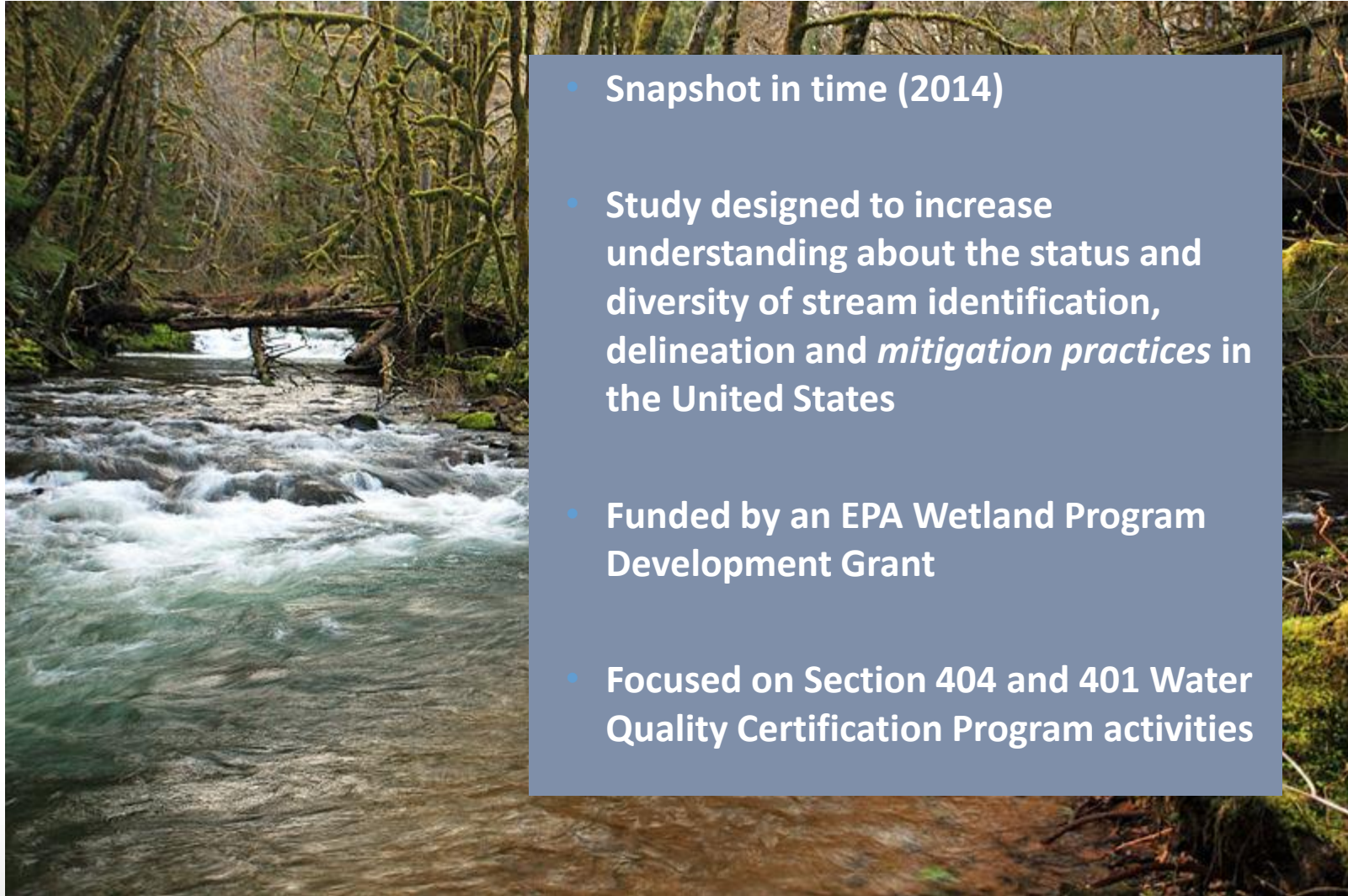


State Mitigation Requirements in State Programs for Streams in the United States

Findings from a 2014 Study by the
Association of State Wetland Managers

ELI Webinar Presentation
by Brenda Zollitsch, PhD
Policy Analyst, ASWM

Introduction to the Report



- Snapshot in time (2014)
- Study designed to increase understanding about the status and diversity of stream identification, delineation and *mitigation practices* in the United States
- Funded by an EPA Wetland Program Development Grant
- Focused on Section 404 and 401 Water Quality Certification Program activities

Amount of Stream Mitigation

- New kid on the block – growing practice
- Newer than wetland mitigation
- In most states, some form of stream mitigation process was in place or being developed
- Amount of mitigation varies widely - *Some states have lots of activities requiring permits, others very few*

