

D I A L O G U E

The State of Compensatory Mitigation

Summary

Compensatory mitigation has been a rapidly growing industry among states, nonprofits, and the private sector ever since the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (the Corps) released their 2008 Mitigation Rule, providing clarification to aid agencies, states, permittees, consultants, and others involved in the mitigation process. Since then, further efforts have been made to provide guidance through various rules, memorandums, and policy updates. However, with the Trump Administration's plans for change, what can the mitigation industry expect moving forward? In conjunction with the 2017 National Wetlands Awards, ELI hosted a panel discussion on May 18, 2017, to address some of these uncertainties. Panelists discussed the future prospects and challenges that face the many aspects of this industry and what it means for wetlands protection. Below, we present a transcript of the discussion, which has been edited for style, clarity, and space considerations.

Kathryn Campbell (moderator) is a Staff Attorney at the Environmental Law Institute.

Karen Bennett is a Partner in the Environment, Energy, and Natural Resources group at Clark Hill PLC.

Collis Adams is Administrator of the Wetlands Bureau at the New Hampshire Department of Environmental Services.

Donna Collier is founder and Manager of Valencia Wetlands Trust and Chair of the National Environmental Banking Association.

Vince Messerly is President of the Stream and Wetland Foundation.

Kathryn Campbell: Thank you all for joining us today for our discussion on “The State of Compensatory Mitigation.” I am a staff attorney at ELI and also manage the National Wetlands Awards program. Today marks the 28th year for the awards, and the discussion today is part of our outreach efforts for the program and in celebration of EPA's American Wetlands Month. You can learn more

about this year's award winners, their many accomplishments, and the awards program in general on our website.¹

Our speakers today are going to present on a variety of aspects of compensatory mitigation. We're going to be talking about different types of mitigation and providing some insights into what permittees, mitigation providers, and others involved in the mitigation process can expect in this recent climate of regulatory and economic uncertainty.

Our first speaker is Karen Bennett, a partner at Clark Hill in the Environment, Energy and National Resources group where she has focused on permitting, compliance, litigation, and regulatory policies related to the Clean Water Act (CWA).² She will be giving us a refresher on mitigation regulations and some updates on recent changes there.

Next, we'll hear from Collis Adams who is one of our award winners this year. As the Administrator of the Wetlands Bureau at the New Hampshire Department of Environmental Services, he will be talking about in-lieu fee mitigation from the perspective of a state-run program.

Then, we'll hear from Donna Collier, founder and Manager of Valencia Wetlands Trust in Idaho. She is also Chair of the newly formed National Environmental Banking Association (NEBA) and will be talking about her experience in operating a mitigation bank and market challenges that have developed there.

Our last speaker will be Vince Messerly. He is the founder and President of the Stream and Wetlands Foundation, a nonprofit in Ohio that operates as both a bank and in-lieu fee program in providing mitigation services for developers. With that, I will turn it over to Karen.

Karen Bennett: I'm happy to be here and participate with my esteemed colleagues on the panel. I'm anxious to hear your experiences; I'll provide just a little bit of a background and context to the discussion. I think most of you are familiar with this, but just for anyone who isn't, the whole notion of compensatory mitigation derives from the CWA §404 program. If the Corps is going to authorize impacts to waters, they must make sure that you first avoid, minimize, and then mitigate for any unavoidable impacts. This process is laid out in the regulations found at §404(b)(1), and we all are familiar with those—the §404(b)(1)

1. ENVIRONMENTAL LAW INSTITUTE, *National Wetlands Awards*, www.nationalwetlandsawards.org.

2. 33 U.S.C. §§1251-1387; ELR STAT. FWPCA §§101-607.

guidelines direct the Corps' analysis and ultimate decision on whether a discharge permit may be granted.

The whole notion then of avoid, minimize, and mitigate evolved from a policy established in 1989 by President George H.W. Bush urging a national goal of "no net loss" of wetlands. That was really a programmatic goal. It was not intended to be applied permit-by-permit. What we saw over the next three decades was really an expansion of that policy and an evolution of the compensatory mitigation program through changes in regulations, policy, and guidance issued by various administrations over time. The no net loss of wetlands policy was expanded to apply to both wetlands and streams and eventually interpreted over time by the agencies to be a permit-by-permit analysis, such that it became a requirement that every permit that was issued would maintain this no net loss of wetlands and streams. So, it really did evolve and expand over time.

I will hit what in my view are the high points and the most significant regulatory changes. 2008 marked a new era in compensatory mitigation policy, the culmination of a whole host of changes that amounted to a real sea change in how the regulatory agencies were approaching it. Prior to that, you often thought in terms of quantifiable ratios. The Corps had a lot of discussion about what that ratio should be and it varied greatly from industry to industry. Prior to 2008, it was very unusual to see mitigation ratios in the 3:1 to 4:1 range. Then, they inched up closer to 7:1, and that was considered the high point at that time. Today, at least in the mining context, I am aware of mitigation ratios as high as 30:1.

In 2008, the Corps and EPA issued a joint rule that really changed the way the agencies and industry were looking at compensatory mitigation quantification. It took on a much more qualitative analysis, looking at replacing the function and value of that water in a watershed on a much bigger scale. And so the analysis became much more functional as compared to just quantifying lost wetland acreages or miles of streams. It also changed the mitigation hierarchy and established a preference for mitigation banks, in-lieu fee programs and, lastly, a permittee performing on-site mitigation.

So, this was a real change in the program. Prior to that, the first preference was on-site and in-kind. I did a lot of work at that time for mining interests who did all mitigation on-site for the most part. It was a very significant change to now be suggesting that the preferred approach was to go off-site to a bank. It was a real change for industry to adjust now to this new approach, but it was a discretionary rule. It wasn't like in 2008 there was a red line drawn in the sand and everything was new. In a lot of places, there were no mitigation banks available.

What happened after 2008 was that it opened up a lot of opportunity in the mitigation industry. This process that already existed sprang up and was refined and improved. Over time, the banking industry pushed on that. I think Donna is going to talk to us about how that process—establishing a mitigation bank—has evolved.

