

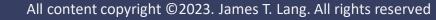
# The Virginia Dam Safety Act Jim Lang March 31, 2023

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## What We Will Cover Today

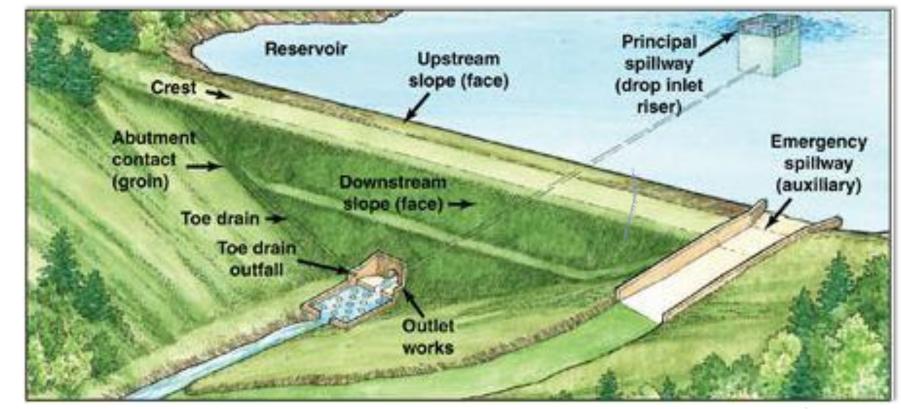
- Causes of dam failure
- Federal law and Virginia law
- Liability After a Dam Failure
- Unsafe Dams
  (Imminent/Nonimminent Danger)
- Right of Entry
- Temporary Stop Work Orders
- Enforcement
- Criminal Penalties
- Civil Penalties





### Main Causes of Dam Failure

- Over topping (water spilling over the top)
- Foundation defects
- Cracking (often caused by natural settling)
- Inadequate
  maintenance



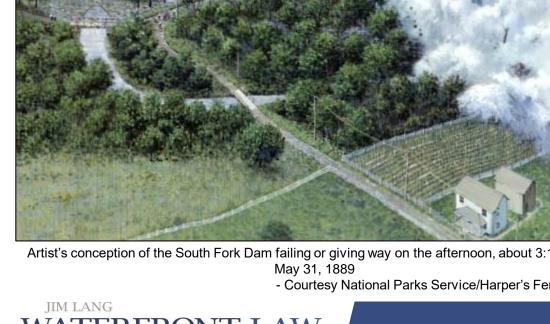
Courtesy U.S. Forest Service



### Dam Failure in Johnstown, PA (1889)



Artist's conception of the South Fork Dam failing or giving way on the afternoon, about 3:15 pm, of May 31, 1889 - Courtesy National Parks Service/Harper's Ferry Center



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- 2,200 people killed
- "Huge trees were snapped off or uprooted one after another and went plunging off in the torrent. . .. The water advanced like a tremendous wall. Giant chunks of the dam, fence posts, logs, boulders, whole trees, and the wreckage of [a home] were swept before it, driven along like an ugly grinder that kept building higher and higher."
  - David McCullough, The Johnstown Flood, page 102

### St. Francis Dam Failure, Los Angeles County (1928)

- Designed by William Mulholland (207 feet tall)
- Deadliest and worst civil engineering failure of the 20<sup>th</sup> century
- Waves of water traveled 54 miles to the Pacific Ocean
- Killed 385 people
- 1,000 houses damaged or destroyed
- Thousands of acres of land, bridges, roads, farms, orchards impacted

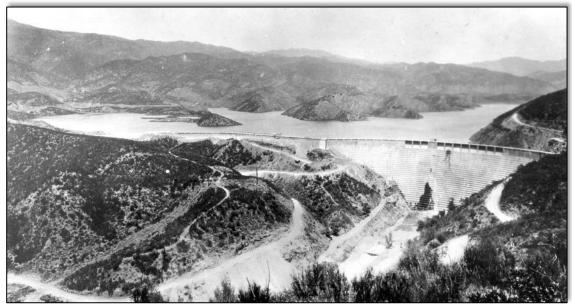


Photo credit: By Stearns, H.T. USGS - This file was derived from: The St. Francis Dam.jpg, Public Domain, https://commons.wikimedia.org/w/index.php?curid=10829037

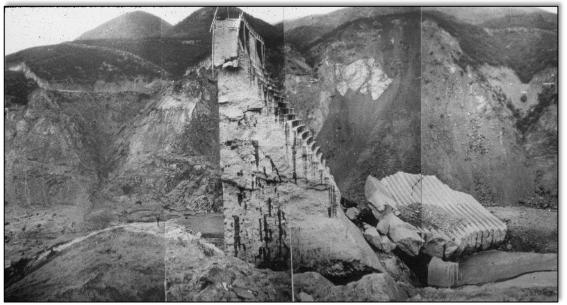


Photo credit: By Vodkamike3 - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=83963022



## Dam Failure in Teton Idaho (1976)

- Designed by Bureau of Reclamation
- 305 feet tall/Teton River
  - Flood control
  - Hydropower
  - Irrigation
  - Drinking water
- Failed as the dam was filling for the first time
- Killed 11 people / \$400M in damages
- Flooded 5 counties, 300 square miles, traveled 155 miles downstream



Photo credit: WaterArchives.org from Sacramento, California, USA, CC BY-SA 2.0 <a href="https://creativecommons.org/licenses/by-sa/2.0">https://creativecommons.org/licenses/by-sa/2.0</a>, via Wikimedia Commons



