

It's Complicated...

Dam Removal Permitting in Massachusetts



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Dam Removal/ Eco-Restoration 101 Training
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Today you will learn...

- How permitting for dam removal works in Massachusetts
- That the design and permitting processes are linked
- That permitting can be time consuming and costly...but doesn't have to be with early planning & coordination
- Landowner participation is critical



What is a permit?

An official document giving someone authorization to do something

What's the purpose?

To protect diverse resources (e.g., sensitive areas/species, historical assets)

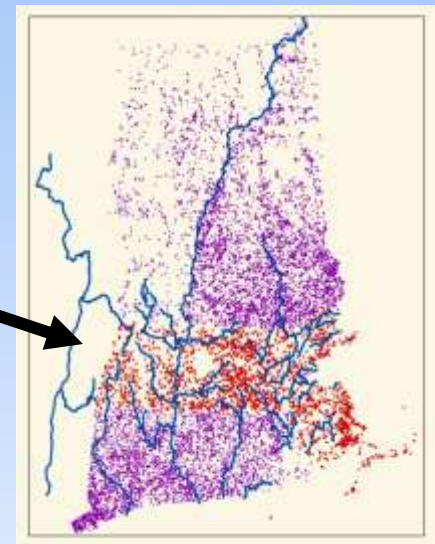
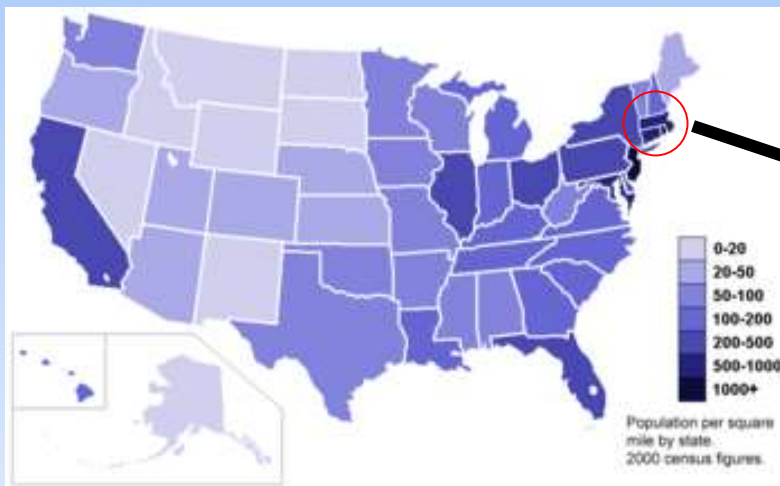
To protect rights (e.g., public use and access)

To help enforce laws and regulations

Regulatory Climate

(The Massachusetts Perspective)

- New England states passed some of the first inland and coastal wetland protection laws
- Strong Home Rule tradition - *local*, state, and federal review
- Densely populated: lots of infrastructure, rich cultural history, many abutters, and diverse opinions

