The Wetland Trust, Inc. Central New York In-Lieu

Fee Program Instrument

Developed under
Part 332.8,
Federal Register Volume 73, Number 70

Sponsor:

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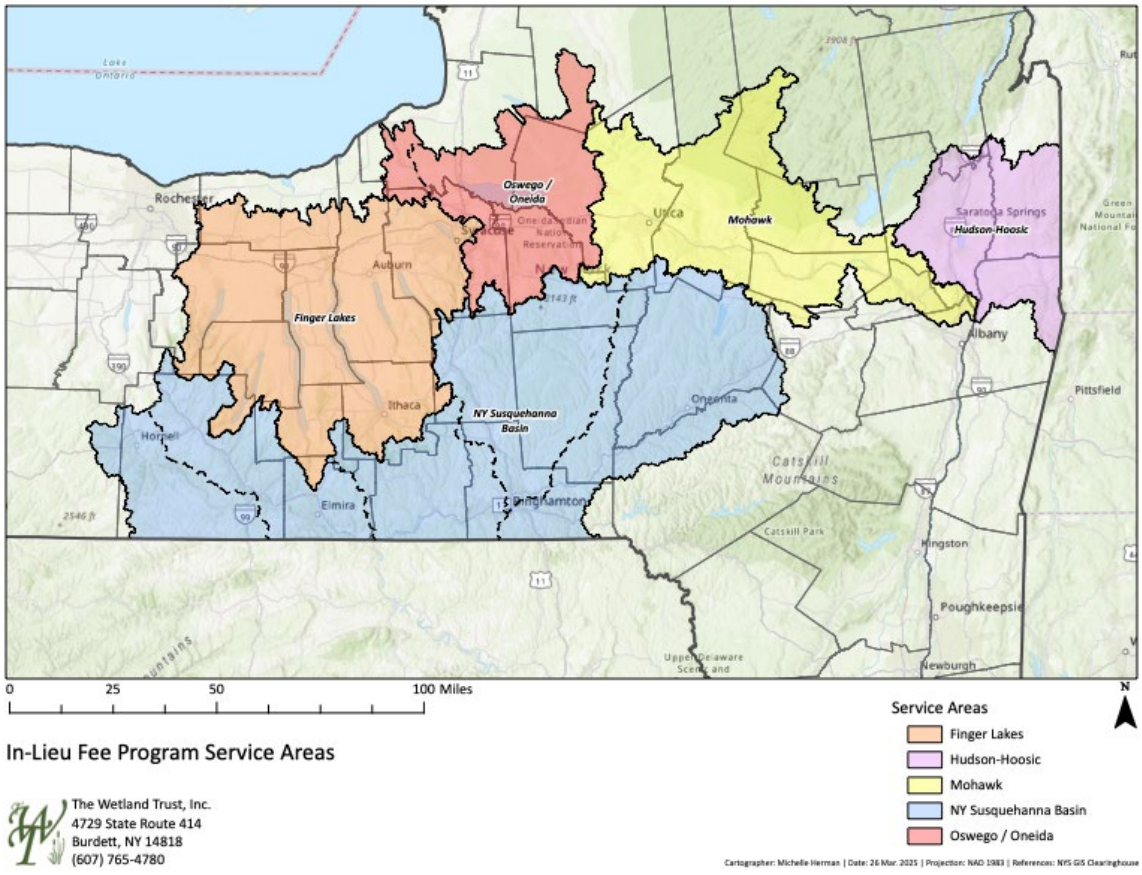

Original: October 2013
Amended: March 2015
Amended: March 2018
Amended: March 2025

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Introduction

On 10 April 2008, the final rules for wetland mitigation were published in Federal Register Volume 73(70): 19594-19,705 for Compensatory Mitigation for Losses of Aquatic Resources Agencies: U.S. Army Corps of Engineers (USACE), Department of Defense, and Environmental Protection Agency. This Instrument is based on those rules and describes the requirements for an in-lieu fee wetland mitigation program in central New York State, covering ten 8-digit hydrological units (HU) in five Service Areas (SA). It provides a total of 136 advance wetland mitigation credits spread across those service areas, funding a mix of re-establishment, establishment, rehabilitation, enhancement, and preservation opportunities.

USACE acceptance of this **TWT Central New York In-Lieu Fee Program Instrument** constitutes the regulatory approval required for it to be used to provide compensatory mitigation for Department of the Army permits pursuant to 33 C.F.R. 332.8(a)(1). This Instrument is not a contract between TWT and USACE or any other agency of the federal government. Any dispute arising under this Instrument will not give rise to any claim by TWT for monetary damages. This provision is controlling, notwithstanding any other provision or statement in the Instrument to the contrary.

Objectives

The primary goal of the TWT Central New York In-Lieu Fee Program (ILFP) is to provide wetland mitigation services on a watershed scale to compensate for permitted wetland losses. More specifically, the ILFP will:

1. match mitigation needs with opportunities and priorities in the watershed;
2. target specific sites or sub-watersheds that can provide long-term wetland sustainability and better watershed functionality;
3. use a science-based analysis of existing information (e.g., the NY Natural Heritage Program and other databases) in conjunction with field data to ensure quality sites are selected;
4. use known high quality wetlands as reference wetlands to help design mitigation efforts;
5. replace and increase the acreage, quality, diversity, and functionality of wetland community types found in the basin, and limit the species and biodiversity lost to development and other stressors;
6. develop a required mitigation plan for each site that contains all elements listed in Federal Register Volume 73, Number 7033CFR 332.4; and

7. to further TWT's core mission to restore, conserve, and protect wetlands.