But from the perspective of industry clients it was a real challenge, because it was this new world where now, instead of coming forward in the application with what the applicant is proposing to do, now they have to look outside to find appropriate mitigation that would be acceptable to the authorizing agency. It became a challenge and there was a lag in availability that drove the cost of credits higher.

Now that we've gone through some period of growth and adjustment, some of this is working out. But initially, when you have this push on the agencies in that direction and you didn't have the available credits, you have a real conundrum. It caused delay and it caused increased costs to permittees. There were a lot of negative impacts on industry, but a lot of positive impacts on an industry that was emerging.

Late in 2015, President Barack Obama issued a new Executive Order, a directive to the public land management agencies telling them to revise their mitigation policies.³ This expanded the notion of compensatory mitigation that, prior to this, had been really only in the context of the CWA §404 program. Now those concepts—avoid, minimize, mitigate—were laid on public land management agencies and applied to other statutes. There was a lot of pushback. A lot of people felt that it was unlawful. It really did expand these concepts from just impacts to waters to now impacts to land, wildlife, and other ecological resources. So, it was a pretty broad expansion of the compensatory mitigation concept and there was a lot of angst from industry and permit applicants.

At the same time, I wrote a client alert on this memorandum and said, setting aside whether or not this is an unlawful expansion, let's talk about opportunities that it creates. Because I really felt that it did create opportunities to talk to the agencies about voluntary approaches to mitigation, in thinking more broadly about what are the broader ecological assets that exist in land holdings that might be assets in a permit negotiation.

While there was a lot of negative resistance to that memorandum, I think at the same time it kind of broadened the discussion a bit. Maybe it got people who knew they were going to be living under these new policies thinking maybe a little more out of the box about mitigation just generally, and what were the opportunities to really look at your own land assets and look at the impacts of your actions and see how could you creatively address some of those voluntarily.

Then, with the 2016 election, it changed things with respect to that particular guidance, because the new administration very early on signaled that it would be taking a look at all of these policies. I'll talk briefly about the other things that I think positioned us for where we are today with respect to this.

First off, the U.S. Congress got involved and moved to overturn the U.S. Fish and Wildlife Service's mitigation

3. Presidential Memorandum on Mitigating Impacts on Natural Resources From Development and Encouraging Related Private Investment (Nov. 3, 2015), available at https://www.epa.gov/sites/production/files/2015-12/documents/presidential_memo_regarding_mitigation_11-3-15.pdf.

policy that was issued in final form in November 2016.⁴ That action was followed by the administration's actions repealing the Obama mitigation policies, as reflected in President Trump's Executive Order on "Promoting Energy Independence and Economic Growth."⁵ The next day, Secretary of the Interior Ryan Zinke started looking into a whole host of things, but for our purposes, looking at the Obama memorandum directing the public land management agencies to revise their mitigation policies.⁶ These two actions from the new administration really indicated that there's going to be a change and, in fact, they are marching forward to reach out and identify and bring everything back for another look and potentially a rescinding and revision of those policies.

In addition to that, there's a bit of a new focus with respect to what mitigation policies will look like going forward from these agencies. That is a process I think people should be getting engaged in soon. In addition to that, I think we should be all watching how the administration's action on a new definition of "Waters of the United States" will affect mitigation.

Federal jurisdiction over waters and wetlands will change. It's inevitable. In implementing this, EPA Administrator Scott Pruitt directed the agency to pull back the Obama final rule on waters of the United States and revisit that and take another look under Justice Antonin Scalia's "relatively permanent waters" test versus "anything that's connected." So, you are going to see a change in federal jurisdiction that will affect the need for compensatory mitigation.

The other thing is that Administrator Pruitt believes that environmental regulation and environmental regulatory programs should be administered at the state level where allowed by the statutes. So, he is encouraging a push from federal regulation to more state-run regulatory programs.

Another recent action worth looking at is the final report of the Assumable Waters Subcommittee to the National Advisory Council for Environmental Policy and Technology (NACEPT) that was issued on May 2, 2017.⁷ It's interesting, because it was an Obama NACEPT subcommittee, but finalized in May and presumably reflecting the Trump Administration. It looks at what waters would be considered federal waters and what waters are

available then for states to assume jurisdiction over under state §404 programs.

You'll see there's still tension between the Corps, which registered its own opinion in a minority report, vis-à-vis the NACEPT report that reflects EPA's comments and, presumably reflects EPA's agreement to the NACEPT approach. So, that's interesting and worth watching. Out of that effort, I think you will see more states consider assuming the CWA §404 permitting program, and then mitigation will change again. I don't see that there will be any less compensatory mitigation if that were to happen, if more states assume the program, but it would be a different dynamic.

Collis Adams: Thank you, Karen. It's a nice transition, because I served on the Assumable Waters Subcommittee and assisted in the preparation of the minority report. It was, unfortunately, not a consensus report based on the Corps' representation on the subcommittee. Now others have explained the issue from the 30,000-foot level, I'm going to bring it way down and talk specifically about how New Hampshire deals with compensatory mitigation primarily through the in-lieu fee instrument option.

I will briefly go through some of the New Hampshire history, how we got to where we are today, and how that program has functioned over the past 10 years that it's been in existence. I've also got a few statistics to share with you to show the success that the program has enjoyed over that period of time. In August 2006, the state formally adopted what was called the Aquatic Resources Mitigation, or "ARM Fund," in-lieu fee option. It was the beginnings of our contemplation of how to deal with the unavoidable loss of aquatic resources—both wetland and stream resources.

I'll start by talking about what guided the NHDES in developing our in-lieu fee program. It came about as a result of some legislative action, and we'll talk about that a little bit later as well, and adoptions of administrative rules to move the mitigation option forward. As Karen had mentioned, this happens after we fully evaluate avoidance and minimization efforts. We still have to make sure that those steps are not overlooked in the process. Avoidance and minimization is critical.

We also looked at the federal mitigation rules to see how they evolved. In the end, we adopted a new fee instrument in coordination with the Corps' New England District and EPA Region 1. We also developed an Interagency Review Team (IRT) and a site-selection committee to implement the program.