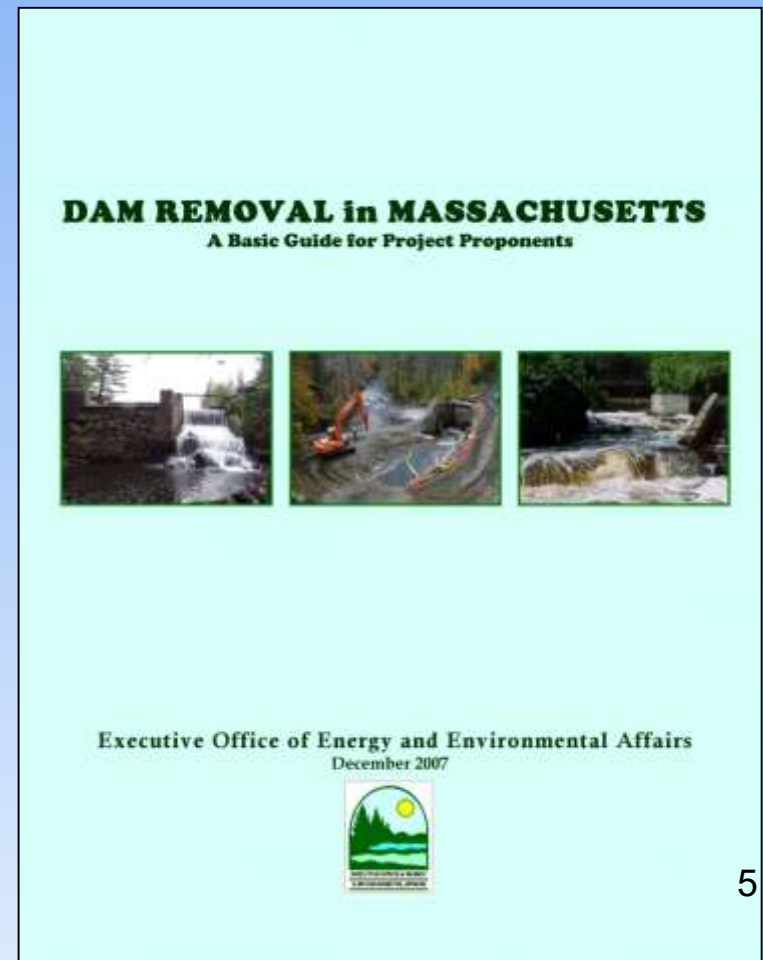
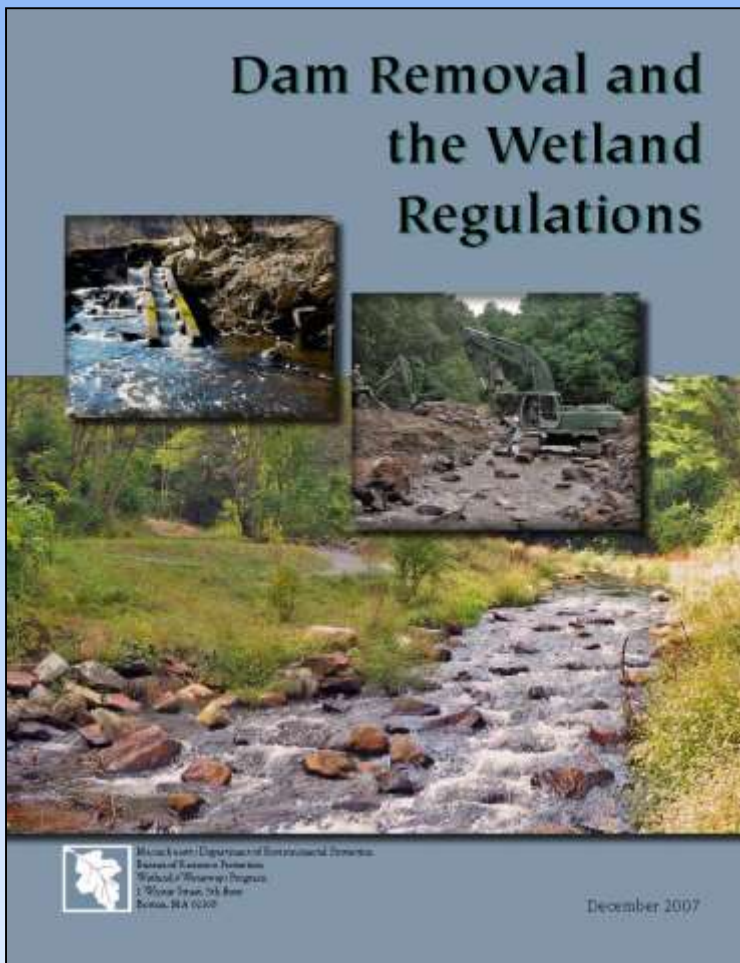


