Thank you for the opportunity to provide feedback on the U.S. Army Corps of Engineers’ (USACE or Corps) initiative to improve our nation’s infrastructure. Please see the following outline of AGC’s priority issues specific to project delivery, financing/budget and permitting issues, along with our recommendations on ways to improve current processes and procedures in these areas. AGC has published two articles highlighting a series of recent actions your agency has taken already, which we expect to have a positive impact on future civil works projects or work in/around “Waters of the United States”: click here and here.

PART I – Accelerate Project Delivery & Transform Project Financing and Budgeting

Over the last couple of years, members of the construction industry and the USACE leadership have looked for proactive solutions to address the challenges companies face working with USACE. To this end, AGC prepared a position paper that highlights several administrative/organizational factors that would help deliver successful projects, this is in addition to substantive comments AGC submitted to the Corps in response to the Administration’s regulatory reform initiative.1 Please see AGC’s detailed position paper online2 and immediately below for some key recommendations from that paper.

AGC’s Recommendations:

• Desired outcomes are only achieved through collective trust. An increase in effective communication and the alignment of expectations are key.
• Timely decision making is a commitment of all project stakeholders to provide the right people, expertise and authority to solve collective problems in the most expedient manner.
• Ensure timely payment of work performed so as not to financially burden private industry especially small businesses, which are the vast majority of construction prime and subcontractors; and practical best practices are essential to attract industry.
• Track and use historical thresholds for Leading Project Indicators and Key Personnel Performance Indicators for USACE and contractors.
• Empower USACE and contractor personnel at the lowest level to make routine/standard decisions with standardized methods of implementation. For example, increasing the field team’s authority to process change orders using a standard form.
• Improve Change Order Cash Flow by standardization, automatic escalation, increase transparency, and greater partnering.

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1 For AGC’s comments to the USACE on the agency’s regulatory review, see http://newsmanager.commpartners.com/agcfed/downloads/USACE%20Reg%20Reform%20-%20AGC.pdf.
2 For AGC’s position paper on ways to improve project delivery, see https://www.agc.org/sites/default/files/AGC%27s%20Recommendations%20for%20USACE.PDF.
PART II – Improve Permitting and Regulation Reform

1. ADVANCE CREDIT METHODOLOGIES AND STREAM CREDIT SUPPLY

The Clean Water Act (CWA) Section 404 program operates under a longstanding goal of achieving no net loss of aquatic resources. The amount of compensation required must be “sufficient to replace lost aquatic resource functions.” Corps/EPA Rule (2008); §332.3(f)(1). AGC members have observed that local regulators have moved away from using simple one-to-one acreage or linear foot compensation ratios to using approaches that seek to estimate the amount of habitat function lost through permitted activities and the amount of functional gain provided by proposed compensatory projects (i.e., a functional or conditional assessment).

Not all Corps districts (and/or state agencies that operate wetland and stream mitigation programs) develop and make available to the public transparent guidance on how regulatory staff will calculate wetland and stream impacts and offsets. In the absence of available and easily implementable methodologies, regulators have to estimate credits on a case-by-case basis, which can be time consuming and include complicated, protracted negotiations with project proponents.

AGC members have shared concerns regarding varied “functions and values/conditions” assessments being used to calculate mitigation ratios, as recently developed by several Corps districts, particularly for stream mitigation (e.g., Fort Worth and Galveston Districts in Texas, the Charleston District in South Carolina and the Huntington District, West Virginia and the four USACE Offices in Ohio – Huntington, Buffalo, Pittsburg and Louisville). Some Corps districts have developed assessment tools that are highly and at times overly precise to minimize the risk of uncertainty. AGC members report the mitigation ratios calculated by these methods are generally higher than when using the traditional way of applying a standard mitigation ratio such as 1.5 feet of mitigation for one foot of stream impact (again, particularly for stream mitigation).

Due to a combination of the uncertainty regarding how credits will be calculated and the excessive stream mitigation credit calculations (in some areas), stream mitigation credits are in short supply or unavailable (in some areas). As a result, project proponents are forced to delay work – due to roadblocks in securing Section 404 permitting – while waiting for bank credit releases or undertaking permittee-responsible mitigation.

