



ASWM Members' Webinar June 19, 2014

Summary Findings from
ASWM's Report on
State Definitions, Jurisdiction,
and Mitigation Requirements
in State Programs for Ephemeral,
Intermittent and Perennial Streams
in the United States

Presentation by Brenda Zollitsch,
ASWM Policy Analyst

Welcome!



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Webinar Moderator



Marla Stelk
Policy Analyst

Association of State
Wetland Managers

Presenter



Brenda Zollitsch, PhD
Policy Analyst
Association of State Wetland Managers

Agenda

The background of the slide features a warm, orange-to-yellow gradient, suggesting a sunset or sunrise. In the foreground, there are dark silhouettes of various plants, including a prominent, tall, thin stem with a large, dark, spherical flower head at the top. Other smaller, more delicate plants are visible in the lower portion of the frame.

1. Welcome and Introductions (5 minutes)
2. Presentation on ASWM Stream Report Findings and Recommendations (50 minutes)
3. Question and Answer (15 minutes)
4. Wrap-up (5 minutes)

Audio

After joining the webinar, open the Audio panel on the right hand side of your screen.

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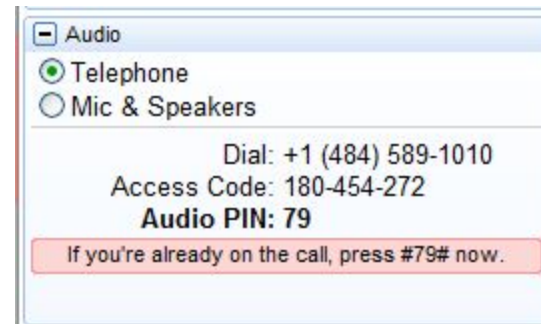
You must have speakers and a microphone to communicate.



Audio

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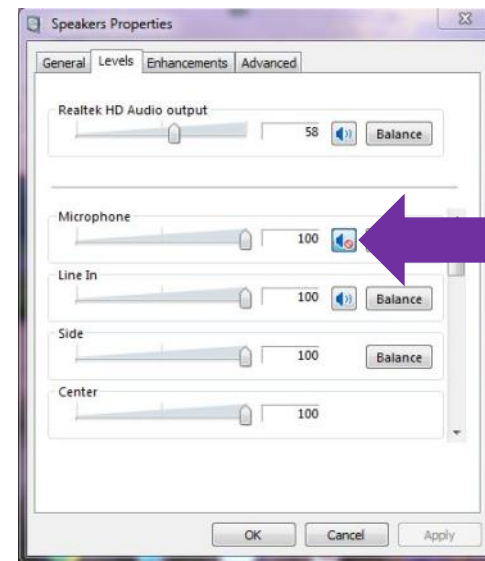
Audio

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Click on the speaker icon on the bottom right of your screen and click on the speaker to mute or slide the bar down.



Click on Speakers, then click on the icon next to microphone to mute.



Webinar Recordings



This webinar will be recorded and will be posted to the ASWM web page following post processing (@ 3 weeks). The recorded webcasts and PowerPoints from past Members' webinars are available on the aswm.org website.



The screenshot displays the ASWM website interface. At the top, the header reads "Association of State Wetland Managers - Protecting the Nation's Wetlands." Below this is a navigation bar with links for Home, ASWM, I Am..., Wetlands, Science, Wetland Programs, Watersheds, Law, News, and Blog. A "What's New" section lists several recent updates, including news about the Clean Water Act 2.0, Virginia Coastal Partners Workshop, and FGCU appointing a director for a new Everglades Wetland Research Park. A main menu is visible on the left, with the "ASWM" menu item expanded to show options like "About ASWM", "ASWM Projects", "Doing Business With ASWM", "Support Wetlandkeepers", "Volunteer", "Contact ASWM", "Publications", "ASWM Members (Login Req.)", "ASWM Webinars/Calls", "ASWM Board (Login Req.)", "ASWM Projects", "Do Business With Us", "Publications", and "ASWM Webinars/Calls". The "ASWM Webinars/Calls" option is highlighted. Below the menu, there is a search bar and a section for "Conference Schedule". A small image of a presentation slide is shown, with the caption "A presentation given during a webinar." The slide features a red dragonfly and various environmental images.