Massachusetts Dams

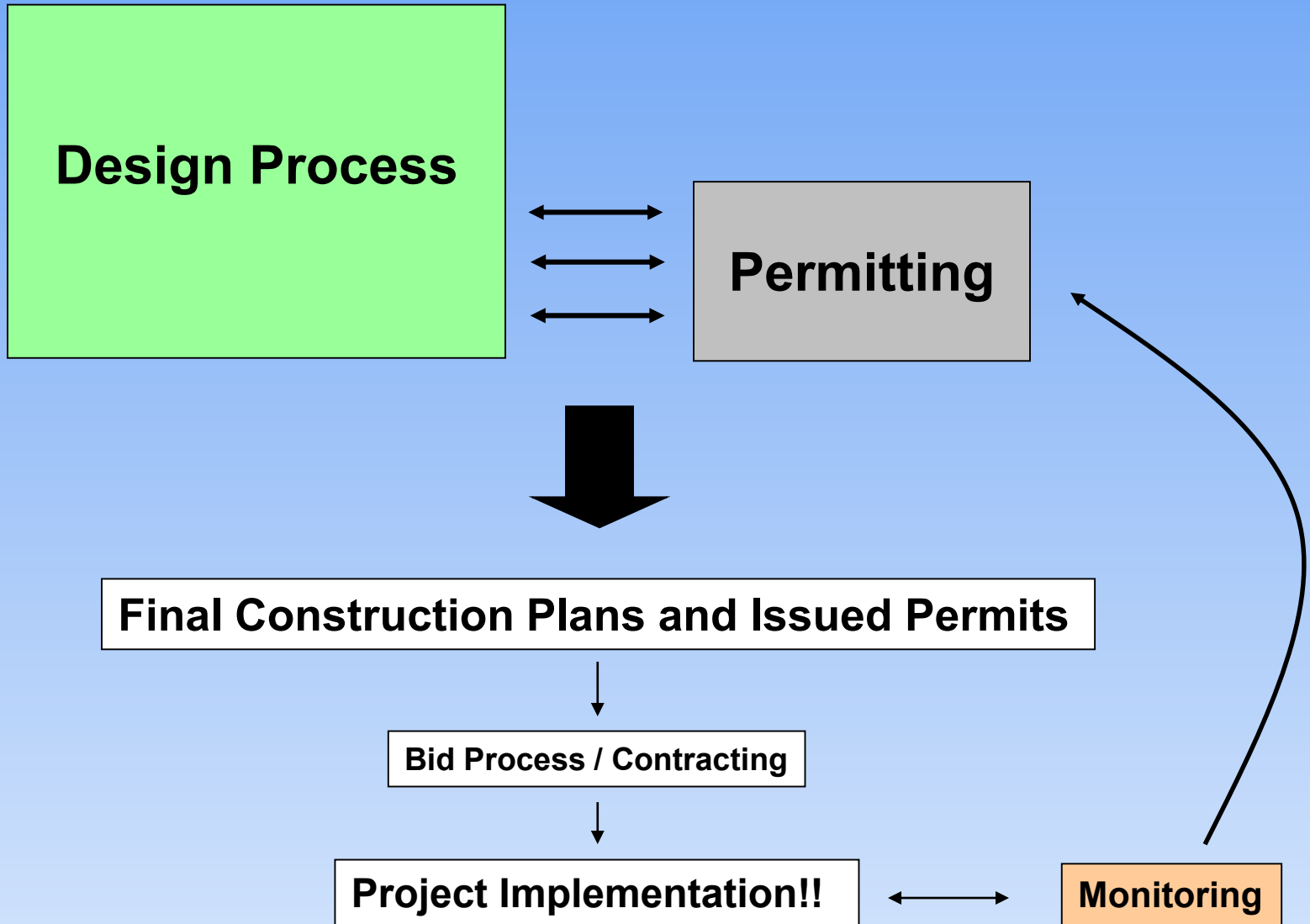
Regulatory Climate

Over the past decade, there has been significant improvement in the climate & culture for dam removal permitting.

- MassDEP “streamlining” in 2014 / MEPA streamlining in 2023



The Big Picture!



Permitting...Major Steps and Approvals

Define Project



Agency Consultation and Feedback

MEPA

(Consider requesting a pre-filing consultation)

Sediment

401, 404, Ch. 91

Dam Safety

Ch. 253

Endangered and Sensitive Species

MESA / Section 7 / TOY

**Historical /
Archeological**

**PNF - NHPA s. 106 /
M.G.L. Ch.9, s. 26-27C**

Wetlands

**NOI-RO.C /
401 / 404**

Waterways Access

Ch. 91 / s. 10

Construction Related Issues

NPDES, Solid Waste, Local permits

**Federal Agency
Environmental Compliance**

NEPA

“Other” – Ch. 85 bridge review, DOT access, DMF fishways, etc.

To make permitting easier....

Define Project



Consultation

Sediment

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Historical /
Archeological

Federal Agency Impacts

Construction

- Establish clear **goals** – future desired outcomes (e.g., provide fish passage, improve WQ, eliminate risks)
- Establish clear **objectives** – actions to achieve goals (e.g., remove the full vertical extent of the dam, dredge sediment, stabilize infrastructure)
- Describe **existing and proposed conditions** – identify resources and predict anticipated changes (via surveys, base mapping, delineations)
- Define **construction methods, best practices, and sequence of work** – how will the work get done (e.g., construction sequence, staging, access, erosion control, water control, dewatering)
- Quantify **impacts** to resource areas – (e.g., permanent, temporary, direct, indirect)
- Read and understand the **regulations**

The regulatory process is iterative. It will evolve and be refined as the project & design advances.

Promote Project Benefits!



1. Restore River Processes
2. Provide Fish Passage
3. Improve Water Quality
4. Improve Habitat Conditions
5. Eliminate Risks (Public Safety / Infrastructure / Sediment)
6. Maintain or Improve Aesthetics
7. Community Benefits / Public Access
8. Environmental Legacy

Note: These are all things environmental regulations and regulators support too!!