AGC is advocating for culvert upgrade projects that have been pre-approved by the Corps as an appropriate method for generating Section 404 stream mitigation credits (i.e., an acceptable compensatory mitigation practice). To this end, AGC has developed a national alternate mitigation program (an in-lieu fee and revolving fund hybrid) to help alleviate the stream credit supply shortage (see attached Fact Sheet and Discussion Paper). It has been widely recognized that the absence of methods for quantifying credits for “barrier removal projects” has presented a significant impediment to such projects becoming more widespread. The Corps’ mitigation credit Regulatory Guidance Letter (RGL) 18-01 is significant because it describes specific considerations for making credit determinations. Further, the RGL 18-01 makes it clear that wetland loss resulting from dam removal will not require compensatory mitigation. However, RGL 18-01 still gives district

3 Projects could include the removal or replacement of undersized or perched culverts to restore/improve river and stream structure, functions, and dynamics.
4 These credits can be sold or transferred to permittees to fulfill compensatory mitigation requirements in Section 404 permits.
engines latitude to determine the number of mitigation credits produced and to consider local conditions in their determinations (e.g., “identify additional factors for determining credit amounts” and “develop local credit determination methodologies for these types of restoration activities”). Another positive advancement is the Corps’ newest mitigation credit RGL 19-016 that will facilitate the release of more credits and make them available for sale to permittees more quickly, following successful construction of a mitigation bank.

**AGC Recommendations:** Clear guidance and direction from Corps Headquarters (HQ) is critical for certainty and consistency. Instead of each region developing its own method(s) unilaterally, HQ should develop a standardized process for calculating reasonable mitigation ratios (similar to RGL 18-01 but see additional comments below specific to barrier removal projects). USACE HQ should review the methods developed at the district level to determine their reasonableness in calculating mitigation ratios.

Crediting methodologies need to be easy to implement to support efficient decision-making by regulators. Their application should not necessitate the measurement of highly precise and numerous metrics, extensive field work, or input from multiple highly specialized natural resource professionals. Corps districts should make their crediting methods available to the public, along with supporting documentation that is transparent regarding the process and assumptions that were used in their development.

Turning back to barrier removal projects: They can be costly and will not serve as suitable environmental restoration options if they do not produce a commensurate return on investment, in the form of compensatory mitigation method/credit. Per RGL 18-01, mitigation credit determinations should recognize (for credit production) stream segments that “physically responds to the removal” of the obsolete structure. Many barrier removal projects, particularly large ones, provide functional uplift to streams at significant distances up- and down-stream from the project site, including up into tributaries of the mainstem. To support an “environmental market” in culvert upgrades, the Corps should further clarify that areas considered for credit production may be at a significant distance from the barrier removal if doing so is justified by the uplift provided by the project. Similarly, the Corps should provide better direction on the appropriate metric to accurately quantify the amount of credits produced by the mitigation project (RGL 18-01 bounces back-and-forth between linear foot and area-based metrics to quantify mitigation credits).

### 2. CLARIFY AND EXPAND EXEMPTION FOR WORK IN ROADSIDE DITCHES

If a ditch is under federal CWA jurisdiction, modifications or disturbance (including certain maintenance) may be subject to CWA Section 404 permitting requirements. AGC maintains that all roadside ditches should be non-jurisdictional in light of their importance to highway safety. The agencies must take care to not impose any obstacles (or delays) to the critically important and routine maintenance activities in jurisdictional ditches, which would not only affect flood control and public safety, but it would also impact the ability of an MS4 (municipal separate storm sewer system operator) to meet its CWA National Pollutant Discharge Elimination System (NPDES) permit requirements.

In the past, the agencies have referred AGC to the statutory exemptions under CWA Section 404(f)(1)(C) for maintenance, which allow for the maintenance (but not construction) of non-excluded irrigation and drainage ditches without a Section 404 permit from the Department of the Army.7 (AGC is also aware that other types

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7 In addition, CWA Section 404(f)(1)(B) exempts additional dredge and fill activities “for the purpose of maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams,
of maintenance activities in WOTUS may also be authorized by a non-reporting Nationwide Permit 3.) However, past EPA and USACE interpretations of Section 404(f)(2)—the so-called exemption to the exemption or “recapture provision” (recapturing the exempted activity back under CWA regulations)—has limited the application and utility of the maintenance exemptions, according to AGC members. For example, many Corps reviewers have been apt to reject an exemption for “maintenance of drainage ditches” if vegetation and sediment have accumulated in a constructed channel or basin or if the ditch is in the vicinity of protected wildlife species habitat.

