



Department of the Environment

Total Maximum Daily Loads: An Introductory Briefing

**Maryland Department of the Environment
Science Services Administration**

May 3, 2007





Overview of TMDL Briefing

- **What is a TMDL?**
- **Which waterbodies require TMDLs?**
- **TMDL development process**
- **TMDL review process**
- **TMDL outreach**
- **TMDL implementation**
- **MDE's responsibilities**



What is a TMDL?

- **Total Maximum Daily Load**
- **Requirement under the federal Clean Water Act**
- **Establishes the maximum amount of an impairing substance or a stressor that a waterbody can assimilate and still meet water quality standards**
- **Allocates load among pollution contributors (i.e., point and non-point sources)**



Which Waterbodies Require TMDLs?

- **State waters that do not or are not expected to meet water quality standards after all technology-based controls and/or other required pollutant controls are in place (MD 303(d) List)**
- **May develop more than one TMDL per waterbody if multiple impairing substances identified (i.e., more TMDLs than number of impaired waters)**





Which Waterbodies (cont.)

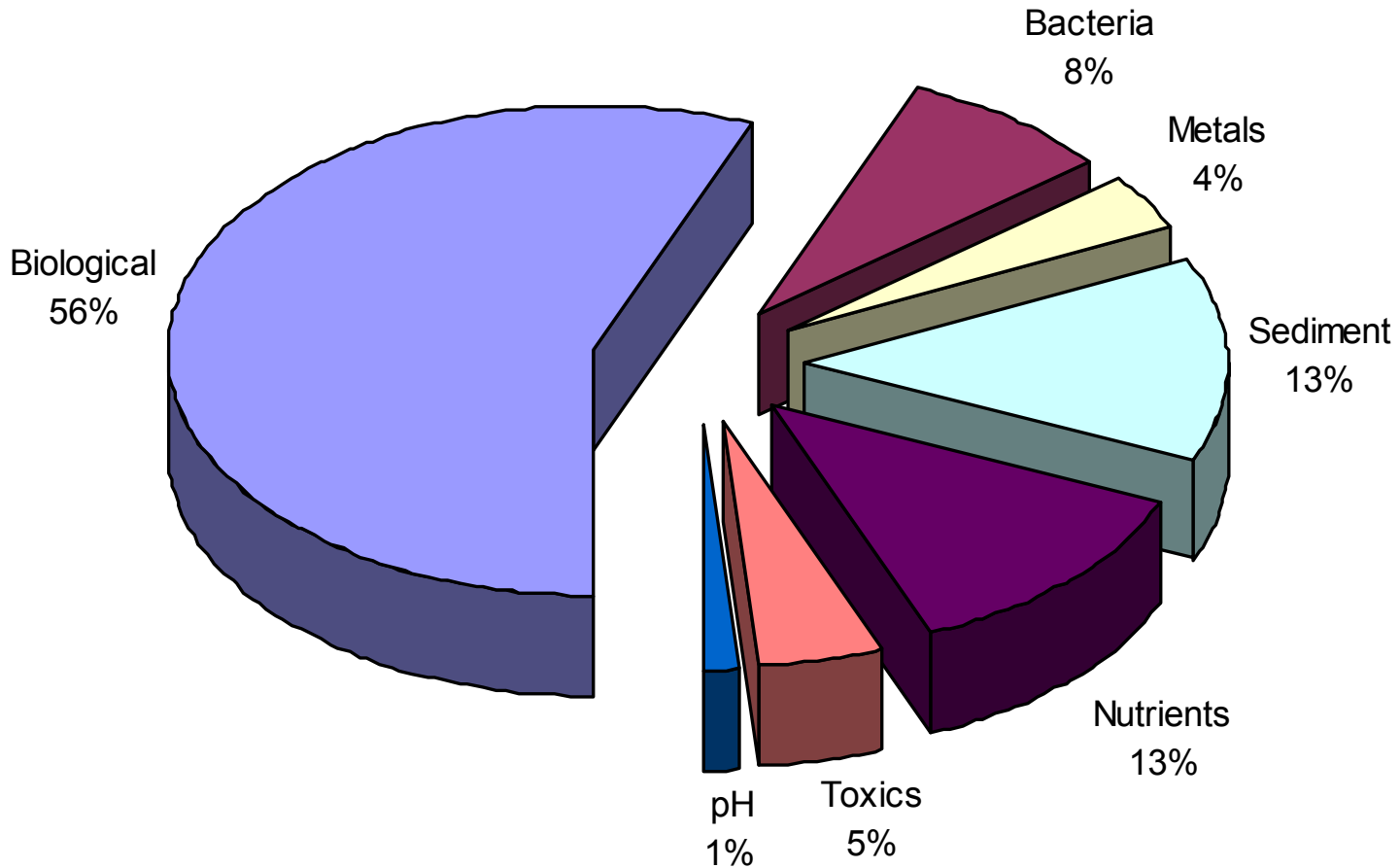
- **303(d) List based upon 305(b) Report of water quality status of State waters**
- **MD 303(d) List of impaired waterbodies first developed in 1996; updated in 1998, 2002 and 2004**





