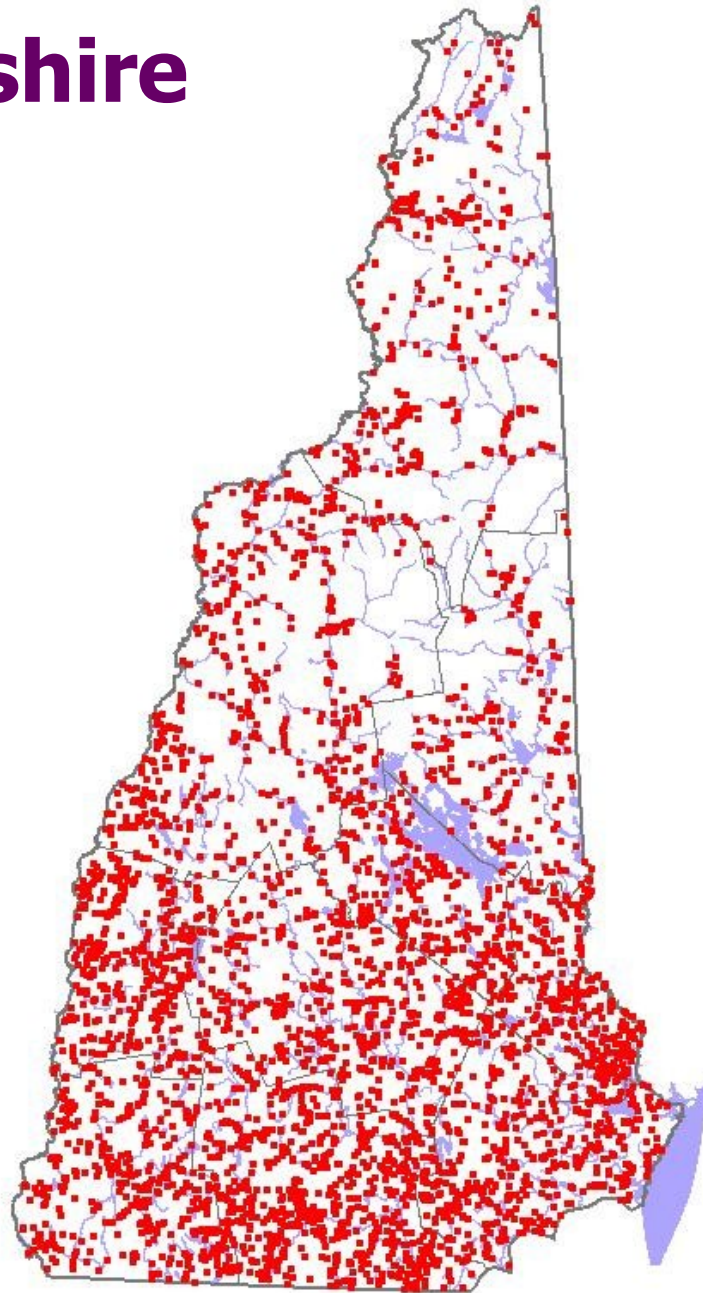


NEW HAMPSHIRE'S DAM PROGRAMS

James W. Gallagher, Jr., P.E
Chief Engineer
Dam Bureau
271-1961
James.Gallagher@des.nh.gov