So, what are the goals and objectives of the ARM Fund? Well, we needed a way to increase the extent and quality of the compensatory mitigation we're getting. Originally, we were looking at on-site, in-kind replacement for wetland loss. It was a failure. It was simply not successful. We saw plenty of attempts to replace the loss of wetlands, but what we ended up with was a lot of small kettle holes alongside the interstate highways that had cattails in them. Those are not unlike efforts in other states, I would imagine. Did it

4. H.J. Res. 52—115th Congress (2017-2018), Congressional Disapproval of Final U.S. Fish and Wildlife Services Mitigation Policy, 81 Fed. Reg. 83440, Nov. 21, 2016, *available at* <https://www.congress.gov/bill/115th-congress/house-joint-resolution/52>.

5. Presidential Executive Order on "Promoting Energy Independence and Economic Growth" March 28, 2017, *available at* <https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energy-independence-and-economy-1>.

6. See Secretarial Order No. 3349, American Energy Independence, *available at* https://www.doi.gov/sites/doi.gov/files/uploads/so_3349_american_energy_independence.pdf.

7. FINAL REPORT OF THE ASSUMABLE WATERS SUBCOMMITTEE: SUBMITTED TO THE NATIONAL ADVISORY COUNCIL FOR ENVIRONMENTAL POLICY AND TECHNOLOGY (2017), *available at* https://www.epa.gov/sites/production/files/2017-06/documents/awsubcommitteefinalreport_05-2017_tag508_05312017_508.pdf.

provide any reasonable functional replacement? No, it did not. They're most often miserable failures, and so we gave up on that fairly quickly.

We then began talking with the Corps about other options. Originally, we were looking toward promoting mitigation banks. We had a couple of private entities come in looking to develop mitigation banks and, unfortunately, those were not a viable option either. New Hampshire doesn't lend itself to mitigation banks as our landscape is dominated by bedrock geology. There's a reason why it is nicknamed the Granite State. We also have very steep topography. Areas like the White Mountains are very rugged. There is very little land that lends itself to developing wetland banks. Because, let's face it, if you can't get the hydrology right, you will never be successful creating wetland banks. If you're doing it with bedrock and steep topography in relatively small areas of flat open spaces, you're not going to be able to come forward with meaningful wetland banks.

So, we set out on a path to develop the in-lieu fee through the ARM Fund. What it does is provide an opportunity to pool money in watershed accounts, if you will. There are accounts for each watershed where projects are built. Payments are made into the account within that watershed. That money is then pooled and spent within that watershed to make more meaningful improvements in the watershed, whatever those might be.

We have a ledger sheet with the number of losses we experienced and the type of resources that were lost. When it comes to using the watershed funds, we match those up with the losses that were incurred during project development. Each year, we send out a request for proposals from groups and organizations to access this money to develop and build projects within the watershed to replace the lost functions and values that occurred during project approvals and issuance of permits. In this way, we are able to make much better and much more meaningful improvements within those watersheds. They're used for everything from wetland restoration and creation, preservation of upland buffers, and aquatic resource and stream improvements.

These are a number of things that trigger mitigation in the state of New Hampshire. For example, impacts to natural communities, the Natural Heritage Bureau areas, and to state or federally listed threatened or endangered species. The threshold for wetlands mitigation is any impact greater than 10,000 square feet. For streams, it's any impact greater than 200 linear feet for a perennial or intermittent stream.

When you talk about perennial, we measure it by three parameters, the thread, plus the left and right bank lengths. On intermittent streams, we're just looking at the channel length. So, those are the thresholds that trigger the need for mitigation in the state of New Hampshire, fairly straightforward. Although I can tell you there was a lot of give and take in trying to arrive at the 10,000-square-foot number, as well as the 200-foot number, but we were able to arrive at these numbers after much discussion with stakeholder groups including developers, homebuilders, contractors, and the like. It was a rather lengthy ordeal.

Next, how much mitigation is required? I can tell you that in New Hampshire most impacts are to forested wetlands. More than 85% of the wetlands in New Hampshire are forested wetlands. So, most of the mitigation we're doing is for forested wetland impacts. For example, if you were to impact one acre of forested wetland, you would have to mitigate with a 1.5 acre of like mitigation. Then, in wetlands preservation, the upland buffer ratio is 10:1. So, for every one acre of wetland impact, you need to preserve 10 acres of upland buffer. The buffer must also continuously surround the wetland that you're trying to protect.

So, here's the big question—after we develop a plan on everything within the watershed, how much is a credit going to cost? This requires a lot of coordination with a big group of stakeholders to figure out how much this is going to be. We've got the developers who obviously want to keep that number small and we've got the environmentalists who want to see it get bigger. So, we're trying to find some place in the middle, some way to come up with a number that we could all hang our hats on that has some rationale and some logic to it.

The first piece that goes into the calculation is determining what it's going to take to buy a piece of upland to create a wetland. The second is the cost of turning that upland into a wetland. It's going to take construction costs such as excavation, materials, planning. So, we met with a lot of people from the construction industry, from the wetland banking industry, and some other folks to determine what it actually costs to create or construct an acre of wetland. The number we came up with was about \$65,000. We have adjusted that based upon inflation and other factors, but that's the number we started at. Then, the third piece is the overhead for NHDES to administer the in-lieu fee program, and that currently sits at 20 %.

So, there are the three things that go into it. We actually have an online ARM Fund calculator. If you go to our website,⁸ you can actually click on the calculator, plug in the town you're at, and it will pull up the land value, the adjusted acreage amount, and the construction amount adjusted for inflation, the increased cost of construction, and those sorts of things. It's a very handy tool. Applicants can figure out how much it's going to cost if they choose to go with the fee route. It's been very useful and successful over the past 10 years of the program.

As I mentioned, we send out requests for proposals for projects that will utilize the money within each watershed account. When they come in, we review them and make cuts to eliminate some of them that we didn't feel meet the minimum standards. After we boil that down, we ask some to send in a more full application with all of the details such as how the money is actually going to be expended and who will oversee the long-term management.