Statewide Impairments

Source: Final 2006 303(d) List of Impaired Waters





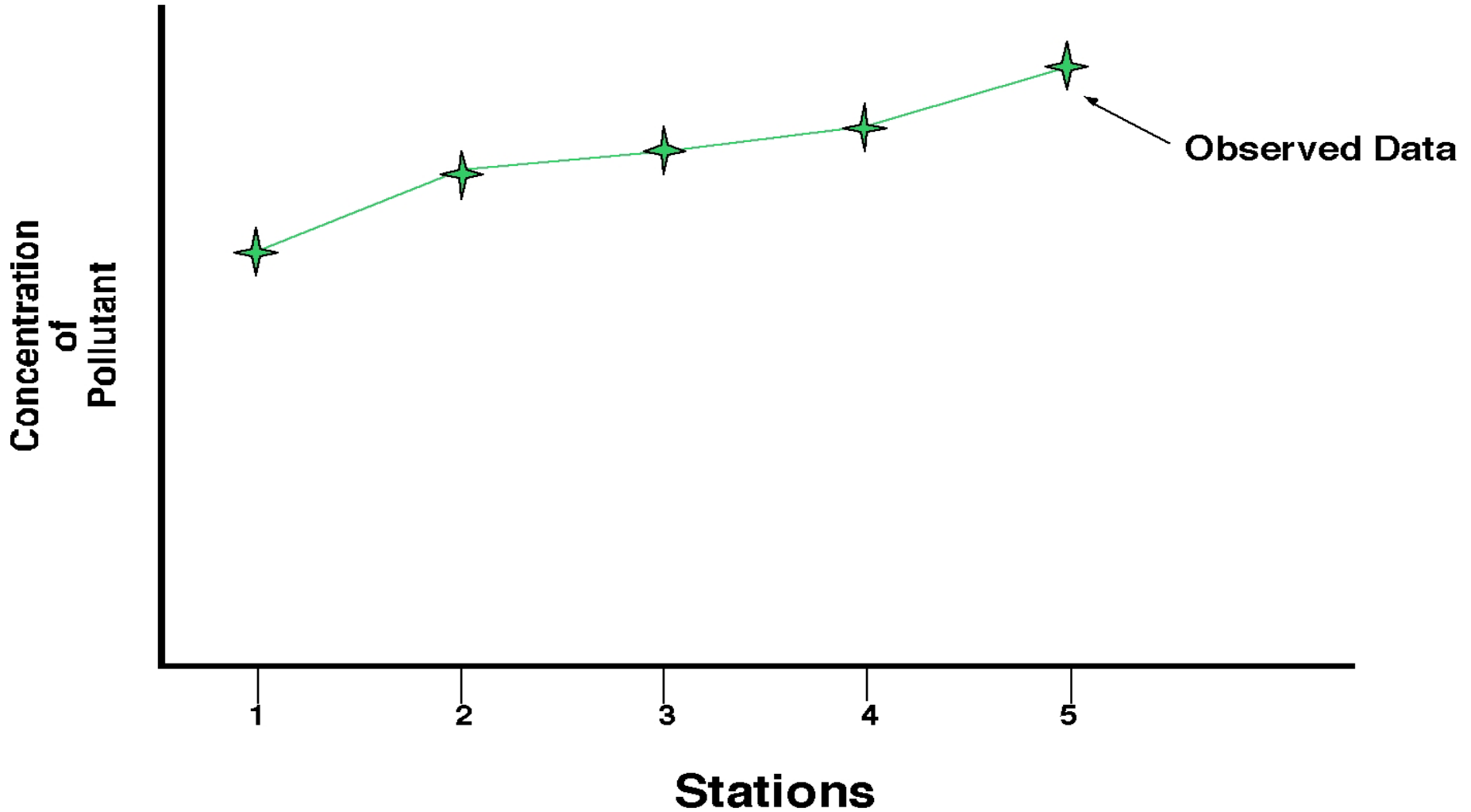
TMDL Development Process

- **Data collection**
 - **Five-year cycling strategy, additional sampling for TMDL purposes, data solicitation**
- **Data analysis**
- **Selection of an assessment tool**
 - **Depends upon system, complexity of problem, available data, etc**
- **Evaluation of various load reduction scenarios**