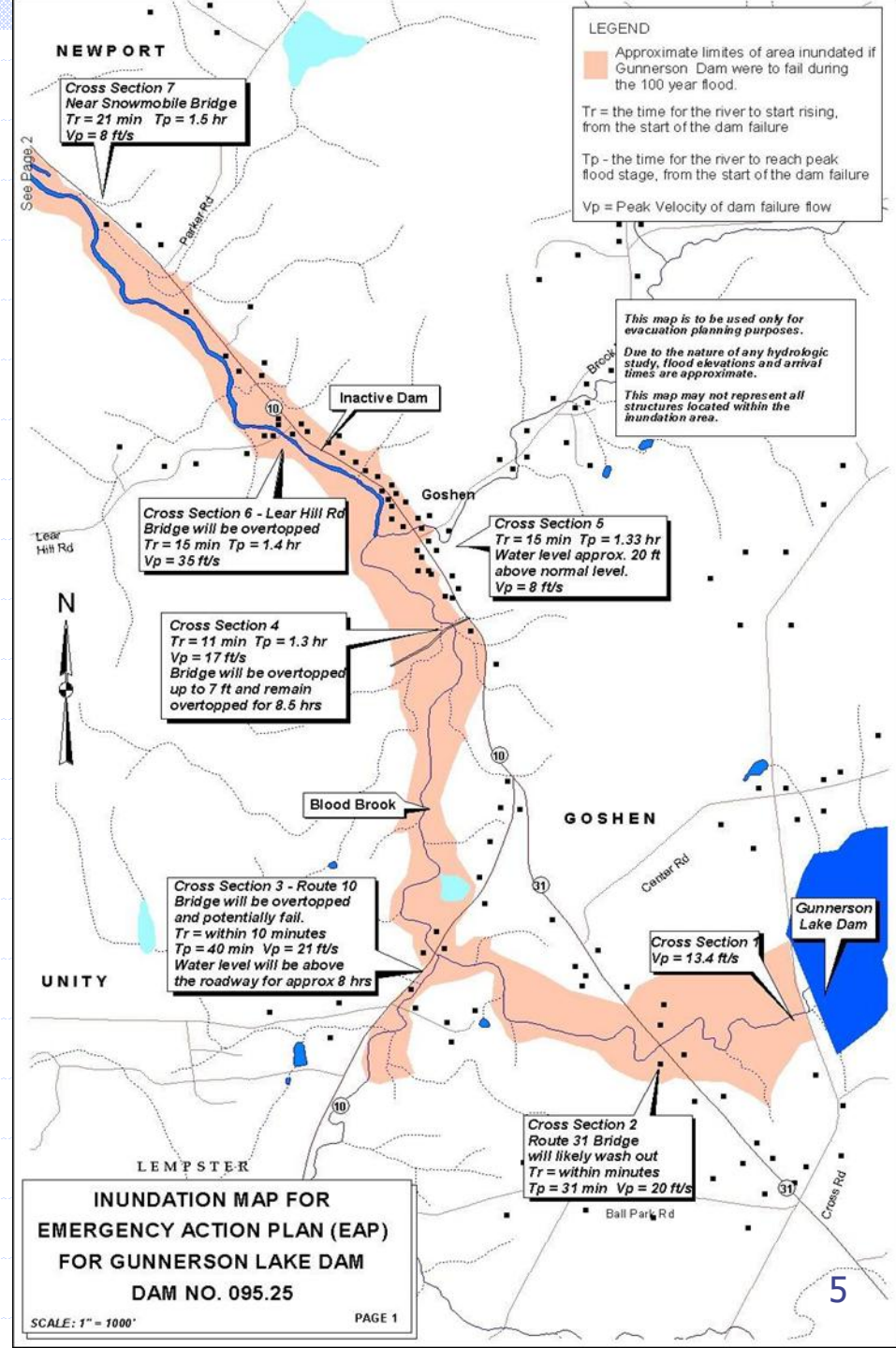
Dams in New Hampshire







Emergency Action Plans Inundation Mapping

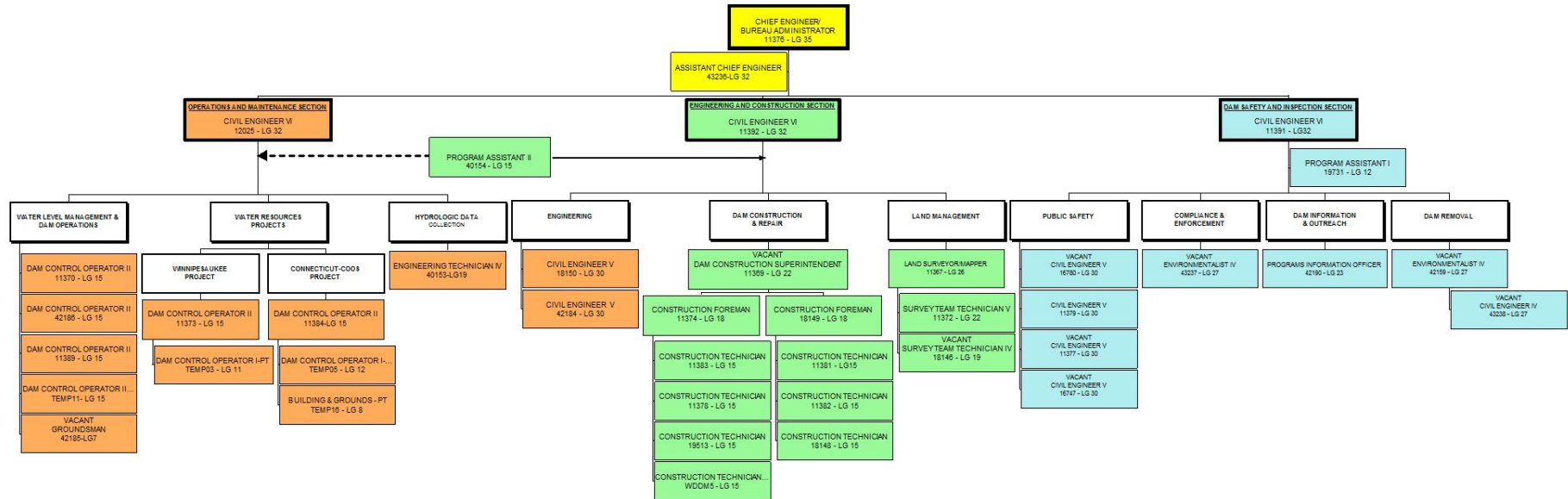


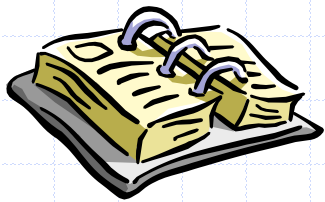
Population At Risk Downstream of High and Significant Hazard Dams In New Hampshire

- ◆ More than 26,000 houses
- ◆ More than 560 State Road Crossings
- ◆ More than 2,500 Town Road Crossings



DAM BUREAU ORGANIZATIONAL CHART





Periodic Inspection Schedule

Hazard Potential Classification	Frequency of Inspection (years)
High	2
Significant	4
Low	6



SATISFACTORY:

- **Acceptable performance under all expected loading conditions**
- **Minor maintenance items may be required**



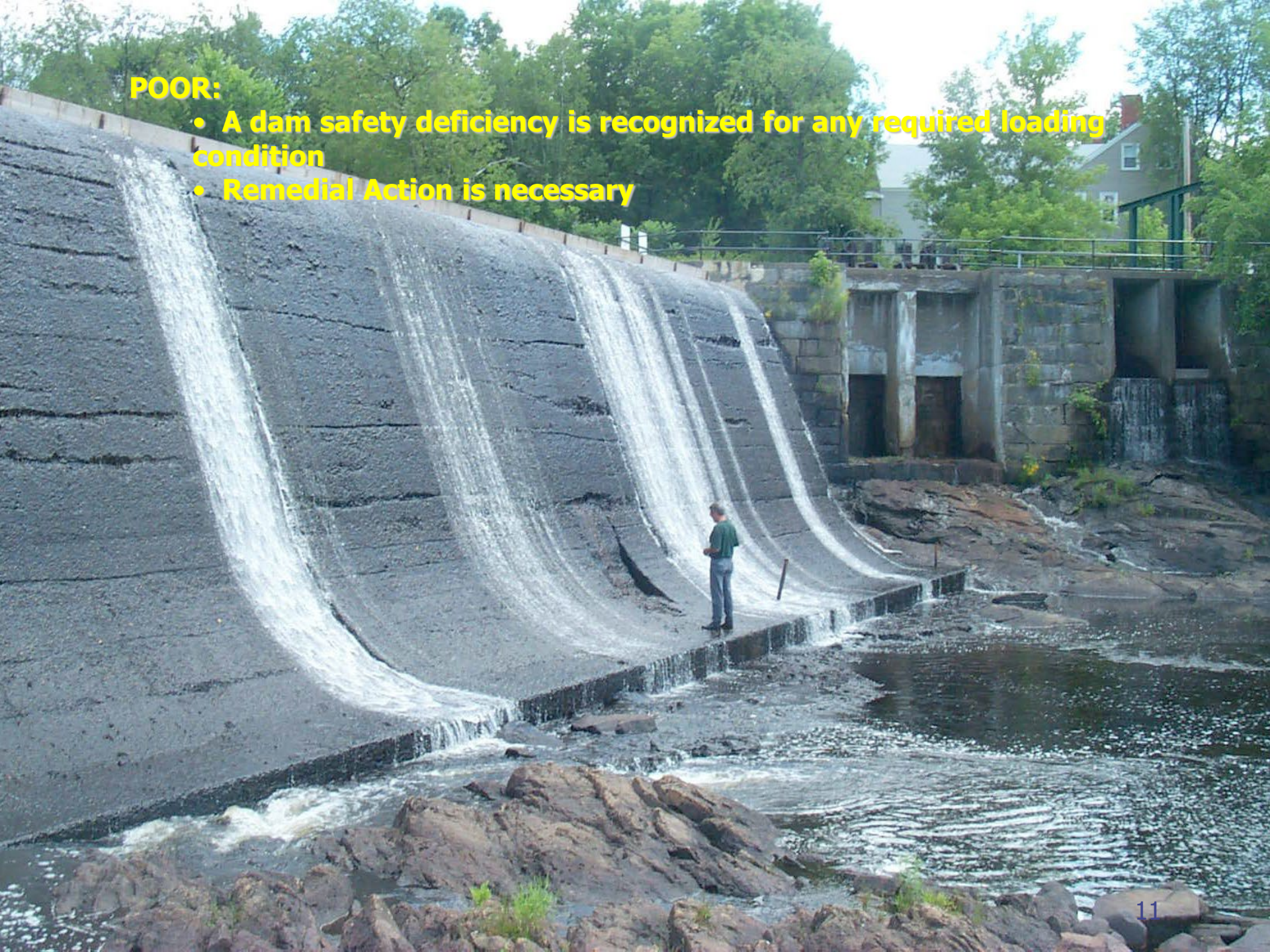
FAIR:

- Acceptable performance under all expected loading conditions
- Minor deficiencies that may require remedial action or investigation

08/04/2009

POOR:

- A dam safety deficiency is recognized for any required loading condition
- Remedial Action is necessary



UNSATISFACTORY:

- Considered unsafe
- A dam safety deficiency requires immediate or emergency remedial action
- Reservoir restrictions may be necessary



06/21/2011

Condition Assessments

Owner Type	Condition Assessment	Hazard Classification		
		Low	Significant	High
State 178	Satisfactory	27	6	20
	Fair	30	14	13
	Poor	15	9	28
	Unsatisfactory	0	0	0
	Not Rated	13	3	0
Municipal 219	Satisfactory	34	31	23
	Fair	30	25	10
	Poor	21	8	13
	Unsatisfactory	1	1	0
	Not Rated	20	3	2
Private 399	Satisfactory	54	21	15
	Fair	94	11	8
	Poor	75	13	8
	Unsatisfactory	3	0	1
	Not Rated	70	14	12
TOTALS		485	158	153

