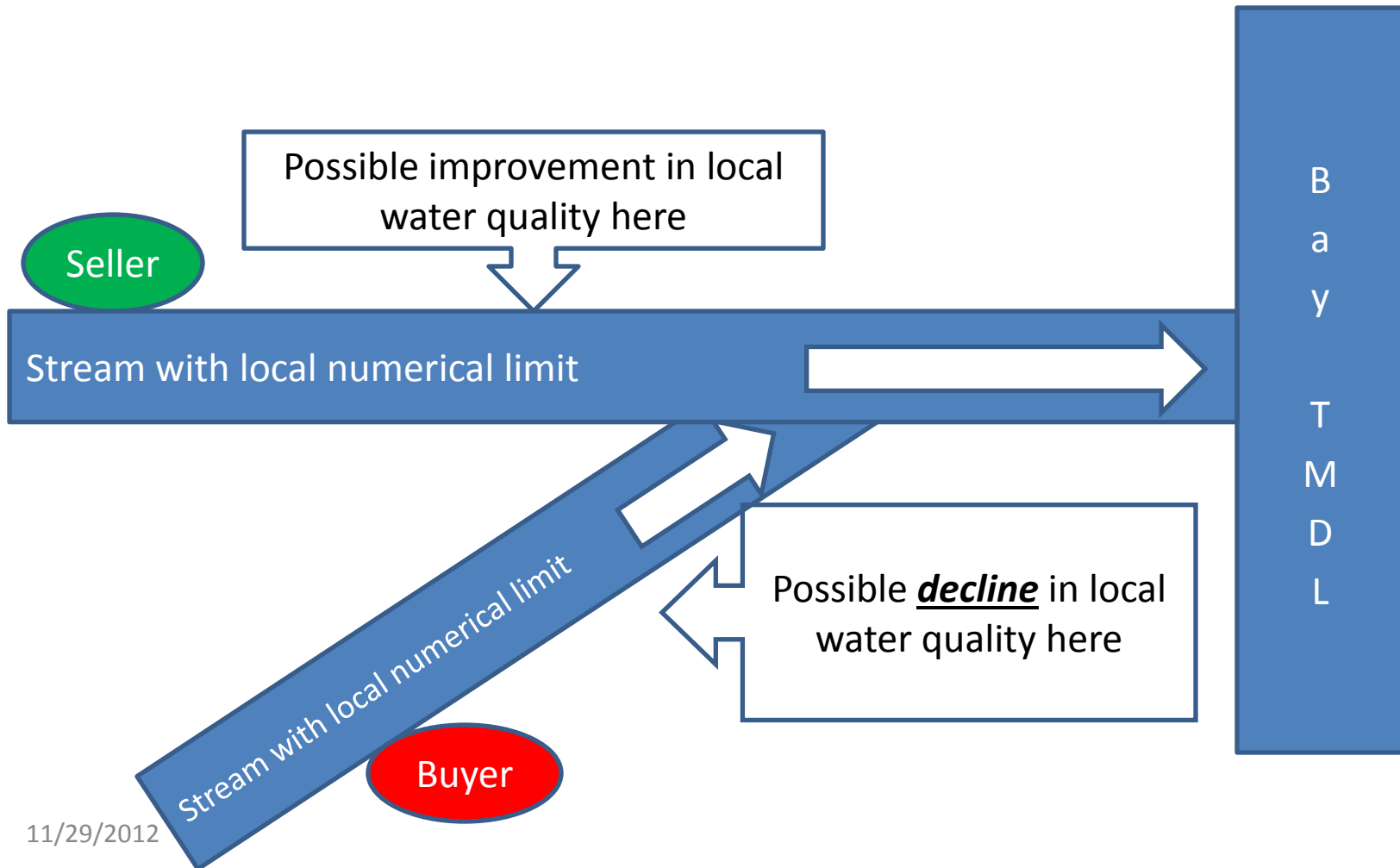
Same Basin, Seller Upstream



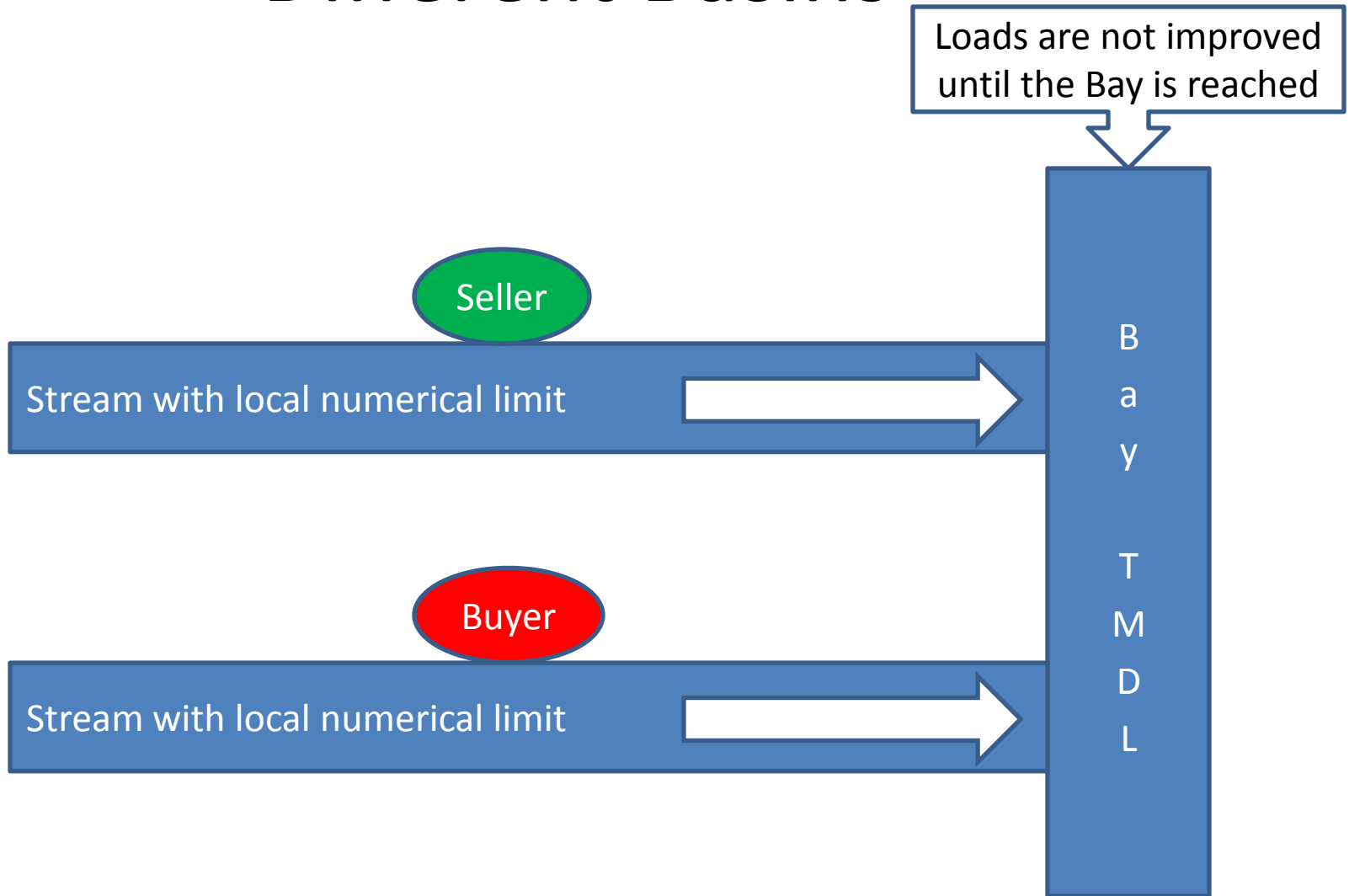
Same Stream, Seller Downstream



Same Basin, Different Streams



Different Basins