**AGC Recommendations:** Notwithstanding the exceptions noted above, Section 404 permitting requirements can be a significant burden on transportation project development, especially for minor maintenance and construction activities that only impact man-made wetlands or ditches located adjacent to roads. AGC recommends USACE clarify and expand exemptions for activities involving maintenance and/or construction of roadside ditches, emergency activities, impacts on low-quality wetlands within the highway median. This may also require an amendment to 33 CFR Section 325.

AGC requests that the agencies take this opportunity to make it clearer that the ditch maintenance exemption applies (and has historically applied) to all drainage ditches, including drainage ditches adjacent to roads. In Regulatory Guidance Letter (RGL) 07-02, “drainage ditch” is broadly defined as “a ditch that conveys water (other than irrigation related flows) from one place to another.” AGC believes this definition is applicable to most, if not all, roadside ditches and asks that the agencies make that point in the final WOTUS rule preamble. AGC is concerned that the CWA exemption is too narrowly applied, and often inconsistently applied, by Corps districts throughout the country. Indeed, the Corps has required contractors to obtain 404 permits for activities that AGC believes should have been covered by an exemption (or exclusion). To read AGC’s complete comments on the Corps/EPA’s 2018 WOTUS proposed rule, click here.

**3. APPLICATION OF “LEAST ENVIRONMENTALLY DAMAGING PRACTICABLE ALTERNATIVE” (LEDPA) GUIDELINES UNDER CWA SECTION 404(B)(1)**

AGC has long maintained that time and money is wasted on redoing project analyses and reviews and on collecting duplicative information from permit applicants that was – or could have been – satisfied during the National Environmental Policy Act (NEPA) review process. It requires more focus and involvement on the front end for agencies to collect what they need for permitting – but this practice reduces costs and expedites project delivery, while maintaining environmental protections. The Corps’ recent actions, in furtherance of Executive Order 13807 and the concept of “One Federal Decision,” will improve early coordination and collaboration between the Corps and other agencies that need to issue project approvals (permits, permissions, certifications, etc.). Notable, the Corps has published details and deadlines regarding its plans for interagency coordination, communication and dispute resolution and the goal of completing NEPA environmental review within two years.

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levees, groins, riprap, breakwaters, causeways, and bridge abutments or approaches, and transportation structures.” See 33 CFR Section 323.4(a)(3) and 40 CFR Section 232.3(c)(3).


In prior discussions with AGC regarding Section 404 individual permit delays and “roadblocks,” Corps staff has pointed to the different standard of analysis (per CWA Section 404(b)(1) “Guidelines”) when it performs a NEPA review for 404 permitting purposes and evaluates alternatives: The Corps must select the “Least Environmental Damaging Practicable Alternative” or LEDPA, which has, apparently, prompted the Corps to redo NEPA procedures again, even after the issuance of a Record of Decision, and routinely conduct most of the 404-permitting review after NEPA. In effect, there is not a concurrent review taking place and the environmental approval process stretches out for many years.

**AGC Recommendations:** President Trump’s EO, the succeeding interagency streamlining Memorandum of Understanding and the Corps’ related guidance\(^{10}\) will help to link (or merge) NEPA and Section 404 review – allowing the Corps to reach a decision on LEDPA and integrate CWA permit requirements for projects impacting WOTUS. A critical step will be the effective use of the “concurrence points” (the project’s Purpose and Need; the Range of Alternatives; and the Preferred Alternative that is selected) as opportunities for lead and cooperating agencies to assess mutual understanding and agreement on fundamental elements of the EIS. (This can make sure that where the Corps is involved, it picks the NEPA alternative that satisfies LEDPA.) AGC encourages the Corps to expand this practice beyond just the complex infrastructure projects that require multi-agency review and approval (i.e., those covered by EO 13807)\(^{11}\) and to, as a matter of practice:

- Merge the NEPA and CWA 404 permitting processes, with Corps issuing permits at the end of the process, using the NEPA-generated information and
- Allow the monitoring, mitigation and other environmental planning work performed during the NEPA process, and included the final EIS/ROD, to satisfy federal environmental permitting requirements, unless there is a material change in the project.