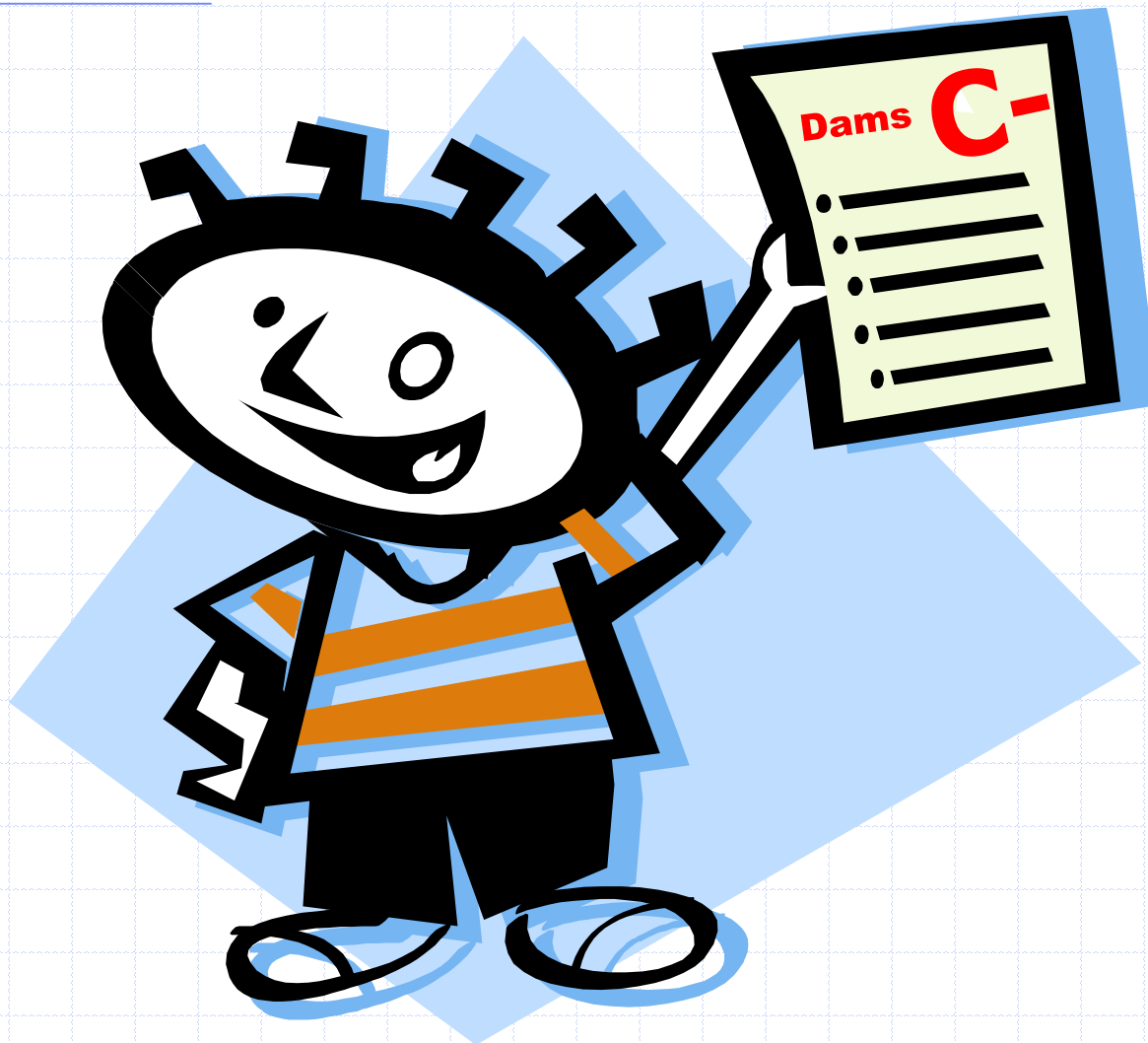
Condition Assessments

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	Poor	75	13	8
	Unsatisfactory	3	0	1
	Not Rated	70	14	12
TOTALS		485	158	153



NH ASCE

2017 Report Card

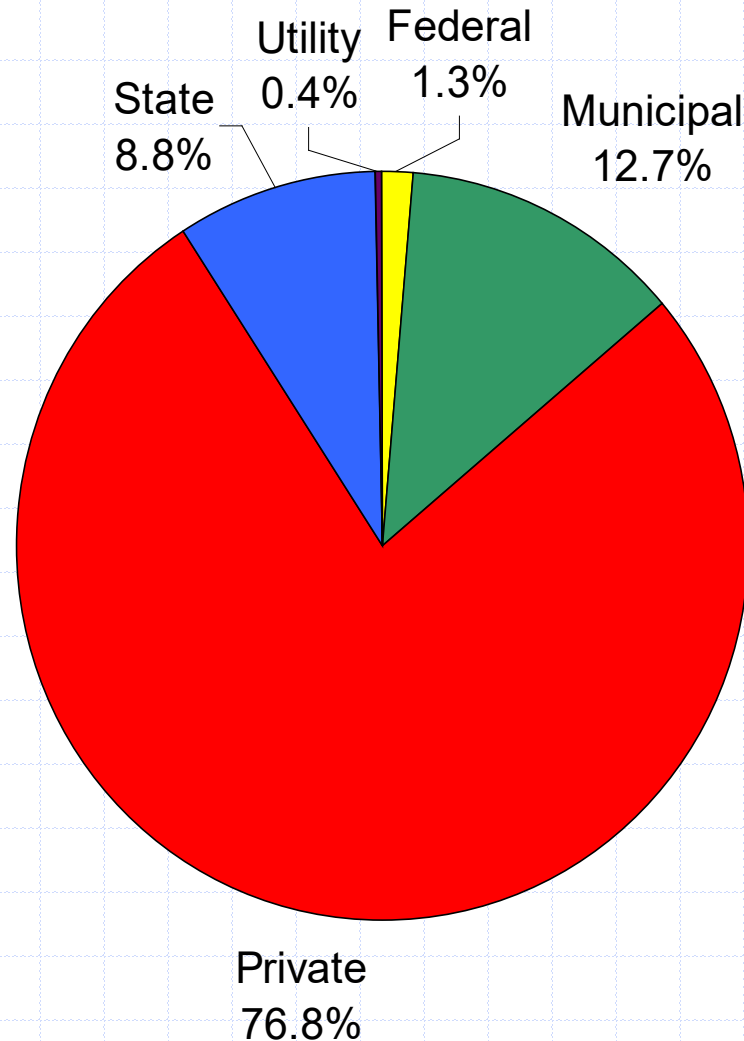




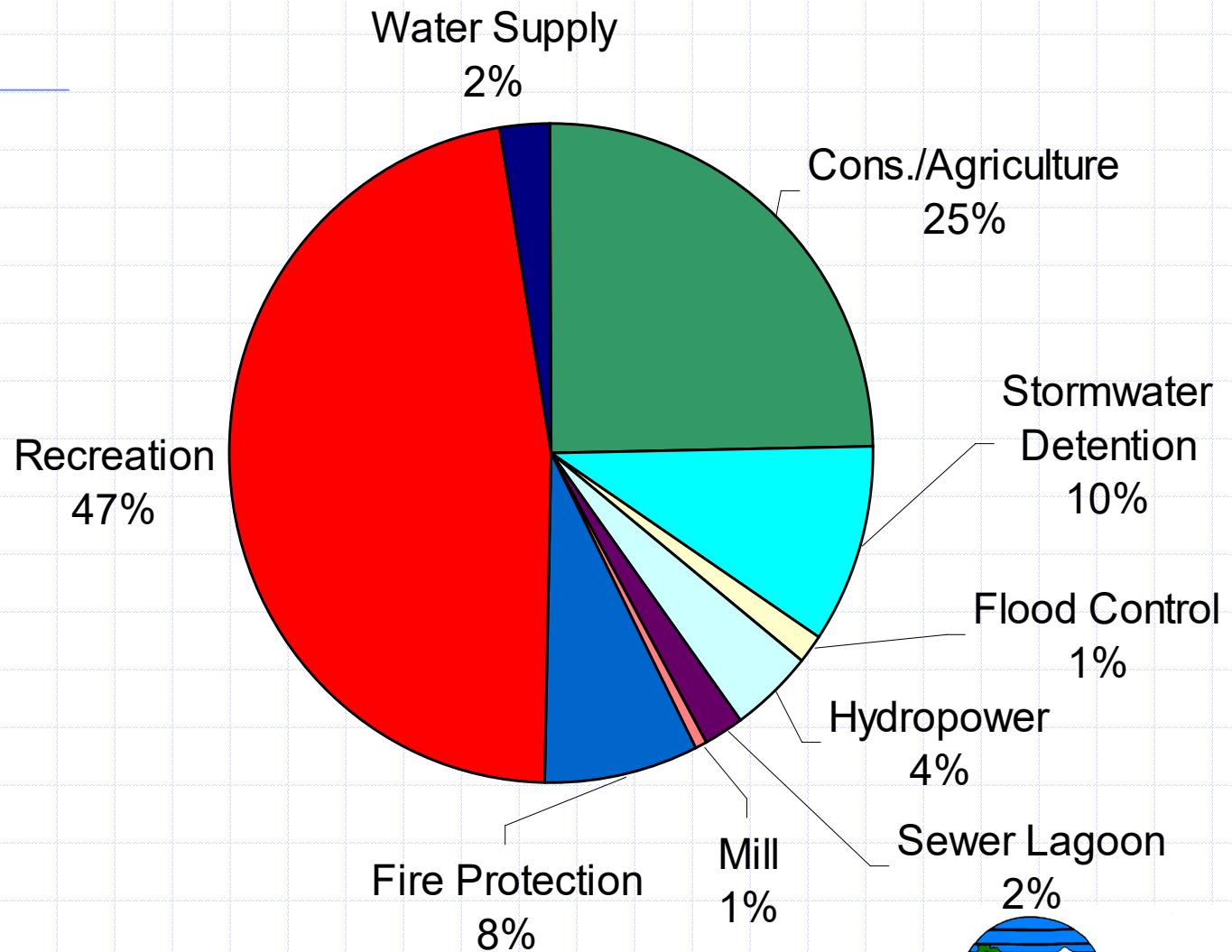
NH ASCE 2017 Report Card

- ◆ Growing and aging inventory of dams
- ◆ Increased number of deficiencies
- ◆ Lack of resources to maintain private and municipally-owned dams