Webinar Schedule/Recordings

Association of State Wetland Managers - Protecting the Nation's Wetlands.



What's New:

- Flood Risk in the Courts, ASFM
- Webinar: Water Adaptation: A Climate of Opportunity
- EPA Announces Interagency Effort to Protect Coral Reefs
- 2013 EPA Community Involvement Training Conference
- Nature Geoscience & Nature Climate Change: Water in a Warming World
- Wetland Breaking News - Current Issue

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ASWM Webinars/Conference Schedule

The Association of State Wetland Managers holds webinars on various topics, most of which relate to a specific project and work group. In addition, ASWM holds webinars as part of its members' webinar series on topics of interest to members. Please click on the webinar group name below for more details about individual webinars. In all cases, if you have any questions about registering for a webinar, please contact Laura at laura@aswm.org. If you are a member, and you missed a webinar that was part of the members' webinar series, please contact us. We will post the recordings of the webinars going ahead.

[Members' Wetland Webinar Series](#) [Future](#) [Past](#)

[Natural Floodplain Function Alliance \(NFFA\)](#) [Future](#) [Past](#)

[Wetland Mapping Consortium \(WMC\)](#) [Future](#) [Past](#)

[Wetland Restoration Permitting Project](#)

[Wetland Program Plans Project](#) [Future](#) [Past](#)

[Stream Identification/Delineation/Mitigation Project](#) [Future](#) [Past](#)



A presentation given during a webinar.

Changing over to Presenter's Computer...





Summary Findings from
ASWM's Report on State Definitions,
Jurisdiction, and Mitigation
Requirements in State Programs
for Ephemeral, Intermittent and
Perennial Streams in the United States

Presentation by Brenda Zollitsch,
ASWM Policy Analyst

ASWM Members' Webinar Group
June 19, 2014

Project Background



- Seeking to understand the status and diversity of stream identification, delineation and mitigation practices in the United States
- EPA Wetland Program Grant and the McKnight Foundation
- Focus on Section 404 and 401 Water Quality Certification Program activities
- Established a national workgroup of state and federal agency staff
- Developed list of interview questions; reviewed and enhanced by workgroup
- Identified state contacts coordinating or working with stream identification, delineation, and mitigation efforts

Project Goals



Development of state-by-state tables (edited by 37 states) → used to develop comparative tables → maps → descriptive text → Report ready for review → Final Edits → Published 4-30-14

- Focus on state staff
- Corps staff were not interviewed unless invited by a state
- Contacted 50 states (N=50)
- 47 states participated (n=47)
- All states except AK, MS, and LA
- 94% response rate
- Practices from all 10 EPA regions
- Focus on identifying common and unique practices
- Capture breadth; did not impose categorization

Reviewed by:

- ASWM Project Working Group
- Staff interviewees from 37 states
- U.S. Environmental Protection Agency
- Army Corps of Engineers

Project Results: Stream Definitions



- Approximately half of the states have a formal definition of “streams”
- 23 states formally define one or more stream *types*

- Term “intermittent” may include streams *scientifically* classified as “ephemeral”
- The vast majority of states include *all* streams in the definition of waters of the state.
- Does not mean they *regulate* all streams

No consistent definitions either in regulations or scientific literature:

Commonly used, but not commonly defined...

Ephemeral: A stream that has flowing water only during or for a short duration in response to precipitation events in a typical year.

Intermittent: A stream that has flowing water during certain times of the year, and at least part of the time groundwater as well as surface runoff provides water for stream flow.

Perennial: A stream that has flowing water year-round and the water table is located above the streambed for most of the year.