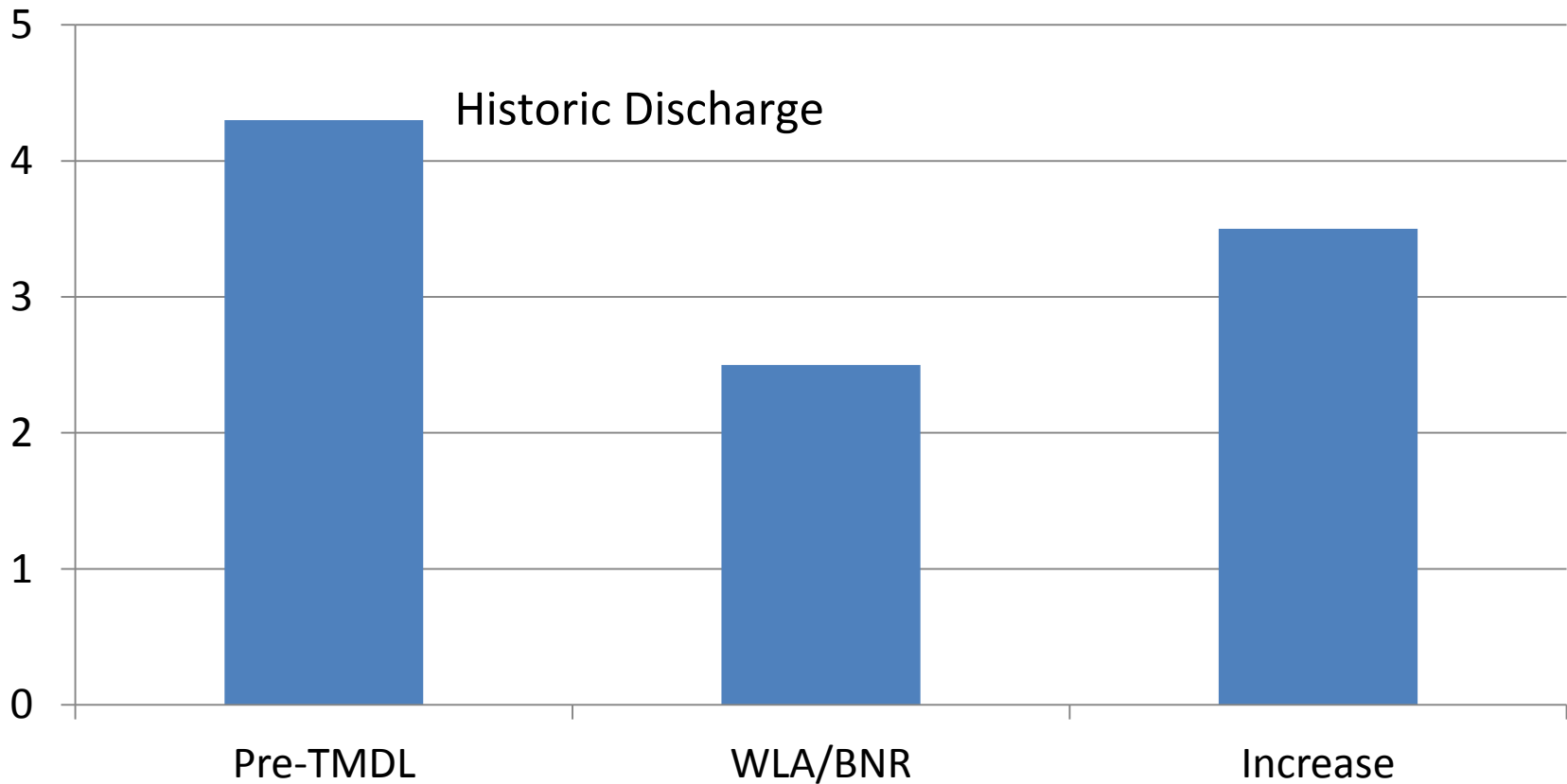
Current Regulations and Guidance

- Chesapeake Bay 2010 TMDL Section 10
- Chesapeake Bay 2010 TMDL Appendix S
- Water Quality Trading Policy, 2003
- Water Quality Trading Toolkit for NPDES Permit Writers 2007
- Clean Water Act and federal and local Water Quality Standards Programs
- Effluent limits and reasonable potential analysis
 - 40 CFR 122.44(d)(1)(vii)
 - 40 CFR 122.4