Dam Ownership in New Hampshire



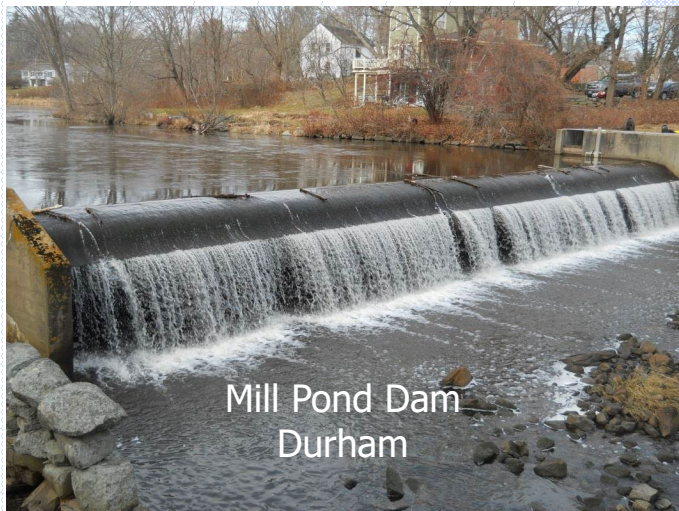
Functions of Dams in New Hampshire



DES River Restoration and Dam Removal Program



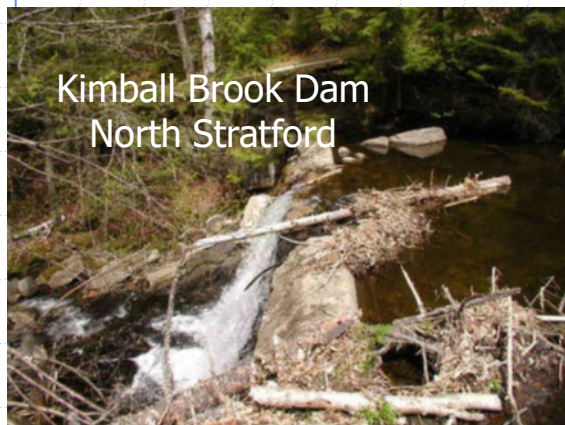
- ◆ We assist
 - Dam owners
 - General public
 - Government agencies
 - Consultants
- ◆ Information about dam removal as an option
- ◆ Help in obtaining funds to offset costs
- ◆ Guidance throughout the permitting process



Mill Pond Dam
Durham



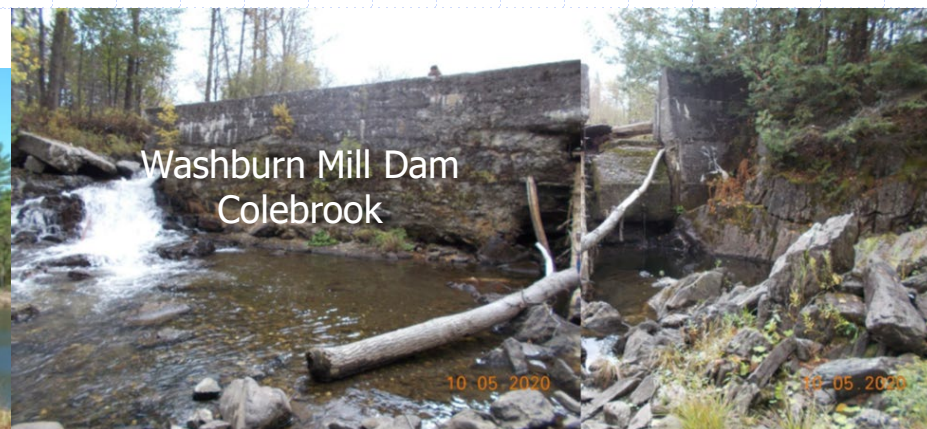
Israel River Ice Dam
Lancaster



Kimball Brook Dam
North Stratford



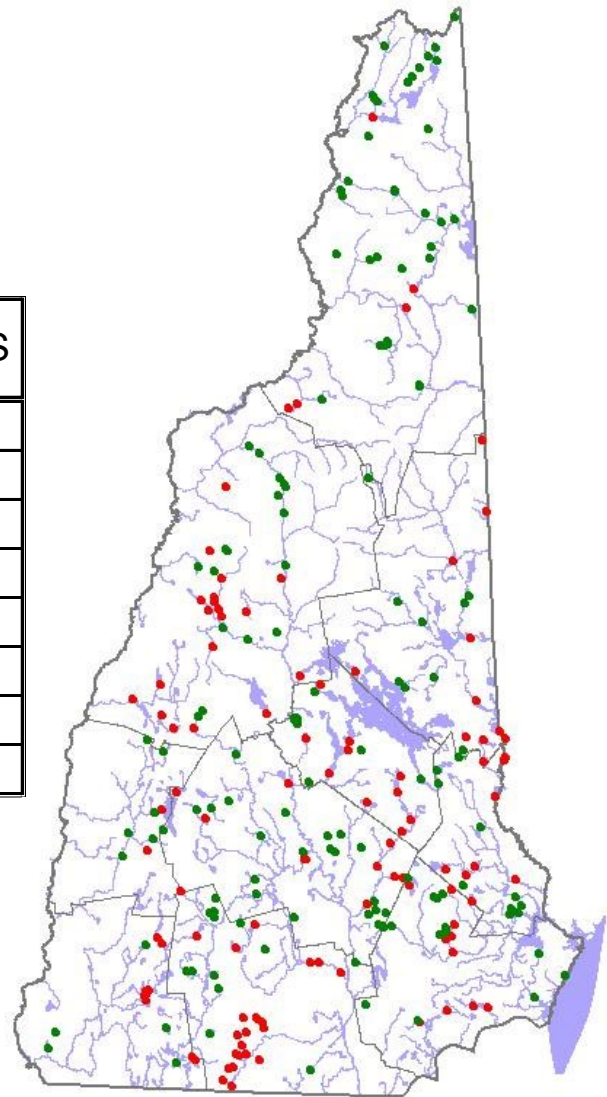
Lower Peverly Dam
Newington



Washburn Mill Dam
Colebrook

State-Owned Dams

AGENCY	Hazard Classification				TOTALS
	HIGH	SIG.	LOW	NM	
DES	40	25	40	6	111
NHFG	5	9	36	47	97
DNCR	2	3	9	17	31
DOT	3	1	4	18	26
UNH	1	1	0	3	5
Glenclyff	0	0	0	2	2
Veterans Home	0	0	0	2	2
TOTAL	51	39	89	95	274



Important Water Resources



Ossipee Lake



Newfound Lake



Squam Lake



Lake Winnepesaukee



Winnisquam Lake



Lake Sunapee

Population At Risk Downstream of State Owned High and Significant Hazard Dams

- ◆ More than 4,000 houses
- ◆ More than 130 State Road Crossings
- ◆ More than 800 Town Road Crossings