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Federal Agency Impacts

Construction

- Engage agency permitting staff as early as possible (at all levels)
- Get the ball rolling ASAP (Project Notification Form [PNF], Jurisdictional Determinations)
- Coordination and feedback usually begins with...
- Filing under the **MA Environmental Policy Act (MEPA)**
 - Know triggers & thresholds / consider EJ areas
 - May seek waiver of mandatory EIR
 - If qualifies as an Ecological Restoration Project, review may be exempt under 11.01(2)(b)(4)
- Review timeline: ~3 months; 6+ months for EIR
- Result > permitting coordination and a list of next steps...



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Construction

- Critical in terms of project costs, strategy, and potential impacts
- Complicated in terms of regulations, requirements, and options (401, 404, Chapter 91)
- **s.401 Water Quality Certification** Regulations (314 CMR 9.00) drive the process
- Considers the **quantity** and **quality** of impounded sediment (and upstream/downstream conditions)
- 401 WQC dredge permit is applicable when >100 CY of sediment is present
- **s.404 Dredge/Fill** approval by US Army Corps of Eng.
- Management options stem from potential impacts to ecology, human health, and public safety (infrastructure)
- Review timeline: Up to 1 year



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Federal Agency Impacts

Construction

- The Department of Conservation & Recreation (DCR) Office of Dam Safety (ODS)
- Dam Safety Orders often drive many projects
- Dams have hazard and condition ratings
- Jurisdictional Dam:
 - >6 feet high or impounds >15 acre-feet
- **Chapter 253 permit** to construct, repair, or alter
- Requires H&H calcs and ODS review
- Unsafe dams must be inspected more frequently
- Review timeline: ~3 months

HAZARD POTENTIAL CLASSIFICATION TABLE

High Hazard Potential (Class I)	Dams located where failure will likely cause loss of life and serious damage to home(s), industrial or commercial facilities, important public utilities, main highway(s) or railroad(s).
Significant Hazard Potential (Class II)	Dams located where failure may cause loss of life and damage to home(s), industrial or commercial facilities, secondary highway(s) or railroad(s) or cause interruption of use or service of relatively important facilities.
Low Hazard Potential (Class III)	Dams located where failure may cause minimal property damage to others. Loss of life is not expected.

FORMAL INSPECTION FREQUENCY

Hazard Potential	Inspection Frequency
Low	ten years
Significant	five years
High	two years



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Construction

- State level: **Natural Heritage & Endangered Species Program (NHESP)**
- Federal level: **USFWS** (Section 7 Evaluation) & **NOAA** (EFH review)
 - IPaC: <https://ipac.ecosphere.fws.gov/>
 - EFH: <https://www.habitat.noaa.gov/apps/efhmapper/>
- If project is located within mapped habitat – management plan and no-take actions may be needed
- MESA, DMF, DFW filings are **embedded in ER-NOI**
- Time of year (TOY) restrictions (freshwater and marine)
- Review timeline: 1+ month



Image: MA NHESP



Image: MA NHESP



Image: ME IFW

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Construction

- Wetlands Protection Act (310 CMR 10.00) is administered locally by **Conservation Commissions**, with DEP support (typically after other approvals).
- Dam removal project file a **Notice of Intent (NOI)** and notify abutters
- Dam removals are specifically called out as an approved type of Ecological Restoration Project
- NOI quantifies changes (temporary and permanent) to regulated resource areas from the dam removal
 - Example: **Conversion** of Land Under Water (LUWW) to Bordering Vegetated Wetlands (BVW) in the former impoundment
- Approval is a standard **Order of Conditions** which contains measures to minimize or avoid impacts to resource areas (BMPs). DEP 2014 revisions make local approval *almost* automatic (except when local bylaws).
- Wetland impacts are also reviewed under s.401 WQC and s.404 approvals
- Review timeline: ~3 months



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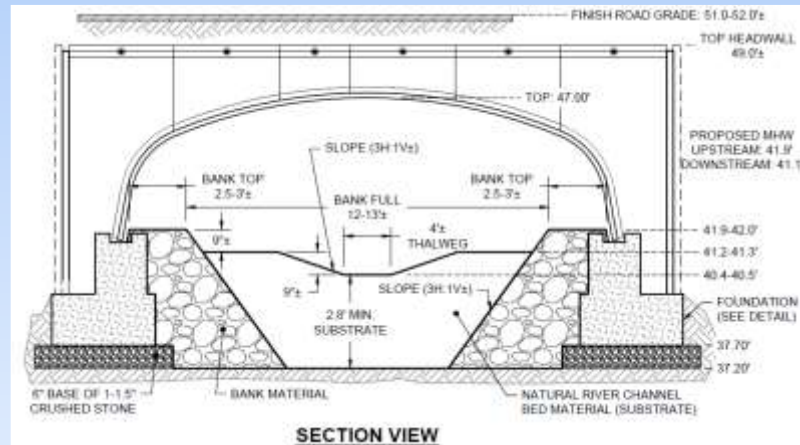
Waterways Access