Section 1. Service Areas

This ILFP encompasses 9,726,185 acres, covering 5 Service Areas, some with multiple portions of 8-digit hydrological units (HU) depicted in Figure 1 and described in Table 1. The use of one or more 8-digit HU's allows for wetland planning on a watershed scale that is large enough to be successful, especially in rural, less developed watersheds, while still addressing the need for local compensation. The Wetland Trust, Inc. (TWT) will provide compensatory mitigation for permitted impacts within the same service area within which the impacts occur, unless the district engineer (DE), in consultation with the Interagency Review Team (IRT), has agreed to an exemption. The exemption request will be for an adjacent SA.

Section 2. Accounting Procedures

TWT has established and maintains an accounting system for tracking credit production, credit transactions, and financial transactions between TWT and permittees. Credit production, credit transactions, and financial transactions are tracked separately for each of the 5 SAs, and within each service area for each individual mitigation project that has its own mitigation plan. The program account and its functions are described in Section 11. Program Accounting Information.

Section 3. Legal Responsibility for Providing Compensatory Mitigation

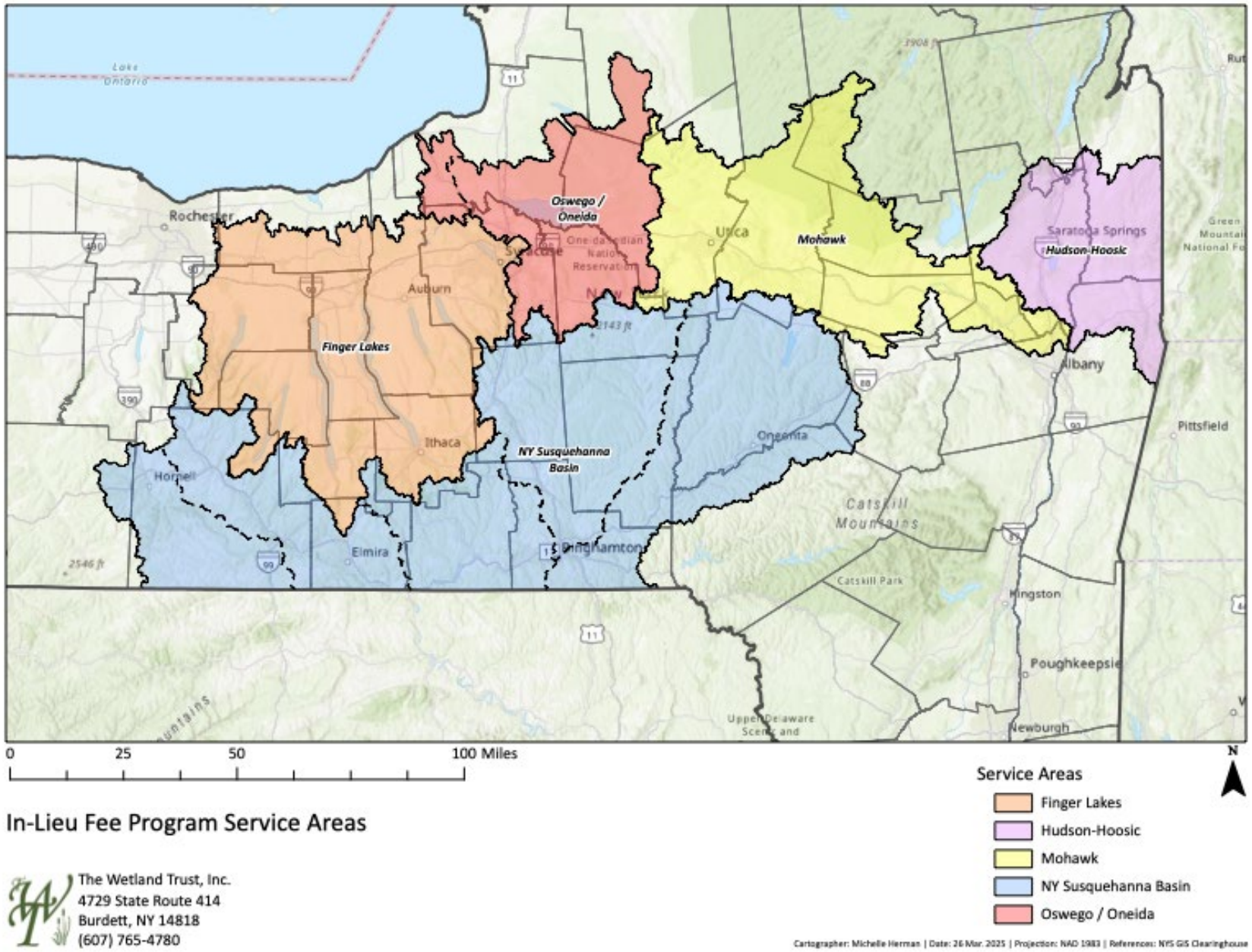
TWT assumes all legal responsibility for satisfying the mitigation requirements of the Clean Water Act sections 404 and 401, Section 10 of the Rivers and Harbors Act, and other state and federal authorizations as appropriate for which fees have been accepted. This responsibility includes design, implementation, performance, permanent preservation, long-term management, and meeting approved performance criteria.