Scientific and Legal Definitions of Stream Types

In all cases, bed and bank and OHWM or other evidence of flow

(Note: Streams can change from one type to another based on watershed practices)

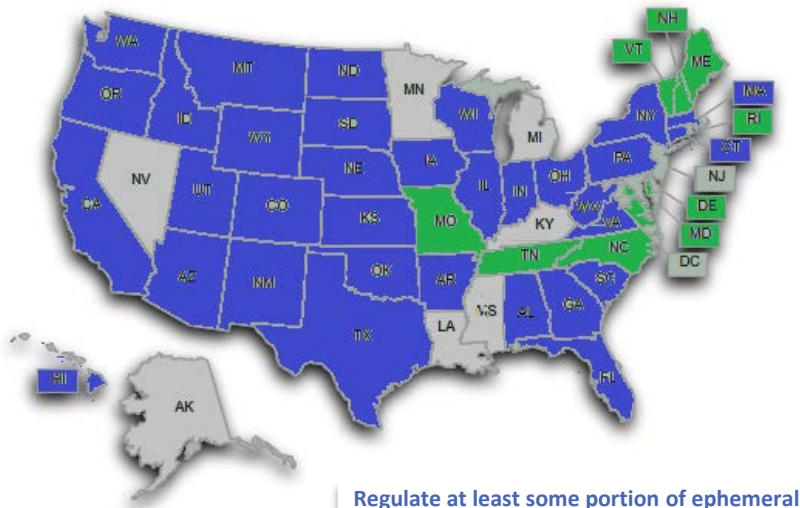


"Groundwater contact" Definition	"Flow Definition"	"Sample Legal Definition"
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Watershed	Western U.S. Ephemeral (Not in contact with groundwater)	Eastern U.S. Ephemeral (Not in contact with groundwater)	Ephemeral (Flow only in response to local precipitation)	Ephemeral (Flow only in response to local precipitation)	Intermittent (All streams with bed and bank and evidence of flow that are not defined as perennial)
	Intermittent (In contact with groundwater)	Intermittent (in contact with groundwater)	Intermittent (Sustained flow part of the year)	Excluded from both definitions	Intermittent (Only in contact with groundwater)
Perennial (Flow year-round)	Perennial (Flow year-round)	Perennial (Flow year-round)	Perennial (Flow year-round)	Perennial (Flow year-round)	

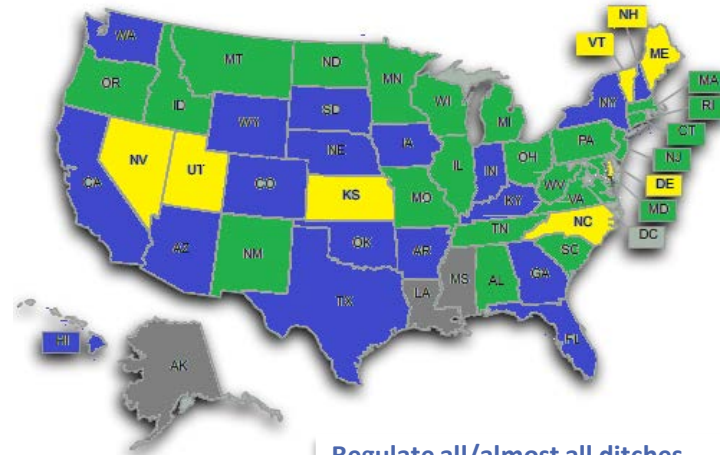


Regulation of Ephemeral Streams and Ditches



Regulate at least some portion of ephemeral
 Regulate **only perennial and intermittent**
 Unknown/State not in study

39 states regulate at least *some* portion of ephemeral streams
 9 States have jurisdiction only over perennial and intermittent streams