Dam Operations



Dam Maintenance



Dam Maintenance



Dam Maintenance



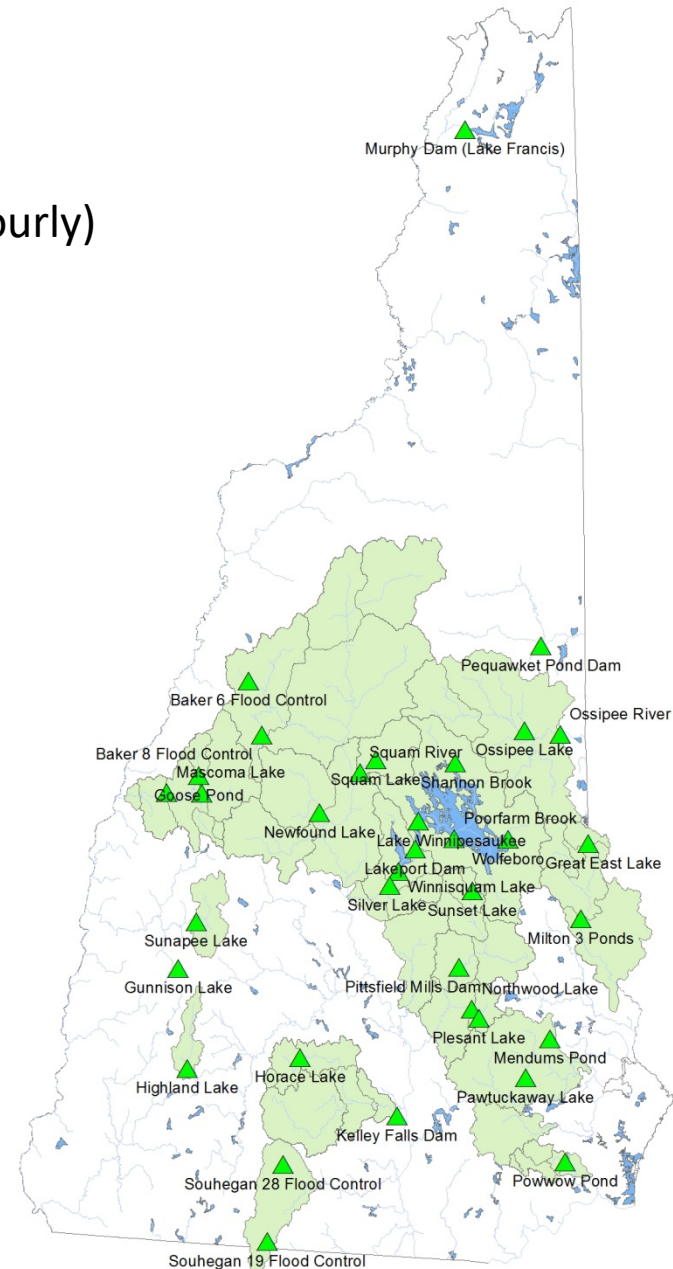
2/12/2004





NHDES Hydrologic Data Collection Network

- 35 stations maintained by NHDES
- Satellite telemetry transmits data in real-time (hourly)
- Dataloggers are programmable for user entry of gate/logbay settings and flow calculations





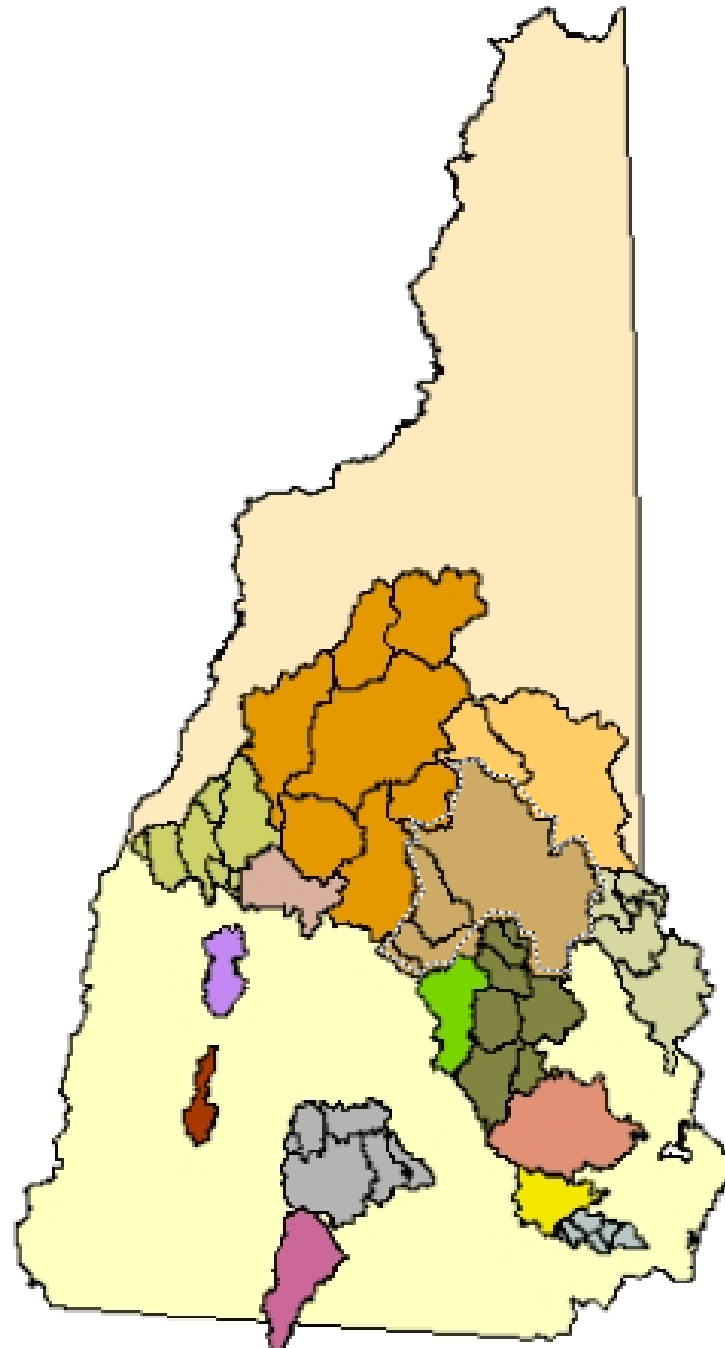


Basins

- Winnepesaukee River
- Smith River
- Pemigewasset River
- Ossipee River
- Salmon Falls River
- Suncook River
- Mascoma River
- Piscataquog River
- Powwow River
- Soucook River
- Lamprey River
- Exeter River
- Sugar River
- Contoocook River
- Souhegan River

Areas

- Northern
- Southern



**Hydrologic Data
Collection Network**



GOES Satellite

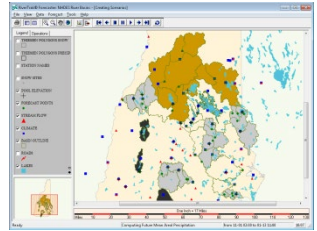
DRGS



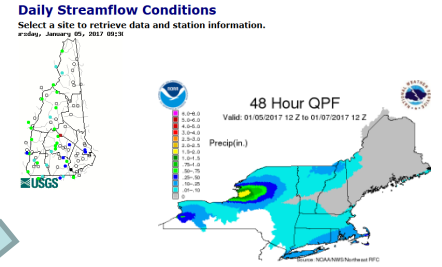
**Public Real-Time
Data
Webpage**



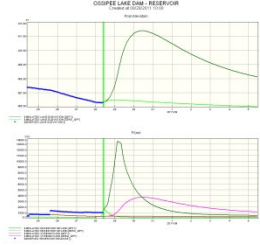
**Rivertrak Modeling
Software &
Database**



