Ensure dams are safe and resilient for all Maryland citizens

Ensure water programs are prepared and responsive, protect public health, vulnerable populations, and the environment from extreme events

Increase flood resilience, prevent pollution, and reduce vulnerabilities from larger, more frequent and more intense storms
**DAM SAFETY**

Facts & Key Strategies

---

**Facts to Know**

- **627 Dams** (~15,000 small ponds)
- **High Hazard Dams Inspected** 87%
- **Emergency Action Plan Compliance** 77%

**Dam Hazard Classification**

- **High** 16.8%
- **Low** 58.9%
- **Significant** 24.3%

---

**Science & Engineering Design Gaps**

- Reevaluate Maryland's Probable Maximum Precipitation
- Perform small pond integrity studies from short high-intensity storms
- Reassess spillway criteria and earthen spillways
- Establish methods for evaluating dam removal impacts

---

**Dam Inspections and Inventory**

- Ensure dams are inspected routinely
- Ensure dam owners update and exercise emergency action plans
- Identify unsafe and dams of concern to perform pre-disaster inspections
- Improve dam owner outreach and education on maintenance and preparedness
- Complete small ponds inventory and mapping to fill data gaps
- Reassess each dam's hazard classification to include new risks
- Develop field inspection app that can inform emergency response

---

**Emergency Dam Repair and Removal**

- Continue to improve Maryland's Comprehensive Flood Management Grant Program
- Build intergovernmental partnerships
- Pursue other funding opportunities, (e.g., FEMA Building Resilient Infrastructure and Communities and High Hazard Potential Dam grants)

---
EMERGENCY RESPONSE & PREPAREDNESS

Key Strategies

Emergency Response Planning

- Inventory and keep updated all MDE emergency action plans, guidance and procedures (e.g., flood, drought, pollution response)
- Exercise emergency plans and procedures regularly

Adaptive Management & Continuous Improvement

- Conduct post-mortem of emergency response events to identify lessons learned
- Develop and implement strategic measures to address identified deficiencies
- Collaborate across MDE Administrations

Drought-Vulnerable Public Water Systems

- Identify drought vulnerable systems
- Develop and implement timely corrective action plans for vulnerable systems
- Examine the types and volume of water reuse in Maryland

Leverage New Technologies

- Adopt new technologies across programs to support response activities
**FLOOD PROTECTION & POLLUTION PREVENTION**

*Key Strategies*

**Science & Engineering**  
**Design Gaps**
- Use the most current science to update storm precipitation values
- Develop and implement best practices to protect coldwater streams from thermal pollution.
- Factor climate science into water quality and hydrologic modeling

**Vulnerable Legacy**  
**Industrial Activities in the Floodplain**
- Inventory activities and identify vulnerable sites
- Target industrial stormwater compliance in floodplain industries
- Develop general permits for certain industrial activities in a floodplain
- Partner with land and material administration solutions

**Water Resources**  
**Resilience**
- Incorporate climate change risks into field investigations
- Enhance protection of wetland and stream buffers
- Increase the use of living shorelines to improve coastal resiliency
- Screen permit applications for flood vulnerability
- Offset climate-driven pollution loads to Chesapeake Bay
- Work with local governments to ensure land use plans consider climate impacts to water resources.

**Erosion Control and Stormwater Management**
- Modernize stormwater permits and erosion control requirements to incorporate updated precipitation and flooding hazards
- Work with local governments to align stormwater restoration with flood mitigation, local hazard management planning and funding programs
- Promote enhanced erosion controls through compliance assistance and training.