The transfer of liability from the permittee to TWT is established by:

1.the approval of this In-Lieu Fee instrument;

2.receipt and acceptance by the District Engineer of a credit sale form that is signed and dated by TWT (see Section 5. Reporting Protocols); and

3. the transfer of fees from the permittee to TWT.



In-Lieu Fee Program Service Areas

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Figure 1. Service Areas in the TWT Central New York In-Lieu Fee Wetland Mitigation Program.

Table 1. SA size and land use composition in the TWT Central New York In-Lieu Fee Program.

8 Digit HU	Service Area Name	Size Acres	NWI Acres	% Wetlands	% Forest	% Ag
02050101	NY Susquehanna River	1,286,275	73,985	5.8	69.1	25.1
02050102		1,027,924	46,523	4.5	68.2	27.2
02050103		578,368	15,077	2.6	71.5	23.1
02050104		455,957	6,374	1.4	68.5	30.0
02050105		659,586	19,766	3.0	67.9	27.3
02020004	Mohawk River	1,631,397	88,782	5.4	44.1	25.7
04140201	Finger Lakes	2,213,707	267,403	12.1	25.2	46.9
04140202	Oneida Lake/ Oswego River	957,947	130,786	13.6	41.1	25.1
04140203		92,822	13,238	14.3	32.0	27.8
02020003	Hudson-Hoosic Rivers	822,202	58,206	10.6	47.2	26

Section 4. Program Default and Closure Provisions

Program Default: If the Corps determines that TWT has failed to provide the required compensatory mitigation in a timely manner, that is, TWT has failed to:

- meet performance-based milestones set forth in the project-specific mitigation plan;
- submit monitoring reports in a timely manner;
- establish and maintain an annual ledger report and individual ledgers for each project in accordance with the provisions in Section 2. Accounting Procedures, and/or Section 11. Program Accounting Information;
- submit an annual financial assurances and long-term management funding report;
- report approved credit transactions;
- complete land acquisition and initial physical and biological improvements by the third full growing season after the first advance credit in that service area is secured by a permittee;

and/or

- otherwise comply with the terms of this instrument.

The district engineer must take appropriate action to achieve compliance with the terms of this instrument and all approved mitigation plans. Such actions may include suspending credit sales, decreasing available credits, requiring adaptive management measures, terminating the agreement, directing that the financial assurances or contingency funds be used to provide alternative compensation, directing the use of in-lieu fee program account funds to provide alternative mitigation (e.g., securing credits from another third-party mitigation provider), or referring the non-compliance with the terms of the instrument to the Department of Justice.

Any delay or failure of TWT to comply with the terms of this agreement shall not constitute a default if it is primarily caused by any force majeure or other conditions that the DE determines are beyond TWT's reasonable control. However, should such events occur during the mitigation process (e.g., before closure), the Corps may require those site plans to be modified, unsold credits to be reduced or suspended, and the mitigation credits sold but not completed (still having to meet success criteria and reverting to long-term management) be replaced at TWT's expense. TWT shall give written notice to the DE if the performance of any of its in-lieu fee projects is affected by any such event as soon as is reasonably practicable.

Program Closure: Either party to this agreement may terminate the agreement within 60 days of written notification to the other party. In the event that the ILF Program operated by TWT is terminated, TWT is responsible for fulfilling any remaining project obligations, including the successful completion of ongoing mitigation projects, relevant maintenance, monitoring, reporting, and long-term management requirements. TWT will remain responsible for the fulfillment of all credits sold.

TWT shall remain responsible for fulfilling these obligations until such time as the long-term financing obligations have been met and the long-term ownership of all mitigation lands has been established, either by transferring to a party responsible for ownership and all long-term management of the project(s) or owned and managed by TWT. Funds remaining in the ILF Program accounts after these obligations are satisfied must continue to be used for the re-establishment, establishment, rehabilitation, preservation, and enhancement of aquatic resources in the same service area from which the credits were sold.

Should this instrument be terminated, the Corps shall direct TWT to use ILF Program funds to secure

credits from another source of third-party mitigation, including but not limited to another in-lieu fee program, mitigation bank, or another entity such as a governmental (i.e., NYS Department of Environmental Conservation (NYS DEC), Soil and Water Conservation Districts) or non-profit natural resource management entity willing to undertake the compensation activities. Should closure provisions be taken, 100% of the remaining funds from advance credit sales must be transferred to an appropriate entity, and no administrative funds may be deducted. The funds should be used, to the maximum extent practicable, to provide compensation for the amount and type of aquatic resource for which the fees were collected. The Corps itself cannot accept directly, retain, or draw upon those funds in the event of a default or closure.

Section 5. Financial and Credit Accounting Reporting Protocols

TWT must report to the DE and the IRT the following information:

- Monitoring reports, on a schedule and for a period as defined by each project-specific mitigation plan;
- credit transaction notifications;
- an annual program report summarizing activity from the program account (financial and credit accounting); and
- annual financial assurances and long-term management funding report.

