Session III: ILF Program Instrument Review

Environmental Law Institute's
National In-Lieu Fee Program Training Workshop
St. Paul, Minnesota
July 13, 2016

Erin Okuno
Foreman Biodiversity Fellow
Institute for Biodiversity Law and Policy
Stetson University College of Law
Gulfport, Florida

Session Overview

- Compensatory Mitigation Rule
- ELI's Model Provisions
- Research Project
- Results and Examples
- Implications and Suggestions
- Discussion

Photo: USFWS National Digital Library

Compensatory Mitigation Rule – Relevant Provisions

- Rule describes required information for an ILF program's final instrument
- Under 33 C.F.R. § 332.8(d), an ILF program's final instrument must include (among other things):
  - "A methodology for determining future project-specific credits and fees"
  - "A description of the in-lieu fee program account"
  - "Specification of the initial allocation of advance credits . . . and a draft fee schedule for these credits, by service area, including an explanation of the basis for the allocation and draft fee schedule"

ELI's Model Provisions for ILF Program Instruments

- "In-Lieu Fee Mitigation: Model Instrument Language and Resources" by ELI
- Funded by an EPA grant and published in 2009
- Offers useful explanations, examples, and models

- Available on ELI's website: http://www.eli.org/sites/default/files/eli-pubs/d19-15.pdf
- Also available on RIBITS: https://ribits.usace.army.mil/ribits_apex/f?p=107:150:14633892260600::NO::P150_DOCUMENT_ID:8006

Model Provisions: Methodology for Future Credits and Fees

Fees for (ILF Program) shall be determined based on an analysis of the expected costs associated with the restoration, establishment, enhancement, and/or preservation of aquatic resources in [the state/region/watershed]. The program costs included in this analysis are those related to land acquisition, project planning and design, construction, plant materials, labor, legal fees, monitoring, remediation or adaptive management activities, program administration, contingency costs appropriate to the stage of project planning, including uncertainties in construction and real estate expenses, the resources necessary for the long-term management and protection of the in-lieu fee project, and financial assurances (including contingency costs) that are expected to be necessary to ensure successful completion of in-lieu fee projects. These fees shall be reviewed annually and updated as appropriate.

Credits generated by (ILF Program) shall be based on [an appropriate assessment method or other suitable metric] approved by the Corps. The standard mitigation ratios for wetlands are currently [See Figure 8.]:

Service Area X

	Aquatic resource type #1	Aquatic resource type #2	Aquatic resource type #3
Restoration	Ratio of acre restored per acre of credit (e.g., 2:1)	"	"
Creation	Ratio of acre created per acre of credit (e.g., 5:1)	"	"
Enhancement	Ratio of acre enhanced per acre of credit (e.g., 5:1)	"	"
Preservation	Ratio of acre preserved per acre of credit (e.g., 10:1)	"	"

Figure 8: Sevice Area X

The standard mitigation ratios for streams are currently:

[Insert chart as appropriate.]

- Pages 72-73 in ELI's "In-Lieu Fee Mitigation: Model Instrument Language and Resources"

Model Provisions: Program Account

Financial accounting

Reporting requirements for financial reporting are at Section (X, "Reporting Protocol.") The (ILF Program) account will track funds accepted from permittees separately from those accepted from other entities and for other purposes (i.e., fees arising out of an enforcement action, such as supplemental environmental projects). The account will be held at a financial institution that is a member of the Federal Deposit Insurance Corporation. Any and all interest accruing from the account will be used to provide compensatory mitigation for impacts to aquatic resources.

The program account will be established after this instrument is approved and before any fees are accepted. If the Corps determines that the (Program Sponsor) is failing to provide compensatory mitigation by the third full growing season after the first advance credit is secured, the agency may direct the funds to alternative compensatory mitigation projects. Additional information on failure to fulfill the terms of the instrument is discussed in Section (X, "Default & Closure"). The Corps has the authority to audit the program account records at any time.

Funds paid into the (ILF Program) account may only be used for the direct replacement and management of aquatic resources. This means the selection, design, acquisition (i.e., appraisals, surveys, title insurance, etc.), implementation, and management of in-lieu fee compensatory mitigation projects. This may include fees associated with securing a permit for conducting mitigation activities, activities related to the restoration, enhancement, creation, and/or preservation of aquatic resources, maintenance and monitoring of mitigation sites, and the purchase of credits from mitigation banks. Use of fees is explicitly prohibited for activities such as upland preservation (other than buffers), research, education and outreach, or implementation of best management practices for wetlands.

Up to (%) of the fees paid into (ILF Program) may be used for administrative costs. Such costs include bank charges associated with the establishment and operation of the program, staff time for carrying out program responsibilities, expenses for day to day management of the program, such as bookkeeping, mailing expenses, printing, office supplies, computer hardware or software, training, travel, and hiring private contractors or consultants.

Credit accounting

(Program Sponsor) shall establish and maintain an annual report ledger that tracks the production of released credits for (ILF Program) and for each individual in-lieu fee project. Reporting requirements for the annual report ledger are at Section (X).

On the income side, (Program Sponsor) shall track the fees and all other income received, the source of the income (i.e., permitted impact, penalty fee, etc.), and any interest earned by the program account. The ledgers shall also include a list of all the permits for which in-lieu fee program funds were accepted, including the appropriate permit number (Corps or state permit), the service area in which the specific authorized impacts are located, the amount (acreage or linear feet) of authorized impacts, the aquatic resource type impacted by Cowardin class, the amount of compensatory mitigation required, the amount paid to the in-lieu fee program for each of the authorized impacts, and the date the funds were received from the permittee.

(Program Sponsor) shall establish and maintain a report ledger for (ILF Program) that will track all program disbursements/expenditures and the nature of the disbursement (i.e., costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management, and administration). (Program Sponsor) may also track funds obligated or committed, but not yet disbursed.

The ledger shall also include, for each project, the permit numbers for which the project is being used to offset compensatory mitigation requirements, the service area in which the project is located, the amount of compensation being provided by method (i.e., restoration, establishment, enhancement, or preservation), the aquatic resource type(s) represented (e.g., Cowardin class), the amount of compensatory mitigation being provided (acres and/or linear feet), and the number of credits certified by the IRT.

The annual report ledger shall also include a balance of advance credits and released credits at the end of the report period for each service area.

- Pages 79-80 in ELI's "In-Lieu Fee Mitigation: Model Instrument Language and Resources"

Model Provisions: Advance Credits

Upon approval of this instrument for (ILF Program), (Program Sponsor) is permitted to sell advance credits in the amount indicated in the chart below. The number of advance credits available for sale varies by service area, as indicated. The number of advance credits available for sale is specified by service area, as indicated in the chart.

As the milestones in the schedule are reached (i.e., restoration, creation, enhancement and/or preservation is implemented), advance credits convert to released credits. At a minimum, credits will not be released until (Program Sponsor) has obtained IRT approval of the mitigation plan for the site, has achieved the applicable milestones in the credit release schedule, and the credit releases have been approved by the district engineer.

Once (Program Sponsor) has sold all of its advance credits, no more advance credits may be sold until an equivalent number of credits has been released in accordance with the approved credit release schedule outlined in a project-specific mitigation plan. Once all advance credits are fulfilled, an equivalent number of advance credits may be made available for sale, at the discretion of the district engineer and IRT.

(Program Sponsor) shall complete land acquisition and initial physical and biological improvements by the third full growing season after the sale of advance credits. If (Program Sponsor) fails to meet these deadlines, the district engineer must either make a determination that more time is needed to plan and implement an in-lieu fee project or, if doing so would not be in the public interest, direct (Program Sponsor) to disburse funds from the (ILF Program) program account to provide alternative compensatory mitigation to fulfill those compensation obligations.

- Pages 62-63 in ELI's "In-Lieu Fee Mitigation: Model Instrument Language and Resources"

Model Provisions: Draft Fee Schedule

The draft fee schedule section should simply include a chart or list of the fees charged by the program per unit of credit and for each wetland type provided and in each service area in which the program operates.

- Page 71 in ELI's "In-Lieu Fee Mitigation: Model Instrument Language and Resources"

Research Project

- Used RIBITS to access final ILF program instruments for approved programs
  - More than 50 approved programs as of July 2016
- Evaluated for compliance with 2008 Compensatory Mitigation Rule
  - 3 provisions: methodology for future credits and fees, program account, and advance credits and draft fee schedule

Results

- Overall
- Methodology for Future Credits and Fees
- Program Account
- Advance Credits and Draft Fee Schedule
  - Many final instruments did not include a draft fee schedule
    - 5 had a partial draft fee schedule
    - 20 had no draft fee schedule

Photo: USFWS National Digital Library

Methodology for Future Credits and Fees – Basic Examples

B. GENERATION OF CREDITS

Each approved ILF Project mitigation plan will include the method for determining the credits generated by the individual project.

DU may only generate credits from an ILF project when there is a net benefit to aquatic resources at the site as determined by the difference between pre- and post- site conditions. Credit generation will be determined using the Modified Charleston Method or the functional assessment method as defined in the current Corps standard operating procedures.

Preservation of existing wetlands that support a significant population of rare plant or animal species, or that are a rare wetland type may be proposed to generate credits. Credits may also be proposed for preservation or improvements of riparian areas, buffers and uplands if the resources in these areas are essential to maintain the ecological viability of a water of the U.S. Credits generated for preservation and buffers will be determined on a case-by-case basis through negotiation between DU and the Corps in consultation with the IRT in accordance with 33 CFR 332.3(h) and (i).

E. COST OF CREDITS

The cost of each credit will be determined by DU based on expected costs of restoration, establishment, enhancement, and/or preservation of aquatic resources. Costs will be based on full costs accounting, including all appropriate expenses incurred to plan, identify, acquire, design, implement, monitor, manage and protect ILF projects, including contingencies, and the setup, operation and administration of the MSD-ILFP.

Credits generated will be determined at the time each project is proposed for funding and using the current New England District compensatory mitigation guidance ratios in place at that time.

B. Generation of Credits

Each approved ILF Project Development Plan will include the method for determining the Credits generated by the individual ILF Project.

Methodology for Future Credits and Fees – Basic Example

Section 8. Fee Calculations

Fee calculations are based on a cost estimate that assumed the purchase of 80 acres that holds 8 credits worth of potential mitigation of any kind (re-establishment, establishment, rehabilitation, preservation and enhancement). This schedule is valid for all Service Areas.

Table 6. Details for developing the cost of one mitigation credit

Credit Component	Sub-component description	Charge per Credit All Service Areas
Land acquisition*	property (mitigation site and assurance acres purchase) boundary survey closing costs/legal fees land acquisition/search	
Project planning and design*	watershed planning wetland mitigation plan permits (SWPPP) SHPO	
Construction*	site layout construction equipment and labor erosion control planting	
Plants and other materials*	plants seeds erosion control supplies signs water well/data logger (2)	
Monitoring, based on 10 years and resulting the remediation or adaptive management activities*	annual monitoring surveys report writing re-grading replanting erosion control	
Long-term management and preservation	stewardship endowment deposit payment to second land steward	
Contingency costs*	funds for unexpected occurrences	
Program administration for duration of the credit (10 years)	tracking credits paying bills payroll audit/ accounting office/supplies	
Financial assurances for TWT *	funding used to meet default during implementation and to rectify loss in case of condemnation	
USC Commitment *	to (re-) establish wetlands as part of assurance commitment	
TOTAL		$ 91,580

** See Section 9 for additional information*

Section 10. Credit Calculations

The ILFP will generate credits based on the net increase in benefits to aquatic resources at sites that meets or exceeds its Mitigation Plan success criteria. The IRT will determine credit ratios based on Table 7 during the final review of each site's Mitigation Plan, including:

- determination of an adequate buffer of at least 50 meters, where credit production may be reduced;
- modified by a sliding scale of quality based on the assessment of functions and services on a site-by-site basis; and
- the IRT using the best available assessment tools.

Table 7. Credit Schedule for developing one Mitigation Credit, valid for all Service Areas.

Re-establishment: Acres to generate 1 credit.	Up to 1:1
Establishment: Acres to generate 1 credit.	Up to 1:1
Rehabilitation or Enhancement: Acres to generate 1 credit.	3:1 to 10:1
Preservation (wetland): Acres to generate 1 credit	10:1 to 20:1
Upland Preservation of a buffer: Acres to generate 1 credit	15:1
Upland Re-establishment or establishment of a buffer: Acres to generate 1 credit	4:1 to 15:1
Price per credit	$91,580

Methodology for Future Credits and Fees – More Detailed Example

7.0 Calculation of Credit Fee and Land Fee

Sections 7.1 and 7.2 describe the method by which credit prices will be set. Section 7.3 describes how the Land Fees will be determined. The prices of mitigation fees and land fees will be adjusted periodically to reflect costs associated with implementing mitigation projects through the program.

7.1 Explanation of Credit Fee Determination for Wetland Mitigation

The credit price has been established using a methodology intended to account for implementation of all aspects of mitigation projects outlined in this instrument, from review of available roster sites, to site selection, permitting and design, construction (including costs associated with contracting), near term maintenance and monitoring and long-term stewardship. The credit price also accounts for inclusion of contingency funds for each project. An initial credit price was based on four recent mitigation or restoration projects and determined using a three-step process for each project to determine a cost per credit for each project (see below). The final credit price resulted from a weighted average of costs per credit from the four projects.

The three-step process followed for each project was:

1. Analyze each project with the draft mitigation assessment methodology (the tool) to determine credits of lift created by each project. Each analysis resulted in a number of habitat credits, hydrology credits, and water quality credits for each project. These analyses were completed in the office by project managers who were familiar with the sites, and all aspects of the mitigation (or restoration) projects.

2. Determine full costs for all projects, including all expenditures to date and all expected future expenditures necessary to complete each project (achieve desired performance standards). Project budgets were reviewed and analyzed thoroughly. In many cases, all necessary projects tasks and associated costs were already included. However, there were exceptions. For instance, in some cases budgeted costs would have been insufficient to cover all requirements for implementing a mitigation project according to the federal rule. In these cases, for analysis purposes only, a proportionally appropriate amount of funds were added to the total project budget before determining the cost per credit.

3. Finally, total (adjusted) project costs were divided by the total number of credits (i.e., the sum of all functional credit types) of lift associated with the project to arrive at the cost per credit. The same method was used to determine cost per credit for each of the four projects.

Due to the difficulty in determining which proportion of project costs were related to achieving which proportion of the different types of credits, each functional subtype of credit (i.e., habitat, hydrology and water quality) were assumed to have cost the same to produce. So each type of credit costs the same as the next.

A detailed spreadsheet showing the analysis methodology by which the base credit price was calculated is included in Exhibit 11.

The projects included in the pricing analysis are real projects. However, the names of the projects were changed to Project 1 through Project 4. Some of these projects are active and being completed as mitigation; because costs added for analysis purposes have changed the total budget of the project, project names were changed to avoid any confusion that may result from the total budget in this analysis being different than a total budget agreed upon in contract negotiations.