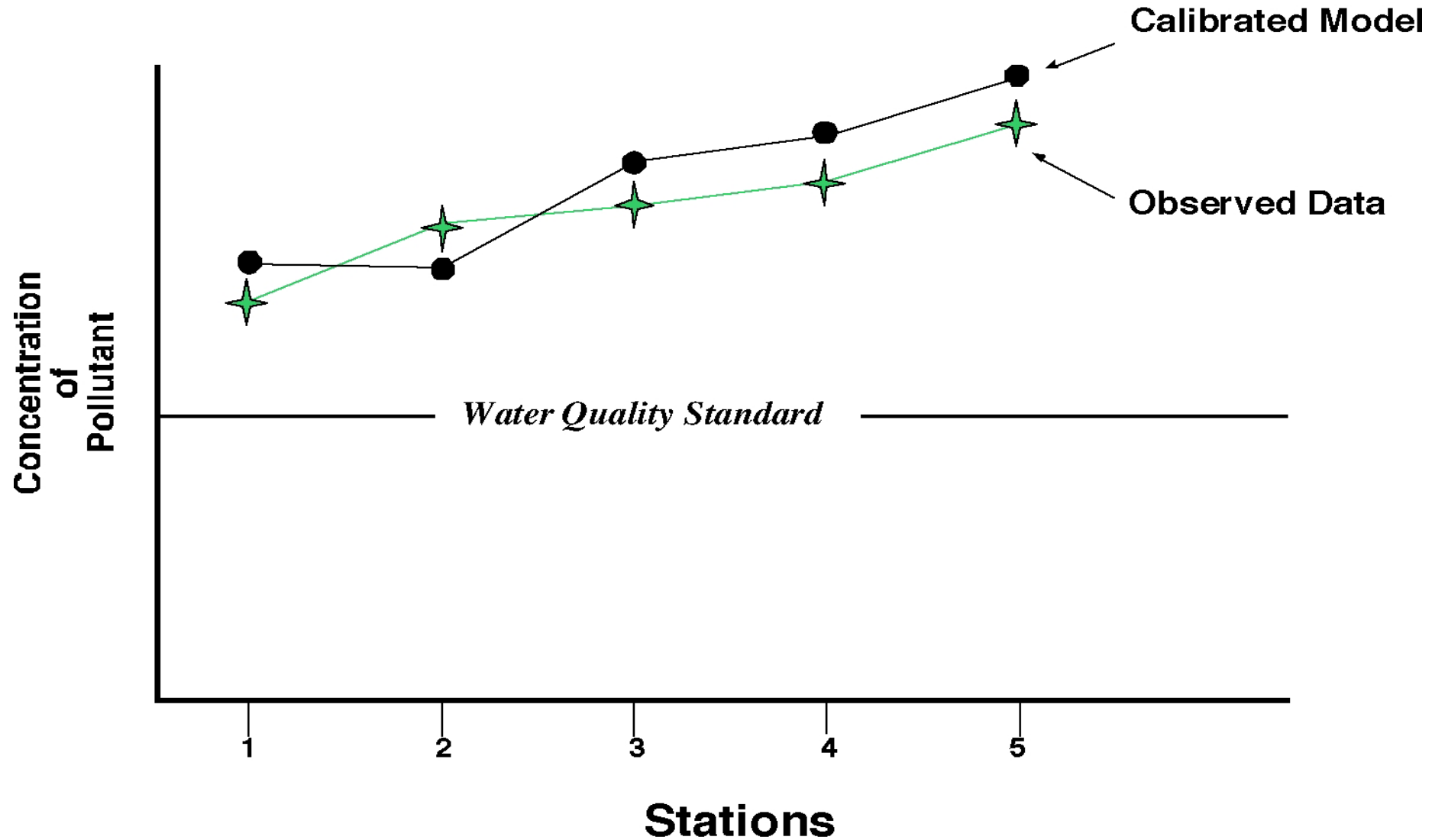


TMDL Modeling Process



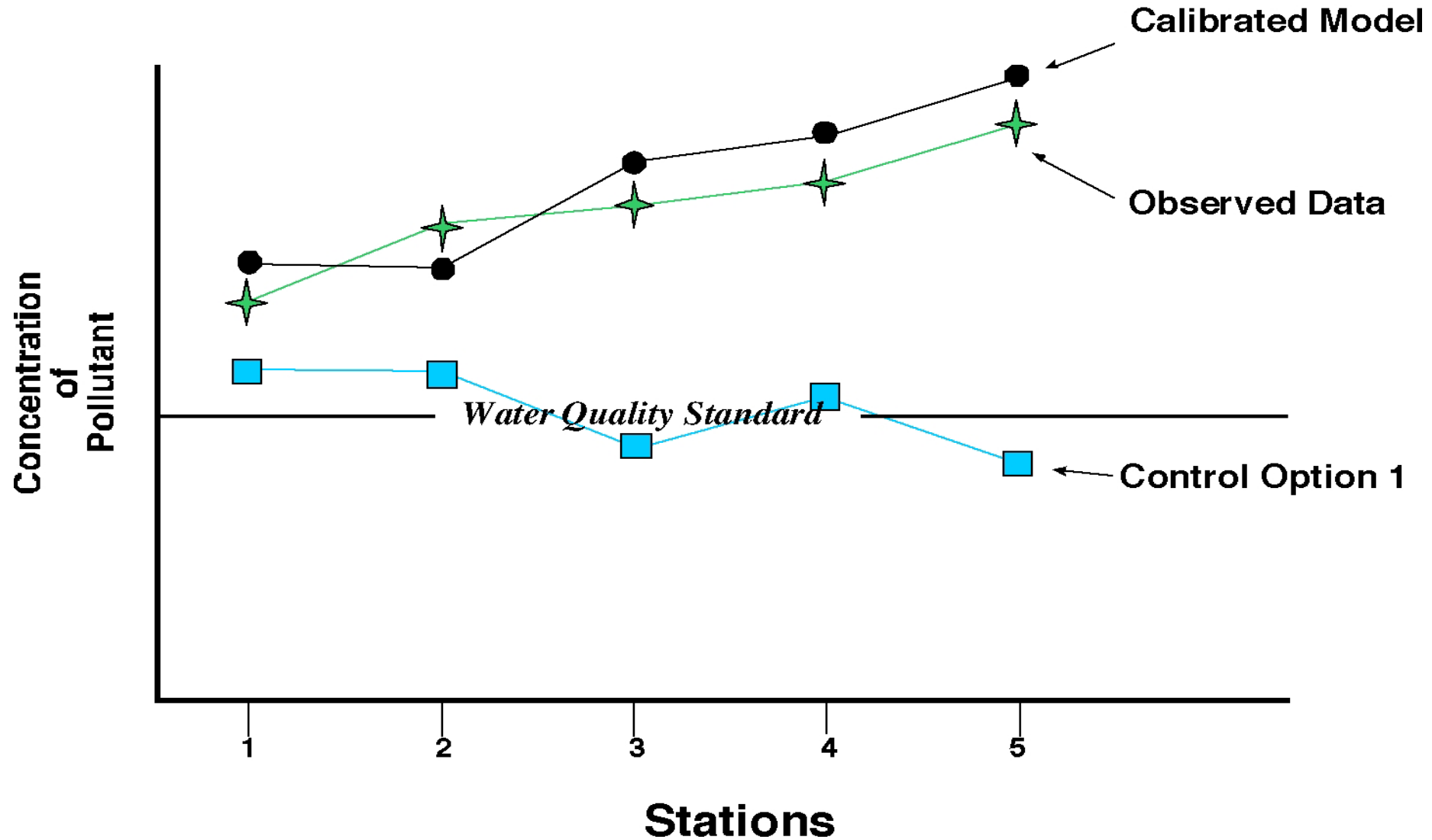


TMDL Modeling Process



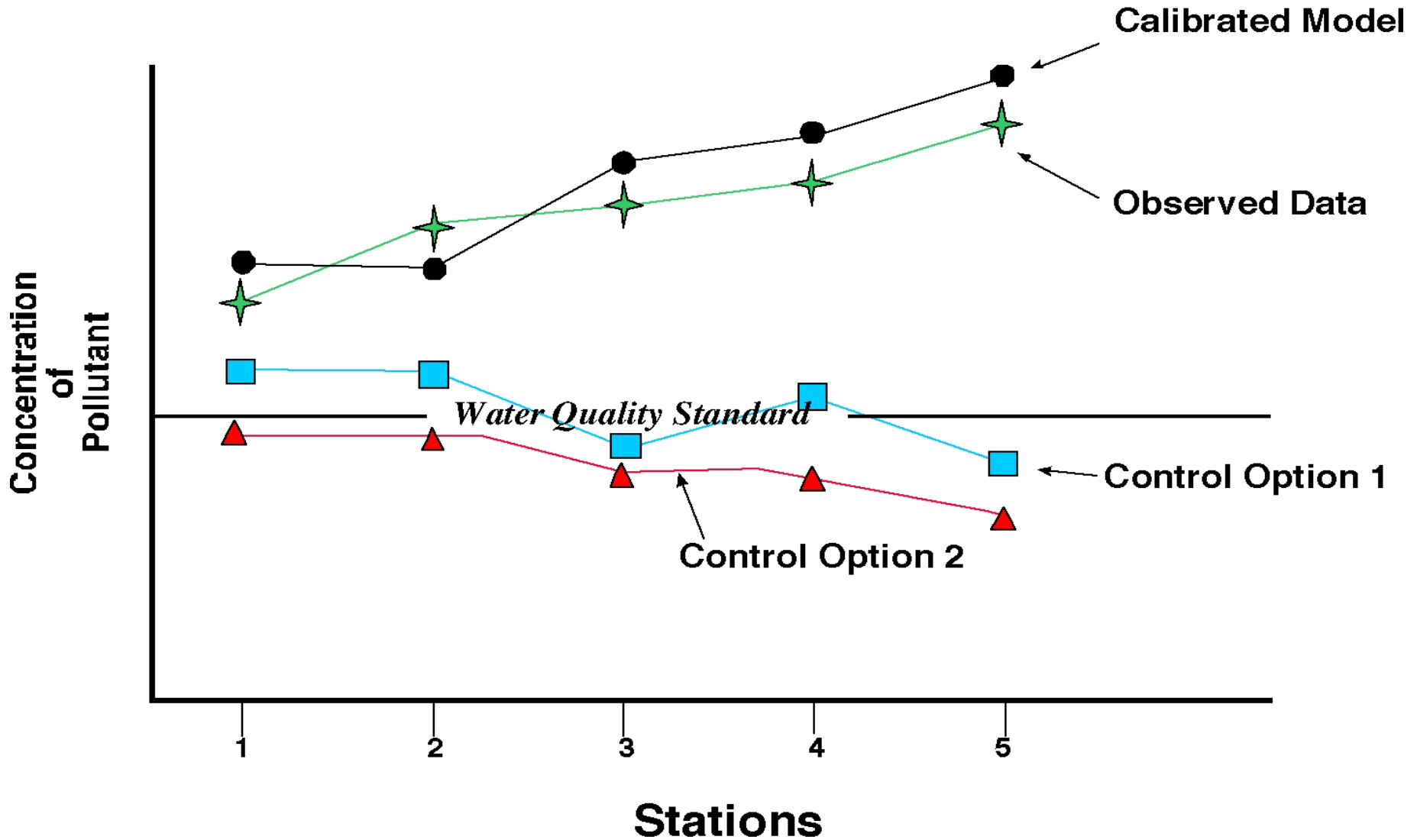


TMDL Modeling Process





TMDL Modeling Process



Development Process (cont.)

- **TMDL = WLA + LA + MOS (+ FA)**
 - WLA = Point Source Load Allocation/Urban Non-point source (MS4 Stormwater Permits)**
 - LA = Non-point Source Load Allocation**
 - MOS = Margin of Safety**
 - FA = Future Allocation (included when applicable)**
- **Currently expressed as a “mass per unit time, toxicity, or other appropriate measure” (40 CFR 130.2(i))**
- **Documentation**



TMDL Review Process

- **Internal MDE review**
- **Interagency review**
- **Preliminary EPA review**