5.1 Monitoring reports

Monitoring is required of all compensatory mitigation projects to determine if the project is meeting its performance standards and if additional measures are necessary to ensure that the compensatory mitigation project is accomplishing its objectives. If TWT fails to submit reports within 60 days of the deadlines outlined in the mitigation plan(s), or fails to make a formal written request for the approval of a monitoring report extension within that timeframe, the Corps may take appropriate compliance action as described in Section 4. Default and Closure Provisions.

Each project-specific mitigation plan is required to detail the monitoring report requirements, including monitoring parameters, length of the monitoring period, and the party responsible for conducting the monitoring. Monitoring reports will be available to the public from Army

Corp's Regulatory In-lieu fee and Bank Information Tracking System (RIBITS) found at http://geo.usace.army.mil/ribits/index.html.

5.2 Credit transaction notification

Section 3. Legal Responsibility for Providing Compensatory Mitigation establishes the terms by which the legal responsibility for compensation requirements is transferred from the permittee to TWT. These terms require TWT to submit a credit sale form to the Corps. The document must be signed and dated by TWT. The credit transaction form must include the permit number(s) for which TWT is accepting fees, acres and resource type(s) (e.g., Cowardin or HGM class) of impacts, and the number of credits being purchased. See Appendix A for a sample credit transaction form. TWT must submit the signed and dated credit transaction form within 15 days of receiving the fees from the permittee. A copy of each credit transaction form will be retained in both the Corp's and TWT's administrative and accounting records for the ILF Program. Copies of the credit transaction forms will also be delivered to the USFWS and other IRT members if requested.

5.3 Annual program report

TWT must submit an annual report on the financial and wetland credit accounts to the District Engineer and the IRT. Credit ledgers will be available to the public from the Army Corp's RIBITS found at http://geo.usace.army.mil/ribits/index.html. The annual program report must be submitted no later than March 31 for the previous year. The annual report (see Appendix B) must include information as follows:

Reporting - General:

- All income received, disbursements and interest earned by the program account for the program and by service area;
- The amount paid to the in-lieu fee program, total, and by service area;
- The balance of advance credits and released credits at the end of the report period for the program and by service area;
- All additions and subtractions of credits;
- Other changes in credit availability (e.g., additional credits released, increase or decrease in credit development at an ILF project site); and
- Any site-specific data required by individual ILF project plans.

Reporting - by Expenditure Category:

- A listing of in-lieu fee program expenditures/disbursements from the account (i.e., the costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management and administration) for the program and by service area.

Reporting by Permit Number:

- A list of all permits for which in-lieu fee program funds were accepted by service area, including the Corps permit number;
- The service area in which the authorized impacts are located;
- The amount and type of authorized impacts;
- The amount of required compensatory mitigation; and
- The date the funds were received from the permittee.

5.4 Annual financial assurances and long-term management funding report

Assurance for securing short-term financial assurances will be site-specific. Assurance options include a traditional bond for all up-front planning and construction costs. Other options, such as compensatory mitigation insurance, may be used, but only as approved by the DE acting in consultation with the IRT.

TWT must submit an annual report (using the calendar year as the reporting time period) on

financial assurances and long-term management to the DE and the IRT. TWT is required to give the Corps at least 60 days advance notice if required financial assurances will be terminated. In addition, any financial assurance instrument must state that it is the obligation of the bonding company or financial institution to provide the Corps notice. Inclusion of a summary of any changes to the financial assurances in the reporting year does not alter this separate obligation. The financial assurances and long-term management funding report must include:

- Beginning and ending balances of the individual project accounts providing funds for financial assurance and long-term management;
- Deposits into and any withdrawals from the individual project accounts providing funds for financial assurance and long-term management; and

- Information on the amount of required financial assurances (i.e., bond, insurance policy) and the status of those assurances, including the potential expiration of the financial assurances for each individual project ("potential expiration" refers to whether the financial assurances that are in place are somehow of a limited duration and could expire before the project closure occurs; "final" expiration occurs when the project is completed and approved by the district engineer).

Section 6. Compensation Planning Framework

6.1 Geographic service area

This ILF Instrument includes 5 geographic SAs, each covering one, two, or one plus portions of other 8-digit HUs in central New York State. The landscape is generally rural with similar land cover, composed of largely forest, agriculture, and wetlands and characterized by rolling hill topography, flashy streams, and a history of extensive agriculture in the early 20th century that has reverted to a more forested landscape at present. The exceptions are the Finger Lakes, which has a combination of vineyards and row crops; and portions of the Hudson-Hoosic, which includes Saratoga County, one of the fastest-growing counties in NYS.

6.2 Threats

There are several major threats to habitat loss in the service areas: construction, logging, and flooding. The first threat is related to new construction and development, especially linear developments such as power lines/smart grid upgrades, highway maintenance and construction, and, to an ever-increasing degree, the development of infrastructure (e.g., solar and wind farms) and housing (population shifts due to climate change or pandemics), or other factors that may arise. Past impacts may not be a good predictor of future issues. For example, the Mohawk Service Area was considered to have relatively few mitigation needs when added in 2015, but it became the most active service area by 2019 and is still active in 2025.