7.2 Explanation of Credit Fee Determination for Aquatic Area Mitigation

In cases where the tool is inappropriate (e.g., for aquatic area or aquatic area buffer impacts), mitigation requirements may be determined according to area-based ratios. In these cases, costs will be determined according to the type of impact (e.g., considering aquatic area type, landscape position and value to society) and then estimating the amount, type, and cost of mitigation that will appropriately offset the impact. In these cases, costs may be based on the costs of recent projects most similar to the type of mitigation likely to be implemented. Alternatively, the MRP may set the base price using DDES bond-quantity worksheet (Exhibit 11, Part 3) or subsequent versions of the worksheet. DDES uses this worksheet to estimate the bond an applicant must post for permittee-responsible mitigation. The bond amount is intended to provide DDES sufficient funds to complete a project if an applicant does not perform required onsite or permittee-responsible mitigation, or to correct a project if the project fails to meet performance standards.

7.3 Land Fees

The purpose of charging applicants Land Fees is to ensure that mitigation 'rights' on publicly-owned land are not given away to private interests without reasonable compensation. As such, Land Fees are added to the Credit Fees; together the Land Fees and Credit Fees constitute the Mitigation Fee. In a credit and function-based in-lieu fee system, there will be cases in which it will be difficult or impossible to assess the actual cost of the publicly-owned area that will eventually be used for an MRP project, because the applicant and King County staff may be 'blind' to the mitigation receiving site when credit fees are collected. In some cases receiving sites will be acquired after an impact occurs to meet a specific functional need not offered by sites already on the MRP "Roster" (see Appendix J).

It was necessary to devise a system for calculating the Land Fee that is equitable for all applicants – whether or not a receiving site has been determined when the applicant buys credits. To meet this need, King County will base the Land Fee on the estimated costs of acquiring new lands for receiving sites in the same service area where impacts occurred. Anticipated land cost will be estimated by determining average land costs per acre for each of four zoning categories in three geographic areas of the county using purchase prices for King County land acquisitions data for the most recent four-year period (2006-2009, to begin).

This average cost per acre will be multiplied at a 1:1 ratio by the acreage of the impact to determine the Land Fee charged to the applicant.

For example, to determine the base Land Fee for a 1.2 acre impact in the Rural Area of North King County, the following equation would be used:

(1.2 acre impact) x (Avg. acquisition $/acre for Rural, North area) = Land Fee

Land acquisition data used to calculate Land Fees are included as Exhibit 11, Part 2 of this Instrument.

This average land cost per acre will be updated annually. This will ensure Land Fees reflect current market conditions and that fees collected are sufficient to acquire new lands.

This strategy supports 'no net loss' policies in the context of both aquatic resource functions and aquatic resource area. This is because the impacted functions are replaced at a Roster site using the credit fees to implement a mitigation project, while land area is replaced through future acquisition made possible by the Land Fee.

King County retains the right to adjust land cost surcharges based on site-specific and project-specific conditions.

Table 1 shows the categories for which average land costs per acre will be calculated.

Table 4. Land Fees ($/acre) *

Land Type	North KC[4]	South KC[4]	Vashon/Maury
Rural	$65,636	$52,175	$45,337
Agricultural	$32,949		Not applicable
Forest	$6,982		Not applicable
Urban	$302,673		Not applicable

**Prices as of April, 2010 based on KC real estate transactions in each type/area over four years from 2006-2009. See Exhibit 11 of Program Instrument for detailed information.*

Methodology for Future Credits and Fees – More Detailed Example (continued)

APPENDIX D: CREDITS AND DEBITS

The standard unit of measure used in mitigation banking and in-lieu fee programs to quantify an impact is "debit" and lift at a mitigation site is measured in "credits". Generally speaking, the MRP will continue to use the terms "debit" and "credit" when speaking about impacts and mitigation projects. The MRP will have several aquatic resource types of credits and debits as described in Section 1.0 below. Each wetland credit will also have a sub-type relating to the category of functions provided by wetlands (habitat, hydrologic and water quality) as described in Section 2.0. Section 3.0 describes how MRP debits and credits will be quantified.

1.0 Debits and Credits – Aquatic Resource Types

The MRP will offer applicants the ability to mitigate unavoidable impacts to multiple types of aquatic resources, including but not limited to wetlands, wetland buffers, rivers and streams and their buffers and other aquatic resources. For any given permitted unavoidable impact, there will be one or more regulatory agencies with jurisdiction, which will be determined on a case-by-case basis. For example, for "isolated" wetlands, King County would have regulatory authority under the Critical Areas Ordinance (KCC 21A.24) and Ecology would also have authority as provided under RCW 90.48. For isolated wetland jurisdictional determination, the Corps has authority in determining whether a wetland or other aquatic resource is isolated.

The MRP will offer applicants four basic aquatic resource types of credit:

- Wetland credits
- Wetland buffer credits
- Aquatic area credits (i.e., non-wetland; see Appendix B: Definitions)
- Aquatic area buffer credits

Credits sold will be tracked carefully in the Credit Ledger (see Appendix G) – both by aquatic resource type (e.g., wetland, river, etc.), and also by which regulatory agency(ies) have authority (i.e., King County only, or King County and other IRT agencies). Mitigation plans proposed by King County to fulfill MRP credits must be reviewed by the IRT. The Corps and Ecology will seek to include all public agencies with a substantive interest in the MRP on the IRT per 33 CFR 332.8 (b)(2).

Buffer-Only Credits

In some cases, unavoidable impacts may affect only wetland buffer or aquatic area (i.e., river or stream) buffer, with no direct impacts to wetlands or aquatic areas. In cases when the DDES permit reviewer determines the MRP to be the most practicable mitigation option (i.e., impacts are unavoidable and no onsite options exist) the applicant can purchase MRP credits to meet their mitigation need.

For wetland buffer impacts, the tool will be used to calculate the debits (see Section 3.0, below) and the applicant will buy credits to offset the debits. These credits will be tracked in the MRP database as "buffer impacts" and the credits sold will be deducted from the advanced credits and tracked on the credit/debit ledger (see Appendix G).

River and stream buffer and wetland buffer impacts may also be mitigated through the MRP if permit reviewers from applicable regulatory agencies determine the MRP is the most practicable mitigation option. In these cases the amount of mitigation required will be determined on a case-by-case basis (see Section 3.3 below). The MRP Manager will track the impacts on the appropriate Ledger (see Appendix G, Section 3.0). Impacts will also be tracked in the MRP database (see Appendix G, Section 6.0).

If MRP credits are purchased to meet a buffer-only impact, these credits must be fulfilled at an "integrated" mitigation project, i.e., a project that also creates lift in wetland or aquatic area functions *and* goes through the full IRT review and approval process. In other words, MRP mitigation fees – even those derived from buffer-only impacts – cannot be used to implement buffer-only mitigation projects, unless such use is explicitly approved by the Corps and Ecology after consultation with other IRT members.

2.0 Wetland Debits and Credits – Functional Types

The functional assessment methodology (i.e., *Calculating Credits and Debits for Compensatory Mitigation in Western Washington – Operational Draft*, see Section 3.0, below) yields three functional sub-types of debits and credits corresponding to the three main types of functions provided by wetlands: habitat functions, hydrological functions and water quality functions.

Impact site Debits

When quantifying an impact to a wetland system, the debits will be divided into three parts based on wetland functions: (1) habitat debits, (2) hydrology debits and (3) water quality debits. As discussed in the credit pricing section (see Appendix F, Section 7.0), each functional type of credit will cost the same, so for monetary accounting purposes, the three types of credits can be added together; the sum of the credit types multiplied by the price per credit will determine the *credit fee*.

Mitigation Site Credits

At mitigation sites, mitigation projects will "earn" credits in each of the three categories. There may be cases when pre-mitigation project functions in one or more categories are already high. In these cases, the project will only achieve lift in the functional category(ies) in which functions were improved (i.e., only when the tool calculates a lift in functions as a result of the project). For example, a reed canary grass-dominated riverine wetland with ample over bank storage may provide high hydrologic and water quality functions in its pre-mitigation project condition. If the mitigation project mainly improves habitat complexity, the project might only earn "habitat credits," and not earn any hydrology credits or water quality credits. Appendix G discusses the "balance" of credits across different functional categories.

3.0 Quantifying Debits and Credits

Debits and credits will be quantified according to functions lost at an impact site (debits) and lift in functions at mitigation projects (credits). Wetland and wetland buffer debits and credits will be quantified using the method *Calculating Credits and Debits for Compensatory Mitigation in Western Washington – Operational Draft*, which is referred to throughout this document as "the tool." The operational draft of this method will be used to provide a basis for quantifying both debits and credits.

However, the tool is not designed to quantify impacts and mitigation projects affecting non-wetland aquatic resources (e.g., rivers and streams). Therefore the impacts and lift will be quantified on a case-by-case basis as described in Section 3.3, below.

In all cases, determinations of debits (and thereby an applicant's credit requirement) must be approved by regulatory agencies permitting an impact. If all regulatory agencies issuing permits for an impact project agree that the MRP is the most practicable way for the applicant to meet their mitigation need, the mitigation requirements must be quantified and approved prior to permit issuance. The tool will provide the initial basis for wetland impacts, but regulatory agencies will need to use other methods to determined debits associated with aquatic resource impacts (see Section 3.3). The number of debits associated with the impact as determined by the tool (or by other means for aquatic resource impacts) may be adjusted for site-specific variables such as on site mitigation, or implementation of best management practices, etc. All regulatory agencies issuing permits for an impact project must agree to the mitigation requirements. Permitting agencies may choose to withhold final permit issuance until the applicant provides proof of purchase of MRP credits commensurate to the number of debits associated with the impact project.

The following sections of the federal rule are relevant:

> 33 CFR 332.3(f)(2) The district engineer must require a mitigation ratio greater than one-to one where necessary to account for the method of compensatory mitigation (e.g., preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site. The rationale for the required replacement ratio must be documented in the administrative record for the permit action.
>
> 33 CFR 332.3(f)(3) If an in-lieu fee program will be used to provide the required compensatory mitigation, and the appropriate number and resource type of released credits are not available, the district engineer must require sufficient compensation to account for the risk and uncertainty associated with in-lieu fee projects that have not been implemented before the permitted impacts have occurred.

Methodology for Future Credits and Fees – More Detailed Example (continued)

33 CFR 332.8(o)(6) *Credits provided by preservation.* These credits should be specified as acres, linear feet, or other suitable metrics of preservation of a particular resource type. In determining the compensatory mitigation requirements for DA permits using mitigation banks or in-lieu fee programs, the district engineer should apply a higher mitigation ratio if the requirements are to be met through the use of preservation credits. In determining this higher ratio, the district engineer must consider the relative importance of both the impacted and the preserved aquatic resources in sustaining watershed functions.

33 CFR 332.8(o)(7) *Credits provided by riparian areas, buffers, and uplands.* These credits should be specified as acres, linear feet, or other suitable metrics of riparian area, buffer, and uplands, respectively. Non-aquatic resources can only be used as compensatory mitigation for impacts to aquatic resources authorized by DA permits when those resources are essential to maintaining the ecological viability of adjoining aquatic resources. In determining the compensatory mitigation requirements for DA permits using mitigation banks and in-lieu fee programs, the district engineer may authorize the use of riparian area, buffer, and/or upland credits if he determines that these areas are essential to sustaining aquatic resource functions in the watershed and are the most appropriate compensation for the authorized impacts.

Section 3.5 explains that credit cannot be generated by projects within public rights of way or from other County, State, or Federal restoration projects in existence outside the MRP.

3.1 Mitigation Assessment Method ("The Tool")

The tool is designed to assess impacts and mitigation, including the preservation, enhancement, restoration and creation of wetlands, providing a framework for standardized wetland assessment across community types and assessment areas. The tool has been developed through a collaborative process including scientists and policy staff from King County, Ecology and the Corps.

As of June 2011, an operational draft of the tool (with the working name *Calculating Credits and Debits for Compensatory Mitigation in Western Washington – Operational Draft)* is complete, and initial tests of the tool to assess functional lift generated by recently completed restoration projects sites indicate that the indicators and methodology of the tool provide reasonable estimations of the functions and values of a wetland system with respect to habitat, hydrology and water quality functions. (It is important to note that these tests of the tool were for analysis purposes only, and that none of these projects are generating any mitigation credit for future impacts mitigated through the MRP.) Although the tool is not finalized, in its current state of completion it can provide very useful information about functional losses at impact sites and functional lift at mitigation sites. Given that the format and content of the tool is based largely on the Wetland Rating System for Western Washington (Hruby 2006), initial users of the tool – DDES and DNRP staff experienced in using the Wetland Rating System – will be able to use the tool to assess mitigation requirements at impact sites and to assess functional lift at mitigation sites. For functional lift associated with mitigation site projects, all credits (habitat, hydrology and water quality) proposed for fulfillment at a mitigation site must be reviewed and approved by the IRT.

The first version of the tool does not incorporate indicators to determine river and stream debits and credits.

Exhibit 10 includes a short introductory narrative describing the current draft version of the assessment method and a copy of the most current draft in its entirety. Ecology staff is working to finalize the methodology. Upon completion of a final draft of the tool, the method will be incorporated into this instrument by reference.

The intent is to use the current operational draft form of the tool as a basis for determining mitigation requirements associated with impact projects and functional lift associated with wetland mitigation projects. Both the federal rule and King County Code support the use of alternative mitigation assessment methods. As mentioned previously, the scoring output of the tool will not stand alone; mitigation requirements and quantification of lift must undergo review by regulatory agency staff and IRT members, respectively. Since the functional assessment method will be used in its draft form, initially, King County expects to carefully review scoring outputs of the tool with King County and Ecology senior science staff. Using the tool will provide consistency in establishing predictable and reproducible baseline information for making mitigation decisions, but for each project there is likely to be complicating factors requiring special requirements based on best professional judgment.

In all cases mitigation requirements associated with impact projects must be reviewed and approved by all regulatory agencies and affected tribes, and in all cases the amount and type of mitigation credit generated by mitigation projects must be reviewed and approved by the IRT. Any time best professional judgment is used to alter mitigation requirements or proposed earned mitigation credit, detailed rationale based in best available science must be documented and delivered to appropriate entities (i.e., regulatory agencies for impact projects and the IRT for mitigation projects).

Despite the availability of and intent to use a draft functional assessment methodology, the MRP shall retain the ability to establish debits/credit requirements on a case-by-case basis in consultation with the IRT using existing approved methods (e.g., area-based ratios).

3.2 Wetland Determinations

Wetland impacts will be quantified using a functional assessment method ("the tool"), which considers the existing condition of the wetland unit relative to potential project effects. Application of the tool results in quantification of units of functional loss, or 'debits', associated with the project. Once the number of debits has been determined, then the permittee can purchase a commensurate number of credits from the MRP to offset the debits.

The tool also accounts for temporal losses by using a temporal loss factor to increase the number of credits required to offset an impact. The tool is included as Exhibit 10.

3.3 Aquatic Area and Aquatic Area Buffer, and Wetland Buffer Determinations

The current version of the tool can only be used to quantify functional losses or lift (i.e., debits or credits) related to wetlands. At this point, the assessment method is not designed for use in quantifying impacts or lift related to functions and values of other aquatic areas (e.g., streams or rivers), associated buffers, wetland buffers, or other aquatic bed environments.