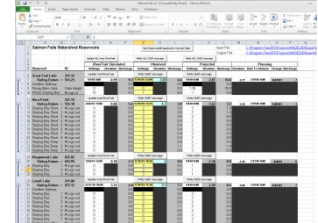
USGS & NWS Imports



Flood Monitor Plots



Manual Data Entry



Dam Construction Crew



Recently Completed Projects

Wendell Marsh Dam, Sunapee



Recently Completed Projects

Jones Pond Dam, Middleton



Recently Completed Projects

Mendums Pond Dam, Nottingham



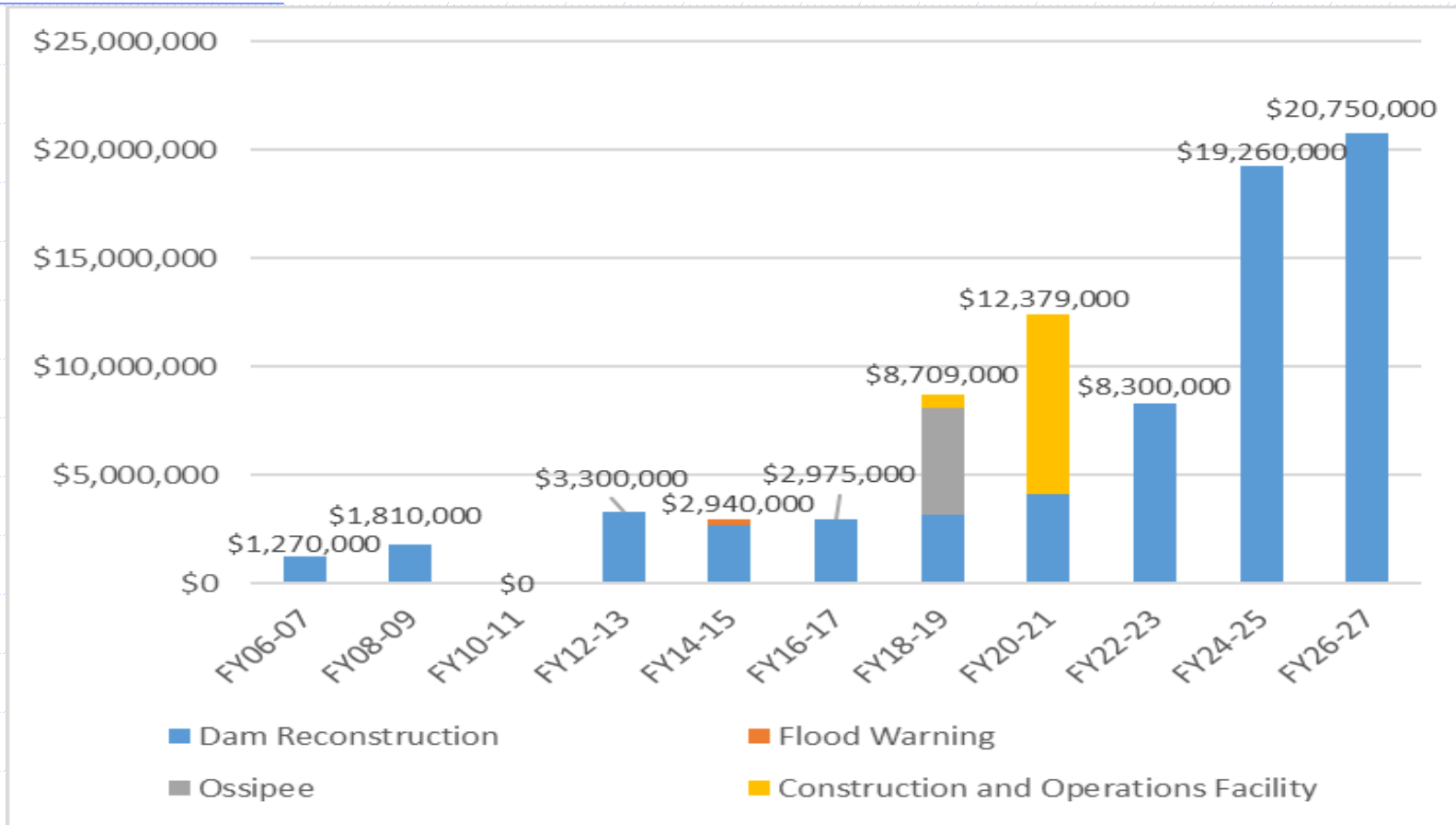
Recently Completed Projects

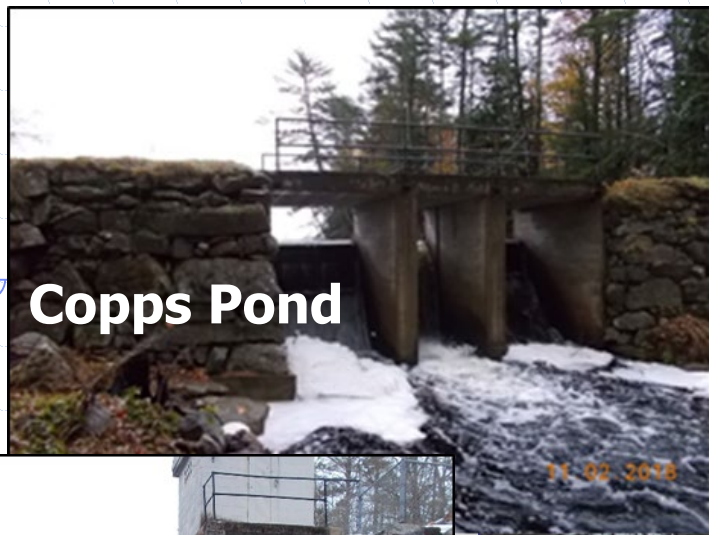
Chesham Pond Dam, Harrisville





Capital Appropriations





Copps Pond



Highland Lake



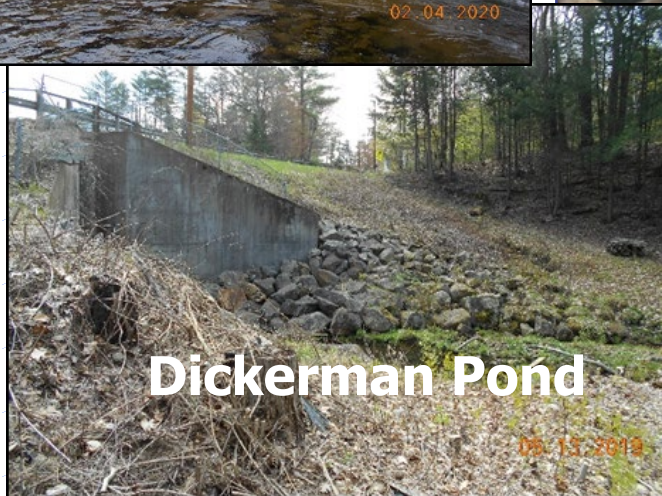
Sunset Lake



Silver Lake



Kilton Pond

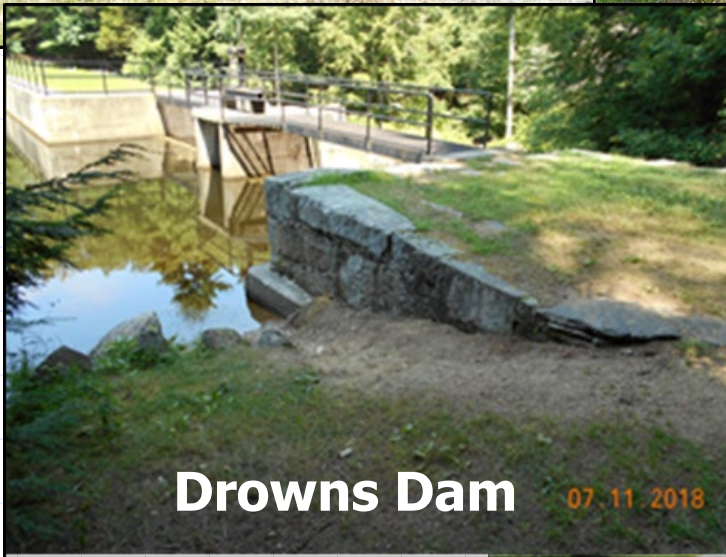
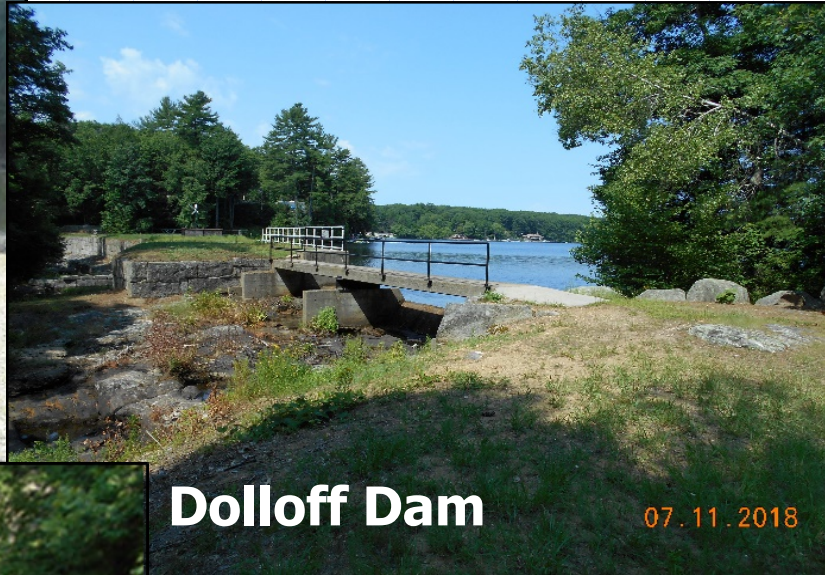