Natural gas transmission lines necessary to transport newly developed reserves may be constructed regardless of whether natural gas is developed in NY. We believe these transmission lines are a fairly remote, but potential, impact as efforts are made to move gas reserves to major metropolitan areas and possibly to coastal locations in order to transport liquefied gas to Europe. Pipeline development is also not related to highways or centers of human habitation but rather are more likely to be spread throughout the landscape, adding an

additional potential for loss of wetland functions and values through habitat fragmentation. With the addition of the Hudson-Hoosic SA, construction and land clearing for residential and industrial development can be an issue, especially in the outskirts of Albany, where the population is expanding. Interestingly, since this Instrument was written, the Finger Lakes SA has an increase in wineries, second homes, and associated businesses, new clearing for vineyards, and construction for primary and secondary homes. Topsoil, sand, and gravel mining that support these construction activities adds to the potential for disturbance.

A second threat is related to the historical land uses is agriculture and logging. These ongoing activities, many times working within the present wetland regulatory framework, have modified wetlands over the years through land clearing, wetland draining, and surface modifications to flow. Agricultural practices, especially tile draining of wet soils, see Section **6.4** Historic resource loss represents both historic and existing threats to wetlands. Dairy is the most common agricultural industry in the region, and there is continual pressure on the landscape for developing soybean and/or corn/hay fields on well-drained soils. Dairy operations are increasing as Greek yogurt continues to increase in popularity, and NY presently is the largest yogurt producer in the United States (NYS Dept. Agriculture and Markets, 12/26/2023).

Logging occurs extensively with little oversight or regulation; most loggers are small operations, which are difficult to track. Many properties are logged intensively just before being sold. Logging and the associated roads reduced canopy cover, increased soil exposure, and compaction increases runoff and erosion. Logging can easily disrupt the forest hydrology and combined with the past extensive forest removal and agricultural plowing, has greatly impacted (e.g., flattened) forest microtopography. Forested wetlands can be logged even if they are regulated by NYS DEC. Smaller logs, especially white cedar, have historically been used as fence posts for a now resurgent Central New York hops market, which has arisen to supply the growing microbrewery movement. The use of cedar posts for hops farms, fencing, and rustic furniture is a niche industry that directly impacts northern white cedar swamps in eastern SAs Indeed, if one reviews tax map parcels of large forested wetland communities surrounded by agriculture in some of the eastern SAs they are often broken up into small, narrow tracts due to the historic need by farmers

for fence posts. TWT considers all privately owned forestlands susceptible to logging unless they are under a conservation easement. TWT suggests these lands should be considered meeting the "under demonstrable threat" criteria for consideration for protection activities.

A third factor impacting wetlands is both flash flooding and sustained flooding, which is accentuated in steeper catchment basins. Complex topography, e.g., limited areas of level landscape, especially in smaller watersheds, concentrates infrastructure and development into the relatively narrow and flattened stream corridors, resulting in flooding that erodes streambanks and road ditches. Post-flooding maintenance operations are usually poorly planned and can impact both streams and nearby wetlands. Weather patterns may accentuate flooding and potential wetland degradation. Weather events at the extremes (large volume rainfall events and longer drought periods) are becoming more common. Severe weather events such as flooding, drought, and high temperatures may become far more frequent. Beavers develop wetlands that in some circumstances create problems. Smaller wetlands created by beavers within floodplains often conflict with human habitation (e.g., plugging roads, ditches, and culverts). These conflicts usually result in beaver removal and the loss of the wetlands they built. Beaver dams can also flood forested wetlands that over time become open water.

6.3 How ILFP will offset wetland loss

The ILF Program will use mitigation funds to re-establish, establish, rehabilitate, enhance, and preserve wetlands based on the watershed analyses and strategies described within this instrument. TWT will acquire one or more tax parcels within each SA after a credit sale has occurred. These parcels will be the basis for developing a mitigation site for providing appropriate opportunities for these activities in priority-quality locations. Attributes include:

- a potential for connecting to larger wetlands or other natural resource areas;
- having adequate hydrological resources that are or can be protected in the long term;
- headwater areas with potential or existing wetlands, small intermittent streams that are important source water areas for the entire watershed;
- riparian areas with wetland potential to provide for wildlife corridors and buffer the stream system;
- areas, especially agricultural lands conducive to re-establishing pit and mound microtopography and forest cover;

- areas with existing forested wetlands where the edge of that wetland can be expanded
- existing forested wetlands that may have bene devastated by disease or insects such as the emerald ash borer, *Agrilus planipennis*
- areas where developing micro topographical habitat diversity is possible to contribute toward biological diversity (Huenneke and Sharitz 1986, Raney et al. 2014);
- areas with upland forest communities where re-establishing or establishing ephemeral wetlands would provide added diversity.

Agricultural lands are another priority for re-establishment sites because historically they held wetland acres that were subsequently drained. Farmland has been naturally reverting to wetlands because agricultural operations have slowed; adding mitigation acres alongside these wetlands maximizes the total footprint of a project (i.e., the purchase of a parcel with existing wetlands and then re-establish or establish wetlands adjacent to those existing wetlands).

6.4 Historic resource loss

NYS DEC has estimated that half of New York State's historic wetlands have been lost (Huffman and Associates 2000). This loss largely appears to be a result of clear-cutting forests and conversion to agriculture. NY is the home of the drain tile first used in 1835 and in common use by 1850, with over 75,000 miles of clay tile laid by 1900 (Biebighauser 2007). Drain tiles efficiently eliminated wetland areas and their hydric soils and these tiles often function after the site has reverted to forest (Biebighauser 2007).