When unavoidable impacts to streams, rivers, or wetland buffers are permitted by King County and other regulatory agencies and/or Tribes, and offsite mitigation through the MRP is chosen to fulfill the mitigation obligation, debits and credits will be determined on a case-by-case basis. These determinations will be made in close coordination with members of the IRT, especially those IRT member agencies with regulatory authority over stream and river resources, namely Tribes, the US Fish and Wildlife Serve (USFWS), National Marine Fisheries Service (NMFS) and the Washington Department of Fish and Wildlife (WDFW). These credit determinations will follow methods of quantifying mitigation currently in use: namely area ratios based on the resource type being affected. King County Code Section 21A.24.380 outlines ratios in detail for wetlands and other aquatic resources such as rivers and streams. When credit determinations are made using area-based ratios, regulatory agencies mentioned above must approve of the mitigation requirements.

Because the tool is for wetland assessment and cannot be used to translate "aquatic area" (i.e., rivers, streams) impacts into credits/debits, the MRP will track aquatic area/buffer impacts separately on an Aquatic Areas Ledger (see Appendix G, Section 3.0) which will track amount and type of impact (e.g., lineal feet of stream bank armoring, square feet of aquatic bed, square feet of stream buffer impact). These impacts will also be recorded and tracked in the MRP Database (See Appendix G, Section 6.0).

Projects mitigated through the MRP pilot program and DDES permit history both suggest that use of the Mitigation Reserves Program to meet aquatic area impacts will be infrequent. In most cases, aquatic area and aquatic area buffer impacts are avoided, and if impacts are unavoidable, in most cases mitigation occurs onsite or as permittee-responsible mitigation within the same reach, as directed by King County code 21A.24.125 and 21A.24.380 (Klein, 2010).

Aquatic area impacts will be handled on a case-by-case basis according to the following process:

1) Regulatory agencies reviewing a proposed impact to aquatic areas and/or aquatic area buffer:
   a) work with applicants to avoid and minimize impact;
   b) determine all onsite mitigation options and require onsite mitigation to the extent possible;
   c) identify impacts that cannot be mitigated onsite;
   d) review offsite options and select one of the options (e.g., permittee responsible, bank, MRP); and

Methodology for Future Credits and Fees – Detailed Example (continued)

e) if MRP is the chosen offsite option, lead regulatory agency (DDES, usually) or project proponent notifies MRP of desire to use the MRP to mitigate for aquatic resource and/or aquatic resource buffer impacts.

2) Regulatory agencies suggest the quantity and type of mitigation to be completed offsite based on impacts and temporal lag associated with in-lieu fee mitigation (e.g., 0.2ac of buffer planting in the Newaukum subbasin, or placement of 8 pieces of LWD in Newaukum Creek). *This will not constitute a detailed Mitigation Plan, but rather an estimate to be used in establishing a fee if MRP is chosen.*

3) MRP Manager reviews the type and location of the impact and the suggested quantity and type of mitigation and then reviews availability of roster sites in the service area that may provide appropriate mitigation sites.

4) If MRP Manager determines one or more suitable sites are available to meet the mitigation need that also address watershed needs, MRP requests permission from the IRT to accept aquatic area/buffer impacts through the MRP. The following will accompany this request:

a) Description of proposed impact project, including steps taken to avoid and minimize impacts, onsite mitigation;

b) Description of the proposed impacts to be mitigated through the MRP (this excludes impacts being mitigated onsite); and

c) Description of Roster sites with potential for projects that would meet mitigation needs.

Note: For case-by-case review of mitigation proposals related to aquatic area impacts, King County will submit for IRT review a concise document that outlines the rationale for using the MRP to meet the mitigation need. IRT members or designated representatives from IRT agencies, and affected tribes will be given the opportunity to comment on the use of the MRP for meeting the mitigation need.

5) MRP Manager notifies the lead regulatory agency of IRT decision;

If IRT approves the request for use of the MRP and the MRP is to be used:

6) MRP Manager sets the mitigation fee;

a) MRP will set the base price using DDES bond-quantity worksheet (Exhibit 11, Part 3), (which DDES uses to estimate funds required for completing a project if an applicant does not perform required onsite or permittee-responsible mitigation).

b) MRP will add to the base price costs required to meet credit fulfillment requirements in the federal rule (MRP Admin, maintenance and monitoring, land costs, etc. (see Appendix F, Section 7.0).

Upon receipt of the mitigation fee:

7) The MRP will use impact data, suggested mitigation requirements and analysis of watershed needs to guide site selection and mitigation project design.

8) The mitigation will occur according to the credit fulfillment steps outlined in Appendix K.

King County Code section 21A.24.380 lists the current mitigation ratios for Aquatic areas as well as provisions for mitigating offsite if there are no onsite mitigation options for unavoidable impacts.

All aquatic area resource and aquatic area buffer impacts handled by the MRP and subsequent mitigation will be tracked on the Aquatic Areas Ledger and in the MRP database (see Appendix G, Sections 3.0 and 6.0, respectively).

3.4 Maximum and Minimum Area of Debits and Credits

The tool quantifies debits associated with wetland impacts and credits associated with wetland mitigation projects, respectively.

The tool quantifies debits by rating functions and values of the wetland that will be impacted, multiplying the scores by the area of the impact, and then multiplying the result by a temporal loss factor (TLF). The TLF accounts for time lag between when an impact occurs and when replacement functions are achieved by mitigation.

Debits = [Functions & Values of Wetland Being Impacted] x [Area of Impact] x [Temporal Loss Factor]

The tool calculates credits by rating functions and values of a wetland to be enhanced, restored, or created, or preserved before and after mitigation (using project plans to estimate mature conditions for in-lieu fee programs) and multiplying the difference in scores by the area of mitigation treatment. To account for risk of project failure, the result is then multiplied by a risk factor.

Credits = ([Wetland Functions & Values After Mitigation] - [Wetland Functions and Values Before Mitigation]) x [Area of Mitigation] x [Risk Factor]

For each category of wetland functions rated by the tool, there are minimum and maximum scores ranging from low functions and values to high functions and values in each category. There are also minimum and maximum temporal loss and risk factors. Therefore it is possible to translate debits and credits into theoretical maximum and minimum areas of impact and lift associated with one credit.

Table 1. Theoretical Maximum and Minimum Area Calculations

	Maximum Area Impacts to lowest quality wetlands; least intensive mitigation treatment		Minimum Area Impacts to highest quality wetlands; most intensive mitigation treatment	
	Acres	Square Feet	Acres	Square Feet
1 Debit (Impact)	0.037	1613	0.005	230
1 Credit (Lift)	2.00	87,120	0.04	1,793

The worksheets used to perform these calculations are included in the *Calculating Credits and Debits for Compensatory Mitigation Western Washington – Operational Draft (Hruby, Draft 2010)*.

3.5 Public Rights of Way and Existing Easement Exclusions

In cases where a mitigation site is traversed by a public right of way (e.g., utility easement or trail) or other easements or restrictive covenants that allow access or activities that would compromise ecological functions provided be mitigation projects, these areas and an appropriate buffer shall be excluded from generating mitigation credit. Appropriate buffers between these easements and MRP mitigation projects will be determined in consultation with the IRT during the mitigation planning process.

3.6 How Mitigation Relates to Restoration Projects

Mitigation credit shall not be available from other County, State or Federal restoration projects in existence outside the MRP. In cases where mitigation sites are adjacent to or near to existing or proposed restoration sites, the Mitigation Plan (see Appendix K) will clearly show areas of restoration (where no credit is available) and where mitigation credit can be generated.

The MRP will not derive credit from any project(s) already funded with Salmon Recovery Fund money or any projects already planned and funded or completed to meet a permit condition.

However, there may be cases when MRP mitigation fees can be used to implement a salmon recovery project or other restoration project. For this to occur, all of the following must apply:

- The project is not funded;
- There is not a restriction related to the funding used to acquire a site where the project will occur; and
- The project is not a requirement associated with a permit (e.g., a mitigation project).

The federal rule, [332.3(j)(2)] states:

> "Except for projects undertaken by federal agencies, or where federal funding is specifically authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or conservation projects undertaken for purposes other than compensatory mitigation, such as the Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program activities, cannot be used for the purpose of generating compensatory mitigation credits for activities authorized by DA permits. However, compensatory mitigation credits may be generated by activities undertaken in conjunction with, but supplemental to, such programs in order to maximize the overall ecological benefits of the restoration or conservation project."

If mitigation fees are used to implement projects or portions of projects prioritized in a Salmon Recovery Plan, the impacts for which mitigation fees were collected must be accounted for when measuring progress toward watershed-wide salmon recovery goals. For each mitigation project implemented through the MRP, the MRP Manager will provide details of the mitigation project to WRIA Forum staff for entry into the Habitat Work Schedule, which is an online mapping and tracking tool used to measure progress and increase accountability for implementation of salmon recovery projects statewide. At minimum, information added to the Habitat Work Schedule database will include the amount of funding from mitigation fees, the type and amount of enhancement, restoration, creation, etc. to aquatic resources and buffers at the mitigation project, and the reports about permitted impact projects from which mitigation fees were derived (see Appendix G, Section 6.1). Mitigation projects will be clearly categorized as such in the Habitat Work Schedule database so it is evident to salmon recovery planning staff that ecological lift at mitigation projects is achieved at the expense of allowing permitted ecological impacts elsewhere in the watershed.

Program Account – Basic Examples

V In-Lieu Fee Program Account and Reporting

Upon Corps approval of the DU-NY-ILF program, DU will establish an ILF Program Account. The Program Account will be held at a financial institution that is a member of the Federal Deposit Insurance Corporation. Interest that accrues from the program account will be applied towards the management of the ILF program. Disbursements from the Program Account may only be made upon receipt of written authorization from the District Engineer. Funds for the operation of the ILF program and project development may be obtained from other sources and repaid as credits are sold.

As part of the overall Program Account, sub accounts will be established for each service area. The sub accounts will track deposits from the sale of credits and expenses associated with implementing ILF projects in accordance with 33 CFR 328.8 (i) (3). In service areas where DU has met all the mitigation obligations associated with specific credit sales, then DU may use any remaining funds to establish mitigation projects within the same or in a different ILF service area in advance of a credit sale or remaining funds may be used for conservation projects within the same or different service area subject to approval by the Corps districts and the IRT.

DU will maintain a system for tracking the production of credits, credit transactions, and financial transactions by service area and separated for each project within the respective service area. Information will be reported on RIBITS. DU will submit an Annual Program Report to the IRT no later than March 31st of each year and will include program data from the previous calendar year (January 1 – December 31). The Annual Report will include the following documents: summary sheet, income statement, expense statement, credit report summary, and the detailed credit report.

VI. In-Lieu Fee Program Account

Under the ILF Instrument, the ILF Sponsor will continue to maintain an ILF Program Account with a financial institution that is a member of the Federal Deposit Insurance Corporation (FDIC). The ILF Program Account is professionally managed, funds are held in FDIC-insured sub-accounts and certificates of deposit, and interest earned is regularly deposited into the account. The ILF payments received will be deposited in the ILF Program Account, with six (6) % directed to the ILF Sponsor's unrestricted funds account and used for reasonable overhead and the administrative costs to operate and manage the ILF Program.

The ILF Program Account is used for the selection, design, acquisition, implementation, monitoring, long-term stewardship or management, and permanent protection of ILF mitigation projects. The ILF Sponsor will track staff time and other routine expenses to specific ILF Program activities as they evaluate, select, acquire and establish long-term stewardship or management of preservation properties. The ILF Sponsor will maintain a dedicated *ILF Stewardship Fund* where the stewardship and management endowment fees for all ILF mitigation properties protected by SEAL Trust are deposited, conservatively invested, and used to cover expenses for stewardship and management (including monitoring, enforcement, litigation, and property maintenance) in perpetuity.

The Corps has the authority to audit the ILF Program Account at any time.

As a companion to the ledgers described in Section V, the ILF Sponsor will provide an annual report on the ILF Program Account to the Corps and IRT. See Section VII.

Program Account – Another Example

4.3 ILF Program Account

Upon Corps approval of the ILF Instrument and before any fees are accepted, Audubon CT will establish an ILF program account ("Program Account"). This Section describes Audubon CT's operation of the Program Account, which will track credit production, credit transactions and final transactions. See Section 7.3 below for the Program Account reporting requirements.

The Program Account will be an interest-bearing account held at a financial institution that is a member of the Federal Deposit Insurance Corporation, and maintained separately from the National Audubon and Audubon CT general operating budget. Any interest accruing in the Program Account will be used to provide compensatory mitigation for impacts to aquatic resources. The Program Account will track funds by service area. Any funds received from other entities and for other purposes (i.e., donations, grants) will be kept in a separate account. The terms and conditions of this Instrument shall apply only to the Program Account, and not to any such separate account.

The Corps has the authority to audit the Program Account records at any time, during Audubon CT regular business hours and upon reasonable prior written notice.

4.3.1 Direct and Administrative Costs

Funds paid into the Program Account will only be used for the direct replacement and management of aquatic resources by the Audubon CT ILF program (i.e, selection, design, acquisition, implementation, monitoring and management of Audubon CT ILF projects, hereinafter "Direct Costs") and payment of Audubon CT's Administrative Costs (described below in this Section 4.3.1). Direct Costs may include, without limitation, the preparation and implementation of Mitigation Plans, securing permits for conducting mitigation activities; activities related to the restoration, enhancement, creation, and/or preservation of aquatic resources and their buffers, maintenance and monitoring of mitigation sites, including, but not limited to, the fulfillment of any reporting obligations; the purchase of credits from mitigation banks (only as a last resort); direct acquisition activities, such as appraisals, surveys, title insurance, and legal fees; and salaries of staff directly involved in the replacement of aquatic resources by the Audubon CT ILF program, including benefits and overhead, as well as consultant costs and expenses, directly related to all such activities. In no event will Direct Costs include costs for education, research and outreach, or for implementation of best management practices for wetlands.

Twenty percent (20%) of the fees paid into the Program Account will be allocated to Audubon CT for administrative costs (i.e., not directly related to the replacement and management of aquatic resources by the Audubon CT ILF program, hereinafter "Administrative Costs"). Three years from the effective date of this Instrument, Audubon CT and the Corps together may review this agreed-upon percentage in light of the costs for Audubon CT. Administrative Costs may include, without limitation, bank charges associated with the establishment and operation of the ILF program; day-to-day management expenses of the Audubon CT ILF program such as bookkeeping, mailings, printing, office supplies and computer hardware and software; costs related to the solicitation of Letters of Intent (as defined in Section 6.2 below); and salaries of staff involved in administrative activities of the Audubon CT ILF program, including benefits and overhead, as well as consultant costs and expenses for administrative activities.

4.3.2 Financial and Credit Accounting

Audubon CT shall establish and maintain an annual report ledger that tracks the production of released credits for each individual Audubon CT ILF project.

With respect to income, Audubon CT shall track all fees and other income received, the source of the income (e.g., permitted impact, donation, grant, penalty fee, etc.) and any interest earned by the Program Account. The ledgers shall also include a list of all permits secured by paying a compensation fee to the Audubon CT ILF, including the appropriate permit number, the service area and town in which the specific authorized impacts are located, the amount (acreage or linear feet) of authorized impacts, the aquatic resource type impacted by Cowardin class or stream classification, if applicable, the amount of compensatory mitigation required, the amount paid to the Audubon CT ILF for each authorized impact, and the date the Audubon CT ILF received the funds from the permittee.

