Permitting 101

What to Expect, What to Submit

MDE Dam Owners Workshop

16 March 2021

John Roche, P.E.

Maryland
Department of
the Environment

MDE Dam Owners Workshop, March 2021

WHY DO I NEED A PERMIT?

Regulating Dams Since 1934

- Throughout history, humans have acknowledged that there is risk associated with the storage of water
- Maryland Water Resources Commission formed in 1931 and by 1933 advanced legislation to protect the water resources of Maryland
  - Included, specifically, a recognition that dams are critical infrastructure and must be designed, constructed, and operated in a manner that protects the resource and the public
- Environment Article § 5-503
  - (a) (1) A person shall obtain, on written application to the Department, a permit from the Department to:

    (i) Construct, reconstruct, or repair any reservoir, dam, or waterway obstruction;

    (ii) Make, construct, or permit to be made or constructed any change or addition to any reservoir, dam, or waterway obstruction;

Regulating Dams Since 1934

- Provides the State with checks and balances to ensure needs of water users, as well as downstream public are protected
- Ensures changes/alterations become part of the permanent record for the dam
- Provides opportunity for public comment
- In current format, also serves as “Operating Permits”
- Permitting process doesn’t absolve dam engineers of being familiar with, and employing the state of the practice

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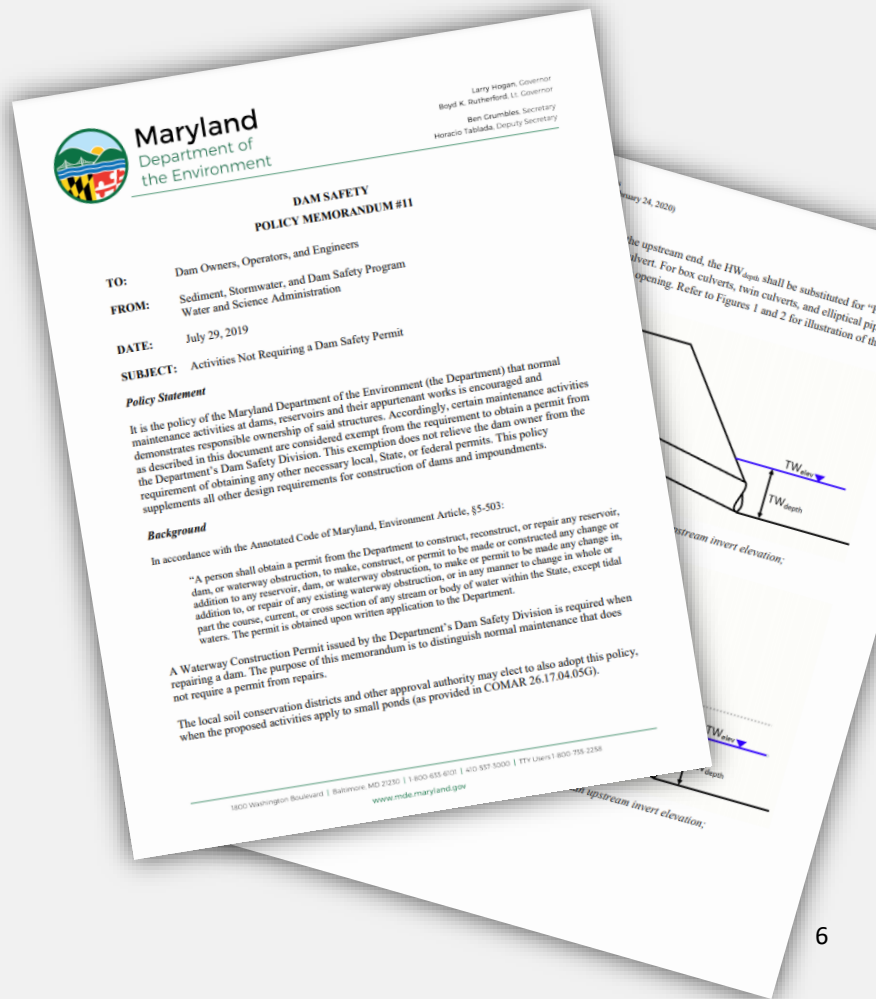
WHEN DO I NEED A PERMIT?