To this end, additional guidance or revised regulation is needed to reinstate – and perhaps strengthen – the Corps’ longstanding flexibility in application of USEPA’s 404(b)(1) Guidelines. In 1993, the Corps and EPA jointly issued guidance that provides that the Guidelines “do not contemplate that the same intensity of analysis will be required for all types of projects but instead envision a correlation between the scope of the evaluation and the potential extent of adverse impacts on the aquatic environment.”\(^{12}\) Additional guidance may also be needed on when an alternative is “practicable” under 40 CFR 230.10(a)(2) and when a practicable alternative has basis for elimination.

AGC offers more input on these recommendation in its comments to the USACE on the agency’s regulatory review, [click here](#).

For more information, please contact AGC’s Leah Pilconis at pilconisl@agc.org or 703-837-5332 (permitting and regulation reform) or AGC’s Jordan Howard at jordan.howard@agc.org or 703-837-5368 (project delivery and financing/budgeting).

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\(^{10}\) Id.  
\(^{11}\) The EO defines “major infrastructure projects” as those requiring a full environmental impact statement (EIS) under NEPA and multiple permits, approvals, or other authorizations from federal agencies (collectively, “authorizations”), and for which sufficient and reasonably available funding has been identified.  
\(^{12}\) RGL 93-02: “Guidance on Flexibility of the 404(b)(1) Guidelines and Mitigation Banking” (Aug. 23, 1993). This RGL remains valid unless superseded by subsequently issued RGLs or regulations. See 40 CFR Section 230.10(1)(4).
Improve Infrastructure, the Environment and Compensatory Mitigation Opportunities

**Background:**

- For infrastructure projects to advance, the permitting and authorization process entails an evaluation and accounting of environmental impacts. Projects seeking a Clean Water Act Section 404 permit will need to avoid, minimize and lastly offset (mitigate) for impacts to streams and wetlands. Project proponents can purchase mitigation credits or engage in mitigation activities themselves to offset impacts. Having more credits available for sale to permittees can reduce permitting timeframes and increase predictability for the important infrastructure, energy, and other administration priority activities.

- The use of mitigation bank or in-lieu fee credits reduce permit processing timeframes by approximately 50 percent, per a 2015 analysis by the U.S. Army Corps of Engineers (USACE). However, a recent AGC review of in-lieu fee programs nationwide found a limited credit supply for stream impacts and an unpredictable market.

- Across the country, communities are seeking to inventory and repair ageing culverts within their public systems (that are at imminent risk of failure) to improve public safety, resilience and water quality. Upgrades to certain culverts can result in immediate improvements to stream flow and the riparian habitat—and qualify for mitigation credit.

**AGC Message:**

- **Establish a National Alternate Mitigation Program for Culvert Upgrades that Serves as a Revolving Fund.** In brief, the program would sell in-lieu fee steam credits to third-party infrastructure project proponents to supplement existing banking capacity. Funds generated by the in-lieu credit sales would be deposited in a revolving fund to provide grants to government entities undertaking culvert upgrade projects. The program would generate a national inventory of pre-planned, qualifying culvert improvement projects that would improve stream function and match purchasers of in-lieu fee credits with culvert upgrade projects located in the same watershed or USACE District(s)—or allocate to “high-priority” tidal culverts if no regional match is made.

- **Authorize the USACE to Administer the National Program.** Congress should amend the Miscellaneous Receipts Act or provide other authorization to the USACE to collect and distribute funds specifically to administer this program. The Corps is best positioned to assess culvert improvements that would qualify for the program, calculate credit amounts for specific upgrades, and provide grants to states and local governments to

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**For more information, contact Melinda Tomaino at tomainom@agc.org or (703) 837-5415**

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make the improvements. The Corps would also be the most appropriate federal partner to administer a tiered approach for matching culvert mitigation credits with specific projects.

- **Authorize a Tiered Approach to Culvert Funding and Application of Mitigation Credits.** Congress should authorize a tiered approach for matching project proponents to qualifying culverts improvements specifically to address the challenge of administering a national revolving-fund based program. Qualifying culvert improvements will ultimately be funded by multiple project proponents in order to cover the cost of the improvements. It may be difficult to find direct matches. Under current law, the mitigation project should be located in the same proximity as the impacts being offset. Congress should authorize the USACE to make matches first at the District, then regional level, applying funds to mitigation outside of the proximity of the impacts only if a local or regional match cannot be made and only then to upgrades of high priority tidal culverts.