Historical /
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Federal Agency Impacts

Construction

- Chapter 91 of MA General Laws - administered by the Waterways Division of MassDEP.
- **Permit versus License.** Is your site currently licensed?
- Determination of Applicability (can request during MEPA)
- License gets recorded at Registry of Deeds (like your OoC). Final plans on mylar.
- Few dam removal projects should require a license. Dredge Permit likely required. Can combine w/ 401 app. Needed for most culverts/bridges.
- Navigability also reviewed under s.10 Rivers & Harbors Act
- Review timeline: 6 to 12 months



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Federal Agency Impacts

Construction

- Process begins with PNF filing with MHC & Army Corps
 - State process coordinated by the **MA Historical Commission (MHC)** (M.G.L. Ch.9, s. 26-27C).
 - Federal process coordinated by the US Army Corps of Engineers (**s.106 of the National Historic Preservation Act**). Must notify regional tribal authorities (THPOs).
- Federal funding or approvals on your project? Who's your "lead federal agency"? When do you want one?
- If culturally significant...avoid, minimize, mitigate. Historical issues rarely stop a project, but could...
- Review timeline: 3 to 6 months; more if MOA is needed



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Federal Agency Impacts

Construction

- **National Environmental Policy Act (NEPA)**
- Done by the Lead Federal Agency (typically the largest federal funder, or the Army Corps)
- Public notice about potential environmental impacts
- Alternatives analysis. Similar in concept to MEPA.
- Steps to avoid, reduce, or mitigate for impacts
- Environmental Assessments (EA) or Environmental Impact Statement (EIS) sometimes required.
- Process varies by agency (e.g., USDA NRCS has many exemptions. NOAA has a Programmatic EIS process. USFWS has adopted NOAA's EIS but requires consultation. Army Corps will look to other federal agencies when possible.)
- Review timeline: 3 to 6 months

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Construction

- Various permits might dictate site-specific direction:
 - Local building permit - ask at Town Hall
 - **NPDES** - File a Stormwater Pollution Prevention Plan (SWPPP) with US EPA if your site is greater than 1 ac. of disturbance (often by contractor).
 - Solid Waste Disposal - If sediment must go to a landfill you will need to consult with the MassDEP Bureau of Solid Waste, and possibly EPA-R1
 - Others:
 - MA DMF Fishway Construction Permit
 - Asbestos Surveys (MassDEP)
 - MassDOT Ch. 85 bridge review
 - MassDOT Access Permit



Typical Permitting Roadmap

1.	PNF to MHC. MEPA EENF.	Historical review. Regulatory coordination and public notice.
2.	401 Water Quality Certification to MassDEP	Sediment
3.	US ACOE coverage under MA General Permit (404) (Will be last permit to be issued).	Sediment, dredge and fill in wetlands
4.	Chapter 253 Dam Removal to MassDCR Office of Dam Safety	Modification of jurisdictional structure
5.	Notice of Intent (NOI) to local Conservation Commission & MassDEP.	Wetland Protection Act and resource area impacts
6.	Chapter 91 Waterways review to MassDEP.	Sediment and navigability
7.	National Environmental Policy Act (NEPA) by <i>Lead Federal Agency</i> (if applicable). Env. Assessment / Section 7. Other project specific applicable approvals (MassDOT, MassDMF, etc.)	Federal environmental compliance. Local/state specialized review.
8.	NPDES to U.S. EPA (often by contractor)	Construction site (>1 acre) erosion and sediment control

Dam Ownership & Liability

LEGAL ISSUES IN DAM REMOVAL: A GUIDE FOR MASSACHUSETTS DAM OWNERS



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<http://clinics.law.harvard.edu/environment/files/2022/10/Dam-Removal-Paper-REVISED-FN-10-5-2022.pdf>

Dam Ownership & Liability

1. Liability from flooding
2. Legal rights to remove a dam despite opposition
3. Responsibility to mitigate for harm to existing river users
4. Who owns land exposed from draining the former impoundment
5. Responsibility for contaminated sediment clean-up and costs
6. Liability for unforeseen post-construction harms
7. Legal rights of partial dam owners

Questions?



2017/01/26

Balmoral Dam, Andover, MA