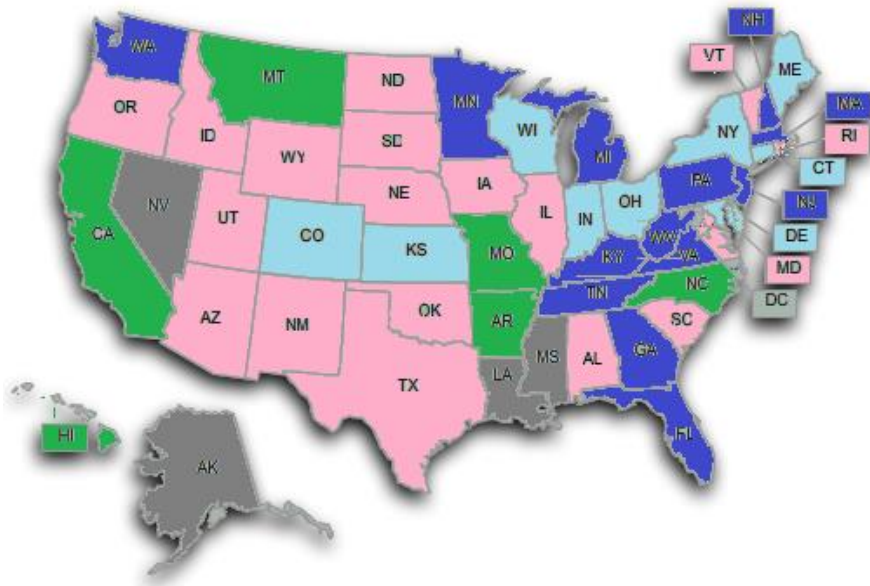


A few influences on the amount of mitigation:

- Limited access to resources
- Increasing high water events/greater stormwater runoff
- Economic impact on number of applications
- Various types of mining
- Expanding U.S. energy industry

Amount of Stream Mitigation	# States
None/Almost None	11
Small	7
Mixed Bag	16
Large	11

Project Results: Stream Mitigation Programs and Practices



Type of Mitigation Arrangement (n=45)	# States
Formal state-coordinated program	15
State mitigation practices (no program)	6
Interagency arrangement	5
Corps only	19

Status of Stream Mitigation Procedures (n=45)	# States
Currently have procedures for assigning stream mitigation debits/credits	21
In the process of developing procedures	5
No plans for procedures	12
Not actively engaged in stream mitigation	6

Study Results: Stream Mitigation Options



Mitigation options for streams:

- **Permittee Responsible**
(39 states)
- **Mitigation Banks**
(25 states)
- **In Lieu Fee Programs**
(22 states)

Matching of siting and design criteria with landscape position and/or other criteria:

- Closely matched
(14 states)
- **Somewhat closely matched**
(17 states)
- No matching
(4 states)

Project Results:

Allowable Stream Mitigation Activities

- 20 states considered all permittee proposed options for stream mitigation
- 29 states identified specific activities that qualify as stream mitigation in their state
- 6 states generally did not require stream mitigation
- *Majority operate on case-by-case basis.*




Most common activities:

Type of Allowable Stream Mitigation Activity	# States
Stream restoration	28
Stream stabilization	25
Buffer/riparian work	23
Stream enhancement	20
Stream preservation	18
Hydraulic modification	18

Other activities included:

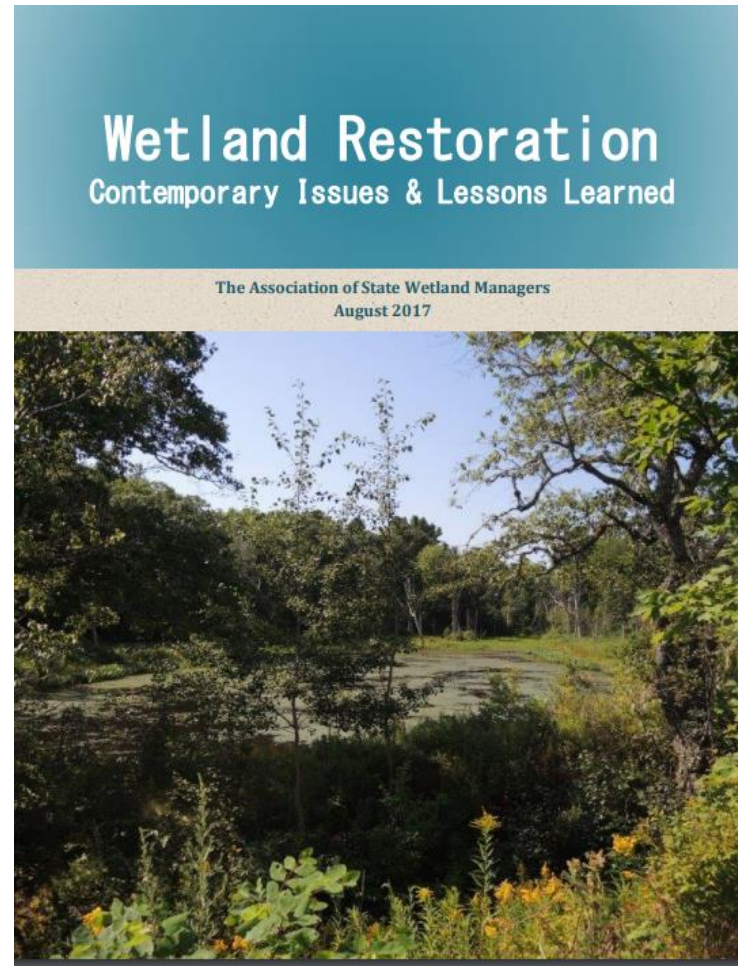
- Re-establishment
- Increasing sinuosity
- Daylighting streams
- Redirecting streams

Key Takeaways from the Report

- 
- Report provided a baseline
 - Stream mitigation found to be just starting to develop in many states
 - Diversity of state statutes and regulations
 - No one-size-fits-all
 - Wetland mitigation \neq stream mitigation
 - Need for sharing of models & templates
 - Must adapt resources

Ecological Performance

- Upstream Impacts
- Site Selection/
Appropriate Plan
- Altered and Altering
Watersheds
- Wetlands or Streams
or Both
- Measuring Ecological
Lift



Feedback, Questions, Ideas:

Brenda Zollitsch

ASWM Policy Analyst

brenda@aswm.org

Jeanne Christie

ASWM Executive Director

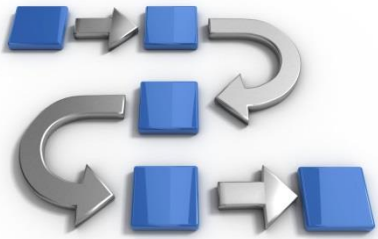
Jeanne.christie@aswm.org



Association of State Wetland Managers

www.aswm.org

207-892-3399



The Nuts and Bolts

Study Methodology

STUDY SAMPLE

- 47 states (n=47)
- 87% response rate
- Documented practices from all 10 EPA regions
- Corps staff were not interviewed unless invited by state
- All states except AK, MS, and LA

DATA COLLECTION

- Semi-structured interviews
- 18 questions
- Adapted for each state
- Telephone interviews
- 60-120 minutes
- Note taking, recorded
- Development of state-by—state and comparative data tables
- Review of tables by interviewees
- Incorporation of edits

Project Results:

Common Types of Dredge and Fill Permits

- “Infrastructure-related” projects
- Transportation-related activities (44 states)
 - Culvert installation/replacement
Roads, bridges, other crossings
- Utility work (21 states)
- Commercial and residential development (21 states)
- Mining (18 states)
- Channel stabilization/modification (18 states)
- Stream restoration (11 states)



What about states that “don’t do” stream mitigation?



IDAHO

Streams remain predominantly un-impacted in the state

NEW YORK, RHODE ISLAND, NEW YORK

Focus on the avoidance and minimization of stream impacts, rather than allowing mitigation

MINNESOTA, OKLAHOMA

Stream mitigation program is so new that only minimal, ad hoc permittee responsible mitigation is currently allowed

WISCONSIN

In the process of developing mechanisms to conduct stream mitigation for metallic mining only

Interesting Trends in Stream Mitigation Activities



Buffer Restoration and Protection

- Growing interest
- Need for regulatory mechanisms

Cattle Exclusion

- Stand-alone practice v. BMP only

Low Impact Development (LID)

- Some states considering
- Different perspectives
- Potentially more appropriate for minimization stage