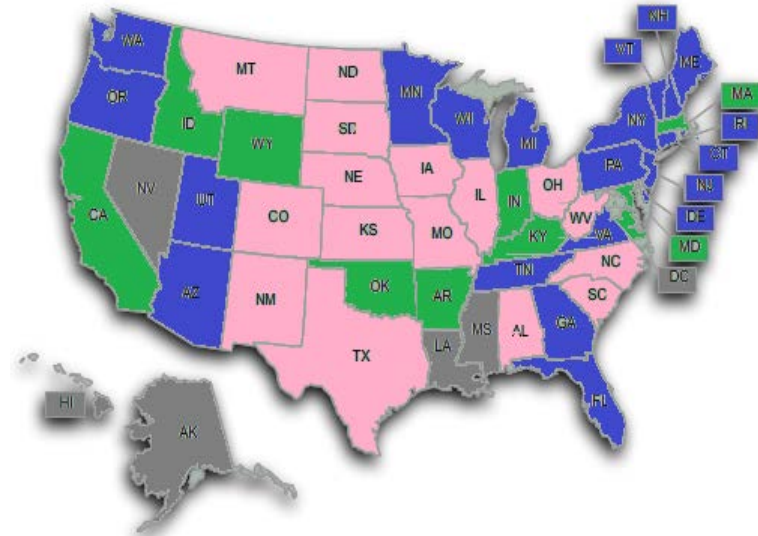
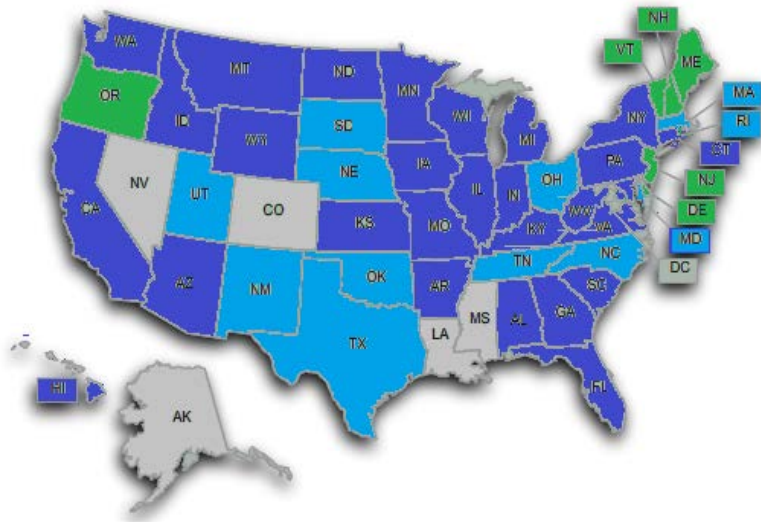


Regulate all/almost all ditches
 Regulate **some ditches**
 Regulate **only if a ditched stream**
 Unknown/State not in study

43 states report that they currently regulate at least *some* ditches (incl. modified/alterd streams)



Dredge & Fill Coverage by Stream Type and Stream Delineation



Stream Types Covered	# States
All streams	27
Perennial, Intermittent and some Ephemeral	11
Perennial and at least some Intermittent (no ephemeral)	7
Don't know/not in study	5

Responsible for Delineation	# States
State conducts own delineation	21
State relies solely on the Corps	17
Combination arrangement	9

Stream Identification



Width measures:

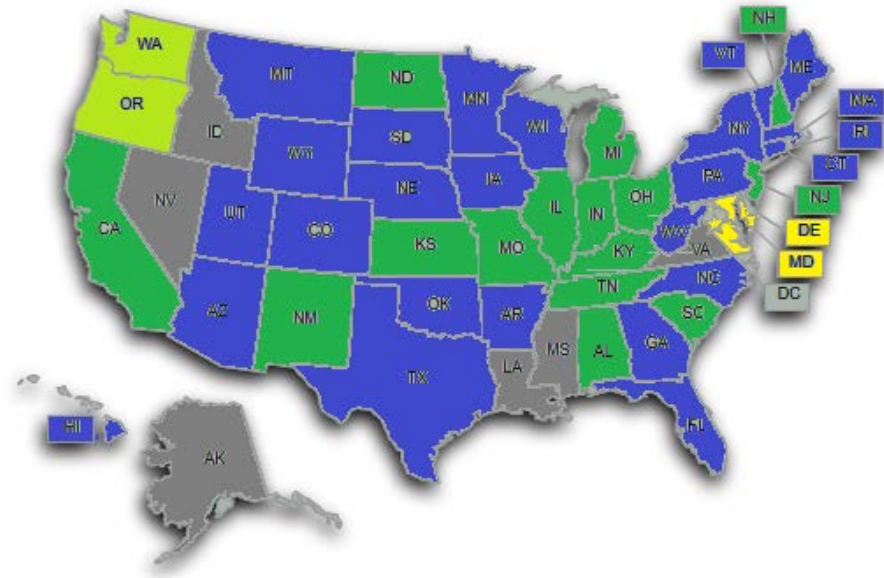
- Top of bank to top of bank
- Bankfull width
- Ordinary high water mark