Permits Are Required When:

- Any change is made to the dam, levee, reservoir, and appurtenant works
  - Includes changes such as adding a forebay, performing soil borings, or adding smart SWM technology
  - Includes in-kind replacement of existing components
  - Includes dam removals
  - Includes culverts that impound excessive amounts of water
    - Refer to Dam Safety Policy Memorandum No. 2
  - Does not include normal maintenance activities
    - e.g., mowing, debris removal, removing sediment (in the dry)
    - Refer to Dam Safety Policy Memorandum No. 11


Maryland
Department of the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

DAM SAFETY
POLICY MEMORANDUM #11

TO: Dam Owners, Operators, and Engineers

FROM: Sediment, Stormwater, and Dam Safety Program
Water and Science Administration

DATE: July 29, 2019

SUBJECT: Activities Not Requiring a Dam Safety Permit

Policy Statement

It is the policy of the Maryland Department of the Environment (the Department) that normal maintenance activities at dams, reservoirs and their appurtenant works is encouraged and demonstrates responsible ownership of said structures. Accordingly, certain maintenance activities as described in this document are considered exempt from the requirement to obtain a permit from the Department's Dam Safety Division. This exemption does not relieve the dam owner from the requirement of obtaining any other necessary local, State, or federal permits. This policy supplements all other design requirements for construction of dams and impoundments.

Background

In accordance with the Annotated Code of Maryland, Environment Article, §5-503:

"A person shall obtain a permit from the Department to construct, reconstruct, or repair any reservoir, dam, or waterway obstruction, to make, construct, or permit to be made or constructed any change or addition to any reservoir, dam, or waterway obstruction, or in any manner to change in whole or addition to, or repair of any existing waterway obstruction, or in any manner to change in whole or part the course, current, or cross section of any stream or body of water within the State, except tidal waters. The permit is obtained upon written application to the Department.

A Waterway Construction Permit issued by the Department's Dam Safety Division is required when repairing a dam. The purpose of this memorandum is to distinguish normal maintenance that does not require a permit from repairs.

The local soil conservation districts and other approval authority may elect to also adopt this policy, when the proposed activities apply to small ponds (as provided in COMAR 26.17.04.05G).

1800 Washington Boulevard | Baltimore, MD 21230 | 1-800-633-6101 | 410-537-3000 | TTY Users 1-800-735-2258
www.mde.maryland.gov

Permits Are Required When:

- Dam or Small Pond?
  - Small ponds may receive approval by local Soil Conservation District
- A dam when answer is “yes” to <u>any</u> of the following
  - Over 20 feet tall (upstream toe to crest)
  - Drainage area over 1 square mile
  - Maximum Storage greater than 50 acre-feet
  - High or Significant Hazard
- Certain Small Ponds <u>must</u> be permitted through Dam Safety if:
  - Located in Use III watershed (regulation change under way), or
  - Located in the Jones Falls, Gwynns Falls, or Herring Run watersheds in Baltimore City or County

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HOW DO I GET A PERMIT?

How to Apply for a Dam Safety Permit:

- Joint Federal/State Application for the Alteration of Any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland
  - aka “JPA”
  - Even if MDE Wetlands/Waterways review is not needed
- Be sure to provide seven (7) copies
- Still paper….. But supporting dam-specific files can be directed to MDE.DamPermits@Maryland.gov
- Land owner must sign application
- Include contiguous property owner notifications
- Be sure to check “Dam” or “Small Pond”

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WHAT SHOULD I SUBMIT?

Every Project is Unique:

- Common Question: “What do you need”?
  - Response: “Well, it depends on what you are doing”
- Important to hire qualified engineer to mutually develop scope
  - “It’s not in scope” is not an acceptable response
- Bring Dam Safety in early
  - We may be able to advise on scope or permitting expectations based on past project experience

General Submission Expectations:

- Detailed construction plans
- Project specifications
- Basis of Design Report (to include the following items. Discipline specific reports should be included as an appendix, as needed, and must include all supporting calculations)
  - Summary of proposed work and project goals
  - Summary of design standards applicable to project
  - Hazard Classification Statement
  - Dam Inspection Report (for existing dams)
  - Hydrology & Hydraulics Report
  - Dam Breach Analysis and Hazard Classification Report
  - Geotechnical Engineering Report
  - Structural Engineering Report
- Operation and Maintenance Plan
- New/Updated Emergency Action Plan
- Memorandum of Land Restrictions
- Engineer-in-Charge (EIC) Affidavit and resume

Design Standards:

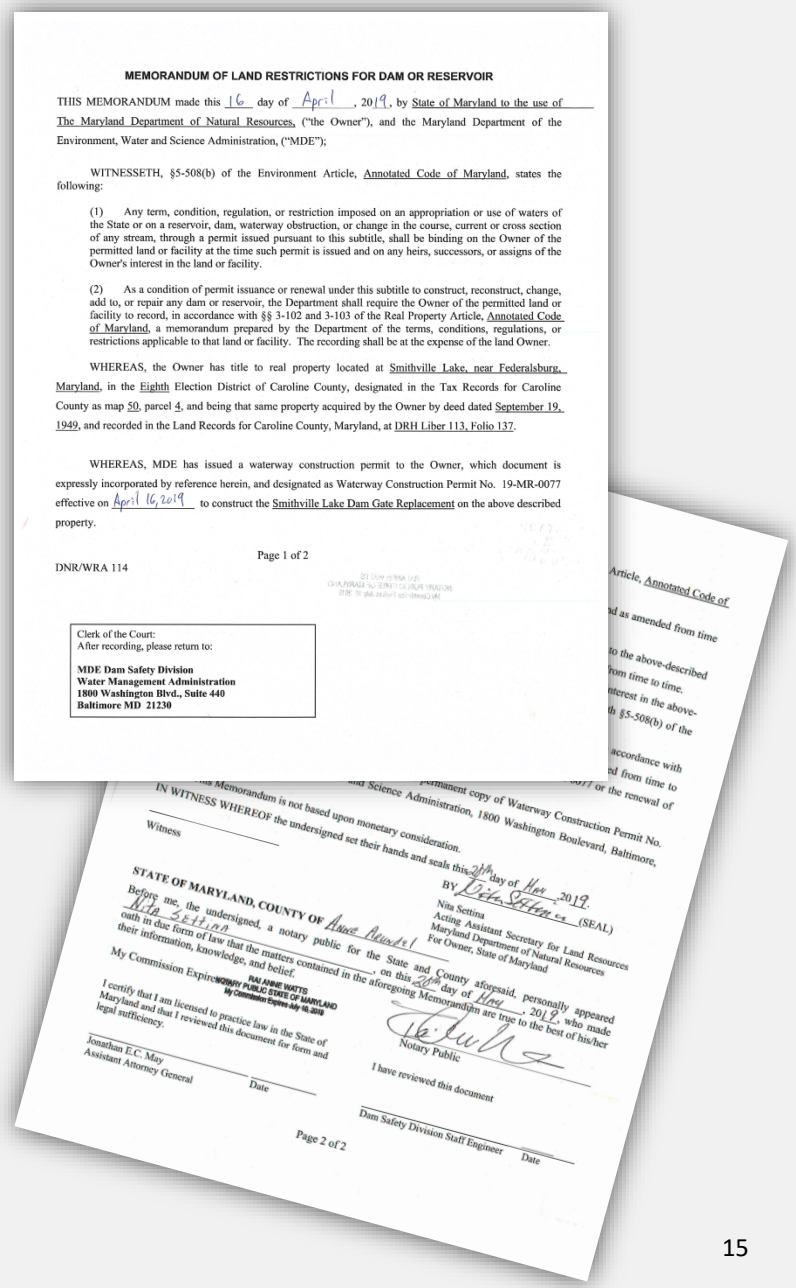
- General requirements of COMAR 26.17.04.05 apply in all cases
- COMAR provides limited design criteria
  - Written assuming that engineers understood and would select appropriate criteria (e.g., USACE, USBR, FERC, NRCS)
    - Design reports include commentary on why a certain criteria is appropriate
  - Dam Safety can advise on generally accepted criteria/practices
  - Development of new guidance and regulations is on the horizon
  - Refer to Dam Safety Policy Memos for additional guidance
- Small Ponds
  - USDA Natural Resources Conservation Service, Maryland Conservation Practice, Standard Pond Code 378 (January, 2000)
    - Dam breach analysis in accordance with Dam Safety criteria
    - Pre-cast concrete risers must be monolithic
    - Filter diaphragm must be used (no anti-seep collars)

Engineer-in-Charge:

- Per COMAR 26.17.04.05, the engineer-in-charge (EIC):
  - Responsible for assuring that the designs conform “to the high standards of professional competence in the specialty of dam design and construction”;
  - Assure that construction is carried out in strict accordance with the approved plans and specifications and under the provisions of the permit; and
  - Must submit a resume of all previous dam design and construction experience, and a written certification of qualification to act as the engineer-in-charge.
- Expectation is that EIC will have responsible charge for from project planning to construction closeout
- Responsible for periodic inspections, documenting the work, preparing as-built plans and completion reports