Regarding expenses, Audubon CT shall establish and maintain a report ledger for the Audubon CT ILF program to track all program expenditures and the nature of the expenditure (i.e., costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management, administration, and administrative fee expenditures). The Audubon CT ILF program will also track funds obligated or committed, but not yet disbursed.

The ledger shall also include, for each Audubon CT ILF project, the permit number(s) for which the Audubon CT ILF project is being used to offset the Corps' compensatory mitigation requirement, the service area in which the project is located, the amount of compensation being provided by method (i.e., restoration, establishment, enhancement or preservation), the aquatic resource type(s) represented by Cowardin class, the amount of compensatory mitigation being provided (acres and/or linear feet).

The ledger shall also include a balance of advance credits and released credits for each service area.

Program Account – More Detailed Example

B. In-Lieu Fee Program Account

1. Account. Payments made to this Program by permit applicants, permittees or other parties as approved by the Corps and OEPA to compensate for losses to aquatic resources will be deposited into an interest-bearing account at a financial institution that is a member of the Federal Deposit Insurance Corporation (the "Account"). The funds will be owned by the Sponsor and, at the Sponsor's request, will be managed by OWDA as the Sponsor's agent. Funds accepted from entities other than permittees shall be kept in a separate account. OWDA shall account for the funds in accordance with generally accepted accounting principles, and the accounts shall be subject to audit by the Corps, OEPA and/or the State of Ohio from time to time, as they each may determine. Interest produced by the Program shall be used for the Program.

The District Engineers shall monitor the funds and may request reports at any time. The Corps and OEPA may review account records with 14 days written notice. When so requested, the OWDA and the Sponsor shall provide all books, accounts, reports, files, and other records relating to the Account and the funds of the Program.

2. Subaccounts and Expenditures. Funds in the Account may be expended for multiple mitigation projects, multiple watersheds or for the Program itself. In any event, all funds expended reflect, and therefore help establish, the minimum cost of credits in each watershed. The funds will be placed into subaccounts as described below to assure proper management and accounting of deposits and expenditures as follows:

a. Project Subaccounts and Expenses – Each Mitigation Project will be assigned a subaccount which will track (i) funds budgeted for that project through its approved Mitigation Plan, and (ii) funds expended associated with that project. Expenses associated with a Mitigation Project may include, without limitation, development of that project's concept plan and mitigation plan, design, acquisition (including purchase price, appraisals, surveys title examination and insurance, environmental assessments, closing costs, etc.), planning, implementation (including equipment and materials), contingencies, long-term maintenance and management, monitoring, administration, management, establishment of financial, technical, and legal mechanisms to ensure long-term success of the mitigation projects, and financial assurances (further described below). Project expenses include staff time, contract services, legal costs and other fees and expenses associated with a Mitigation Project, and all expenses for planning, selecting and conducting mitigation activities, activities related to the restoration, enhancement, creation, and/or preservation of aquatic resources, maintenance and monitoring of mitigation sites, and the purchase of credits from mitigation banks. Notwithstanding the foregoing, project expenses, including staff time, incurred by Sponsor with respect to a Mitigation Project prior to approval of that project's Mitigation Plan are incurred at Sponsor's risk but may be reimbursed to Sponsor once the Mitigation Plan is approved.

b. Financial Assurances - Financial assurances will be set aside into separate subaccounts in the form of:

i. *Project Contingency Fund* – For each Mitigation Project, an amount shall be set aside and placed into a Project Contingency Subaccount. The amount will be specified in the Mitigation Plan budget. Funds from this subaccount will be used to cover unanticipated costs which may arise during the implementation of the Mitigation Project. Once the Mitigation Site has closed, the funds in this subaccount will be released and will go into the Long-Term Management Fund (described below) if needed, or otherwise will be used on other mitigation projects in the same primary service area.

ii. *Other Project Financial Assurances* – The District Engineer, in consultation with the IRT, will determine whether additional financial assurances are warranted for an individual mitigation project to ensure a high level of confidence that the project will be successfully completed in accordance with the applicable performance standards. It is not anticipated that additional financial assurances will usually be required due to the project and program contingency funds. However, if it is determined that additional financial assurances are needed, they may include performance bonds, insurance, letters of credit, or other mechanisms to the extent set forth in the Compensatory Mitigation Rule and acceptable to the IRT to be set aside.

iii. *Program Contingency Fund* - A maximum of 5% of funds paid into the Program will be set aside and placed into a subaccount for a Program Contingency Fund. This subaccount may be used to fund unanticipated program or project expenses not covered by the Project Contingency Fund (such as catastrophic events which occur after the project contingency fund has been released), and/or to implement supplemental or advance mitigation projects. Additionally, the Sponsor may use this fund for management or maintenance costs after site closure for stream repairs or invasive plant control deemed necessary for project success.

If the balance of the Program Contingency Funds accumulates to an amount deemed excessive for the purposes described above, continued deposits into this account may be temporarily reduced or suspended, or advance mitigation projects may be undertaken, at the discretion of the Sponsor. The upper limit target will be determined considering the outstanding program mitigation obligation, mitigation success uncertainty, and other risk factors.

iv. *Long-Term Management Fund* - For each Mitigation Project, an amount shall be set aside and placed into a Long-Term Management Subaccount. The amount will be specified in the Mitigation Plan budget, which will include a line item for long-term management that will be determined by the size of the property, the type of Site Protection Instrument, the specific long-term management needs, the stewardship needs of the owner/holder of the Site Protection Instrument, annual cost estimates to meet the various needs, inflationary adjustments, and other contingencies, as appropriate. Funds in the subaccount will be used to support long-term success of the Mitigation Project in accordance with the Mitigation Plan (including the Long-Term Management Plan) and Corps and OEPA regulations. After site closure, these funds would be provided to the Long-Term Steward (which may be a single disbursement of funds in a lump sum). However, a portion of these funds may also be provided to the owner or holder of the Site Protection Instrument (in a lump sum or otherwise) for long-term stewardship of the Site Protection Instrument (such as conservation easement monitoring and enforcement, or administration of fee title ownership separate and apart from long-term mitigation management).

Program Account – More Detailed Example (continued)

c. Administrative Fees - Administrative fees shall be paid to the Sponsor and OWDA. The fee paid to the Sponsor will be a minimum of 8% and a maximum of 15% of the funds paid into the Program (from credit sales or other sources), plus all interest accruing upon the funds. The administrative fee shall initially be established at 15%, but may be periodically adjusted within the minimum and maximum range as the Program becomes fully established and the Sponsor determines that its administrative costs have decreased (or increased, but not to exceed the maximum). Out of this administrative fee, OWDA will receive a fee amounting to 0.35% of the funds deposited as reimbursement for its costs associated with administering the account. The administrative fees will be deducted when payment is received and deposited. Sponsor may request that its fee be paid immediately, or the Sponsor may request that OWDA hold Sponsor's administrative fee in an Administrative Subaccount. The administrative fee offsets expenses associated with program administration which includes managing credit sale transactions, annual reporting, accounting, program related meetings, expenses for day-to-day management of the Program, site selection (identification and assessment of ecologically appropriate stream and wetland restoration and protection opportunities), development of concept plans and other expenses incurred on projects which do not become approved Mitigation Projects, and overhead. Separate project accounting may be established internally by Sponsor to record administrative costs to justify increasing or decreasing the administrative fee within the minimum and maximum range. Approval is not required for the expenditure of administrative fees.

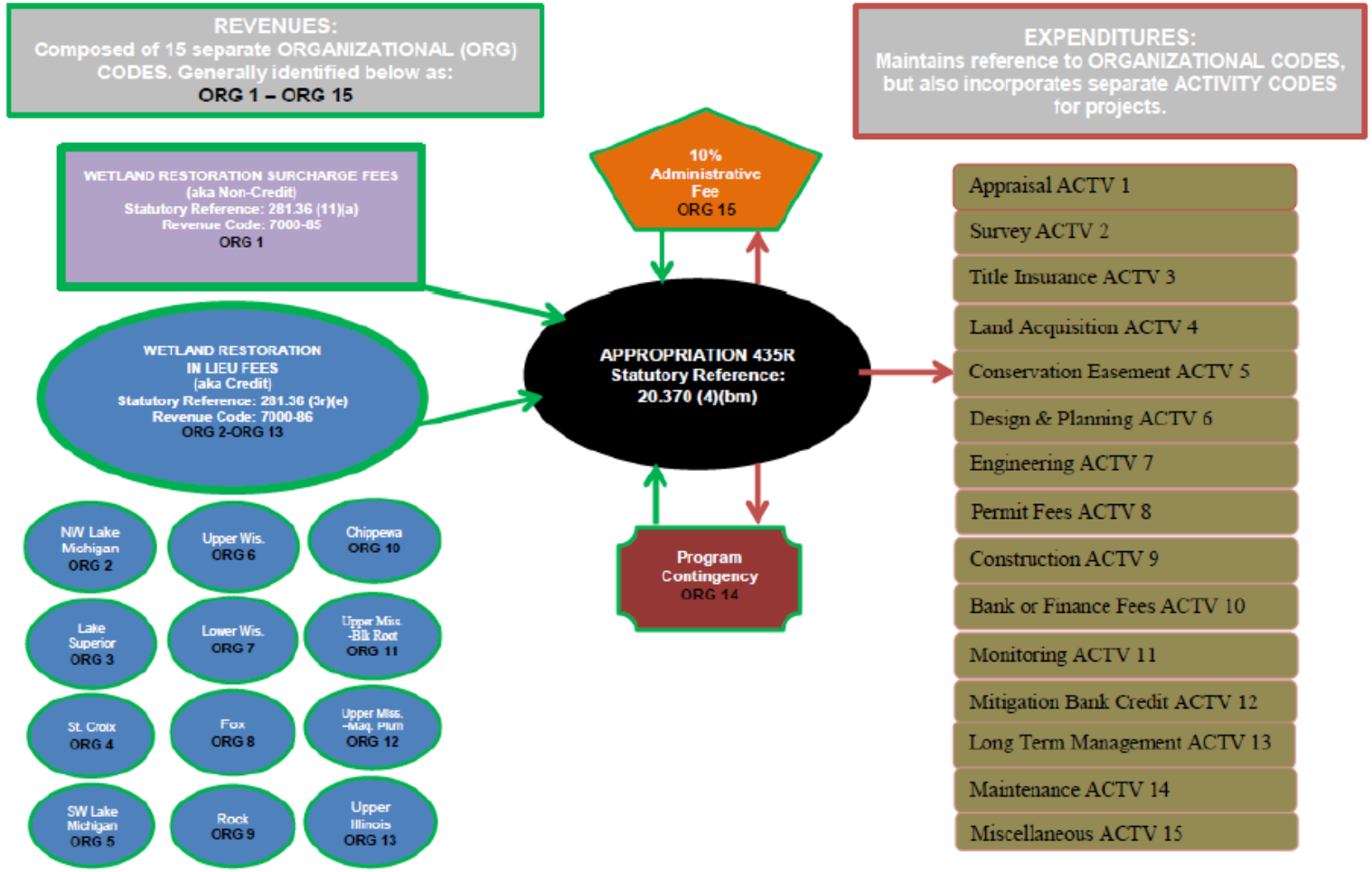
3. Disbursements to Sponsor. The timing and logistics of disbursement of funds to Sponsor by OWDA shall be pursuant to arrangements agreed upon between Sponsor and OWDA.

4. Budgets. Complete budgets for mitigation projects must be included in the Mitigation Plan. Changes in amounts among budget line items is permitted; provided, however, that any increase from the total approved budget for a Mitigation Plan in excess of 10% will require the relevant District Engineers' approval before additional funds may be disbursed.

5. Excess Funds. Funds received by the Program in excess of the amount needed for Mitigation Projects shall remain with the Program and shall be disbursed for other mitigation projects or other uses approved by the relevant District Engineer in consultation with the IRT. In service areas where Sponsor has met all mitigation obligations, any remaining funds that are paid into the Program because of impacts in those service areas may be used to establish additional mitigation sites subject to the approval of the relevant District Engineer in consultation with the IRT. With the approval of the relevant District Engineer, remaining funds may also be used in adjacent service areas where insufficient funds are available to accomplish suitable mitigation projects, or to expand the size and ecological value of established projects.

Program Account – Example of Visual Depiction

Figure 3. *– Visual Depiction of Appropriation 435 WWCT Program Account*



Advance Credits – Basic Examples

8. Advance Credits

No advance credits will be associated with the seven existing Umbrella Plan mitigation projects[5], in their current form, being brought into the NWFWMD ILF Program. However, the USACE agrees that 195.98 unused credits, previously released by the USACE under the Umbrella Plan, will be brought into the NWFWMD ILF Program and will be available for immediate use.

Although the Sponsor does not anticipate the use of advance credits as a mitigation option, this Instrument does not, per se, preclude advance credits for new mitigation projects developed in the future, or for substantial expansion of existing mitigation projects. In such cases, the USACE may allow, on a project by project basis, advance credits. If advance credits are allowed by the USACE for new or substantially expanded projects, the initial allocation of advance credits will be specified, a credit release schedule for the fulfillment of advance credits included, and an explanation of the basis for the allocation and fee schedule provided.

SECTION VII: CREDIT ACCOUNTING

A. Advance Credits

Upon the Program Effective Date, Program Sponsor is permitted to Transfer fifty (50) Advance Credits for the Service Area. The number of Advance Credits that are approved for Transfer is based on (1) the projected mitigation opportunities within the Service Area, (2) the Program Sponsor's past performance for implementing Enhancement and Restoration activities within the Service Area, and (3) the projected financing necessary to begin planning and implementation of ILF Projects.

Once the Program Sponsor has sold all of its Advance Credits, no more Advance Credits may be sold until an equivalent number of Credits has been released in accordance with the approved Credit Release schedule outlined in an ILF Project-specific Development Plan. Once all Advance Credits are fulfilled, an equivalent number of Advance Credits may be made available for Transfer, at the discretion of the USACE, in consultation with the IRT.

Program Sponsor shall complete initial physical and biological improvements by the third full growing season after the Transfer of Advance Credits. If Program Sponsor fails to meet these deadlines, USACE must either make a determination that more time is needed to plan and implement an ILF Project or, if doing so would not be in the public interest, direct Program Sponsor to disburse funds from the Program Account to provide alternative Compensatory Mitigation to fulfill those compensation obligations.

Advance Credits – Another Example

C. ADVANCE CREDITS

"Advance Credits," as used in this Agreement, are Credits that are not associated with a compensatory Mitigation Project and that are available for sale prior to initiation of a Mitigation Project in accordance with an approved Mitigation Site Development Plan. Specification of the amount of Advance Credits and the fee schedule for those Advance Credits is set out in Exhibit B. Advance Credits have been assigned to particular Service Areas as outlined in Exhibit B. These Advance Credits were based on the following considerations:

(a) The compensation planning framework;
(b) The Conservancy's past performance for implementing aquatic resource restoration, establishment, enhancement and/or preservation activities in the proposed service area or other areas;
(c) The projected financing necessary to begin planning and implementation of in-lieu fee projects; and
(d) The availability of mitigation bank credits in each service area.