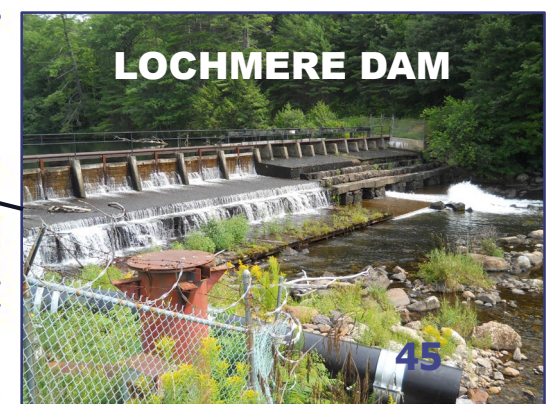
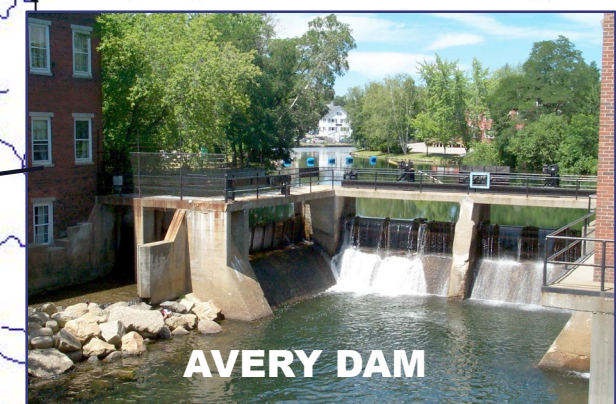
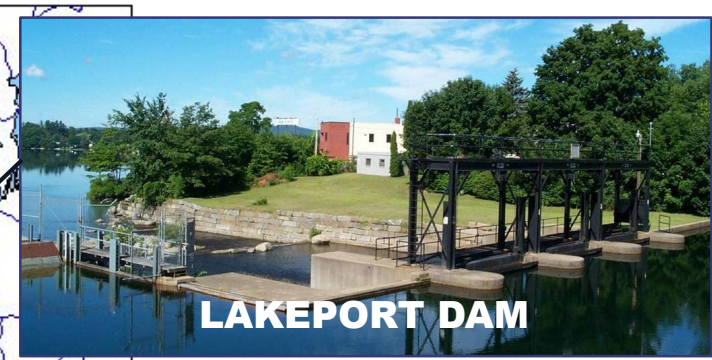
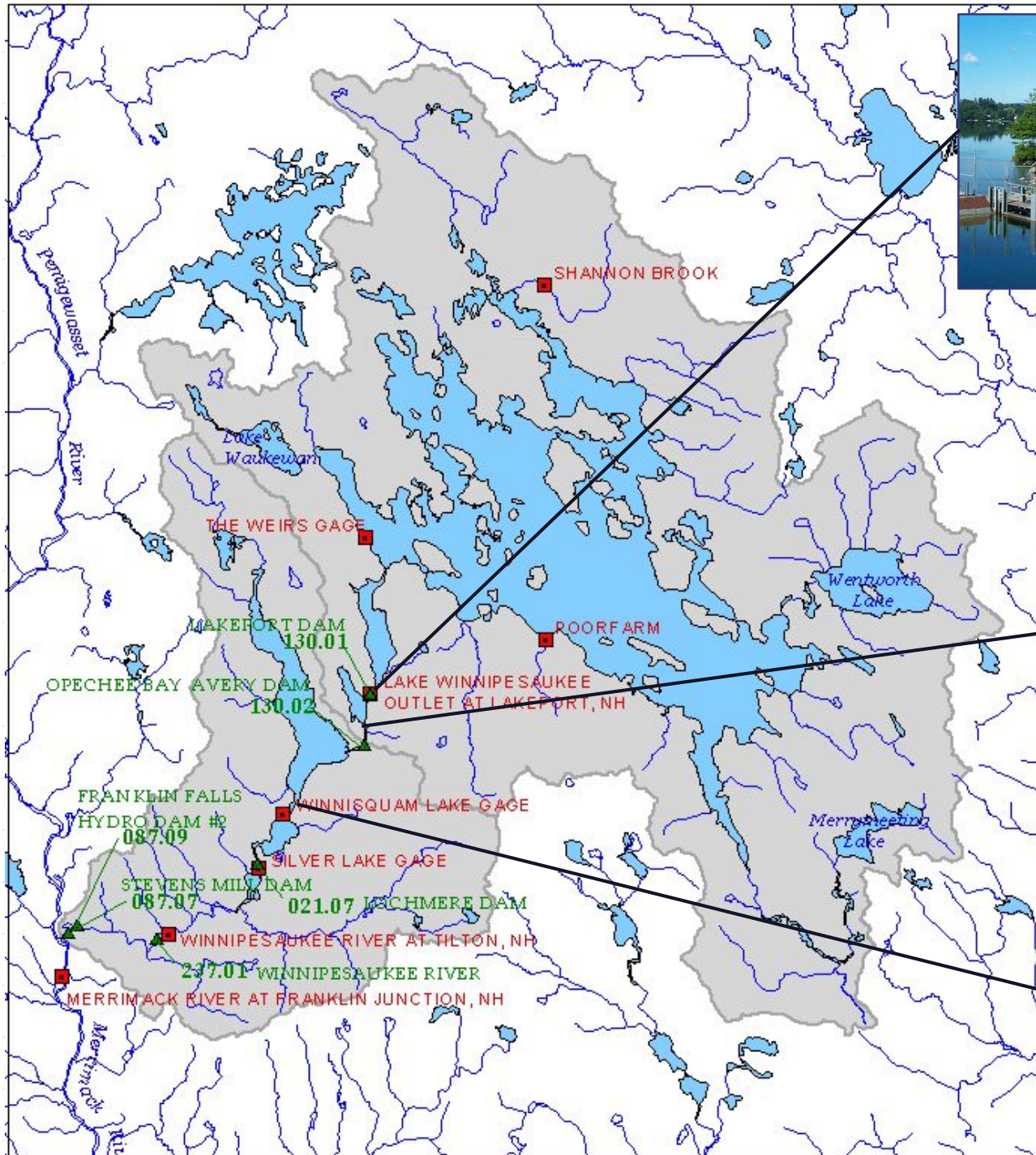
Dickerman Pond