- **Fund the National Inventory and Program Administration.** Congress should allocate funds to the USACE to work with states and create the national inventory of qualifying culverts, as well as to administer and promote the program. Once established the revolving fund would use credit sales to sustain culvert improvements. AGC understands that public funds cannot be used for mitigation; that funding would come specifically from credit sales to project proponents.

AGC has available a discussion document that further details the establishment and functioning of the national alternate mitigation program for culvert improvements, along with information on mitigation challenges and the need for culvert improvements. Please contact AGC’s Melinda Tomaino at tomainom@agc.org for the most recent version of the discussion document. AGC also welcomes input from other stakeholders to advance the discussion and further the goals of the proposed program.
SUMMARY

Outlined herein is a proposed national alternate mitigation program (an in-lieu fee and revolving fund hybrid) to facilitate the upgrade of structurally deficient, outdated or under-maintained culverts and stream crossings that adversely impact aquatic ecosystem resources. The program would create a national inventory of pre-planned, qualifying culvert improvement projects that would improve stream function and generate mitigation credits that could be used as Clean Water Act Section 404 compensation for unavoidable impacts to waters of the United States caused by infrastructure projects. The program administrator would maintain the national inventory, hold funds generated by the in-lieu credit sales in a revolving fund, and distribute grants to state/local governments to implement queued projects. The program would rely on an in-lieu fee program approach as the culvert projects themselves are not completed until the credits are sold and the appropriate funds become available for distribution. Refer to the “Program Administration” section below for further details.

AGC’s proposed national alternate mitigation program would produce a readily available supply of stream credits to supplement commercial mitigation banks and existing in-lieu programs to provide additional opportunities for compensatory mitigation. The program’s national inventory of qualifying culvert improvement projects (pre-planned and identified in advance) as well as its narrow focus would enable it to quickly address a widespread, nationwide need for more stream credits and assist the permittee in securing mitigation on the ground across the country in a more predictable, timely and standardized manner.

The program would benefit the health and vitality of our nation’s aquatic ecosystems, the viability and integrity of the infrastructure, project sponsor investment, the United States Army Corps of Engineers’ (USACE) CWA 404 permitting program and the public by, for example:

- Expanding availability of alternate mitigation and in-lieu fee as viable mitigation options nationally thus promoting stability and predictability in the mitigation market;
- Generating immediate and long-term benefits to stream riparian habitat by improving up and down stream flows, aquatic habitat connectivity, benefits fisheries; and
- Reducing flooding and improving public safety by funding culvert and stream crossing upgrades to correct existing hydrologic deficiencies.
ACTION ITEMS

- Seek an exemption in the Miscellaneous Receipts Act\(^1\) so that the Corps could administer the program. (Or identify an appropriate designee to serve as a third-party administrator.)
- Revise the 2008 Mitigation Rule\(^2\) or establish revised policy/guidance documents to create more flexibility for in-lieu fee and alternate mitigation banking programs.
- Obtain examples of the types of culvert improvement projects that would qualify for this program, including cost information and the approximate number of credits that would have been generated.
- Find concurrence on a preferred approach for calculating credit generation of stream credits (linear vs areal) for this program.
- Secure funding options through the appropriations process for the establishment of the national inventory and program administration by the Corps.
- Either modify the existing Corps’ Nationwide Permit 3 “Maintenance” to allow for improvements not merely repairs; explore the use of other NWPs such as 14 “Linear Transportation Projects,” 27 “Aquatic Habitat Restoration, Enhancement, and Establishment Activities,” or 53 “Removal of Low-Head Dams;” \(^3\) or create a new nationwide permit that allows for the streamlined approval of qualifying culvert and stream crossing improvements that result in environmental benefits.

NEED

_Mitigation Banks Do Not Have Enough Consistent Stream Credits Nationwide_

Bank and in lieu fee mitigation options for streams are limited in many areas and available inconsistently nationwide as seen through an examination of RIBITS (Regulatory In-lieu Fee and Banking Information Tracking System) data of approved in-lieu fee programs. A national alternate mitigation, in-lieu fee hybrid program, such as described in this culvert and stream crossing improvement program, could make stream mitigation more widely available and serve to restore flow to streams where a structure may have failed, is in poor condition, or is undersized.

The 2008 Mitigation Rule promulgated by the USACE and USEPA identified three methods of mitigation in order of preference: mitigation banks, in-lieu fee, and permittee-responsible mitigation.