Once that's done, it goes to the NHDES site-selection committee, where they rank, score, and make recommen-

8. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, *Wetlands Program*, <https://www.des.nh.gov/organization/divisions/water/wetlands/wmp/>.

dations on the proposals. Those recommendations go forward to both the Corps and the Wetlands Council, which is an independent council in the state of New Hampshire. They also do a review to make sure everything makes sense and that we've done due diligence in requesting proposals, evaluating proposals, and making recommendations for dispersal of funds. Then, it needs to go to the governor in the state of New Hampshire for a final blessing. Finally, at that point, the funds would be distributed. That's it in a nutshell.

Donna Collier: It's an honor and pleasure to be here. I'm always excited to be able to talk to people about wetland mitigation banking. It's become quite a passion for me in the last 16 years.

In 2001, I was fresh out of getting final plat approval for a 500-lot golf course development. I was feeling pretty good. I had been quite successful and was looking for a site for another golf course development. I pulled up in front of a property with a real estate agent and looked around and thought, oh my gosh, who on earth is going to clean up that mess? Little did I know, it was going to be us.

It was a Louisiana-Pacific sawmill site that they had abandoned. We saw large chunks of concrete, rebar, rusty saw blades and strange pieces of equipment. You couldn't even figure out what it all was in the mess that was out there. There were cattle up on a backfield. There was also contamination and refuse dumps. We assumed that probably Louisiana-Pacific still had to clean up the contamination. As it turned out, we got a good price, because we took on the liability that Louisiana-Pacific still had.

They had been piling up log decks and irrigating them. A wetland area actually had been filled in over a period of 20 years. They hauled in tons of rocky fill. We ended up hauling out about 250,000 cubic yards to restore the previous wetlands. So, we were cleaning this up and getting ready to do the golf course development, and the Corps came to us with the wetland mitigation banking program. I had never heard of it before, which surprised me because I had been deeply involved in real estate development. They brought me a stack of books and reports about six inches high to study. So, I studied it for about 10 to 12 months and decided to switch to a wetland bank.

I had been working at becoming an amateur wildlife photographer, so I was running around the site taking pictures. I studied the hydrology and the topography and where the water was coming from. It looked like it really could work. So, we got some investors excited about it and put together a prospectus and had our first meeting with the Inter-Agency Review Team (IRT), which is when reality set in. A couple of agencies on that team were nothing short of furious that we would presume to do this. At the time, I was dumbfounded. I thought this was a great program. I thought they'd be happy. Compared to a 500-lot real estate development, I thought this would be a walk in the park, but it ended up being just the opposite.

Back then, I didn't understand why they were upset. Our investors also had second thoughts about what they were doing. It looked like it was going to be a lot bigger bite than we had thought, but we decided to go ahead. I've since learned that the reason they were upset was because when a public comment period expires on a public notice, most people don't realize that it goes silent. You think that you're giving each other comments and that everybody's got a say and it's all transparent, but we don't really know what's going on.

What actually happens is when the comment period ends, everything goes dark. Unless you issue a Freedom of Information Act request to find out what was in the permit, you can't find out. So, we ended up losing credit sales and trying to find out why and where they went, and couldn't find out. Eventually, I had someone come from the Corps who told me that the state agencies were selling mitigation to developers. We were actually losing credit sales to the agencies that were upset at us. In the beginning, we didn't know that this was happening.

One of the priorities of NEBA is to make sure that we don't have IRT members and/or other government agencies that are competing with taxpayer-subsidized options and basically squeezing out the credit sales from mitigation banks. So, there's the guts and feathers. That's how the sausage is made. This is what we ended up doing.

We got to work restoring the site to what has become a spectacular wetland/wildlife oasis. We had some contractors come in and they hauled out a lot of the fill for free in exchange for keeping the material they could use. They screened out gravel and topsoil.

This is what the site transformation looked like. It took us 15 years to get there. We actually just finished the construction and had our final assessment last year. The physical outcome on the ground was a phenomenal success. It exceeded my expectations. When we did this, we had wildlife come in that none of us had ever seen or heard of. It's just teeming now with a variety of diverse waterfowl. We also do tours. We have schools bring classes out to the site, but we also go into the classes to give presentations, show videos, and provide hands-on learning projects. It's been a lot of fun as far as the expansion of the outreach and education that we've been able to provide to our student community.

So, the actual science, the concept of wetland banking has been proven. When you create a wetland bank, as you go through all this and meet performance standards, you will be awarded credits that you can then sell. The reason banking is so successful is that you don't get paid until you prove you are successful. You have to do the work first. You have to have investors who are willing to take the risk and put the money upfront, and it takes years for them to get a return on their money.

Now, we get into the technical part. When you start a mitigation bank, the most important part is the physical site. When we started studying why things fail, and they usually do, it's that the site itself is not going to sustain



Before (left) and after (right) pictures of the Valencia Wetlands Mitigation Bank; top row, Louisiana-Pacific sawmill; bottom row, sandpit (Donna Collier).

a permanent wetland if there's not one there already. So, when you're looking for a site, you need to find something that can be made into a permanent, self-sustaining wetland. Like Collis said, the hydrology is very important. You have a service area where they'll allow you to sell credits. You have a banking instrument, which is basically the agreement you have with the Corps, EPA, and other members of the IRT. Then you have the IRT that comes and oversees everything that you do.

So, we are intensely regulated. We do monitoring and provide annual reports. They come out and check them, look to make sure our wetland scientist got his information right. They look at everything we do. It is common across the country to have lots of small impacts that are nearly impossible to offset without a wetland bank. When all of these small projects come to us, it drastically reduces regulatory oversight. Regulators just have one site to oversee, instead of traveling around enforcing lots of small, failing projects. We are actually a higher quality wetland than all of the projects we have offset. So, you really have a net gain for the environment with less regulatory oversight. So, at least for us—and I know a lot of other banks are similar—this is a win-win all around.

In the 2008 Mitigation Rule that was previously mentioned, there are 12 legal requirements. Another main goal of NEBA is to work toward having these 12 requirements

enforced. Right now, it's not predictable. Wetland banks are required to meet every single one of these. All 12 have been determined to be required to make mitigation projects successful.

The mitigation banking program, as it is structured, is extremely successful. We meet all 12 requirements, plus achieve performance standards before credits are awarded for us to sell. According to the 2008 rule, everyone's supposed to be doing this. We're working to make sure that these same requirements are actually applied to other mitigation options, as the law requires. It not only improves the environment for everyone, it also drastically reduces regulatory costs for taxpayers. And it creates a lot of jobs in the areas we serve.