More recently (1980s and 1990s) total wetland acres increased by an estimated 3,000 acres but these were "open water" wetlands (NYS DEC Bureau of Habitat), while during that same period palustrine scrub shrub (PSS) swamps declined by about 5,000 acres and palustrine emergent marsh (PEM) declined by 16,000 acres (NYDEC 2005). The two photographs below from the Seeley Creek watershed in Chemung County, NY depict the land use changes that are ubiquitous throughout all the service areas.

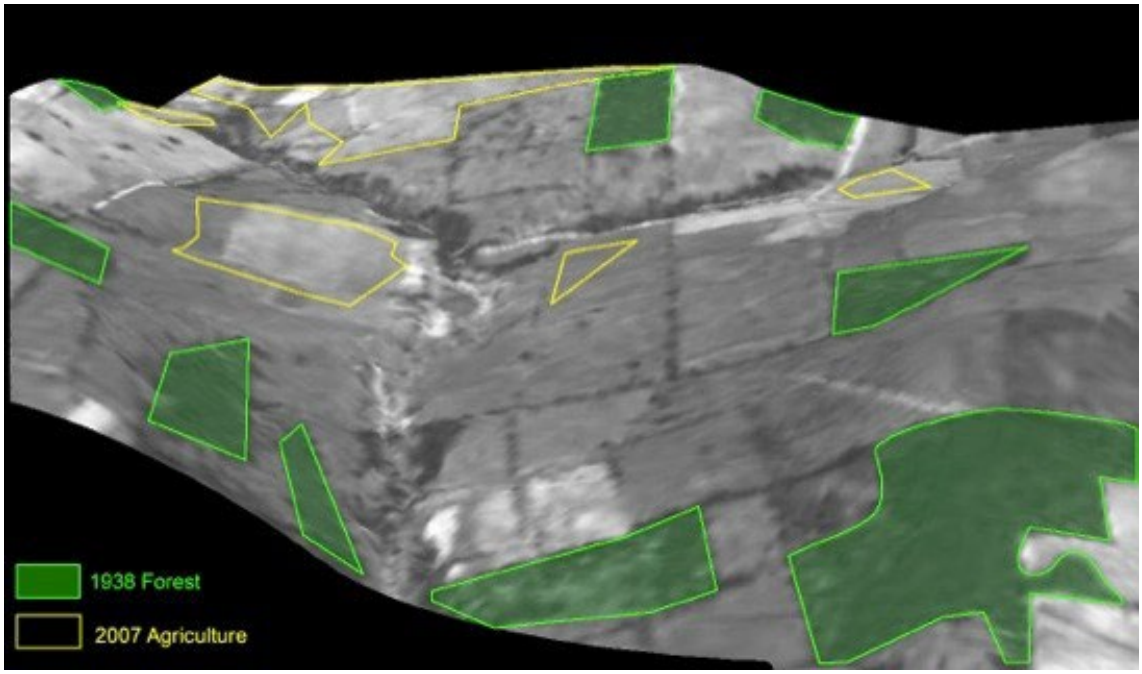

Figure 4. 1938 Aerial Photo Comparison of Agriculture and Forest Cover

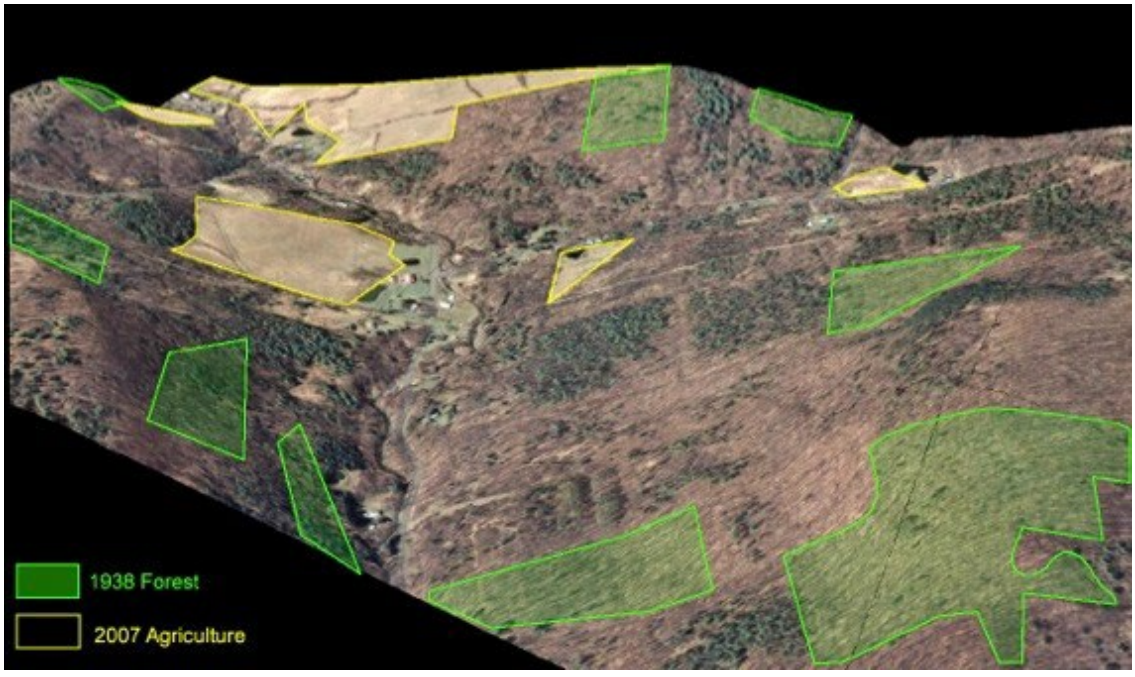

Figure 5. 2007 Aerial Photo Comparison of Agriculture and Forest Cover

6.5 Current aquatic resources

Table 2 summarizes wetland acres in all service areas. In the past, forests were cleared for agriculture, resulting in lower quality second growth forest but also lower quality wetlands that re-established themselves. With less microtopography variation and many species extirpated or reduced, only those more aggressive species in reoccupying sites have become common. TWT believes that

"older growth forests," that is, those forested areas found in early photographs such as the 1938 aerial photo shown above, will more likely harbor rarer species as they provided a refuge from agricultural conversion. An example is in Schuyler County, where the only Jefferson Salamander observation reported to NYS Heritage came from an oak forest woodlot depicted on a 1938 photo, with multiple vernal pools and pit and mound topography that indicated the site was never plowed.

Table 2. A summary of wetland types within each TWT ILFP SA, by 8-digit HU.

HU	Name	NWI Acres	Total Wetlands %	PEM %	PFO %	PSS %	River %	Pond %	Lake %
Susquehanna									
02050101	Unadilla/Susquehanna	73,985	5.8	25.5	32.8	19.4	2.4	7.9	12.0
02050102	Tioughnioga/Chenango	46,325	4.5	17.8	37.0	21.7	6.0	6.2	11.3
02050103	Cayuta/Catatonk/Owego	15,077	2.6	15.9	24.6	18.3	21.5	15.5	4.1
02050104	Canisteo	6,374	1.4	17.8	24.2	8.3	28.3	17.5	3.9
02050105	Cohocton/Chemung	19,766	3.0	19.0	27.0	20.3	12.4	9.5	11.7
Mohawk									
02020004	Mohawk	88,782	5.4	13.9	40.2	15.0	1.4	6.6	22.8
Finger Lakes									
04140201	Finger Lakes	267,403	12.1	8.3	31.5	5.7	1.6	2.3	50.6
Oneida/Oswego									
04140202	Oneida	130,786	13.6	4.2	45.9	4.1	0.7	2.8	42.3
04140203	Oswego	13,238	14.3	4.8	60.8	9.6	0.6	3.2	21.0
Hudson-Hoosic									
02020003	Hudson-Hoosic	76,906	7.1	12.7	33.8	13.3	7.4	4.3	18.2

6.6 Aquatic goals, including general amounts, types, and locations

The overall goal of this In Lieu Fee Program is to increase the acreage, quality, diversity and