While given preference by the rule, AGC members have reported that mitigation banks have not kept pace with demand for stream credits on a nationwide basis and have persisted in spite of hopes that planned capacity expansions will relieve shortages. As mitigation banks can speed up the permitting

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\(^1\) 31 U.S.C. § 3302(b).
\(^3\) See https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Nationwide-Permits/2017_NWP_FinalDD/.

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process by 50 percent, AGC initiated an effort to investigate the issue and find a solution to improve availability.4

**Existing, Proposed In-Lieu Fee Sites Do Not Address Stream Credit Shortages**

To supplement bank credit supplies, the USACE also promotes in-lieu fee where funds are paid to a natural resource management entity for implementing aquatic resource projects that generate salable credits. However, an AGC review of available in-lieu fee sites has found that the supply of in-lieu credits is spotty.

As mapped by the USACE RIBITS database, see screenshots below, existing and proposed in-lieu fee sites are concentrated in the eastern portion of the United States. The symbols mapped identify the number of sites within a geographic area.

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4 AGC members report that shortages were common in many areas of the country during the recession of 2007 and postulate that the shortage continues today for a variety of reasons including:

1. The economic recovery is stimulating increased spending on infrastructure and development projects;
2. Streams are linear resources and more difficult to avoid than wetlands. Stream impacts can represent over 95 percent of total mitigation required for linear projects such as roadways or pipelines;
3. Creation of stream mitigation credits compared to wetland credits are less attractive to private mitigation banks because stream mitigation requires more land area, generates lower credit yields per acre, and represents more risk of failure due to damage caused by high flow flood events; and
4. Stream assessment methods used by USACE Districts generate high mitigation ratios for streams relative to wetlands resulting in chronic shortages of stream credits in the banking sector.
A RIBITS listing means the USACE has approved an in-lieu fee instrument and is not an indicator of credit availability. A sampling of sites in October 2018 found many to have minimal or no credits available and have small service areas. Others are reserved for specific projects or project sponsors and do not represent a reliable credit supply.

RIBITS also identifies 69 larger in-lieu programs. These programs tend to have more than one mitigation site and larger service areas. However, at the time of the sampling, RIBITS classified 29 of the 69 listed sites as “no site listed at this time,” while 26 had five or less sites with limited credit availability -- meaning 80 percent of listed programs were not a stable source of credits.

Of the 320 proposed sites mapped by RIBITS along the central Atlantic coast, the majority are within one program, the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Mitigation Services. NCDENR created the in-lieu program in 1996 initially to provide mitigation credits for North Carolina Department of Transportation projects. The program was later expanded to serve private projects. NCDENR’s in-lieu program backstops the mitigation bank market and offers credits for purchase only when bank credits are unavailable.

While the North Carolina program could serve as a model, only nine other states have implemented similar programs with varying degrees of success as summarized in the Table below.
## Approved Statewide In-Lieu Fee Mitigation Programs

Source: USACE RIBITS Database, October 2018

<table>
<thead>
<tr>
<th>Program</th>
<th>Approved Sites</th>
<th>Pending Sites</th>
<th>Approved Credits</th>
<th>Potential Credits</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona Game &amp; Fish Dept ILF Mitigation Program</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>All sites sold out.</td>
</tr>
<tr>
<td>California State Coastal Conservancy ILF Program</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>No sites listed at this time.</td>
</tr>
<tr>
<td>Connecticut In-lieu Fee Program</td>
<td>14</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>Total credits across all approved sites.</td>
</tr>
<tr>
<td>Indiana Department of Natural Resources In-Lieu Fee Program</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>No sites listed at this time.</td>
</tr>
<tr>
<td>Massachusetts ILF Program</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>14</td>
<td>Total credits across all approved sites.</td>
</tr>
<tr>
<td>Maine Natural Resource Conservation Program</td>
<td>93</td>
<td>0</td>
<td>668</td>
<td>702</td>
<td>Total credits across all approved sites. Majority are wetland credits.</td>
</tr>
<tr>
<td>New Hampshire Aquatic Resource Mitigation Fund</td>
<td>72</td>
<td>0</td>
<td>1,245</td>
<td>15,460</td>
<td>Total credits across all approved sites. Majority are stream credits</td>
</tr>
<tr>
<td>North Carolina Division of Mitigation Services</td>
<td>97</td>
<td>322</td>
<td>60,955</td>
<td>221,584</td>
<td>Total credits across all approved sites. Majority are stream credits</td>
</tr>
<tr>
<td>Tennessee Stream Mitigation Program</td>
<td>28</td>
<td>4</td>
<td>18,125</td>
<td>139,465</td>
<td>Total credits across all approved sites. Majority are wetland credits.</td>
</tr>
<tr>
<td>The Kentucky Department of Fish &amp; Wildlife Resources ILF Program</td>
<td>5</td>
<td>13</td>
<td>1</td>
<td>0</td>
<td>Total credits across all approved sites.</td>
</tr>
<tr>
<td>West Virginia ILF Stream and Wetland Mitigation Program</td>
<td>7</td>
<td>5</td>
<td>1,437</td>
<td>3,340</td>
<td>Total credits across all approved sites.</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>325</strong></td>
<td><strong>347</strong></td>
<td><strong>82,437</strong></td>
<td><strong>380,571</strong></td>
<td></td>
</tr>
</tbody>
</table>