Memorandum of Land Restrictions:

- Required by Environment Article § 5-508
- Legal instrument filed with land records
  - Affirms that current and future dam owners will abide by applicable laws, regulations, and permit conditions.
  - Provides right-of-entry to Dam Safety to perform necessary inspections
  - Helps ensure that future owners are aware of their obligations
  - Must be signed by dam owner(s)
- Some owners will want legal or deed reviews before signing, be sure to get this in front of them early to avoid delays



MEMORANDUM OF LAND RESTRICTIONS FOR DAM OR RESERVOIR

THIS MEMORANDUM made this 16 day of April, 2019, by State of Maryland to the use of The Maryland Department of Natural Resources, ("the Owner"), and the Maryland Department of the Environment, Water and Science Administration, ("MDE");

WITNESSETH, §5-508(b) of the Environment Article, Annotated Code of Maryland, states the following:

(1) Any term, condition, regulation, or restriction imposed on an appropriation or use of waters of the State or on a reservoir, dam, waterway obstruction, or change in the course, current or cross section of any stream, through a permit issued pursuant to this subtitle, shall be binding on the Owner of the permitted land or facility at the time such permit is issued and on any heirs, successors, or assigns of the Owner's interest in the land or facility.

(2) As a condition of permit issuance or renewal under this subtitle to construct, reconstruct, change, add to, or repair any dam or reservoir, the Department shall require the Owner of the permitted land or facility to record, in accordance with §§ 3-102 and 3-103 of the Real Property Article, Annotated Code of Maryland, a memorandum prepared by the Department of the terms, conditions, regulations, or restrictions applicable to that land or facility. The recording shall be at the expense of the land Owner.

WHEREAS, the Owner has title to real property located at Smithville Lake, near Federalsburg, Maryland, in the Eighth Election District of Caroline County, designated in the Tax Records for Caroline County as map 50, parcel 4, and being that same property acquired by the Owner by deed dated September 19, 1949, and recorded in the Land Records for Caroline County, Maryland, at DRH Liber 113, Folio 137.

WHEREAS, MDE has issued a waterway construction permit to the Owner, which document is expressly incorporated by reference herein, and designated as Waterway Construction Permit No. 19-MR-0077 effective on April 16, 2019 to construct the Smithville Lake Dam Gate Replacement on the above described property.

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DNR/WRA 114

Clerk of the Court:
After recording, please return to:

MDE Dam Safety Division
Water Management Administration
1800 Washington Blvd., Suite 440
Baltimore MD 21230

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Common Pitfalls:

- Application and MLR must be signed by owner(s)
  - Not easement holder, or property management company
- Identify and address current deficiencies
- Stormwater Design Report may not be adequate
- Reports should:
  - Include engineering evaluations and recommendations
  - Seek to avoid excessively conditional statements
  - Do more than transmit data
- Reliance on older approved plans/reports/analyses may not be acceptable

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I NEED MY PERMIT, NOW!

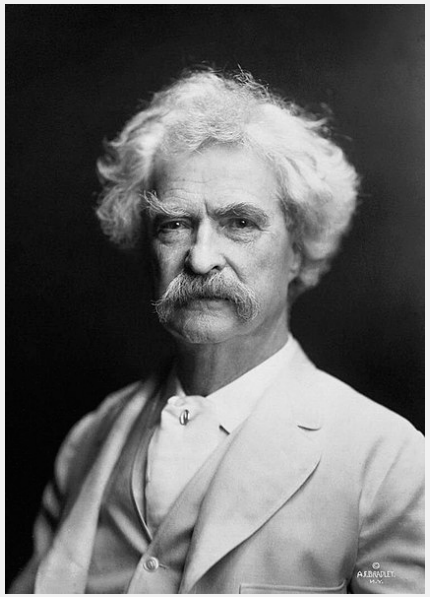
Permitting Timeframe:

- Elements of permitting that add time:
  - COVID and telework issues
  - Application completeness
  - Public Notice requirements
  - Coordination with other agencies
  - Staff workload
  - Permit volume

- What we are doing to improve:
  - Outreach/Education
  - Policy Memos
  - Process improvement activities
  - Regulatory change
  - Advocating for additional staff