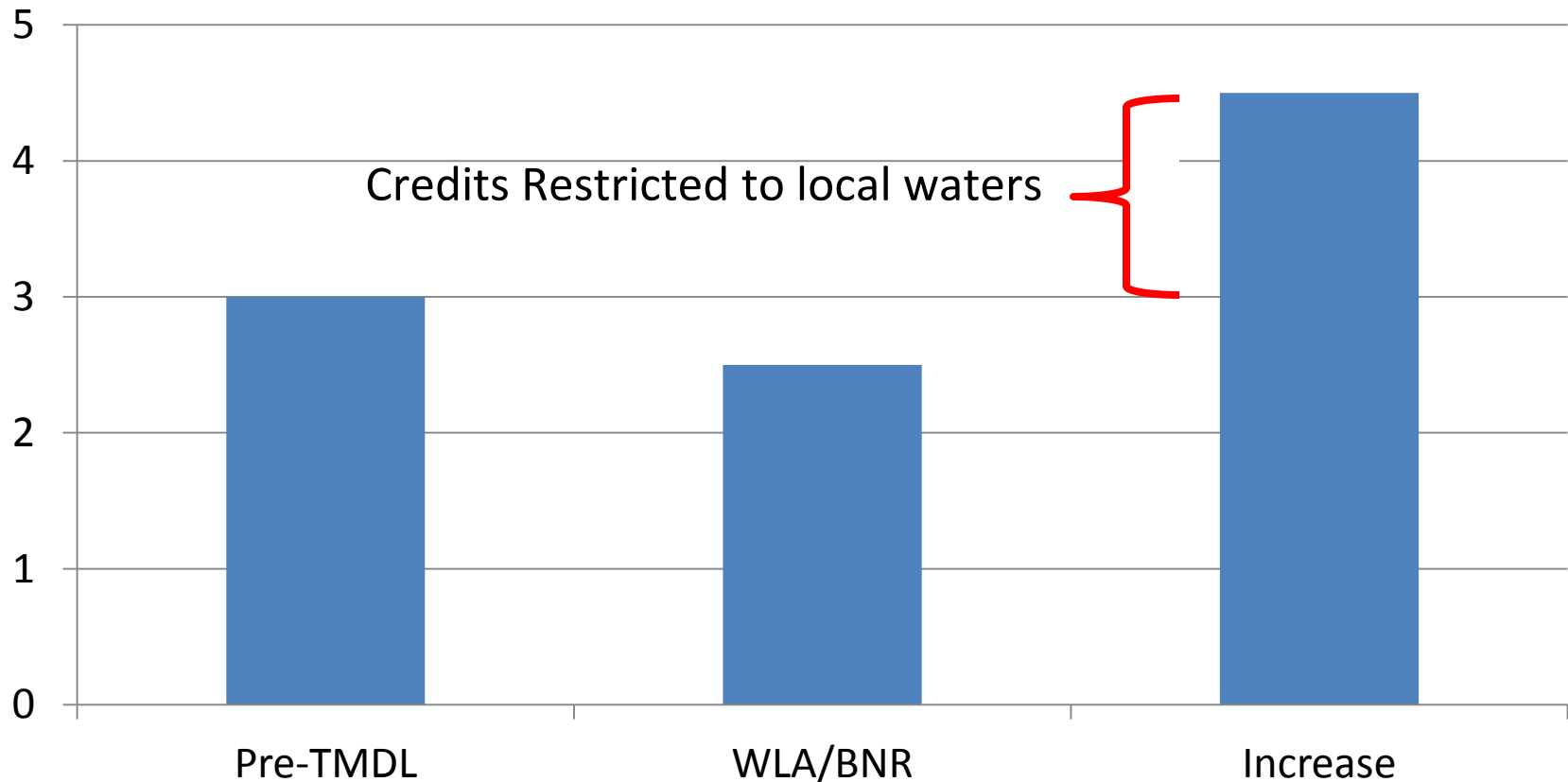
Case I Local Waters Not Listed as Impaired, No Local TMDL

- Existing Source, no increase in load: Credits can be generated outside of local waters.
- New Source, no applicable Bay TMDL WLA
 - Establish a local WQBEL; or
 - Restrict credit generation and use to local waters
- Existing Source with Applicable Bay TMDL WLA, proposed increase in load
 - Establish a local WQBEL; or
 - Consider Historical (at time of assessment) Discharge Levels

Historic Discharge: Greater than proposed discharge – No Restriction



Historic Discharge: Less than proposed discharge – Restriction



Case 2 Local Waters Listed as Impaired, No Local TMDL

- Principal: No new or increased discharge to impaired waters
- Existing Source with applicable Bay TMDL WLA, no increase in load
 - Loads offset above historical discharge level should use credits generated in local waters
- New Source with no applicable Bay TMDL WLA:
 - Entire load is required to be offset and credits used should be generated in local waters