Any debited Advance Credits must be fulfilled, or offset, by Released Credits associated with mitigation sites in a given service area before Released Credits are available for sale. Once the mitigation obligations associated with debited Advance Credits have been satisfied by Released Credits, that corresponding amount of Advance Credits is again available for use.

Because this Agreement modifies an existing in-lieu fee program, it is recognized that there may be Mitigation Projects that were approved or completed and funded by Program monies before the Effective Date of this Agreement that are not associated with a mitigation liability. Credits associated with that work may be released, if approved by the IRT, and may be available for sale, transfer or fulfillment of any Advance Credit Sales in the Service Area of the associated Mitigation Projects. These Credits may be released as milestones are achieved in the Credit Release schedule approved for each project. The Credit Release schedule is expected to follow that provided in the Mitigation Banking Instrument Template unless otherwise approved by the IRT. Released Credits may be sold once the mitigation obligation associated with Advance Credits has been met. Released Credits generated by preservation will only be sold in conjunction with an equal number of Released Credits generated by restoration or creation unless otherwise approved by the IRT. Ratios shown in Exhibit C ("Standard Ratios") were used to calculate the amount of Released Credits.

Land acquisition and the initial physical and biological improvements associated with a Mitigation Project must be completed by the third full growing season after the first Advance Credit in that Service Area is sold or debited, unless the IRT determines that more time is needed to plan and implement a Mitigation Project in that Service Area. If the IRT Chairs, in consultation with the members, determine that there is a compensatory mitigation deficit in a specific Service Area by the third growing season after the first Advance Credit was secured, then the IRT may direct the disbursement of funds from the Account to provide alternative compensatory mitigation to fulfill those mitigation obligations. In that case, the mitigation liability to the Account shall be reduced accordingly and transferred to the receiving party. If such project or proposal will be accomplished by another organization, the Conservancy will transfer from the Account an amount of funds not to exceed the original amount paid for the impacts as directed by the IRT to that other organization.

In Service Areas where the Conservancy has met all mitigation obligations, any remaining monies that were paid into the Account because of impacts in those Service Areas may be used to establish additional mitigation sites, as approved by the IRT Chairs, in consultation with the IRT members, in advance of a mitigation liability. Such remaining monies may also be used in the same or other watersheds for projects not typically acceptable as compensation, but that have an ecological benefit (*e.g.* oyster reef establishment or submerged aquatic vegetation restoration). Such projects require approval by the IRT.

Exhibit B
Advanced Credits

River Basin	Advanced Credits (Non-tidal Wetlands)	Advance Credits (Streams)	Advance Credits (Tidal Wetlands)
Atlantic Ocean Basin	5	5,000	2
Big Sandy River Basin	0	0	0
Chesapeake Bay Basin	20	5,000	2
Chowan River Basin*	5	5,000	2
Lower James River Basin	20	10,000	2
Middle James River Basin	10	5,000	0
Upper James River Basin	10	5,000	0
New River Basin	5	5,000	0
Potomac River Basin	5	10,000	2
Rappahannock River Basin	5	7,500	2
Roanoke River Basin	5	5,000	0
Shenandoah River Basin	5	10,000	0
Tennessee River Basin	5	5,000	0
York River Basin	10	5,000	2
All Basins	**110**	**82,500**	**14**

*Advanced Credits for the Chowan Basin are only available in the following HUCs: 03010204, 03010201, and 03010202.

Advance Credits – More Detailed Example

A. Advance Credits

Advance credits are any credits that are available for sale prior to being fulfilled in accordance with an approved Mitigation Plan. The number of advance credits available to this Program will be approved by the relevant District Engineer, in consultation with the IRT, and will be specific to each primary service area based on considerations provided in 33 CFR 332.8(n):

i. the CPF (Exhibit A attachment);
ii. Sponsor's past performance for implementing aquatic resource restoration, establishment, enhancement, and/or preservation activities; and
iii. the projected financing necessary to begin planning and implementation of mitigation projects under this Program.

The number of advance credits Sponsor will be permitted to sell is specified by primary service area in Table 1 and is derived from methodology presented in Exhibit B. In general, advance credit numbers are derived from projected demand for credits using data from historical impacts and projections of future impacts. In the service areas with fewer historical impacts, a minimum number of advance credits have been specified to ensure that the Program meets potential demand and has sufficient financing for project delivery. If demand for mitigation credits exceeds the allotted amount of advance credits, and purchased credits have not been released, the IRT may approve an increase in the number of advance credits.

The number of advance credits available to the Sponsor at any time to sell in a given service area is equal to the number of advance credits specified in this Instrument minus any that have already been sold but not yet fulfilled. Once sold advance credits have been fulfilled, an equal number of advance credits will be re-allocated for sale to fulfill new mitigation requirements.

TABLE 1: Advance Credits and Credit Fees by Primary Service Area

HUC 8		Stream Advance Credits	Credit Fee	Wetland Advance Credits	Credit Fee
04100001	Ottawa	10000	$320	20	$49000
04100002	Raisin River	10000	$320	20	$49000
04100003	St. Joseph River	10000	$260	20	$49000
04100004	St. Mary's River	10000	$320	20	$59000
04100005	Upper Maumee	20000	$260	30	$49000
04100006	Tiffin River	10000	$260	20	$49000
04100007	Auglaize River	10000	$320	20	$52000
04100008	Blanchard River	10000	$390	20	$56000
04100009	Lower Maumee	20000	$350	20	$49000
04100010	Cedar-Portage River	20000	$390	20	$52000
04100011	Sandusky	10000	$330	20	$53000
04100012	Huron-Vermilion	10000	$280	20	$57000
04110001	Black-Rocky Rivers	20000	$320	20	$59000
04110002	Cuyahoga River	30000	$450	35	$72000
04110003	Chagrin-Ashtabula	25000	$450	25	$72000
04110004	Grand River	20000	$280	32	$52000
04120101	Conneaut	10000	$270	20	$52000
05030101	Upper Ohio	20000	$250	20	$52000
05030102	Shenango River	20000	$270	20	$52000
05030103	Mahoning River	20000	$320	20	$52000
05030106	Upper Ohio-Wheeling	32000	$240	20	$52000
05030201	Little Muskingum River	20000	$270	20	$52000
05030202	Upper Ohio-Shade	20000	$250	20	$52000
05030204	Hocking River	50000	$250	20	$52000
05040001	Tuscarawas River	46000	$280	60	$50000
05040002	Mohican River	20000	$320	20	$59000
05040003	Walhonding	20000	$320	20	$59000
05040004	Muskingum River	20000	$270	20	$52000
05040005	Wills Creek	20000	$250	20	$52000
05040006	Licking River	20000	$320	20	$59000
05060001	Upper Scioto River	43000	$290	32	$50000
05060002	Lower Scioto	20000	$320	20	$57000
05060003	Paint Creek	20000	$320	20	$53000
05080001	Upper Great Miami	20000	$290	20	$53000
05080002	Lower Great Miami	35000	$270	20	$59000
05080003	Whitewater River	20000	$450	20	$72000
05090101	Raccoon-Symmes Creeks	21000	$240	20	$52000
05090103	Little Scioto-Tygarts	20000	$270	20	$52000
05090201	Ohio Brush-Whiteoak	20000	$290	20	$57000
05090202	Little Miami River	33000	$270	20	$59000
05090203	Middle Ohio-Laughery	20000	$450	20	$72000
05120101	Upper Wabash	20000	$380	20	$56000
05120103	Mississinewa River	20000	$320	20	$57000

B. Timeline

After the first advance credit in a service area has been secured by a permittee, the Sponsor has until the third full growing season for the Program to have completed land acquisition and initial physical and biological improvements on a Mitigation Project(s), unless the relevant District Engineer determines that more time is needed to plan and implement a mitigation project in that service area. The Sponsor may, as appropriate and with the relevant District Engineers' approval: 1) delay the expenditure of funds until sufficient funds are available in the primary service area to implement an effective and sustainable project; 2) divide a specific project into phases to allow funding in phases; 3) seek to leverage monies with other appropriate sources of funds to expand and complement the scope of proposed projects; or 4) utilize fees to carry out compensation projects in secondary service areas (see Section II(f)) . In any event, it will not be considered a default of the terms set forth in this Instrument if an insufficient number of credits are sold in a given service area to accrue enough funds to implement an environmentally sustainable project.

If the relevant District Engineer determines that there is a compensatory mitigation deficit in a specific service area by the third growing season after the first advance credit in that service area is sold, then the relevant District Engineer may direct the disbursement of funds from the Account to provide alternative compensatory mitigation to fulfill those mitigation obligations. In that case, the mitigation liability to the Account and under this Program shall be reduced accordingly and transferred to the party receiving the disbursed funds. If such compensatory mitigation will be accomplished by another organization, OWDA will transfer to the other organization funds from the Account in an amount as directed by the relevant District Engineer, but which shall not exceed the original amount paid into the Account for the impacts.

If, within any 8-digit HUC, there are insufficient credits sales to fully fund the implementation of a project, the Sponsor may submit an alternative proposal to the relevant District Engineer for review and approval. Such alternative proposals may seek to satisfy the mitigation obligation liability through the use of released credits or bank credits from within the same Primary Service Area, use of preservation, deferral of the mitigation liability to the next year, use of funds from primary service areas within the same secondary service area, transfer of funds from or to another ILFP that is operating in the primary service area, or use of other mitigation options as approved by the relevant District Engineer, in consultation with the IRT (see also Section III(A)). An alternative proposal may also be submitted after two years, if, despite the Sponsor's best efforts, appropriate mitigation project sites have not been identified within the primary service area.

Advance Credits – More Detailed Example (continued)

Exhibit B: Advance Credits

A. Introduction

This Exhibit B is attached to and made a part of "The Nature Conservancy's Ohio Stream and Wetland In-Lieu Fee mitigation Program Instrument" (the "Instrument"). The purpose of this exhibit is to present the qualifications and methodology for issuance of Advance Credits to the Sponsor (TNC) as set forth in Section V.A. of the Instrument.

Advance credits are any credits that are available for sale prior to being in accordance with an approved mitigation plan. The number of advance credits available to an ILF program is to be approved by the District Engineer in which the watershed is located, in consultation with the IRT, and specified for each primary service area based on considerations provided in 33 CFR 332.8(n):

iv. The compensation planning framework;
v. TNC's past performance for implementing aquatic resource restoration, establishment, enhancement, and/or preservation activities;
vi. The mission of TNC; and
vii. The projected financing necessary to begin planning and implementation of in-lieu fee projects.

The number of advance credits TNC will be permitted to sell is specified by primary service area (see Table 3) and is derived from methodology presented below.

B. Qualifications

TNC is a tax-exempt 501(c)(3) organization managed from its worldwide office in Arlington, Virginia. TNC works in all 50 United States and in more than 30 countries. The organization has protected more than 119 million acres of land and 5,000 miles of rivers around the world — and operates more than 100 marine conservation projects globally. TNC is supported by more than 1 million members and employs about 3,200 staff worldwide. The Nature Conservancy has been named a "Top-Rated Charity" by the American Institute of Philanthropy.

The mission of TNC is to conserve the lands and waters on which all life depends. At global, national, regional and state scales, the organization employs a scientific, systematic analysis to identify places large enough and rich enough in plant and animal species to ensure meaningful conservation results. At each place, TNC employs a range of strategies tailored to local circumstances and communities, including: buying land and interests in land; helping landowners, private and public, manage their properties; facilitating public-private partnerships; and collaborating with likeminded partners to seek pragmatic, cost-effective solutions to the most pressing conservation threats at the largest scale.

To achieve TNC's place-based mission, the worldwide Board of Directors has established chapters of TNC at the state and country level. Each state and country program is run by a director who manages the program's annual plan and budget in support of the TNC's mission and goals.

The Ohio Chapter has helped conserve over 60,000 acres of land in Ohio. Of these, almost 25,000 acres are owned and managed by TNC. The other 35,000 acres are now owned and managed by other natural resource management agencies, most prevalently the Ohio Department of Natural Resources, United States Forest Service, County Park Systems, and partner land trusts.

As of summer 2013, the Ohio Chapter consisted of 46 paid positions (34 long-term and 12 short-term staff). The Ohio Chapter is advised and assisted by a volunteer Board of Trustees which provides guidance on strategic, assists in setting goals and, most importantly, subjects the Chapter's work to additional critical thinking.

Wetland and Stream Restoration, Establishment, Enhancement and Preservation Experience

TNC has demonstrated considerable experience with wetland and stream restoration, protection and long-term stewardship. Through its land protection experience (outlined above), TNC has become a leading expert in real estate transactions that ensure strong protection and preservation. Because of these efforts, TNC has been awarded the national distinction of land trust accreditation from the Land Trust Alliance, which recognizes TNC for meeting national standards for excellence, upholding the public trust and ensuring that conservation efforts are permanent.

In addition, The Nature Conservancy has long recognized the role that mitigation – avoidance, minimization, and compensation for unavoidable impacts – can play in advancing our conservation mission. This commitment is reflected in the organization's Global Challenges, Global Solutions Conservation Framework. One of the Conservancy's strategies is to employ "effective mitigation options, in partnership with governments, corporations and private/communal landowners to balance development and conservation needs, avoid impacts to sensitive natural areas and wildlife, and identify opportunities to offset remaining impacts."

TNC is engaged in mitigation projects, programs, and policies across all operating units from state chapters, regions, and programs to U.S. and International Government Relations. Nationally 30 of TNC's 48 state chapters, including Ohio, are engaged in wetland and stream mitigation. At least 8 TNC chapters have participated in wetland and stream mitigation banking and at least 11 of have participated in In-Lieu Fee programs. At least 17 TNC chapters play some role in long-term management for mitigation lands (e.g., hold fee title or a conservation easement on mitigation lands) and/or are responsible for long-term stewardship of a mitigation project. TNC's engagement in wetland and stream mitigation has helped to protect over 34,000 acres nationwide. In Ohio, one recent example of restoration accomplished by TNC included 10,500 linear feet of stream re-establishment and rehabilitation, and 4.7 acres of wetland establishment. This was completed at the Darby Headwaters Preserve in Logan County, Ohio.

The experience and expertise within TNC goes very deep. With over 550 scientists, and many other professionals who are dedicated to conservation initiatives, TNC is arguably the most effective conservation organization in the world. As part of TNC's commitment toward mitigation TNC hired Jessica Wilkinson in 2012 as a senior policy advisor. Wilkinson was a Senior Policy Analyst and Director of the Wetlands Program at the Environmental Law Institute (ELI) in Washington, DC. She joined ELI in 1994 after receiving her Masters of Environmental Management from Yale University, School of Forestry and Environmental Studies and a BA in Environmental Science from Barnard College, Columbia University. As director of ELI's Wetlands Program, Jessica oversaw the Institute's program of wetlands research and training. She has been the lead researcher on several of ELI's seminal wetlands publications including the 2006 publication "The Status and Character of In-Lieu Fee Mitigation in the United States". She has also designed and administered numerous training courses on compensatory mitigation, and has led policy dialogues on wetland protection, water quality trading, and the integration of biodiversity conservation and land use planning.