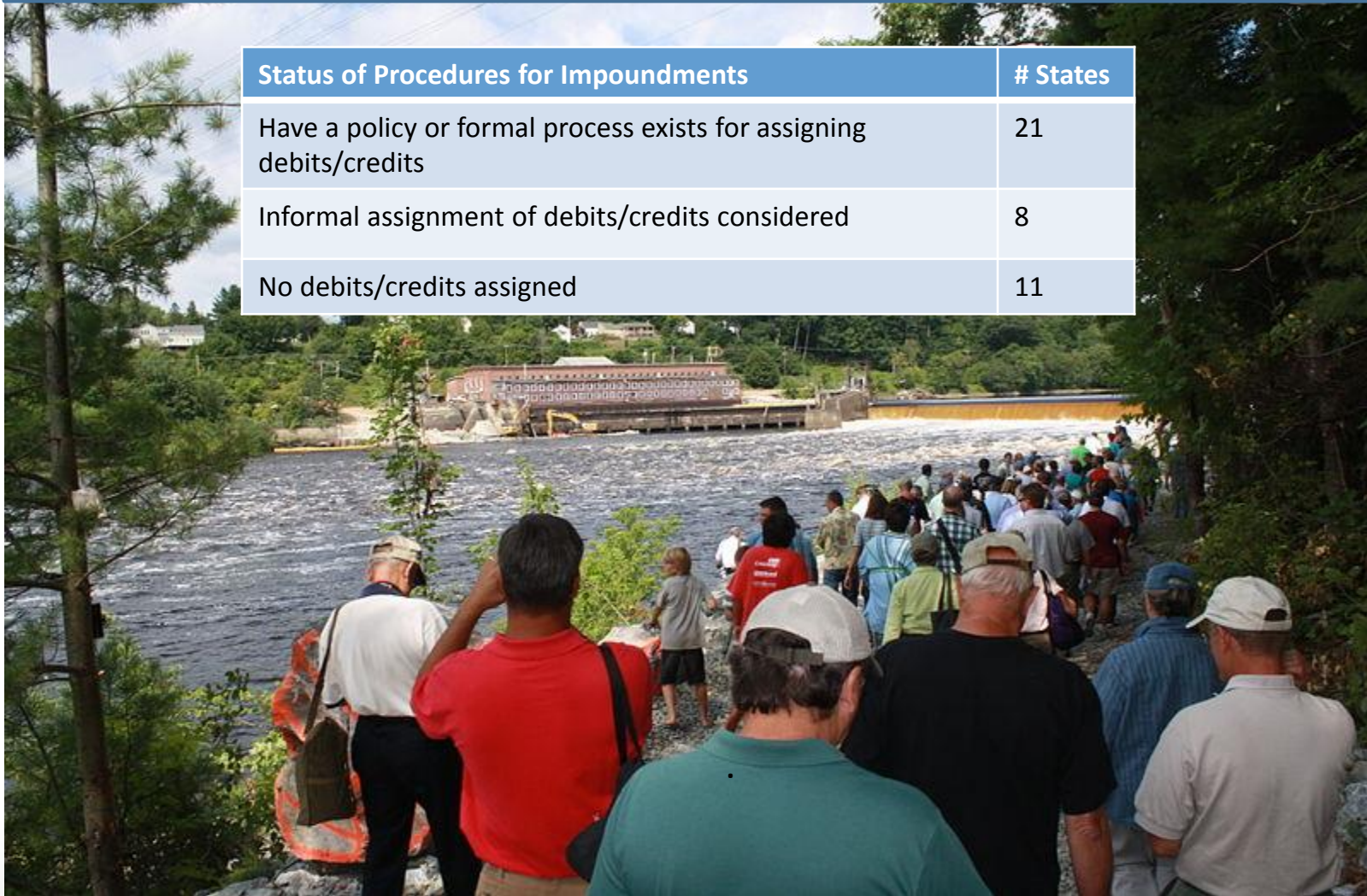
Study Results: Site Selection and Design

- 39 states reported site selection and design information
- 29 of these select sites and design on a case-by-case basis, using best professional judgment
- Review more similar between options since 2008, but ILF and banks reported to get more thorough review in many states



Study Results: Stream Mitigation for Impoundments

Status of Procedures for Impoundments	# States
Have a policy or formal process exists for assigning debits/credits	21
Informal assignment of debits/credits considered	8
No debits/credits assigned	11



Study Results: (n=38)

Measuring Stream Mitigation Success



Formalized/standardized measures
(9 states)

Measure success on a case-by-case basis
(29 states)

- Best professional judgment
- Outline measures in permit
- Include requirements for data collection and reporting
- Usually 3-5 years
- May have site inspection or not (due to resource limitations)

Stream Mitigation-related Challenges for States



GAPS

- Standardization
- Transparency
- Resource Issues
- Access and availability
- Regulatory system limitations
- Inconsistency between regulatory entities/processes

NEEDS

- Case studies on successes and failures
- Functional uplift guidance
- “How-to” Support
- Guidance on judgment calls
- Federal-level assistance on specific issues
- Regional collaboration
- Scientific/research needs