A wide range of practices

Most common:

- Identification of bed and bank
- The presence of a channel
- Ordinary high water mark
- Various measures of flow
- Rely at least in part on maps
- Use of best professional judgment

How state identification/delineation differs from the Federal JD



Arrangement	# States
Additional/Supplemental to Federal JD	24
Same as/Consistent with the Federal JD	15
Either Additions <u>or</u> Subtractions from Federal JD	2

Stream Assessment



Most commonly assessed:

- Habitat (30 states)
- Water quality (29 states)
- Biological (25 states)
- Physical/structural (20 states)
- Hydrological (11 states)

Most states:

- Use a complement of assessment practices, measuring more than one condition or function.
- Focus less on using a specific set of measures and more on using assessment to target improvements (e.g. NH, CA).

Status of Functional Assessment	# States
Using Currently	10
Developing Currently	6
Interested in Developing	6

Stream Mitigation: The New Kid on the Block



- Most stream mitigation since 2008 final regulations governing compensatory mitigation
- In most states, some form of stream mitigation process in place or being developed
- Amount of mitigation varies widely *Some states have lots of activities requiring permits, others very few*

How Much Stream Mitigation is Happening?



Amount of Stream Mitigation	# States
None/Almost None	10
Small	7
Mixed Bag	17
Large	11

STATES THAT “DON’T DO” STREAM MITIGATION

IDAHO

Streams remain predominantly un-impacted in the state

NEW YORK, RHODE ISLAND, VERMONT

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

Some Notable Influences on the Amount of Stream Mitigation



- Lack of resources
- Increasing high water events
- Increases in stormwater impacts
- The economy
- Addressing the impacts of mining
- New/expanding energy industry-related impacts

Common Types of Dredge and Fill Permits

- “Infrastructure-related” projects
- Transportation-related activities (45 states)
 - Culvert installation/replacement
Roads, bridges, other crossings
- Utility work (23 states)
- Commercial and residential development (24 states)
- Mining (18 states)
- Channel stabilization/modification (21 states)
- Stream restoration (14 states)



Allowable Stream Mitigation Activities

- 20 states consider all permittee proposed options for stream mitigation
- Majority operate on case-by-case basis.

Most common activities:

Type of Allowable Stream Mitigation Activity	# States (n=26)
Stream restoration	28
Stream stabilization	25
Buffer/riparian work	23
Stream enhancement	20
Stream preservation	18
Hydraulic modification	18



Stream Creation as Mitigation

Stream Creation:

Establishment of a stream where a stream has never existed before.

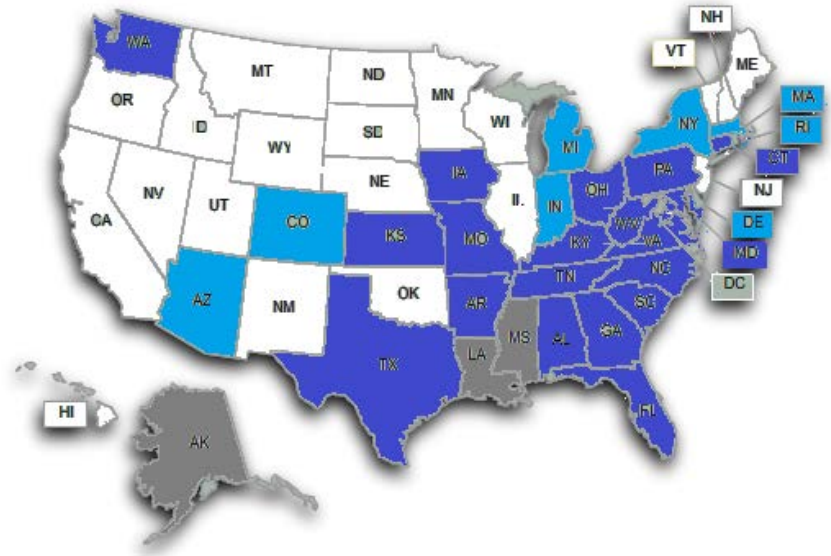


- No states formally allow stream creation as mitigation at this time
- Theoretically would be considered as a mitigation option (13 states)
- Other related practices allowed (5 states)
- *Not* allowed (25 states)
- One state has explored the practice in limited, isolated situations
- Primarily about technical inability