There is a time line for getting banks approved that is not always followed. We've had regulators say, if I have to approve it within that time, the answer is no. So, this is one of the challenges that we work with. Regulators all have different opinions about what should or shouldn't be done. Funding is also a big challenge. When you think you want to do a bank, you've got to get your sources of funding. A regular bank, a traditional lending bank, is not an option because there's too little ability to predict what your credit sales will be. There are too many unpredictable steps in between. There are too many opinions that may not follow the 2008 rule.

The Corps has latitude. We've had state agencies that sometimes do mitigation themselves, which means the mitigation banks are bypassed. So, you have to get a private investor that's actually committed and willing to take the risk, which we are very fortunate to have had. When we lost credit sales to state agencies, which is up in the millions for us now, we had investors that were really committed and stuck with it and helped us, and continue to help us, as we work out the kinks in the program.

You have to look at the cost of land, which is different in different areas. You look at the cost of the conservation easement. It took us an entire year to negotiate that. The Rocky Mountain Elk Foundation holds our conservation easement. They worked with the Corps to negotiate every word of the easement, which is very long, as each word was parsed out between four different agencies. It fits hand-in-glove with the banking instrument. The whole process to get our approval took us four years, from beginning to end—including going through staff turnovers with regulators.

You have wetland scientists and engineers. You have the cost of construction, cost of long-term maintenance, cost of annual monitoring reports, cost of financial guarantees, and the manager's long-term compensation. The financial consideration for revenue depends on selling credits to highway departments—which is the biggest user of wetland credits in the country—power companies, and airports. Airports are actually often not allowed to mitigate nearby, because it creates waterfowl that interferes with the air traffic. We have a lot of homebuilders, individual homeowners. We're also opening up new markets for endangered species banks and new markets for Superfund sites.

The Montana Wetland Assessment Method is what the Corps assigned to us for measuring our success. We have all these 12 functions that are considered and measured on our site. When someone's going to impact a site, they use these same 12 functions to assess their site. Whatever the score is at the bottom, they come and buy that number of credits at our bank, which is really slick.

In our case, the Corps recommended this assessment method. They don't make us do in-kind offsets. If it's emergent wetland, you don't necessarily have to go buy emergent wetland credits. It actually makes for a bigger and more environmentally viable and diverse wetland bank in the end. So, we were pretty happy with it.

Another benefit that you get from banking is that the legal liability transfers to the environmental bank. Any other option that you do, you're perpetually responsible. You have to keep trying and trying over and over until you succeed. People have poured an awful lot of money on the ground that did not actually become successful. So, that's a pretty good benefit. You also get the 1:1 mitigation ratio for all types of wetlands in the primary service area, which we also talked about. That goes out as far as 2:1 in the outer areas.

The permits are really improved. We've got it streamlined to the point where it can happen in a week or so. We can sell blocks of credits at a reduced rate to highway

departments. We have the Federal Highway Administration's mandate for use of wetland banks. Wetland credits facilitate shovel-ready status for projects, because a highway department can just say we're buying credits from this bank. They don't have to go out and identify a bunch of different sites and hope that they're going to be viable in the future. It's a huge difference to just come to the bank and buy credits.

Service areas are different for every bank and are negotiated with the Corps. They are required to take into account the economic viability, and they did that with us. They let us have a bigger service area, because there's not a lot of development up there in North Idaho.

So, when we encountered the difficulties with the regulatory agencies, I started going to Washington, D.C., with the National Mitigation Banking Association (NMBA) back in 2009, to talk to the agencies about what was working and what wasn't. When the 2008 rule came into effect, at least in our area, everybody went right on like it didn't exist. The 2008 rule meant nothing.

I ended up on the Board of Directors for NMBA. I served as its Treasurer and also Secretary. Over time, we went to D.C. several times a year and talked with regulatory agencies. We made a lot of headway in ironing out some of the misunderstandings, streamlining things, and educating people about what wetland banks were. In the beginning of 2017, a group of the original founders of NMBA, past presidents, and board members got together and started NEBA to serve the entire mitigation banking industry.

We are now the largest association representing bankers across the country. We got a very enthusiastic response, and I feel like we're going to have a strong voice to help promote the banking industry. We are currently offering free membership for 2017 on our website.⁹ If anyone is interested in learning more, I'd be happy to talk with you.

Vince Messerly: I'm the president of the Stream and Wetlands Foundation, which is based in Ohio. We're a mitigation bank sponsor and an in-lieu fee program sponsor. We also, on a case-by-case basis, will complete permittee-responsible mitigation and endangered species habitat mitigation projects. We were established in 1992 and were one of the first mitigation bank sponsors in the country. Our establishment effort was led by leadership from the Ohio Home Builders Association. The group thought that the establishment of a mitigation bank may be a good way for the organization to serve their members.

At that time, \$401 and \$404 permit applicants typically constructed their own mitigation projects and there was a high rate of failure. Often, the media portrayed early mitigation failures in a very negative way. My recollection is that the establishment of large mitigation, landscape-scale mitigation projects for federally funded highway projects were deemed to be largely successful. The large projects allowed

9. NATIONAL ENVIRONMENTAL BANKING ASSOCIATION, <https://environmentalbanking.org/>.

state and federal agencies to aggregate their resources for the review, approval, and oversight of these projects.

As it turned out, the home builders association determined that becoming a mitigation bank sponsor presented too many uncertainties for the association. Therefore, leadership elected to pursue the establishment of a nonprofit entity that could become a mitigation bank sponsor. The group established the Ohio Wetlands Foundation in 1992. In 2015, we changed our name to the Stream and Wetlands Foundation to reflect that we no longer worked in just Ohio and that we did more than just wetlands mitigation.

In 1991, the Corps issued a draft policy, I believe. It was referred to as draft guidelines or some other type of memo, to establish what they called then “pooled” or “consolidated” mitigation. The policy evolved into the final draft guidelines for the establishment of mitigation banks. The final guidelines were issued in December 1995. Then, finally, the mitigation rule was issued in early 2008 and went into effect in June 2008, I believe.