To put the credit availability represented by the above programs in perspective, AGC members have offered the following examples. An 11-mile interstate widening within existing right-of-way in South Carolina required 300 stream credits to offset 100 feet of stream impact. An 18-mile interstate widening within existing right-of-way in South Carolina required 12,000 credits to compensate 1,800 feet of stream impact. A 13-mile toll road on new location in Texas required 85,000 credits to compensate 8,800 feet of stream impact.

Insufficient bank capacity and limited in-lieu options force projects sponsors into permittee responsible mitigation, the lowest ranked mitigation option in the 2008 mitigation rule. Permittee responsible mitigation requires the project sponsor to design, construct, preserve and maintain, over the long-term, their own mitigation. This approach does not match the resources of most project sponsors and is often
not practicable because it requires expertise and long-term commitments beyond the abilities of the typical sponsor.

Banks and in-lieu fee mitigation represent the only viable option for many applicants. However, bank credit availability is often constrained due to high demand and the time required to get a bank developed and approved. Bank credit supply is also constrained, particularly in the west where hydrology and rain patterns are less reliable and predictable, injecting unacceptable risk to private banking ventures. Permittee responsible mitigation and in-lieu fee projects face similar weather risks, which could factor into why most in-lieu fee programs are concentrated in the southeast and eastern portions of the country. Another factor to consider is that mitigation is tied to the proximity where the impacts occurred. Rural areas may not have enough development to warrant the risk of establishing a mitigation bank or in-lieu fee program.

A nationwide alternate mitigation, in-lieu fee hybrid program for culvert upgrades administered by the USACE or its designee would make in-lieu fee more widely available as a mitigation option in underserved areas nationally while supplementing the commercial bank market to ensure viable mitigation options are available.

PROGRAM ADMINISTRATION OF PROPOSED NATIONAL ALTERNATE MITIGATION, IN-LIEU FEE HYBRID PROGRAM FOR CULVERT/STREAM CROSSING IMPROVEMENTS

The proposed national alternate mitigation, in-lieu fee hybrid program for culvert or stream crossing improvements would offer a unique opportunity to restore functional stream dynamics by investing in public infrastructure. The program would act as a revolving fund administered by the USACE or its designee. The program would rely on having a national inventory of approved culvert improvement projects at the ready. State/local governments would submit qualifying culvert improvement projects (that include cost and environmental benefit information) to the program administrator to include in the national inventory, if approved. The program administrator would assist in the process of determining credits generated by each qualifying project and would maintain the inventory of approved/qualifying projects with their associated credit value. The credits would be sold on the open market to generate funds for dispersal to state and local governments for culvert or stream crossing improvement projects within the inventory. The credits would fulfill all or part of a CWA Section 404 permit applicant’s compensatory mitigation obligations.

Although it would be a national program, the program administrator would disperse the funds to qualifying projects within the region (Corps’ districts or watersheds basis) proportional to the location of the original impacts. In order to expand the availability of stream credits to areas without established banks or in-lieu fee programs, AGC further proposes that Congress, in the establishment of this program, allow the Corps (as program administrator) to distribute grant funds in a tiered approach—first to District(s) and regional culvert mitigation projects and then to high-priority tidal culvert repairs in instances when no local outlets are available in the region. This will assist in developing vital infrastructure in areas not covered by traditional banks or in-lieu fee programs as well as focus efforts on the nation’s priority resiliency needs.
Scope/Administration – National, administered by the USACE or its designee such as a natural resource management non-profit. Administration costs covered by application and mitigation fees, supplemented by a percent of the mitigation fund balance fund if necessary.