functionality of wetland community types and the numbers and biodiversity of species otherwise lost to development. The ILFP goals described below cover all service areas due to their similarity in past land use, topography, and potential impacts. Mitigation Plans prepared for each site will outline more specific goals for those sites.

General Amounts

- To distribute sites within each 8-digit HU Service Area to increase diversity, local connectivity, maximize restoration and target high-quality sites for protection and as a base for expanding into larger wetland complexes
- To ensure long-term site sustainability and wetland functionality through a combination of wetland and uplands. Larger sites of 80 to 100 acres or more, adjacent to already protected lands, especially wetlands, would provide additional assurance of sustainability.

General Types

- To re-establish/establish/rehabilitate/enhance microtopography (pit and mound-type landscape) lost to historic land clearing activities, such as pothole construction within forested areas to add hydrology and topography, but not within existing forested wetlands and not to conflict with other existing important habitats.
- To eliminate effects of drain tiles and redevelop hydric soils.
- To enhance/rehabilitate diversity in existing wetlands that have been degraded due to encroachment by invasive plants, such as reed canary grass (*Phalaris arundinacea*), and keep invasive species from overwhelming the re-established diversity in the long-term.
- To select land parcels including high quality uplands to maximize wetland functionality.
- To select parcels with historically intact forests (based on the 1930's aerial photos) for re-establishment/establishment of adjacent wetlands and to increase habitat connectivity for rare species still populating these refugia.
- To target functions lost from the impacted wetland, but also add other functions/services in that wetland type to replace historical losses and to address watershed/service area priorities.
- To re-establish/establish wetlands that support habitats or species that may have been historically reduced or decreasing, such as emergent wetlands for breeding marsh birds (i.e., American bittern, pied-billed grebe); ephemeral headwaters wetlands for amphibians (i.e. mole

salamanders, wood frogs); wetlands along ridge tops for migratory bats and scrub shrub wetlands for songbirds and American woodcock.

- To use the NYS Heritage community types and attributes as guides for mitigation projects.
- To incorporate wetland projects in river floodplains.
- To add a climate change design component to potentially "buffer" weather extremes.
- To provide corridors for plant and animal migration and movements.
- To provide additional habitats for listed and other species of special concern.