Since our inception in 1992, we have completed 12 different mitigation banks around Ohio and one in North Carolina. Currently, we also have four different instruments for in-lieu fee programs in the Pittsburgh and Huntington Corps Districts in Ohio. We have separate instruments for wetlands and stream mitigation in each of these districts.

A little bit about in-lieu fee mitigation. Collis covered a lot of these things, but basically we’re looking at selling advanced credits and initiating the fulfillment of the sold advanced credits within a three-year window. Once we have credits that are in excess of those advanced credits, those credits are essentially viewed as being equivalent to mitigation bank credits. So, that’s just a little summary for those of you who may not be familiar with mitigation through the in-lieu fee program.

In Ohio, we’re a little unusual compared to most other states. We have a robust isolated wetland permitting program. You can visit our website if you’re interested in reading what we do relative to the §401 program or for what we do for isolated waters.¹⁰ Basically, in Ohio, no matter how the waters of the United States issue shakes out, you’re going to be required one way or another to obtain a permit.

That’s me in a nutshell. I would be more than happy to answer any and all questions, including particulars about our organization, our mitigation banks, and our in-lieu fee mitigation programs. But I think everybody here did a good job getting everything covered. That’s the beauty of going last. So, I think we can move along to questions.

Audience Member: Thank you so much for these fruitful presentations. I work for the nonprofit Ecotropics. We work on projects for the tropical areas of the world. Certain industries in some of those tropical countries have strong dilemmas in balancing between destructivism and sustainability. I can see that you all have a long tradition of removing barriers against those sorts of problems.

What can we say to this group of stakeholders in those areas where they face the challenges of destructivism? How can we go ahead with this sort of business model or mechanism that has been so effective? It’s definitely solving problems, and I would like to hear a little bit more from you.

Vince Messerly: It’s a process that’s evolved over a long period of time, as far as we’re concerned. We’ve been doing this for more than 25 years. So, if you’re just beginning, starting with the program, I think you have some great learning experiences that could be picked from in the United States as to how we’ve gotten things started. It’s never going to be perfect. I’m unfortunately convinced of that. I’d like for it to be perfect. I’d like for everything to work smoothly. I guess for better or worse, it’s kind of a bar that everybody has to get over to be in the business of mitigation service providing.

There are so many different stakeholders. There is the public from the §401 and §404 permitting process that has a vested interest, if they don’t want that project to be built next to them. To the permit applicant that has a lot invested financially to make this thing happen. To the regulatory community, that it’s their job to be stewards of the environment, to make sure that everybody is doing the right thing. And then of course, again, the mitigation service provider that’s trying to appease everybody at the same time. It’s just like having a family argument. It’s really difficult to get everybody at the kitchen table to say yes at the same time.

Karen Bennett: I would add to that just the recognition that this all is derived from a legal prohibition on doing anything in waters here in our country without a permit. And the requirement of the permit is that you avoid, minimize, and mitigate. So, there is that legal framework in place. I don’t know what you have or what you’re operating under, but I think it would be pretty hard for all of this to spring up without some kind of an organic statute with those kinds of legal requirements that drive where we are today.

Vince Messerly: For better or worse, our organization when we got started, we were actually started by a group of developers in Ohio. They were all members of our Ohio Home Builders Association, members of the National Home Builders Association. They figured out early on in the regulatory process, after the Bush Administration issued the Executive Order on no net loss, that they weren’t very good at doing environmental compensation. They were pretty good at building roads and streets and houses, but not so good at mitigation.

When this draft policy came out in 1991, they came out as an association thinking, hey, this might be a way for our members to be helped by the association. Unfortunately, or fortunately, the solution at that time was let’s start a separate nonprofit organization—and that’s what we are. That’s how we were born. The driving force then was to have a program that allowed for win-win situations as much as

10. STREAM AND WETLAND FOUNDATION, <http://streamandwetlands.org/>.

possible. It was a win for the public in that they got natural resources restored that could be used as recreational areas, for hunting and fishing, and also for educational and research opportunities.

On economic development, I looked at ELI's vision for "a healthy environment, prosperous economies, and vibrant communities founded on the rule of law," and that's what they were looking for. At the same time, another win was having an option for mitigation that the regulators could rely upon, because they got burned or picked on a lot of times in trying to authorize permits that they really didn't feel could be fulfilled or met with the compensatory mitigation that was being provided at the time. So, we were trying our best to solve those dilemmas. A lot of people moved forward to have vibrant communities and vibrant economies.

Collis Adams: If you try to put a program together and get some regulations that address the dilemma you're dealing with, it's a question of how do you convince the people that this is the direction you want to move in? We still go, and I personally still go, back to the notion that you talk to people in words that they understand and in things they can feel and they can touch in their lives every day. So, I would like focus on three things, and that is: (1) everybody needs clean water and they understand the importance of clean water; (2) everybody is susceptible to flooding and the damage it can do; and (3) everybody loves wildlife.

The wetland mitigation programs provide all three of those important things to everybody, regardless of your socioeconomic position in life. I think if you keep hammering out on those, if it's something that people can touch, they can see, they can feel, then they now can easily understand and place real value on it.

Donna Collier: I think Karen is right, that you've got to have the underlying regulations. People would not come and buy anything from us if they didn't have to. It also depends on reliable enforcement, if you don't have that, the whole thing falls apart.

Audience Member: What could an executive order or even this new Clean Water Rule do to slow down or damper compensatory mitigation at this point? Before EPA decided to issue the Clean Water Rule in 2015, the company I worked with in the Midwest had been doing mitigation since the 1990s. So, however the Corps and the states have determined what waters required permits, I am not seeing how this rule that is currently enjoined is going to stop what has been trucking along.

Karen Bennett: You're right. The compensatory mitigation requirements are tied to the issuance of any permit. So, my point, if it was misconstrued, was there are a couple of other things going on out there that may affect mitigation. If, for example, the new waters of the United States rule renders fewer federal waters, then some actions may

take place in areas that would otherwise have required mitigation because they would have otherwise been captured. Or they may happen under some state program.

It's not a direct correlation. Just the point that it's another thing that is out there that is going to redefine the universe of federal waters. And federal waters is what triggers the need for a permit, which then triggers the need for the compensatory mitigation at the federal level.