TNC has also developed robust databases and procedures to track and manage all aspects of compensatory mitigation projects and programs in other states. The Ohio Chapter is drawing upon these resources, particularly those from Virginia, West Virginia, and Maine to guide the tracking systems that the Ohio Program proposes to establish. These tracking systems range from those that track projects from permitted impacts, through the competitive proposal process, to the award and monitoring of compensation projects. TNC also has experience managing mitigation funds and carrying out restoration and protection projects from the collection of impact fees and the award of grants for compensation projects. In several states, such as Maine and West Virginia, TNC also works with partner agencies to administer competitive grant programs for compensation projects, undertake marketing and outreach for mitigation programs, provide support to prospective applicants, manage proposal review, develop project agreements for mitigation fund awards, and carry out transactional due diligence on all projects.

In addition to the many experienced and well trained staff at the Ohio Chapter the Mitigation Program Manager is responsible for setting up and running the ILF program. As the Mitigation Program Manager, Devin Schenk has over 14 years of experience working in the stream and wetland mitigation field. Schenk earned his Master of Environmental Science Degree from

Advance Credits – More Detailed Example (continued)

Miami University in 2000. He also earned a Juris Doctor degree from Northern Kentucky University, where he worked for 10 years as an ecologist with the University's ILF program.

C. Advance Credit Considerations

The Compensatory Mitigation Rule includes a hierarchy of preference for mitigation alternatives (33 CFR 332.3(b)(1-6)), although the Army Corps has considerable discretion in determining which compensatory mitigation option is most likely to successfully replace lost functions and services and take into account watershed-scale considerations. The preference hierarchy requires that when considering compensatory mitigation options the Corps must first determine whether there are available and appropriate credits from a wetland mitigation bank, followed by credits from an in-lieu fee program. In the state of Ohio, banks are focused almost exclusively on wetland mitigation and their service areas are focused on the watersheds with the most significant demand for credits. In order for an ILF program to be in a position to provide the appropriate type of credits and establish ecologically successful and sustainable projects that support the needs of the watershed it is important for the program to have an adequate amount of advance credits available in each primary service area. Without adequate advance credits the program would be limited in its ability to serve as an alternative and offset aquatic resource functions and services on a watershed-scale.

Determining how many advance credits are needed for each primary service area requires thoughtful analysis using past permitting and compensatory mitigation data. The Ohio Environmental Protection Agency (OEPA) publishes an annual report on isolated wetland permitting, 401 water quality certification activities, and the resulting compensatory mitigation. Wetland mitigation data are available from 2004 to 2012 and stream mitigation data are available from 2006 to 2012. Below are tables and figures that show the mitigation requirements over these time periods.

An analysis of the past compensatory mitigation demand in each primary service area makes evident significant differences between each watershed's compensatory mitigation needs. Statewide there is an annual average of 194,983 linear feet of stream compensatory mitigation and 340 acres of wetland compensatory mitigation provided in Ohio. Some watersheds, however, have had no compensatory mitigation demand over the past 9 years (e.g. St. Mary's River, 04100004). While on the high end, five watersheds have had average annual stream compensatory mitigation needs of greater than 10,000 linear feet and 10 watersheds have had average annual wetland mitigation needs of greater than 10 acres. Given these differences it is important to base the advance credits allocated for each primary service area watershed on its individual historic needs.

Additionally the requirements for site identification, project approvals, design, permitting, construction and monitoring, means that it may require three years before an initial partial credit release (30%) for new projects and eight years or more to achieve 100% credit release (see Section V(D) for a discussion of the credit release schedule). In order to accommodate mitigation credit needs for each watershed, the amount of advance credits allocated must be calculated based on an 8-year timespan and the temporal delays associated with the credit release schedule. The advance credits for each primary service area should, as a result, be based on potential demand over the entire timespan that would be required for full credit release.

The advance credit results provided in Tables B-1 and B-2 below were calculated based on this rationale. Section D of this exhibit provides an in-depth description of how the numbers were derived.

Table B-1: Mitigation in Lake Erie Watersheds

HUC 8		Stream Mitigation			Wetland Mitigation		
		Average Annual ('06-'12)	Highest Annual ('06-'12)	Advance Stream Credits	Average Annual ('04-'12)	Highest Annual ('04-'12)	Advance Wetland Credits
04100001	Ottawa	1288	2773	10000	0.56	5.00	20
04100002	Raisin River	0	0	10000	0.03	0.27	20
04100003	St. Joseph River	0	0	10000	3.20	16.55	20
04100004	St. Mary's River	0	0	10000	0.01	0.09	30
04100005	Upper Maumee	1700	11558	20000	5.23	47.05	20
04100006	Tiffin River	514	3600	10000	2.56	20.00	20
04100007	Auglaize River	1674	4595	10000	5.95	41.71	20
04100008	Blanchard River	0	9705	10000	0.10	0.90	20
04100009	Lower Maumee	3803	84480	20000	4.16	24.32	20
04100010	Cedar-Portage	1737	11237	20000	17.26	38.96	20
04100011	Sandusky	2287	5371	10000	11.96	43.11	20
04100012	Huron- Vermilion	92	647	10000	1.89	10.10	20
04110001	Black-Rocky Rivers	3228	12168	20000	23.08	80.46	20
04110002	Cuyahoga River	8311	34933	30000	28.75	87.22	35
04110003	Ashtabula-Chagrin	3532	14986	25000	19.80	80.82	25
04110004	Grand River	6739	16215	29000	37.26	153.51	32
04120101	Conneaut	0	0	10000	0.00	0.00	20
04120200	Lake Erie Islands	579	4056	20000	5.01	45.10	20

Historic mitigation data derived from available annual OEPA reports on Isolated Wetland Permits and 401 Water Quality Certifications in Ohio http://epa.ohio.gov/dsw/401/permitting.aspx

Table B-2: Mitigation in Ohio River Watersheds

HUC 8		Stream Mitigation			Wetland Mitigation		
		Average Annual ('06-'12)	Highest Annual ('06-'12)	Advance Stream Credits	Average Annual ('04-'12)	Highest Annual ('04-'12)	Advance Wetland Credits
5030101	Upper Ohio	4223	13723	20000	5.17	28.28	20
5030102	Shenango River	0	55	20000	0.58	1.73	20
5030103	Mahoning River	1576	4281	20000	14.72	58.18	20
5030106	Upper Ohio-Wheeling	14786	43456	32000	10.62	39.22	20
5030201	Little Muskingum River	2729	216172	20000	0.13	0.60	20
5030202	Upper Ohio-Shade	8793	29214	20000	1.54	11.53	20
5030204	Hocking River	23318	135792	50000	3.75	31.12	20
5040001	Tuscarawas River	21603	31250	46000	69.96	383.68	60
5040002	Mohican River	1334	5283	20000	0.99	7.11	20
5040003	Walhonding	514	1895	20000	1.25	6.91	20
5040004	Muskingum River	3560	16186	20000	2.88	11.00	20
5040005	Wills Creek	7541	22085	20000	2.58	10.14	20
5040006	Licking River	1799	12590	20000	2.63	15.00	20
5060001	Upper Scioto	19973	68726	43000	37.05	130.51	32
5060002	Lower Scioto	0	0	20000	0.30	2.68	20
5060003	Paint Creek	0	240	20000	0.70	4.90	20
5080001	Upper Great Miami	3590	10636	20000	2.43	12.96	20
5080002	Lower Great Miami	16172	36505	35000	2.81	9.22	20
5080003	Whitewater River	0	0	20000	0.00	0.00	20
5090101	Raccoon-Symmes	9549	17034	21000	2.87	11.00	20
5090103	Little Scioto-Tygarts	4741	18582	20000	0.61	5.52	20
5090201	Ohio Brush & Whiteoak	6612	31170	20000	4.51	22.04	20
5090202	Little Miami River	6510	19050	33000	4.21	10.00	20
5090203	Middle Ohio-Laughery	302	1592	20000	0.29	2.58	20
5120101	Upper Wabash	271	1900	20000	0.68	6.13	20
5120103	Mississinewa River	0	0	20000	0.03	0.28	20

Historic mitigation data derived from available annual OEPA reports on Isolated Wetland Permits and 401 Water Quality Certifications in Ohio http://epa.ohio.gov/dsw/401/permitting.aspx

Advance Credits – More Detailed Example (continued)

D. Advance Credit Calculations

Given the above considerations the advance credits were calculated using the following equation (results are presented in Tables B-1 and B-2 above):

Advance Credits = (AAM*3)+(AAM*.15)+(AAM*.30)+(AAM*.40)+(AAM*.50)+(AAM*.60)+ (AAM*.70)

Where:

3 = number of years allowed after credit sale for site identification
AAM = Average Annual Mitigation
.15 = 15% credit release upon permit approval and recording of site protection instrument
.30 = 15% credit release upon completion of construction and approval of as-built report + 15% permit approval and recording of site protection instrument
.40 = 10% 1st year performance standard credit release + 30% previous credit release
.50 = 10% 2nd year performance standards credit release + 40% previous credit release
.60 = 10% 3rd year performance standards credit release + 50% previous credit release
.70 = 10% 4th year performance standards credit release + 60% previous credit release

Assuming that the majority of compensatory wetland mitigation needs will be accommodated by mitigation banks as per the mitigation hierarchy, the results of the above equation for wetland advance credits are multiplied by 20%. Also, assuming that permittee-responsible mitigation will likely continue to be important in the State, the results of the above equation for stream advance credits are multiplied by 50%.

In primary service areas where the calculated advance credits are low, a minimum of 20,000 advance stream credits and 20 advance wetland credits are provided to ensure that the ILF program meets potential demand and has sufficient financing for project delivery. In the Buffalo District the minimum stream credits were reduced to 10,000 in those watersheds with a highest annual compensatory mitigation need of less than ten thousand.

HUC 8		Average Annual Stream Mitigation ('06-'12)	Highest Annual Stream Mitigation ('06-'12)	Average Annual Wetland Mitigation ('04-'12)	Highest Wetland Mitigation ('04-'12)	Average Annual Stream mitigation	Advanced Stream Credits for 8 years	round up 500	stream banks and permittee-responsible minus 50%	average annual Wetland Mitigation	Advanced Wetland Credits for 8 years	round up 10	wetland bank minus 80%
4100001	Ottawa	1288	2773	0.56	5.00	1288	9929	10000	5000	1	15.69	20	4
4100002	Raisin River	0	0	0.03	0.27	0	0	0	0	0	0.85	10	2
4100003	St. Joseph River	0	0	3.20	16.55	0	0	0	0	3	53.65	60	12
4100004	St. Mary's River	0	0	0.01	0.09	0	0	0	0	0	0.28	10	2
4100005	Upper Maumee	1700	11558	5.23	47.05	1700	36800	37000	18500	5	147.68	150	30
4100006	Tiffin River	514	3600	2.56	20.00	514	11443	11500	5750	3	63.19	70	14
4100007	Auglaize River	1674	4995	5.95	41.71	1674	15878	16000	8000	6	132.57	140	28
4100008	Blanchard River	0	9705	0.10	0.96	0	29115	29500	14750	0	2.83	10	2
4100009	Lower Maumee	3803	84480	4.16	24.32	3803	258194	258500	129250	4	78.16	80	16
4100010	Cedar-Portage	1737	11237	17.26	38.96	1737	35882	36000	18000	17	138.45	140	28
4100011	Sandusky	2287	5371	11.96	43.11	2287	18972	19000	9500	12	144.28	150	30
4100012	Huron and Vermilion Rivers	92	642	1.89	10.10	92	2057	2500	1250	2	32.66	40	8
4110001	Black-Rocky Rivers	3228	12168	23.08	80.46	3228	40539	41000	20500	23	270.23	280	56
4110002	Cuyahoga River	8311	34833	28.75	87.22	8311	115188	115500	57750	29	297.60	300	60
4110003	Ashtabula-Chagrin	3532	14986	19.80	80.82	3532	49374	49500	24750	20	267.22	270	54
4110004	Grand River	6739	16215	37.26	153.51	6739	57068	57500	28750	37	507.11	510	102
4120101	Conneaut	0	0	0.00	0.00	0	0	0	0	0	0.00	0	0
4120200	Lake Erie Islands	579	4056	5.01	45.10	579	12892	13000	6500	5	141.56	150	30
5030101	Upper Ohio	4223	13723	5.17	28.28	4223	46448	46500	23250	5	91.31	100	20
5030102	Shenango River	0	55	0.58	1.73	0	165	500	250	1	5.92	10	2
5030103	Mahoning River	1576	4281	14.72	58.18	1576	14811	15000	7500	15	192.94	200	40
5030106	Upper Ohio-Wheeling	14786	43456	10.62	39.22	14786	148851	149000	74500	11	130.94	140	28
5030201	Little Muskingum River	2729	216172	0.13	0.60	2729	651927	652000	326000	0	1.96	10	2
5030202	Upper Ohio-Shade	8793	29214	1.54	11.53	8793	98634	99000	49500	2	36.52	40	8
5030204	Hocking River	23318	135792	3.75	31.12	23318	436524	437000	218500	4	98.05	100	20
5040001	Tuscarawas River	21603	31250	69.96	383.68	21603	120754	121000	60500	70	1238.49	1240	248
5040002	Mohican River	1334	5283	0.99	7.11	1334	17516	18000	9000	1	22.57	30	6
5040003	Walhonding	514	1895	1.25	6.91	514	6327	6500	3250	1	22.29	30	6
5040004	Muskingum River	3560	16186	2.88	11.00	3560	53007	53500	26750	3	36.60	40	8
5040005	Wills Creek	7541	22085	2.58	10.14	7541	75682	76000	38000	3	33.65	40	8
5040006	Licking River	1799	12590	2.63	15.00	1799	40018	40500	20250	3	48.28	50	10
5060001	Upper Scioto	19973	68726	37.05	130.51	19973	231144	231500	115750	37	437.84	440	88
5060002	Lower Scioto	0	0	0.30	2.68	0	0	0	0	0	8.41	10	2
5060003	Paint Creek	0	240	0.70	4.90	0	720	1000	500	1	15.58	20	4
5080001	Upper Great Miami	3590	10636	2.43	12.96	3590	36396	36500	18250	2	41.92	50	10
5080002	Lower Great Miami	16172	36505	2.81	9.22	16172	129730	130000	65000	3	31.17	40	8
5080003	Whitewater River	0	0	0.00	0.00	0	0	0	0	0	0.00	0	0
5090101	Raccoon-Symmes	9549	17034	2.87	11.00	9549	63038	63500	31750	3	36.58	40	8
5090103	Little Scioto-Tygarts	4741	18582	0.61	5.52	4741	61672	62000	31000	1	17.33	20	4
5090201	Ohio Brush-Whiteoak	6612	31170	4.51	22.04	6612	101775	102000	51000	5	71.76	80	16
5090202	Little Miami River	6510	19050	4.21	10.00	6510	65287	65500	32750	4	35.26	40	8
5090203	Middle Ohio-Laughery	302	1592	0.29	2.58	302	5154	5500	2750	0	8.10	10	2
5120101	Upper Wabash	271	1900	0.68	6.13	271	6039	6500	3250	1	19.24	20	4
5120103	Missisinewa River	0	0	0.03	0.28	0	0	0	0	0	0.88	10	2

Examples without a Draft Fee Schedule

In accordance with 33 CFR 332.8 (o)(5), the cost per unit of credit will be based on all the costs associated with the restoration, establishment, enhancement and/or preservation of wetlands or aquatic resources in that service area including, but not limited to, expenses for land acquisition, project planning and design, construction, plant materials, labor, legal fees, monitoring, remediation or adaptive management strategies, as well as administration of the ILF Program. The cost per unit credit will also take into account contingency costs appropriate to the stage of project planning, including uncertainties in construction and real estate expenses as well as the resources necessary for the long-term management and protection of the proposed project. Finally, the cost per unit credit will include financial assurances that are necessary to ensure successful completion of proposed projects.