Other related practices allowed as mitigation:

- Increasing sinuosity
- Relocation
- Daylighting

Stream Mitigation for Impoundments



Status of Mitigation 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

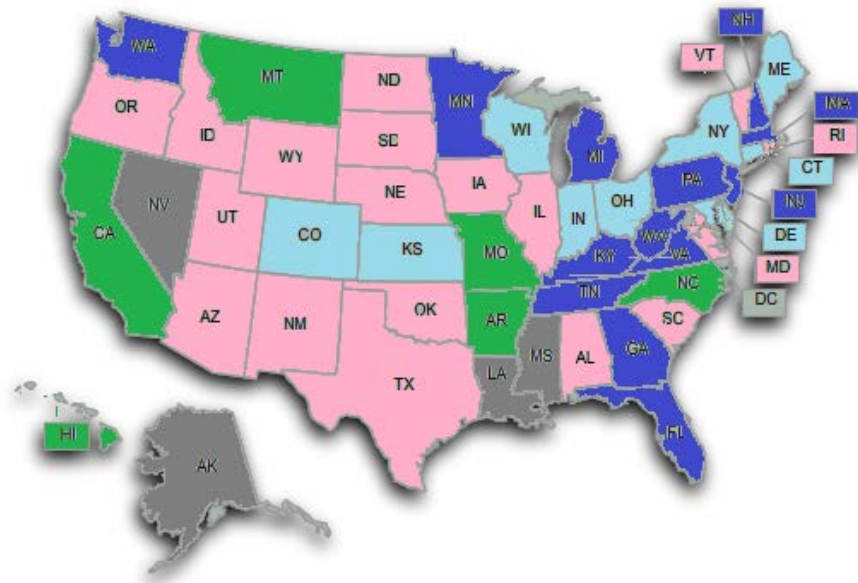
Stream Mitigation Programs and Practices



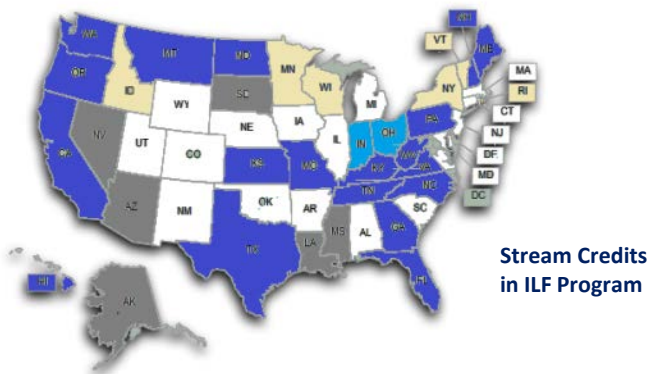
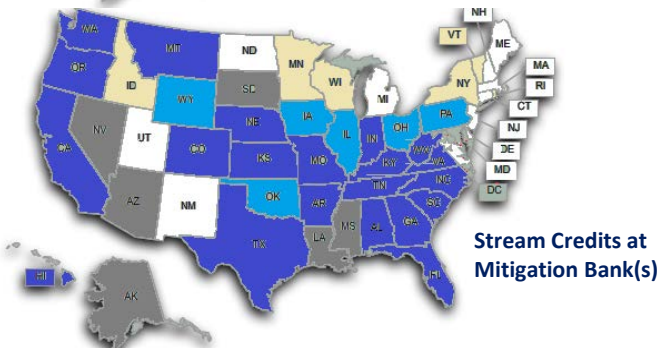
Type of Mitigation Arrangement	# States
Formal state-coordinated program	15
State mitigation “practices”	7
Corps only	18
Interagency Arrangement	6

Specific types of differences (based on):

- Stream type
- Location
- Water quality/classification
- Stream condition/quality
- Habitat type



Stream Mitigation Options



Mitigation options for streams:

- **Permittee Responsible** (39 states)
- **Mitigation Banks** (26 states)
- **In Lieu Fee Programs** (22 states)