To your point about compensatory mitigation, I think you're right. I mean, to the extent that the Corps is issuing permits or a state is issuing permits, there will be compensatory mitigation for those impacts. It is just, will they be under the federal rule or will they be under some state program? But, yes, I think you're correct in that just because we are now revisiting the extent of federal waters, it doesn't really mean necessarily that compensatory mitigation is going to change.

Audience Member: I helped an in-lieu fee program in the state of Missouri prior to moving to D.C. I thought it was interesting to hear your approach from a state level, because in the state of Missouri, there is the Missouri Heritage Conservation Fund. They were the only in-lieu fee program in the state before this nonprofit organization created another in-lieu fee program.

From the nonprofit standpoint, you are issued advance credits. Is that how it's done in New Hampshire? Is there a select amount of credits that your in-lieu fee program can sell prior to having to put something on the ground? How does it work for a state-run in-lieu fee?

Collis Adams: Well, we don't sell credits. It's kind of still on its head. We accept the fees first, and then we'll go through the process of distributing that money. Now, we have to work within the recording process on the Corps' Regulatory In-Lieu Fee and Bank Information Tracking System.¹¹ Within that process, there is a way we create the payments to credits. So, it's built into that process. But I'm just trying, like I say, to turn it on its head. We accept the money first, then we spend it.

Audience Member: Under the 2008 Mitigation Rule, there are three growing seasons or three years to put things in the ground. Have you found, in your experience, it's been difficult to meet that time line or does the state regularly meet that three-year time line? For example, if there's an impact and you say I'm going to mitigate it here and you offer that land out to the Corps as being the solution for an impact, you have three years from the time you take the money to put a project on the ground? Does that apply to whichever proposal you accept?

Collis Adams: Well, the proposals will need to have a time line built into them. There are some monitoring requirements, and there's some follow-up to it as well. That's all

11. REGULATORY IN-LIEU FEE AND BANK INFORMATION TRACKING SYSTEM, <https://ribits.usace.army.mil>.

part of the proposal we would receive from the entities who are looking to access the grant money. So, there's that check in place.

Audience Member: Do you have a hard time getting these projects in the ground within three years?

Collis Adams: We're not bound by that really. I can tell you most of the projects that get funded are land protection preservation projects. We do it for restoration as much as we can. That's our first goal, to try and restore as much as we can. But there's really not a whole lot of opportunity for that for a variety of reasons. The vast majority of our projects and grant awards are for upland preservation. So, right now, we're dealing with that. But there are times when we need to do monitoring and follow-up and those sorts of things. We do typically require at least three growing seasons, but we follow up. It may need to be adjusted. We may need to modify the project to make sure that it's meeting its performance standards.

Audience Member: I have a question for Karen and for Collis. When you were talking about how EPA may change the rules and give more jurisdiction to the states, what happens when a river, for example, runs through multiple states and those states adopt different standards?

Karen Bennett: There is authority in the CWA for states to assume the role of implementing a permit program. I think that there are number of states that were interested in doing that in the past. There are two states that do that currently—Michigan and New Jersey. They currently implement their own §404 program. But that's what this whole NACEPT report is really about. It's looking at how are we going to define what waters are federal waters. What you're talking about is interstate waters, so those would likely stay now in "waters of the United States" under a delegated program. It would fall outside of the state.

Audience Member: And then, I'm not very familiar with banking or fee in-lieu, because I'm from Connecticut. We have a pretty small state and maybe not a lot of opportunity for this. How do you find the land to do the mitigation on? Is that somebody else's private property? Then, how do you bring that person in and have them agree to be part of all this?

Collis Adams: That's a good question, a complex question, but a good question. It's up to the applicant or the project proponent to go out and find land first to be preserved that meets the qualifications and standards. A lot of times, they'll just go and flat-out buy it or they'll buy an easement. It's held in perpetuity by an easement holder. That has to be approved by the state so that they meet all of the various rigorous tests that they need to meet for being a qualified easement holder. So, that's the whole process that they have to go through.

Not all has to occur before we issue the permit. Sometimes, we'll issue the permit with conditions that say you need to work out some of the financial details before you put the shovel in the ground. So, that's how we handle that.

Audience Member: Well, before I leave that, it made me think of a program in Connecticut that matches a farm with a farmer or a farmer with a farm. There are many small farms with farmers who want to retire. And there are new farmers without farms, and so there is this matching program.

I wonder if the same sort of idea could be applied here, where willing private property owners who would want mitigation to take place on their property could put their name on a list, and then there'd be a readily available place for this to happen.

Collis Adams: That's a good concept and I think warrants some further consideration. We're certainly always out there encouraging municipalities to go out and work with land-owners to make them aware of the program and perhaps come up with what we call a top 10 wish list. It might be restoration projects or acquisition projects that you'd like to have, so they're all geared up. They've got a way to approach it so that when the money becomes available, they can start to pass it around with a leg up. Perhaps, other folks can get into the program or get started on the program. I think that's similar to what you're talking about.

I also want to comment on the assumable waters. For interstate waters, it's very straightforward that those are retained by the Corps. What's really difficult is when waters that go through multiple Corps districts, because each district has different waters that they've identified as traditional, navigable waters.

Audience Member: I am a contractor who works in support of NOAA. One of my questions is about aquatic and submarine mitigation. We are not seeing a lot of in-kind mitigation happening for impacts on things like coral reefs or sea grasses. I think there is a lot of high risk in these habitats. There are issues with who owns the land, because you are dealing with states. You can't really purchase land that might be in an estuary, because it's underwater.

What is the role of mitigation banking in that type of environment? What are the things that could be done to help incentivize mitigation banks to come into some of these habitats and ecosystems where we are not seeing it happening?

Donna Collier: I can answer that. When you're looking to do mitigation, you've got to show investors, or whoever is going to fund it, where the market is going to come from. If you have a market there, you get a bank. If it's got to be in-kind, that's really risky for a banker to go and do. If they don't know where the sales are going to come from, you probably would not be able to get a bank to do that.