Jones Pond Dike









LOVELL LAKE



GREAT EAST



HORN POND

KINGSWOOD LAKE



JONES BROOK



MOUNTAIN LAKE



UNION MEADOWS



ROWE



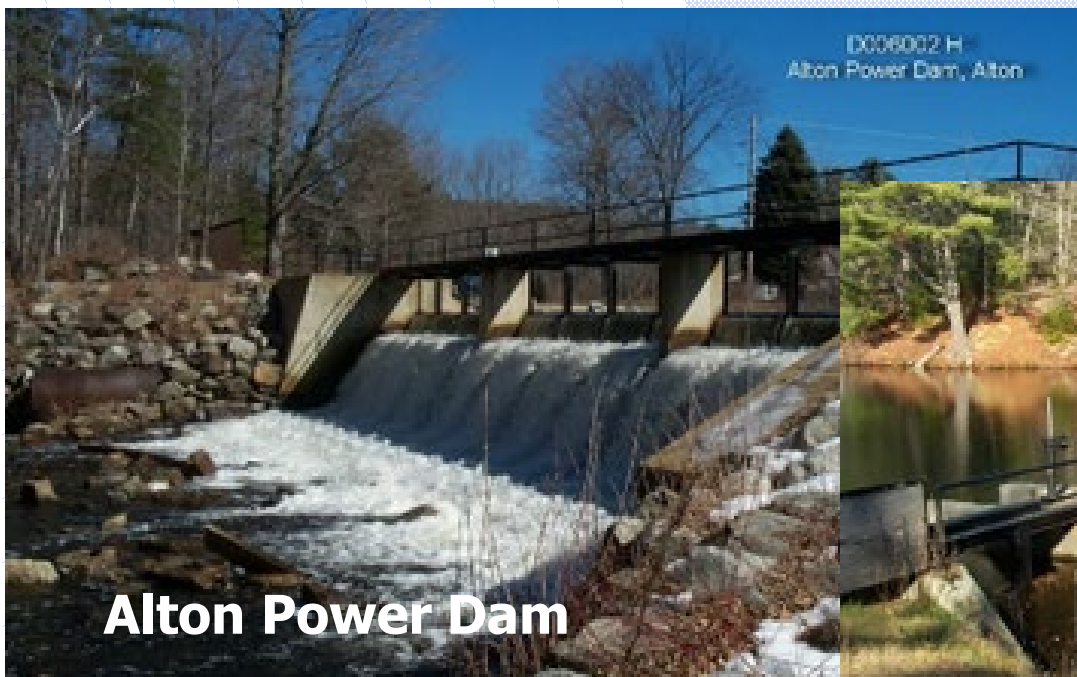
WAUMBEC



NORTHWOOD

MILTON 3-PONDS





D006002 H
Alton Power Dam, Alton

Alton Power Dam



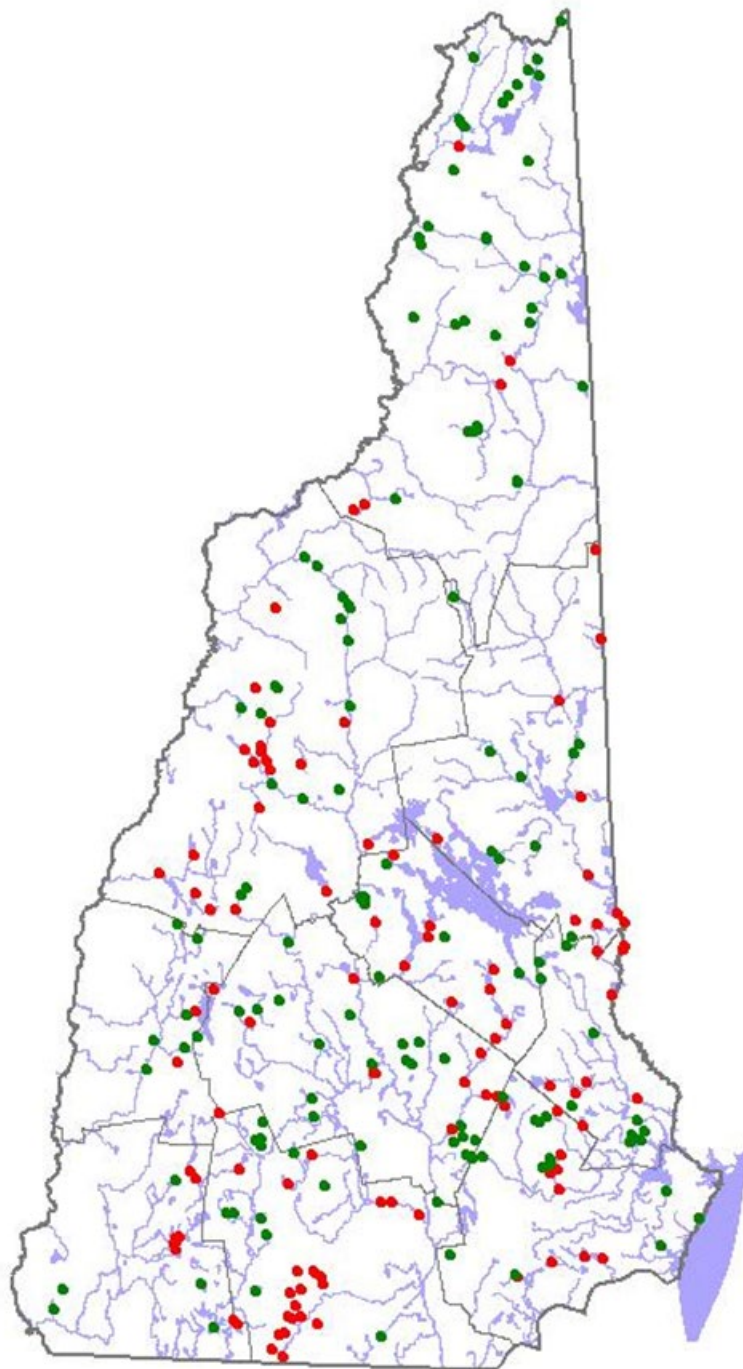
D176002 H
Jones Dam
New Durham

Jones Dam

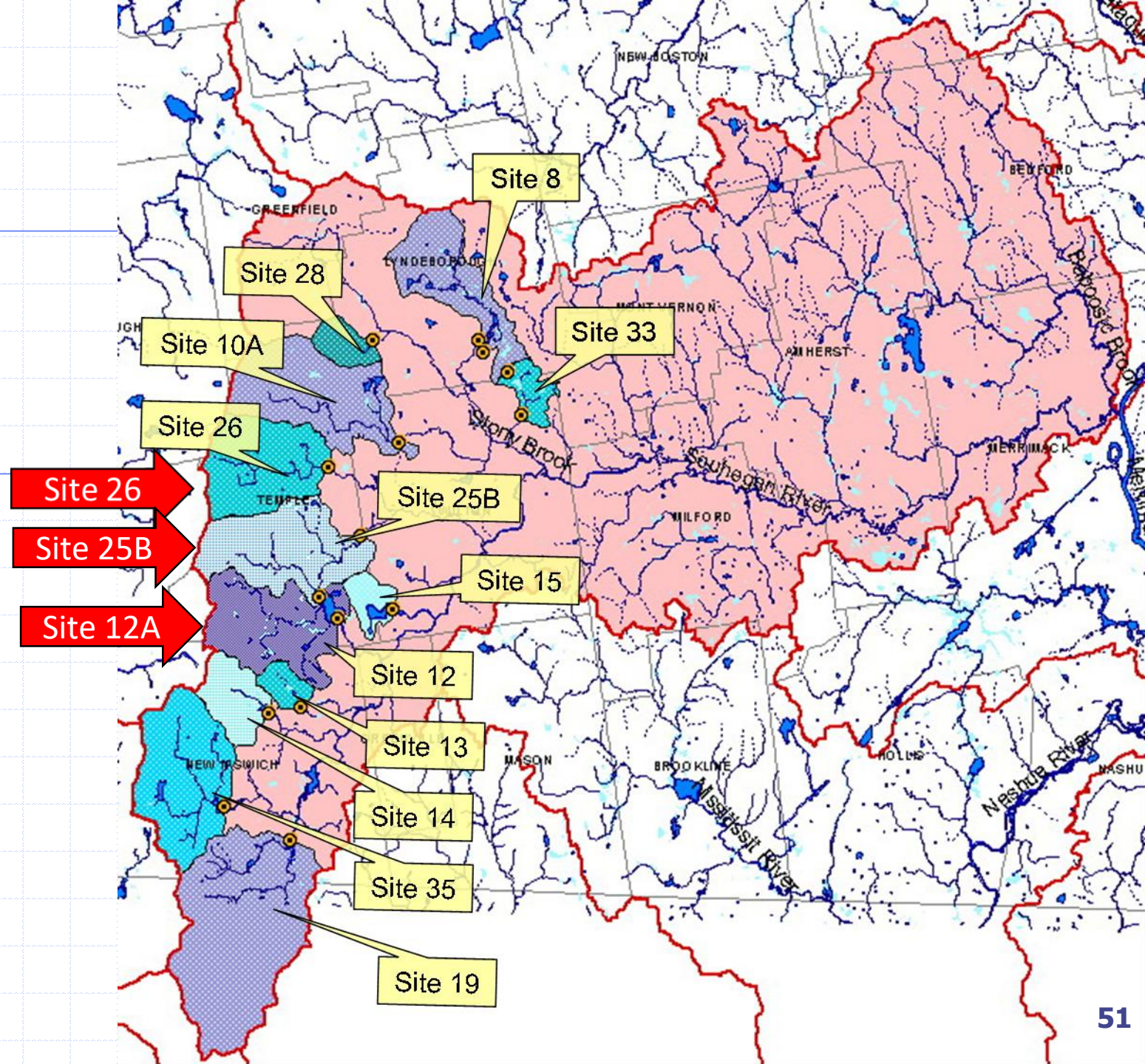


Merrymeeting Dam

11/17/2017







Infrastructure Investment and Jobs Act

- **FEMA**
 - State Assistance Grant: \$80k increased to \$400K
 - HHPD Grant: \$350k increased to >\$2 million
- **NOAA**
 - \$400 million for dam removal
- **NFWS**
 - \$200 million for dam removal
- **NRCS**
 - \$118 million for Watershed Rehabilitation Projects



NEW HAMPSHIRE
DEPARTMENT OF

Environmental Services

Water Division
Dam Bureau