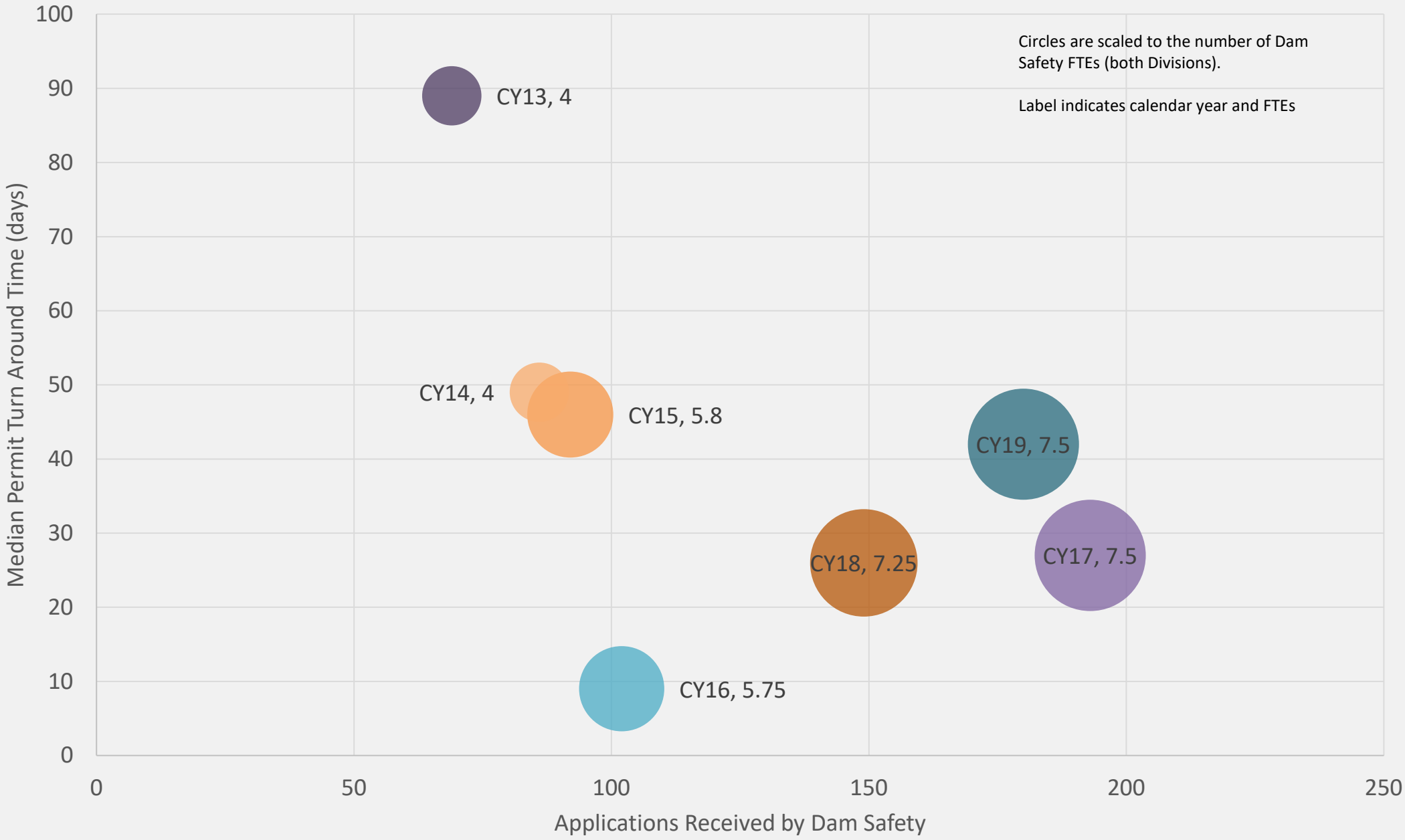
"Continuous improvement is better than delayed perfection"

Samuel Clemens (Mark Twain)