E. Fee Schedule

The cost per unit of Credit must include the expected costs associated with the Restoration, Establishment, Enhancement, and/or Preservation of aquatic resources in the Service Area. These costs must be based on full cost accounting, and include, as appropriate, expenses such as land acquisition (including, without limitation, options to purchase), project planning and design, construction, plant materials, labor, legal fees, monitoring, and remediation or adaptive management activities, as well as administration of the Program. This list is not meant to be exhaustive and may include other categories, as appropriate, as determined by the Program Sponsor on a case-by-case basis. The cost per unit of Credit must also take into account contingency costs appropriate to the stage of project planning, including uncertainties in construction and real estate expenses. The cost per unit of Credit must also take into account the resources necessary for the long-term management, protection of the ILF Project, and enforcement of the long-term instrument or other protection mechanism. In addition, the cost per unit of Credit must include financial assurances that are necessary to ensure successful completion of ILF Projects. These fees shall be reviewed at least annually and updated as appropriate.

Draft Fee Schedule – Basic Examples

Initial Credit Fee Schedule*

8-Digit HUC	River Subbasin	Nonforested Wetland Credit	Forested Wetland Credit	Stream Credit
05040001	Tuscarawas River	$25,000	$35,000	$165

*Credit prices will be reviewed annually by the Sponsor and are subject to change. The Sponsor will establish minimum purchase requirements.

- $610 per mitigation unit (or $260 per linear foot) in EKSAP Service Areas for streams
- $215 per mitigation unit (or $220 per linear foot) in KAP Service Areas for streams
- $30,000 per mitigation unit in KAP for wetlands in all Service Areas

Tidal Wetlands (mangrove and salt marsh)
$217,800.00/credit

Non-tidal (Freshwater) Wetlands
$217,800.00/credit

Seagrasses
$435,600.00/credit

Draft Fee Schedule – Other Examples

Table 3. Wetland Credit Fee Schedule Per Service Area & Calculation of Total Mitigation Cost Per Acre

Service Area	Adjusted Real Estate Price Necessary to Produce One Acre of Mitigation	Price Per Acre of Mitigation Costs	Financial Assurances (+5%)	Program Administration (+10%)	Total Mitigation Cost Per Acre	Wetland Credit Price
Cimarron A	$4,567	$38,650	$2,161	$4,322	$49,700	$49,700
Cimarron B	$8,930	$38,650	$2,379	$4,758	$54,717	$54,800
Cimarron C	$10,897	$38,650	$2,477	$4,955	$56,979	$57,000
Cimarron D	$10,897	$38,650	$2,477	$4,955	$56,979	$57,000
Upper Arkansas	$8,930	$38,650	$2,379	$4,758	$54,717	$54,800
Neosho/Grand A	$14,111	$38,650	$2,638	$5,276	$60,675	$60,700
Neosho/Grand B	$13,121	$38,650	$2,589	$5,177	$59,536	$59,600
Neosho/Grand C	$14,111	$38,650	$2,638	$5,276	$60,675	$60,700
Canadian A	$7,280	$38,650	$2,296	$4,593	$52,819	$52,900
Canadian B	$11,827	$38,650	$2,524	$5,048	$58,049	$58,100
Canadian C	$11,009	$38,650	$2,483	$4,966	$57,108	$57,200
Canadian D	$9,108	$38,650	$2,388	$4,776	$54,922	$55,000
Beaver/N. Canadian A	$4,250	$38,650	$2,145	$4,290	$49,335	$49,400
Beaver/N. Canadian B	$7,458	$38,650	$2,305	$4,611	$53,024	$53,100
Beaver/N. Canadian C	$11,827	$38,650	$2,524	$5,048	$58,049	$58,100
Beaver/N. Canadian D	$14,375	$38,650	$2,651	$5,302	$60,979	$61,000
Beaver/N. Canadian E	$14,375	$38,650	$2,651	$5,302	$60,979	$61,000
Lower Arkansas A	$14,111	$38,650	$2,638	$5,276	$60,675	$60,700
Lower Arkansas B	$11,306	$38,650	$2,498	$4,996	$57,449	$57,500
Lower Arkansas C	$12,395	$38,650	$2,552	$5,105	$58,702	$58,800
North Fork of the Red A	$6,884	$38,650	$2,277	$4,553	$52,364	$52,400
North Fork of the Red B	$7,768	$38,650	$2,321	$4,642	$53,381	$53,400
Upper Red A	$6,884	$38,650	$2,277	$4,553	$52,364	$52,400
Upper Red B	$8,514	$38,650	$2,358	$4,716	$54,239	$54,300
Upper Red C	$7,438	$38,650	$2,304	$4,609	$53,001	$53,100
Upper Red D	$12,916	$38,650	$2,578	$5,157	$59,301	$59,400
Upper Red E	$8,514	$38,650	$2,358	$4,716	$54,239	$54,300
Upper Red F	$12,005	$38,650	$2,533	$5,066	$58,254	$58,300
Lower Red A	$10,692	$38,650	$2,467	$4,934	$56,743	$56,800
Lower Red B	$10,157	$38,650	$2,440	$4,881	$56,129	$56,200

Appendix II: Wetland and Stream Advance Credits and Credit Fee Schedule

Resource Compensation Rates*				
Service Area	Number of Advanced Wetland Credits	Fee for one (1) credit of wetland mitigation	Number of Advanced Stream Credits	Fee for one (1) linear foot of stream mitigation
Black River (HUC 4150101)	15	$72,000	10,000	$315
Buffalo-Eighteen Mile (HUC 04120103)	40	$94,000	10,000	$420
Conewango-Creek (HUC 05010002)	15	$72,000	10,000	$315
Irondequoit-Ninemile Creek (HUC 04140101)	40	$92,000	10,000	$410
Lower Genesee (HUC 04130003)	30	$80,000	10,000	$350
Niagara River (HUC 04120104)	15	$83,000	10,000	$365
Oneida Lake (HUC 04140202)	30	$82,000	10,000	$360
Oswego River (HUC 04140203)	30	$85,000	10,000	$380
Seneca Lakes (HUC 04140201)	30	$82,000	10,000	$360
St. Lawrence - Eastern (HUCs 04150305-8)	15	$ 70,000	10,000	$310
St. Lawrence - Western (HUCs 04150301-4)	15	$ 70,000	10,000	$310

*Credit prices are subject to change on an annual basis.

The credit fees are determined using full cost accounting and may include the following expenses related to: Site identification; land acquisition; mitigation plan development; permitting; contracting and construction management; land protection; land protection endowment fee; performance monitoring (5-10 year period); contingency measures for adaptive management; long-term management endowment; financial assurances; legal fees; and program administration, and other tasks or expenses necessary to ensure project success.

Draft Fee Schedule – Other Examples

Table 2. *Draft fee schedule for advance credits showing the typical cost per credit by geographic service area, physical setting and wetlands category*

Service Area	Slope/Flat/Depressional Wetlands	Riverine/Lacustrine Wetlands	Estuarine/Marine Wetlands
Arctic			
Urban	$22,000	$33,000	$44,000
Rural	$11,000	$22,000	$33,000
Remote	$5,500	$11,000	$22,000
Interior			
Urban	$22,000	$33,000	$44,000
Rural	$11,000	$22,000	$33,000
Remote	$5,500	$11,000	$22,000
Southwest			
Urban	$22,000	$33,000	$44,000
Rural	$11,000	$22,000	$33,000
Remote	$5,500	$11,000	$22,000
Southcentral			
Urban	$33,000	$44,000	$55,000
Rural	$22,000	$33,000	$44,000
Remote	$11,000	$22,000	$33,000
Southeast			
Urban	$33,000	$44,000	$55,000
Rural	$22,000	$33,000	$44,000
Remote	$11,000	$22,000	$33,000

These fees reflect typical costs for credits for each service area and the actual cost of credits for a specific project will be determined on a case-by-case basis. Generally, the costs of credits in urban areas will be higher than rural areas, and rural area credit costs will be higher than remote area credit costs. This is due to the trend that urban area properties are valued higher than remote area properties, which are valued higher that rural area properties. Upon request, TCF will calculate an in-lieu fee for a permittee's mitigation requirement based on full cost accounting and using region-specific, periodically-updated costs and national standards for preservation land practices. An in-lieu fee estimate includes multiple cost components:

Exhibit D

VARIF MITIGATION PRICES FOR ADVANCED CREDITS

BASIN	HUC	Per Acre NT Wetland	Per Acre Tidal	Per Unit (CR) Stream
ATLANTIC OCEAN	2060010	$ 65,000	$ 500,000	$ 400
	2080110	$ 65,000	$ 500,000	$ 400
SHENENDOAH	2070001	$ 70,000	n/a	$ 400
	2070004	$ 70,000	n/a	$ 400
	2070005	$ 70,000	n/a	$ 400
	2070006	$ 70,000	n/a	$ 400
	2070007	$ 70,000	n/a	$ 400
POTOMAC	2070008	$ 100,000	$ 600,000	$ 700
	2070010	$ 100,000	$ 600,000	$ 700
	2070011	$ 100,000	$ 600,000	$ 700
RAPPAHANNOCK	2080103	$ 70,000	$ 500,000	$ 500
	2080104	$ 70,000	$ 500,000	$ 500
YORK	2080105	$ 65,000	$ 400,000	$ 400
	2080106	$ 65,000	$ 400,000	$ 400
	2080107	$ 65,000	$ 400,000	$ 400
CHES BAY	2080101	$ 100,000	$ 450,000	$ 400
	2080102	$ 100,000	$ 450,000	$ 400
	2080108	$ 100,000	$ 450,000	$ 400
	2080109	$ 100,000	$ 450,000	$ 400
UPPER JAMES	2080201	$ 65,000	n/a	$ 400
	2080202	$ 65,000	n/a	$ 400
MIDDLE JAMES	2080203	$ 55,000	n/a	$ 500
	2080204	$ 55,000	n/a	$ 500
	2080205	$ 55,000	n/a	$ 500
	2080207	$ 55,000	n/a	$ 500
LOWER JAMES	2080206	$ 50,000	$ 500,000	$ 500
	2080208	$ 50,000	$ 500,000	$ 500
ROANOKE	3040101	$ 75,000	n/a	$ 400
	3010101	$ 75,000	n/a	$ 400
	3010102	$ 75,000	n/a	$ 400
	3010103	$ 75,000	n/a	$ 400
	3010104	$ 75,000	n/a	$ 400
	3010105	$ 75,000	n/a	$ 400
	3010106	$ 75,000	n/a	$ 400
CHOWAN	3010201	$ 30,000	n/a	$ 400
	3010202	$ 30,000	n/a	$ 400
	3010203	n/a	n/a	$ 400
	3010204	$ 30,000	n/a	$ 400
	3010205	n/a	$ 550,000	$ 400
NEW RIVER	5050001	$ 65,000	n/a	$ 375
	5050002	$ 65,000	n/a	$ 375
TENNESSEE	6010101	$ 75,000	n/a	$ 400
	6010102	$ 75,000	n/a	$ 400
	6010205	$ 75,000	n/a	$ 400
	6010206	$ 75,000	n/a	$ 400

Draft Fee Schedule – More Detailed Example

F. Fee Schedule for Mitigation Credits

The fee schedule (Appendix J) for mitigation credits has been determined based on market forces that rely on several factors, including costs associated with restoration, establishment, enhancement and/or preservation activities. These costs have been determined using full cost accounting and include land acquisition, project planning and design, construction, plant materials, labor, legal fees, monitoring, adaptive management and remediation activities, as well as administration, financial assurances, contingency costs, and long term management and protection. Program fees are subject to change as determined by MCHF, and any changes to fees will not necessitate a modification of the instrument. Program fees are the responsibility of MCHF, but will be subject to COE review to insure that all costs are included in the fee structure.

Cost Per Credit

Land Acquisition: costs associated with purchasing lands, either fee title or easement purchase. Taking several past SSTF acquisition costs and divide by the credits to get a per credit acquisition range.

#85…McSpadden Acquisition…$220,942; 71,4623 credits…$3.08 /credit

#79…Haslag Perpetual Easement…$23,785; 3887 credits…$6.12

#66…Berry Tract Acquisition…$170,018; 20123 credits…$8.40/ credit

#57…Robinson Perpetual Easement (donated)…$5275; 2776 credits…$1.90/ credit

#44…LaBarque/Wild Canid Acquisition…$280,000; 10,834 credits…$25.84/credit

Averaged all of the above to come up with $9.07 per credit acquisition cost

Project Planning: Assume 4 man-days of effort per project at $35/hour. Total number of projects xS1,120 divided by the total number of credits will get a per credit planning cost

SSTF has completed 35 projects generating 383,284 credits since 2007. Therefore, project planning would be $39,200 for 383284 credits or $0.10 per credit

Project Design: A range…high for bank stabilization and other engineered projects, pretty small for a riparian planting project. For an average, we use the same amount as project planning.

SSTF has completed 35 projects generating 383,284 credits since 2007. Therefore, project design would be $39,200 for 383284 credits or $0.10 per credit

Construction: Take a standard bank stabilization project, itemize costs, and divide by the average number of credits generated by the project.

Took 17 projects (#s 46,47,53-56,63,67,68,71,73,74,77,80,82,84 &85) and totaled dollars and credits. Threw out the highest and lowest dollar projects. Assumed that 15% of project was supplies, 70% was labor, 10% was equipment rental and 5% was other; multiplied percentages by dollars to get itemized total costs then divided by total credits of the 15 projects…100,649

Supplies…$188,279; 100,649…$1.87 per credit

Labor…$878,720; 100,649…$8.73 per credit

Equipment Rental…$125,532; 100,649…$1.25 per credit

Other…$62,766; 100,649…$0.62 per credit

Plant materials: convert a per ft or per acre cost

Difficult item to estimate, we have assumed $1.00 per credit.

Legal fees: Assume that legal fees will be 10 hours of legal work times $100/hr for a lawyer and divide by the average number of credits in a project

SSTF has completed 35 projects generating 383,284 credits since 2007. Therefore, legal fees would be $35,000 for 383,284 credits or $0.09 per credit

Monitoring: 8 hours per year for 5 years equals 40 hours; multiply by $35/hour to get a total for a project and then divide by the average number of credit per project to get monitoring cost per credit.

SSTF has completed 35 projects generating 383,284 credits since 2007. Therefore, monitoring costs would be $49,000 for 383,284 credits or $0.13 per credit

Adaptive management and remediation: Some projects will need to be changed and others will not. Assume 2% of project cost.

Long term management and protection: Find the long term management fee used by ngos for easement management and divide by the number of credits to find a per credit long term management cost

#65…Muhm Perpetual Easement (stewardship fees only)…$49,850; 23788 credits…$2.10 per credit

Financial assurances/contingency costs: 10% of project cost up to $250,000. Will only affect the cost per credit when it drops below the minimum amount.