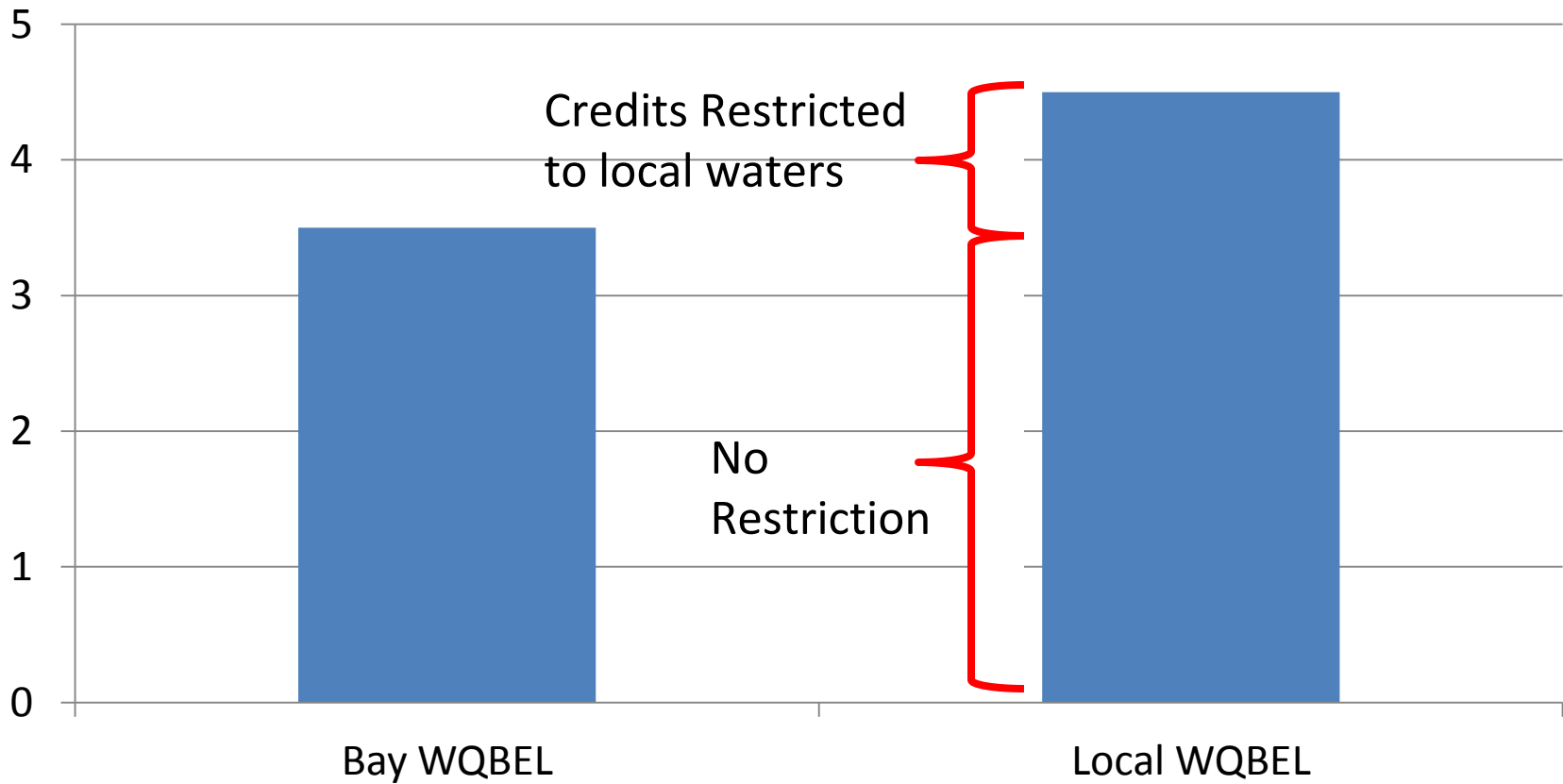
Case 2 Local Waters Listed as Impaired, No Local TMDL

- Existing Source with applicable Bay TMDL WLA, proposed increase in load
 - Loads above historical discharge levels should be offset using credits generated in local waters

Case 3 Local TMDL

- Existing Source with applicable Bay and Local TMDL WLAs
 - Local WQBEL more Stringent: Credits restricted to local waters
 - Bay WQBEL more stringent: Credits Restricted to local waters tom meet local WQBEL, below local WQBEL no restriction

Case 3



Case 3 Local TMDL

- New Source with applicable TMDL WLA in either the local or Bay TMDL
 - Entire Load must be offset
 - No Local WLA: credits restricted to local waters
 - No Bay WLA: Credits Restricted to local waters to meet local WQBEL, below local WQBEL no restriction
- New Source with no applicable TMDL WLA in either the local or Bay TMDL
 - Entire load must be offset, and credits restricted to local waters

Associated Pollutants

- Poses a problem, particularly for MS4s
- Many Urban Streams are impaired for non-Bay pollutant of concerns (e.g. pathogens, metals, etc)
 - Controls used to deal with non-Bay pollutant of concerns are often same as Bay pollutants
- Trading for Bay pollutant of concerns, may undermine addressing other pollutants

EPA Oversight

- EPA has stated it will review all permits for Bay significant dischargers and for any new or increased dischargers.
 - EPA will be reviewing the permit and the associated fact sheet to ensure that the permit contains the requisite analysis of reasonable potential for the discharge to cause or contribute to an exceedance of WQS, and if so to review whether the WQBEL as well as any offset or trade that allows for additional loading is protective of local water quality.
 - The permit writer should provide clear documentation in the fact sheet the basis of these limitations and any offsets or trades.