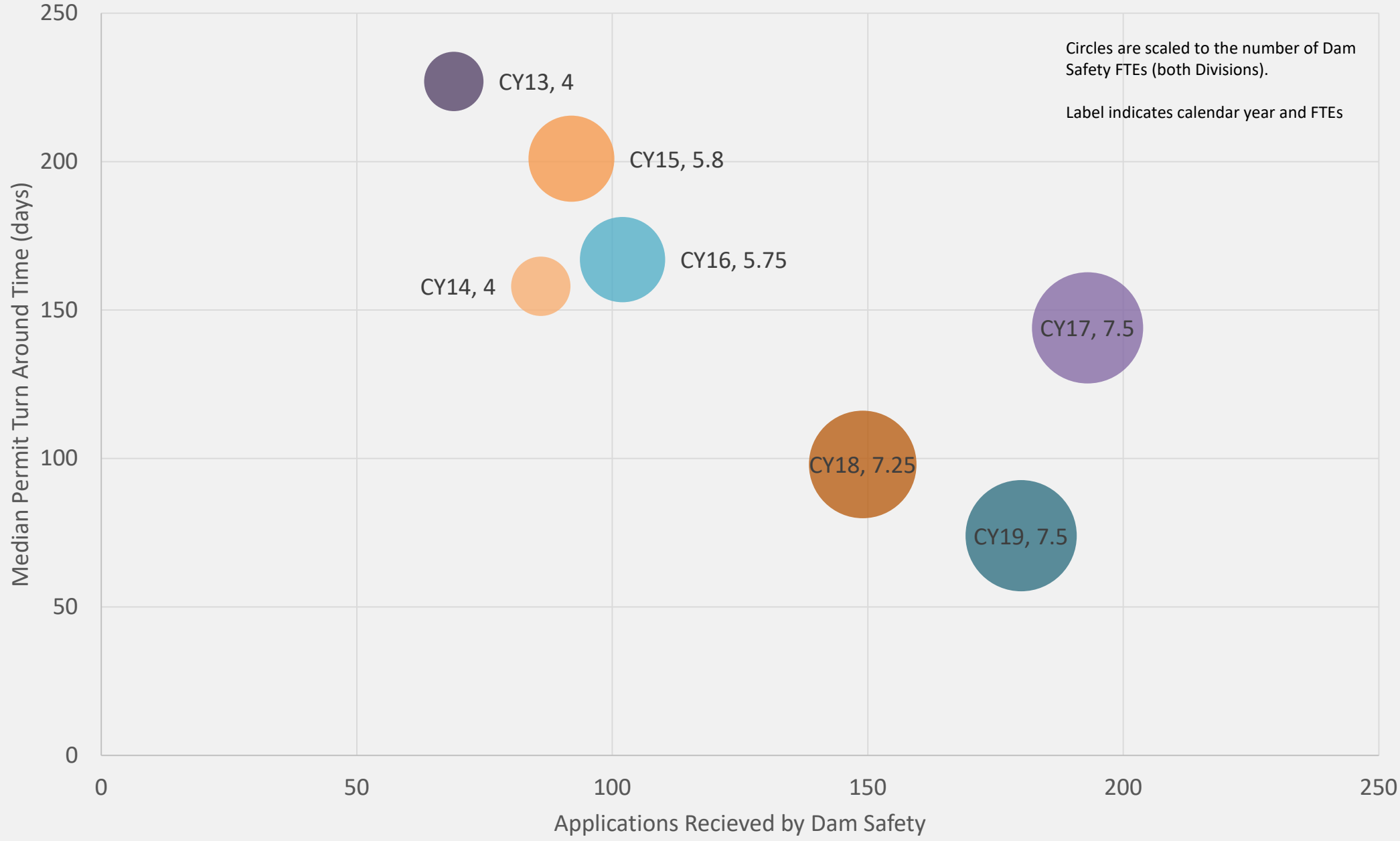


A portrait of the American writer Mark Twain taken by A. F. Bradley in New York, 1907 Source: Wikipedia Public Domain

Permit Exemption Turn Around Time and Volume CY13 to CY19



Permit Issued Turn Around Time and Volume CY13 to CY19



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WHAT TO EXPECT ONCE YOU HAVE A PERMIT.

Permit Conditions / Expectations:

- EIC will remain engaged and oversee construction
- Pre-construction kick-off to discuss permit requirements
- Weekly progress reports
- Keep Dam Safety informed of progress, submittals, RFIs, etc
- Consult with Dam Safety if changes are requested/required
- Upon completion of work:
  - Request to begin filling/use
  - As-built plan set
  - Project completion report
  - Project completion certification

MDE File Photos

Thank You

John.Roche@Maryland.gov
410-537-3552
mde.maryland.gov/DamSafety

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