Audience Member: I'm with Restore America's Estuaries. First, thank you to all the panelists. I found this very informative. My question is related to what Karen had mentioned about this change to the qualitative analysis of wetland functions in mitigation banking. Also, Donna, you had a nice slide about the different assessment methodology that you look for in projects.

My question is how are those particular functions that are monitored for determined? The reason I ask that is to see whether carbon services could be included within that. One of a wetland's functions is carbon sequestration and storage, and I don't know if there would be interest and appetite to include that as a wetland function that is mitigated forward, so I wanted to get your opinion on that.

Karen Bennett: I absolutely think there is interest in quantifying and including carbon sequestration and storage benefits for mitigation credit. It is an area that is developing in the mitigation banking context. As applied to estuaries, I don't personally have any experience with that so I don't know what those tools would look like.

Donna Collier: The Corps actually determines which assessment method to use. There are different methods depending on what the ecosystem is like. They are working on something they call credit stacking where, if you wanted to add more ecosystem products to that, you could as long as you're not double-dipping, which is selling the same credits twice. That might mean amending your banking instrument to include a new ecosystem value. It's important to be really clear on what your performance standards are. So, as long as the definitions of your ecological values are clear, and you are not counting the same thing twice, there is the potential to add new values.

Vince Messerly: You need to add functional assessments for anything. It would have to obviously be related to what you're doing. So, if you wanted carbon to be a tool that you're using to evaluate the success or failure of that project, you certainly could come up with some type of mechanism to use to evaluate that and determine whether or not you're meeting your goals. But, as Donna is referring to, stacking or bundling credits, I think, is more of what you're looking at. So, how would that restoration project—whether it's wetlands or uplands or forests or whatever, or estuaries—all provide a suite of functions?

Most mitigation banks will do projects using an acreage surrogate. You have to get away from that, in my opinion. You want to look at the functions and values and evaluate it for how much carbon sequestration, nutrient retention, sunlight retention, or flood attenuation it may provide. You would take all those different components and come up with a major lift for those and determine how those can be used as a compensatory mitigation product for advocates that need them.

This also goes back to the other issue of needing to have the market. Is there somebody who really needs carbon? Is there somebody who really needs to sell them that retention? With mitigation, how do you analyze that? Some states have figured that out, but not very many. Again, the big mental block is getting over the acreage surrogate and the double-dipping conundrum.

Karen Bennett: And I think that there are institutional barriers to that kind of thinking. In considering the science community, consultants have models to look at all of that. There is this idea of selling to the Corps an acceptable approach and something that they feel comfortable with. I think that's probably where the challenge is, and we're just not there.

Donna Collier: Some people thought banks were a scam in the beginning. It took some time for them to see what we did. We created a before-and-after video that showed the dramatic changes we made. Several people have told us it changed their minds, changed their whole attitude. Part of the problem is education so that people will understand what a really good program this is. They were used to a lot of failure. They expected us to fail. So, it took a while for them to see how well we do.

Karen Bennett: Also, it takes time. You need time-lapse photography to really tell your story because, otherwise, there is a period of faith. You expect it's going to come, but there is this time factor.

Collis Adams: The industry concept had the same perception problem. At first, it was promoted as just buying permits. Just tell them how much and they pull out their checkbook for the permit. Now, we actually make them show beyond the shadow of a doubt, if you will, that they have analyzed and explored all of the options available to them and this was the only choice. Getting over that perception image was very difficult and it took some time, but I think the success has paid dividends and allowed a lot of people to see the benefits.

Donna Collier: It looks like their program to bring private industry into the mitigation space has turned out really well. In North Carolina, they had a statewide in-lieu fee program that resulted in nearly \$200 million in unfunded liabilities. They are buying credits from banks to make up for all that. Since banks do not receive credits to sell until they are proven successful, the risk of failure is removed. When you pay in advance for mitigation that has not been created, the failure rate is really high.

Audience Member: I'm with the National Association of Home Builders, and I have a question that kind of keys into the §404(g) assumable waters, as well as the 2008 mitigation rule. It's a little bit technical, but I think it's worth exploring. If states get delegated authority under §404(g)

for the waters that are determined variable to assume, is there any mechanism in the 2008 mitigation rule that would enable them also in turn to get delegated authority over basically the mitigation rule or the mitigation banking instrument process?

Vince Messerly: We still have to follow the federal rule. It's still in effect. It's not like they've delegated this. They still have to meet the minimum criteria for it.

Donna Collier: We do have areas where the 2008 rule is not being followed. Agencies are working on training that is intended to correct that.

Karen Bennett: So your question is if §404(g) provides authority for the banking part of the rule? Whether the preference hierarchy in the 2008 rule applies to a delegated program, right?

Vince Messerly: There's a 180-degree difference, it's the §401 program. There are four states that don't operate on the program and there are 46 states that do. But those states that operate on the §401 program still have to follow the federal §401 program in that baseline. They could be stricter and more stringent, but they can't be less strict.

Audience Member: Yes, no doubt about it. If a state gets authority to run its §404 dredge and fill program, it still needs to meet the requirements on all borders. But the question is under the 2008 mitigation rule, can you get delegated authority? Basically, to sideline the Corps from

the process and the state goes through its own mitigation rule separate and apart from the federal government.

Donna Collier: The perception, I think, is that states are always going to be more honest. We have not determined if that's the case in reality. We have the same problems on a state level with the regulators that you do on the federal, at least. I believe, as you go do things in the states, we're going to have clear guidelines and rules. We have programs being set up under state authority, under the umbrella of federal regulations, that don't meet the requirements of the federal rules. Both EPA and the Corps are disturbed, because some states had set things up, apparently under their authority, and they don't meet federal guidelines. So, we will have a lot of things to work out.

Collis Adams: The banking piece may be a bit of a challenge for a state-assumed program, but the bottom line is if a state is going to assume they have to execute a memorandum of agreement with both the Corps and EPA. Then, that mitigation piece would have to be teased out before that memorandum could be executed. How do they do that, I don't know. I guess they would learn as they go as more states with mitigation banking try to assume the program.

Kathryn Campbell: I hope that this conversation on mitigation can continue as the actual impacts of these recent changes become clearer in the new administration. Thank you again everyone, and congratulations to the winners of the 2017 National Wetlands Awards.