- **Stakeholder/public review**
- **Submission to EPA for review and approval**





TMDL Outreach

- *“Notice of Intent to Develop TMDL”*
- *Pre-comment period notification*
- **30-day public comment period**
- *Notifications of submittal and approval*
- **Briefings**
- **Role/responsibility of local primary contact**
 - **Involvement at request of stakeholders**



TMDL Implementation

- **Maryland views TMDL implementation as having two parts:**
 - **Institutionalization to communicate existence of approved TMDLs**
 - **Planning and execution to reduce excess pollutants, off-set new sources, and protect healthy waters**



TMDL Implementation (cont.)

- **Institutionalization**
 - **Parties notified (e.g., State agencies, affected local governments, dischargers, public)**
 - **Documented in the State's Continuing Planning Process (CPP)**
 - **Includes adjusting permit limits to reflect wasteload allocations (WLAs)**





TMDL Implementation (cont.)

- **Planning and Execution**
 - **Many activities = TMDL implementation, so document any and all pollutant reduction actions**
 - **State can provide technical assistance for implementation**
 - **MDE is working with local government representatives to develop an “Interim TMDL Implementation Guidance for Local Governments”**
 - **Common sense approach**
 - **Sensitivity to existing local priorities**
 - **Build upon existing programs and forums**





MDE's TMDL Responsibilities

- **303(d) List**
 - **Development**
 - **Review process, forward for EPA approval**
- **TMDL analyses**
 - **Development**
 - **Review process, forward for EPA approval**
- **Implementation**
 - **Institutionalize TMDLs**
 - **NPDES permitting**
 - **TMDL Implementation Guidance Document for Local Governments**





For More Information

TMDL Outreach and Coordination Program

Melissa Chatham, 410-537-3937

**[http://www.mde.state.md.us/Programs/
WaterPrograms/TMDL/index.asp](http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/index.asp)**

TMDL Implementation

Jim George, 410-537-3579

**[http://www.mde.state.md.us/Programs/WaterProgr
ams/TMDL/implementation/index.asp](http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/implementation/index.asp)**