The cost/credit is an estimated $25.56 without financial assurances. Several of the land purchases used in the calculations above were those in a urban watershed with extremely high land values, we believe that using these expensive projects to calculate the per credit cost gives us the upper end of what our costs will be and with that said allows us to charge the $25.00 per credit and still allows us the ability to absorb the financial assurances costs. Per credit cost for all of the above are listed below:

Cost Per Credit:	
Land Acquisition	**$9.07**
Project Planning	**0.10**
Project Design	**0.10**
Construction	
Supplies	**1.87**
Labor	**8.73**
Equipment Rental	**1.25**
Other	**0.62**
Riparian Planting (assume $1.00)	**1.00**
Legal Fees	**0.09**
Monitoring	**0.13**
Long Term Management/Protection	**2.10**
Subtotal	**$25.06**
Adaptive Management (2%)	**$0.50**
Subtotal	**$25.56**
Financial Assurances/Contingency (10%)	**$2.56**
Total	**$27.62**

Draft Fee Schedule – More Detailed Example

Exhibit 6 Credit Pricing Analysis Table

					Base Acre-Points *				Proposed Acre-Points*																					
Project Name	HGM	Type	Acres of Treatment	Acres Preserved	Wq	Hy	Ha	*Risk Factor*	Wq	Hy	Ha	Additional Acre-Points *	Total Universal Acre-Points	Acre-Points / Acre	Appraised Land Value	Appraisal Date	Site Selection, Planning, Permitting & Design	Administration and Staff Time	Construction & Materials	Irrigation	Performance Period Maintenance	Monitoring for Performance Standards	Long-term M & M	10% of Site Implementation Costs	Total Project Implementation Budget (Minus Land Value)	Year Construction Complete	CPI Scaling Factor*	2014 Adjusted (Using CPI)	Cost per credit--Credit Fee*	Cost per Credit--Land Fee*	Cost per Credit--Mitigation Fee (Credit Fee plus Land Fee)*
Larchmont Wetland Reserve	riverine/ depressional	rehab/ enhancement	16.1	0	22.44	9.28	20.12	1	22.44	9.28	20.12	15.0	66.8	4.2	$1,175,000	2005 and 2011	$270,000	$163,000	$821,000	$0	$15,000	$40,000	$253,000	$82,100	$1,644,100	2013	1.023	$1,681,914	$25,163.29	$17,579.00	$42,742.29
South Midland Wetland Reserve	riverine/ depressional	estab/ rehab/ enhance	15.3	0	36.34	32.63	25.36	1	36.34	32.63	25.36	5.0	99.3	6.5	$582,636	2005	$200,000	$317,550	$1,829,125	$160,000	$15,000	$40,000	$253,000	$198,912	$3,013,587	2008	1.100	$3,314,946	$33,374.74	$5,865.00	$39,239.74
TOTALS			31.4						58.8	41.9	45.5		166.2		$1,757,636		$470,000	$480,550	$2,650,125	$160,000	$30,000	$80,000	$506,000	$281,012	$4,657,687			$4,996,860	$29,269.01	$11,722.00	$40,991.01

Irrigation cost 66% of initial planting cost for SMWR. If no other model, use this for budgeting purposes. Larchmont will not be irrigated.

2005 and 2006 acquisitions totalled $759,000. This price includes the additional $416,000 we spent to acquire Schmidt and Lindley.

Per Grant, as of 4/30/13. Tasks 3 and 4.

$317,550 was actual cost for SMWR Admin (staff salaries) with estimate of $6,000 for future 8

This includes all other staff time not accounted for in previous column. This includes TASK 8. $60,000 spent as of 4/30/13. As with SMWR, anticipate 6,000 additional administrative/staff costs over next 10 years for admin tasks beyond and above

This is based on a cost of $500.00 per day for WCC crew and average of 10 days per year for 10 years.

ACI contract is $705,000. Cost for fence along west side of property was an additional $16,000. WCC is hand removing invasive plants and replanting/underplanting. Budget $100,000 for this effort, which is ongoing as of 02/2014. Future

This is related to the contingency fund. The 10% allocation to the contingency fund is based on this calculation of 10% of the costs of site implementation (land acquisition, site assessment, design, permitting, construction, and any irrigation). This is what we budget for cost overruns, in the event of dissagreement with contractor, change orders, etc. This is for cost overruns during the construction phase. Not related to performance period maintenance, monitoring, or long term M&M. By including it here, this becomes part of the credit fee. The overall credit fee is then allocated according to the allotments in the instrument. The Contingency fund ends up being 10% of everything (once administrative time, short and long term maintenance and monitoring, etc.) is figured in.

*** Notes:**

The **Base Acre-Points** and **Proposed Acre-Points** are anticipated credits expected from the two pre-capitalized receiving sites. At the time of publishing this Instrument these expected acre-points have not been reviewed or approved by the IRT. These numbers are, therefore, subject to change. However, they represent the Sponsor's best guess of anticipated credits and are therefore the best values to use to calculate the proposed Mitigation Fees.

The "Risk Factor" is the risk of failure of the mitigation site. If there is a chance of failure, the risk factor will be less than 1. According to the Credit/Debit tool, the risk factor is anywhere from 0.4 to 1.0. Since these sites have been implemented before any sale of credits and most likely (certainly in the case of SMWR), at least one year will pass between the time "as-built" plans are submitted to regulatory agencies and any credits are sold, a risk factor of 1.0 applies to these sites (in other words, no deduction of credit).

Additional Acre-Points represent extra credit beyond what was determined through application of the Credit/Debit tool. These extra acre-points may be granted by the IRT, on a case by case basis, when the Sponsor demonstrates that there has been additional ecological lift that the rapid credit/debit assessment tool simply didn't capture. Examples may be improvement of groundwater quality by the removal of contaminated fill, or significant and measurable retention of stormwater flows (but not enough to register with the robust metrics of the Credit/Debit Tool).

The CPI Scaling Factor is generated by dividing the latest Consumer Price Index for All Urban Consumers for the Seattle-Tacoma-Bremerton, Washington Region by the annual CPI of the year construction of the project was complete. The CPI Scaling Factor will be adjusted annually as part of the program review and review of credit pricing.

Fees are subject to change after IRT review, and annually thereafter. Based on the values in this table, the credit fees and land fees at the inception of the PCILF program are $29,000 plus $11,000, respectively, for the Chambers/Clover Creek Watershed (WRIA 12) and $22,000 and $8,000 for the Nisqually Watershed (WRIA 11). These prices are subject to change based on actual numbers once additional sites have been added to the program.

Draft Fee Schedule – More Detailed Example

Exhibit 5, Part 1: WETLAND CREDIT PRICING ANALYSIS

				Base Credits*				Earned Credits*																
													007	003	009									
Project Name	HGM	Type	Acres of Treatment	Wq	Hy	Ha	Risk Factor**	Wq	Hy	Ha	Total Function credits	Credits / Acre	Site Selection, Planning, Permitting & Design	Construction & Materials	Maintenance & Monitoring	Contingency	Contng %	Large Project Contractor Upcharge	Long-term M & M	MRP Admin	Total Project Budget	CPI Scaling Factor	2010 Adjusted (Using CPI)	Cost / "Universal Credit"
Project 1	Riverine	Enhancement	14.85	0	0	44.55	0.9	0	0	40.1	40.1	2.7	$161,062	$322,624	$166,278	$97,495	15%	$64,525	$13,345	$64,996	$890,325	100%	$890,325	$22,205
Project 2	Depressional	Enhancement	1.38	0	0	5.52	0.9	0	0	5.0	5.0	3.6	$85,253	$86,860	$75,920	$49,607	20%	$17,372	$2,108	$24,803	$341,923	100%	$341,923	$68,825
Project 3	Riverine	Enhancement	5.85	5.85	0	11.7	0.9	5.265	0	10.5	15.8	2.7	$370,852	$295,642	$44,944			$59,128			$770,566	100%	$770,566	$48,785
Project 4	Depressional	Enhancement	6.14	5.53	11.05	11.05	0.9	5.0	9.9	9.9	24.9	4.1	$72,079	$123,395	$37,509	$46,597	20%	$24,679	$12,280	$23,298	$339,837	118%	$401,008	$16,126
			28.22					10.2	9.9	86.6	86.7												$2,403,821	

*Acre-point calculations subject to change as the tool is revised
** Risk Factor values are policy-based.

Weighted Average cost per credit $28,041
(Subject to change based on further analysis before first credit sale)

PRESERVATION CREDITS

Project Name	Acres Preserved	Preservation Credits	Land Cost Surcharge	Cost / Preservation Credit
Project 1	16.67	4.2	$96,948	$23,083
Project 2	3.9	0.6825	$242,296	$355,012
Project 3	9	1.1	$344,761	$313,419
Project 4	NA			

Exhibit 5, Part 2: MARINE/NEARSHORE CREDIT PRICING

v3.15.2012					Account Types:	Individual Mitigation Project Accounts					Contingency Fee	Long term Management	Program Administration	
Project	Activity Type	Habitat Class	Scale/ Intensity	Acres	Site Survey, Design, Permitting	Construction, Materials, Tax	Monitoring and Maintenance	Large Project Surcharge	Sub-Total/Acre	Average Sub-Total/Acre	Contingency Cost	Long term Management Cost	Administrative Cost	Total Cost/Acre Credit
					Lump Sum	Lump Sum	10%+	5%			22% of construction	12% of construction	12% of all other costs	
1	Overwater Structure Removal	Subtidal or Intertidal	Small	2	$168,006	$786,704	$78,670	$39,335	$536,358	$556,392	$122,406	$66,767	$89,468	$835,034
2	Overwater Structure Removal	Subtidal or Intertidal	Large/ Intensive	5	$168,006	$2,360,112	$236,011	$118,006	$576,427					
3	Eelgrass Supplementation	Subtidal or Intertidal			?	?	?	?	?	?	?	?	?	?
4	Bulkhead Removal	Intertidal	Medium	0.46	$52,897	$115,420	$11,542	$5,771	$404,301	$404,301	$88,946	$48,516	$65,012	$606,775
5	Bulkhead Setback	Intertidal	Small	0.46	$158,690	$230,840	$23,084	$11,542	$923,812	$674,575	$148,407	$80,949	$108,472	$1,012,402
6	Bulkhead Setback	Intertidal	Large	2.87	$158,690	$923,360	$92,336	$46,168	$425,339					
7	Levee Removal	Intertidal	Small	1.8	$87,523	$173,077	$17,308	$8,654	$159,201	$135,268	$29,759	$16,232	$21,751	$203,010
8	Levee Removal	Intertidal	Large	15	$116,697	$1,350,713	$135,071	$67,536	$111,334					
9	Fill Removal	Intertidal	Small	0.11	$20,000	$40,000	$4,000	$2,000	$574,992	$502,246	$110,494	$60,270	$80,761	$753,771
10	Fill Removal	Intertidal	Large	1	$50,000	$330,000	$33,000	$16,500	$429,500					
11	Riverine Channel	Intertidal	Small	0.46	$45,000	$220,000	$22,000	$11,000	$649,044	$576,081	$126,738	$69,130	$92,634	$864,582
12	Riverine Channel	Intertidal	Large	1.15	$60,000	$450,000	$45,000	$22,500	$503,118					
13	Tidal Channel	Intertidal	Small	0.17	$25,000	$60,000	$6,000	$3,000	$545,952	$434,366	$95,560	$52,124	$69,846	$651,896
14	Tidal Channel	Intertidal	Large	0.57	$30,000	$135,000	$13,500	$6,750	$322,780					
15	Wood Placement	Intertidal	Light	1	$30,000	$70,000	$7,000	$3,500	$110,500	$175,875	$38,693	$21,105	$28,281	$263,953
16	Wood Placement	Intertidal	Intensive	1	$40,000	$175,000	$17,500	$8,750	$241,250					
17	Conifer Underplanting	Riparian	Medium	1	$5,000	$20,000	$4,000	$1,000	$30,000	$30,000	$6,600	$3,600	$4,824	$45,024
18	Open Space Planting	Riparian	Medium	1	$5,000	$40,000	$8,000	$2,000	$55,000	$55,000	$12,100	$6,600	$8,844	$82,544
19	Invasives Control	Riparian	Light	1	$5,000	$10,000	$1,000	$500	$16,500	$22,250	$4,895	$2,670	$3,578	$33,393
20	Invasives Control	Riparian	Intensive	1	$5,000	$20,000	$2,000	$1,000	$28,000					
21	Structure/Fill Removal	Riparian or Intertidal	Small	0.15	$20,000	$90,000	$9,000	$4,500	$823,333	$779,204	$171,425	$93,505	$125,296	$1,169,430
22	Structure/Fill Removal	Riparian or Intertidal	Large	0.28	$30,000	$150,000	$15,000	$7,500	$735,075					

Implications and Suggestions

- Compliance
- Planning
- Transparency and accountability
- Program sustainability/success
- Suggestions

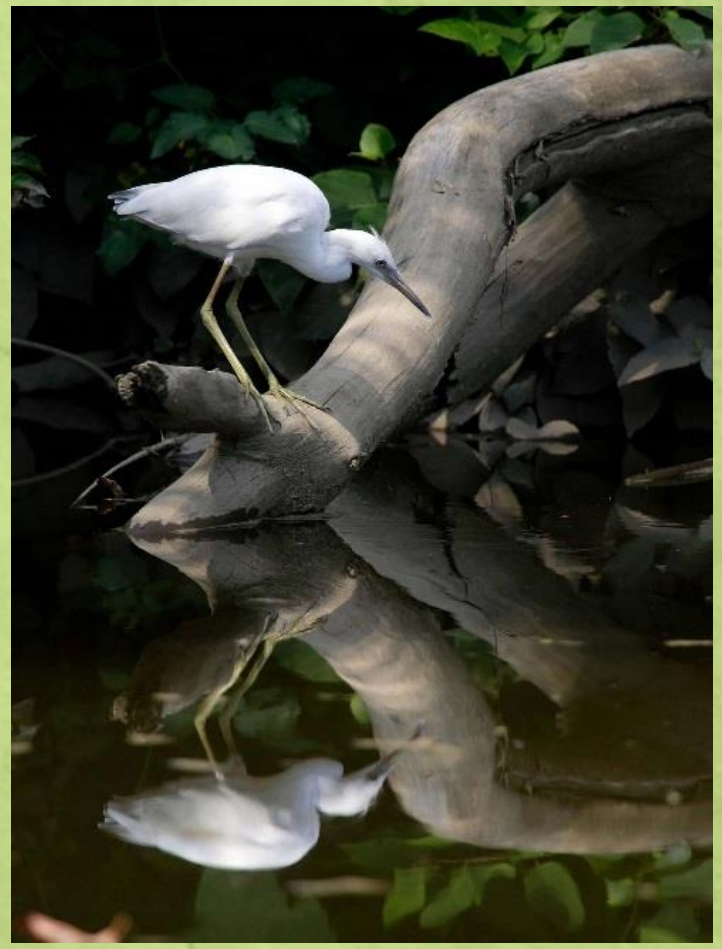


Photo: USFWS National Digital Library

Discussion

Photo: USFWS National Digital Library

Email: okuno@law.stetson.edu

Stetson's Institute for Biodiversity Law and Policy Website: www.law.stetson.edu/biodiversity

Thank you!