Credit Generation – Eligible culvert upgrade projects would be rated to determine credit generation based on factors such as stream type, up and down stream functional assessment, and existing and projected flow.⁵

Credit Account – Credits generated by approved individual culvert projects would be consolidated in a program account. Those credits would be sold on the open market to third party projects to generate funds which in turn would fund the culvert improvement projects. Funds would be allocated to culvert projects within the watershed or District for which the third party 404 impacts and credit sale occurred.

Credit Sale Price – Indexed on the mitigation bank price for comparable stream credits within the District for which the impacts were taken. The indexed credit price would be multiplied by the number of credits required as determined through the stream assessment to determine total payment to the fund. Credit price could be marked up above the prevailing bank price by a predetermined percent so as not to directly compete with mitigation banks.

⁵ On September 25, 2018, the Corps issued a regulatory guidance letter titled, Determination of Compensatory Mitigation Credits for the Removal of Obsolete Dams and Other Structures from Rivers and Streams. This guidance may prove helpful to “district engineers on: 1) factors they should consider when determining the amount of mitigation credit generated from the removal of obsolete dams or other structures... .” See https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll9/id/1473.
**Fund Distribution** – The USACE (or its designee) would distribute funds to state and local government for culvert improvement projects within the District or watershed for which the impacts were taken.

**Eligible Fund Recipients** – State and local government agencies.

**Eligible Projects for Funding** – Projects adopted within a current capital improvement plan and progressed by the applicant through preliminary engineering to determine need, budget, and hydraulic benefit (i.e., credit generation). Eligible projects will likely fall within the purview of an NWP (or are positioned to proceed with necessary permits/approvals in a streamlined manner) to ensure timely construction and accrual of stream and habitat benefits.

**Eligible Costs** – Final design, construction, and monitoring.

**Ownership and Long-Term Maintenance** – Eligible culvert and stream crossing upgrade projects must be within a public right-of-way owned by the applicant. The applicant or designee will be responsible for long-term maintenance as part of their infrastructure maintenance program.

**CULVERTS AND STREAM CROSSING OVERVIEW**

Culvert and stream crossing improvements present an opportunity to make environmental gains while also generating credits available for mitigation. Poorly aligned, undercut and undersized culverts negatively impact stream habitat through erosion, restricted flow, water quality impacts, and restricted aquatic habitat connectivity.

Culverts and stream crossings are numerous and widely used throughout the United States. Even though there is a lack of available information on the exact number of these structures and their current integrity, we can make an educated guess using the transportation system as an example. Based on a review of some state examples, an individual state could have thousands of large culverts and tens of thousands of small culverts. Considering the age of the transportation system and the service life culverts, a good portion of those culverts constructed even as recently as 35-50 years ago could be structurally deficient in design and capacity thus negatively impacting water quality, aquatic ecosystem habitat and movement of aquatic species.

A review of the literature suggests the number of transportation-related culverts are well in the hundreds of thousands, many of which were likely constructed during the transportation system’s “boom years” of the 1950s and 60s. The number could be even higher. The Indiana DOT has approximated that there are 90,000 small culverts, with a diameter of less than 48”, under the state’s highways.\(^6\) Ohio DOT manages close to 100,000 culverts; VTrans in Vermont estimates they have between 60,000-80,000 culverts. In California, LA County alone has approximately 10,000.\(^7\) An inventory by Oregon DOT found a third of their culverts in critical to poor structural condition.\(^8\)

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CONCLUSION

AGC’s proposed national alternate mitigation, in-lieu fee hybrid program to upgrade culverts and stream crossings would distribute mitigation opportunities equitably across the county and correct the current patchwork of programs. It would significantly expand the availability of mitigation options nationally, aid communities to reduce flooding, improve public safety and generate immediate and long-term benefits to up- and down-stream aquatic ecosystems.

The USACE and USEPA are jointly implementing the Section 404 permitting program nationally—and more should be done at the federal level to ensure bank and in-lieu fee mitigation required by the Section 404 program is available to project proponents. The proposed national alternate mitigation, in-lieu fee hybrid program would increase mitigation credit availability, improve public safety and achieve the overall goals and objectives of Section 404 of the Clean Water Act.

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MAY 2019