### Legal Response to Dam Failures

- Common law
- Federal Dam Inspection Program (33 USC §§ 467 to 4670)
  - FEMA
- Regulations (7 CFR § 1724.55)
- Virginia Dam Safety Act (Va. Code Va. Code §§ 10.1-604 to 613.6)
  - Virginia Soil and Water Conservation Board ("Board")
  - Department of Conservation and Recreation ("Director")
- Regulations (4 VAC 50-20-10 to 4 VAC 50-20-400)





## **Owner & Operator Liability After Dam Failure**

- Common law
  - Nuisance
  - Negligence
  - Trespass
- Strict liability (Va. Code §10.1-613.4)
  - Owner liable
  - Operator liable
  - All personal injury and all property damage
  - Even if dam is fully compliant with Va Dam Safety Act

Photo Credit Everett/shutterstock.com





## Unsafe Dams (1 of 2)

- Imminent Danger (Va. Code §10.1-608)
  - If the owner does not take appropriate and timely action the Governor has authority to take immediate appropriate action without a hearing
  - Attorney General can sue owner to recover to expenses for action taken by Governor
  - Lien to secure owner's obligation to pay
  - Owner's defense: the dam was known to be safe

Photo credit: melissamn/shutterstock.com



## Unsafe Dams (2 of 2)

- Nonimminent Danger (Va. Code §10.1-609)
- Virginia Soil and Water Conservation Board (VSWCB) issues report to owner after safety inspection
- Owner shall implement recommendation in the report
- If owner refuses, Director can issue an administrative order to owner
- Owner can contest the order at hearing before the VSWCB
- Owner can appeal VSWCB'S decision to Circuit Court
- Civil and/or criminal penalties if owner defies the order and does not contest the order at VSWCB





#### Right of Entry (Va. Code §10.1-610)

- VSWCB's regulators can enter to inspect and perform tests
- Reasonable times
- Reasonable circumstances
- Will seek consent
- If consent withheld, seek warrant
- Probable cause to believe there is a dam on the property "which is not known to be safe" (affidavits)



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## Temporary Stop Work Orders (Va. Code §10.1-612.1)

- Director of DCR may issue the order
- Grounds
  - Construction or alteration without necessary approvals
  - Construction or alteration not in accordance with approvals
- Order will have time/date of hearing before VSWCB to show cause why the order should be vacated (within 15 days)
- Owner can appeal results of show cause hearing to Circuit Court
- If owner defies the order
  - Injunction, civil, criminal penalties



Oroville, CA Dam and Spillway Feb 2017 Photo credit: Public Domain



## Enforcement (Va. Code §10.1-613)

 VSWCB may sue any person who fails or refuses to comply with an order

- Remedy
  - Injunction to halt unlawful construction, modification, operation, maintenance
  - Owner pays the VSWCB's expenses
  - · Lien on the owner's land



#### Criminal Penalties (Va. Code §10.1-613.1)

- Class 3 misdemeanor
  - No jail time
  - \$500 fine maximum, per day following service of the notice of violation
  - \$25,000 total maximum
- Operate, construct or alter a dam without approval
- Violate an order
- Obstruct the VSWCB, its agents or employees

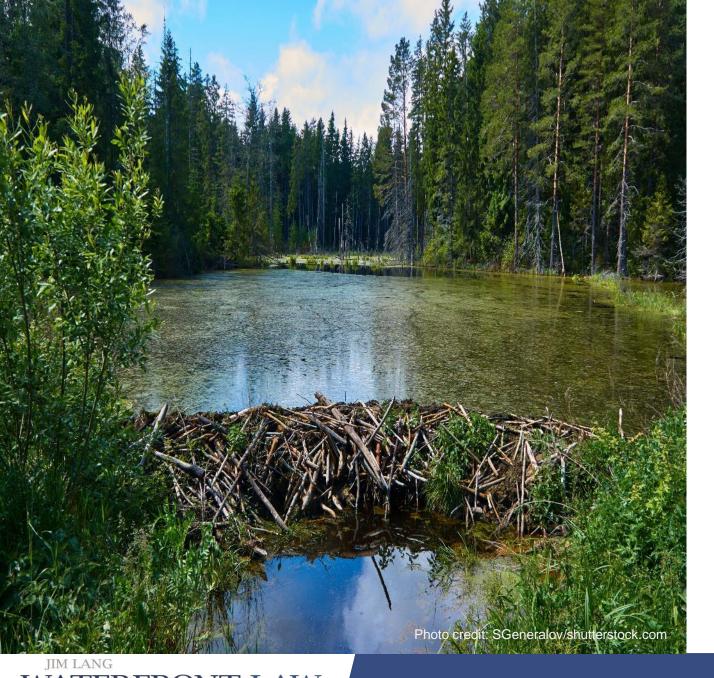


## Civil Penalties (Va. Code §10.1-613.2)

- \$500 per day NTE maximum of \$25,000
- VSWCB sends written penalty notice to owner
- Owner can contest at hearing before VSWCB
- Owner can appeal VSWCB decision to Circuit Court



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### **Additional Resources**

- DCR website: <u>https://www.dcr.virginia.gov/dam-</u> <u>safety-and-floodplains/dam-</u> <u>safety-index</u>
- Virginia Law and Regulation Regarding Dam Safety: <u>https://www.waterfrontpropertylaw</u> <u>.com/blog/posts/virginia-law-and-</u> regulation-regarding-dam-safety/
- Virginia Law on a Dam Owner's Liability After a Dam Failure: <u>https://www.waterfrontpropertylaw</u>.com/blog/posts/virginia-law-on-adam-owner-s-liability-after-a-damfailure/

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## Thank You & Questions

(757) 502-7326 jlang@pendercoward.com





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