Mitigation Site Selection and Design

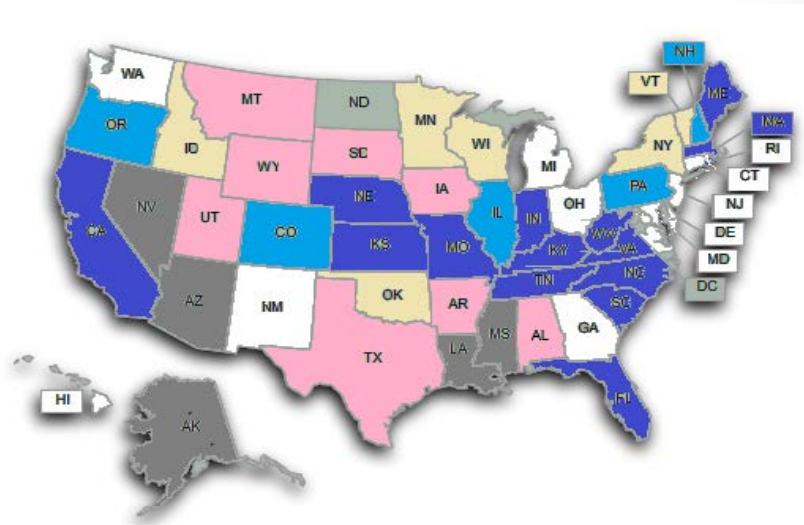


- Majority select sites and design:
 - On a case-by-case basis
 - Using best professional judgment
- Review *more* similar between options since 2008
- ILF and banks reported to get more thorough review



Match of Siting/Design	# States
Closely	14
Somewhat Closely	17
Not at all Closely	4

Procedures for Assigning Debits and Credits



Status of Stream Mitigation Procedures

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

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)

Some Trends in Stream Mitigation Activities



Riparian Zone/Buffer Restoration, Enhancement and Protection

- Growing interest
- Need for regulatory mechanisms

Livestock Exclusion

- Stand-alone practice v. BMP only

Low Impact Development (LID)

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

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

Growing Demand for Current, High Quality, Low-cost, Easily Accessible Training

The Need for Training:

- Field developing quickly
- Timing and frequency
- Cost and access

Strong interest in online training:

- Anytime/anywhere
- Cost-effective
- Approval easier
- High staff turnover
- Limited training and travel budgets



A Partial List of Training Requests: ✓

- General training on both stream and wetland concepts & methods
- Biological/hydrologic connections
- Stream identification (including by stream type)
- How to assess streams and stream impacts
- Mitigation training : Types, options, activities, successes and failures, lessons learned and how to deal with both common and specific challenges
- How to evaluate the success of mitigation
- Guidance on decision making/judgment calls on most aspect of the mitigation process

The Bottom Line:



- Great diversity in state systems, definitions and practices
- Most current guidance and templates must be adapted for use
- To make findings more generalizable and recommendations more transferable, facilitate engaged discussion about developing common terms/practices
- Take into consideration the highly diverse regulatory systems and terminology within which stream mitigation occurs
- Facilitate engaged debate about methods, practices and measures

Study Conclusions

- 
- A photograph of a river flowing through a forest. The river is in the foreground, with white water rapids. The forest is dense with trees, many of which are covered in moss. In the background, a wooden bridge spans across the river. The overall scene is lush and green.
- Report provides a baseline
 - 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
 - Encourage regional and national dialogues

Stream Report-related Products

- **Project Report (175 pages)**
 - Executive summary
 - Intro, background
 - Methodology; study sample and list of interviewees
 - Findings by interview question
 - Associated tables, figures and maps from comparative analysis
 - Glossary of terms
 - Appendices with state-by-state breakdown data tables
- **ASWM Stream Mitigation Website**
<http://www.aswm.org/wetland-programs/stream-mitigation>
 - Links to identification, assessment and mitigation documents
 - PDF of Report and Executive Summary
- **Other Resources:**
 - Wetland Wanderer Blogs
 - Feature Article in “Wetland News” newsletter
 - PowerPoint presentations that can be delivered to different audiences



Questions/Discussion



Thank You for Participating!



Feedback, Questions, Ideas:

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