General Locations

- To locate parcels in, adjacent to or near rare or high-quality communities (e.g., cedar swamps, hemlock/hardwood peat swamps, fens, and bogs), especially those not adequately preserved.
- To select locations in those areas where long-term sustainability of high-quality wetland sites (already existing and those to be re-established, established, rehabilitated, preserved, and/or enhanced under this Program) are most likely.
- To select locations that add to the development of a sustainable ecology across the watershed consisting of large natural resource/wetland hubs connected by wetland and riparian habitat corridors.
- Site locations will alternate between 8-digit HU's for SAs with more than one of those watersheds to distribute the conservation lift. Locations will favor credit where sales are concentrated if indeed that transpires.

6.7 Prioritization strategy: screening to locate general areas and sites

This ILFP will screen each SA to locate and nominate sites for inclusion in the program. Areas of interest within sub-watersheds, wetland corridors, or wetland areas will be located based on information gleaned from

- A search for landscapes with suitable soils for wetland development;
- A review of other comprehensive analyses; and
- A review of expert opinions.

To some degree this screening activity will overlap, which is a benefit, as the more times a location comes up on the "screen," the more likely it is a high-priority opportunity. It is also imperative that multiple areas be targeted, as an important objective of this ILF Program is to be

able to secure a site in a high-priority location when it becomes available. The timing of land being available when it is on the market can be measured many times in days and at most months. TWT has found that calls to the landowners is highly productive once multiple tax parcels of interest in an area are located.

A review of other comprehensive analyses

A review of analyses and reports was conducted to inform and guide the development of the ILFP. Examples are shown in Table 3. The reports and publications include:

- Conservation Focus Areas of the Upper Susquehanna Watershed. 2012. Finger Lakes Land Trust. 43p. (http://www.fllt.org/linkfiles/uppersusqreport.pdf)
- Burger, M.F. and J.M. Liner. 2005. Important Bird areas of New York, Habitats Worth Protecting. 2005. BookMasters Press. Second Edition. 352p.
- Eallonardo, A.S., Jr., Leopold D.J. (2014) Inland salt marshes of the Northeastern United States: Stress disturbance and compositional stability. Wetlands 34:155-166.
- Hunter, E.A., Raney, P.A., Gibbs, J.P., and Leopold, D.J. (2012) Improving wetland mitigation through community distribution modeling and a patch based ranking scheme.
  Wetlands. 32:841-850.

- NYSDEC. 2005. Comprehensive Wildlife Conservation Strategy for New York-Susquehanna Basin pages 467-501. (http://www.dec.ny.gov/docs/wildlife_pdf/susquehannatxt.pdf)
- NYNHP (2013) Rare species and community occurrences, Biodiversity Databases, Element Occurrence Record Digital Data Set. New York Natural Heritage Program, Albany, NY.
- NYSDEC. 2009. New York Open Space Conservation Plan. New York Department of Environmental Conservation. Albany. 240p (http://www.dec.ny.gov/lands/47990.html)
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Table 3. Examples of natural areas within the TWT ILFP boundaries.

8 Digit HU	Name	Targeted Natural Areas	References
02050101	Unadilla/ Susquehanna	Unadilla River Floodplain Clapper Lake Mud Lake Mud Pond (Jordanville) Jordanville Swamp	Hunter et al. 2012 NYNHP 2013
02050102	Tioughnioga/ Chenango	Pharsalia Woods Long Pond Ninemile Swamp Morrisville Swamp	NYSDEC 2005 Burger and Liner 2005 Hunter et al. 2012 NYNHP 2013
02050103	Cayuta/Catatonk/Owego	Connecticut Hill Emerald Necklace Michigan Hollow Swamp/Spencer Lake/Spencer Marsh complex	Burger and Liner 2005 NYSDEC 2009 FLLT 2012 Tompkins County files
02050104	Canisteo	Canisteo Headwaters	NYSDEC 2009

02050105	Cohocton/ Chemung	Cohocton Headwaters	Edinger et al. 2002
02020004	Mohawk	Deansboro Swamp Yule Corners Rd Swamp Canning Factory Rd Fen	USC 2013 Raney 2014
04140201	Finger Lakes	Junius Ponds Seneca Army Depot Fall Creek Fens Cortland Marl Pools Saline Wetlands	Wiegand and Eames1925 NYNHP 2013 Raney 2014 Eallonardo & Leopold 2014
04140202	Oneida	Nelson Swamp White Lake Swamp Cicero Swamp Peterboro Swamp Fenner Swamp	Scanga & Leopold 2010 & 2012 NYNHP 2013 Raney et al. 2014
04140203	Oswego	Ox Creek Swamp Bowens Corners Muck Farm	USC 2013
02020003	Hudson-Hoosic	Young's Bog Preserve. Inland poor fen and spruce-tamarack bog	https://www.renstrust.org/explore/preserves/public/14-mud-lake-preserve-shuba-preserve

6.7.1 A review of expert opinions

Development and implementation of the ILFP includes input from local, state, regional, and federal scientific experts and input from natural resources groups such as the Upper Susquehanna Conservation Alliance, Finger Lakes Land Trust, Otsego Land Trust, The Nature Conservancy, Central New York Land Trust, and NY Audubon. Expansion into the Hudson Hoosic SA will provide new potential partners who have knowledgeable professional staff, including Hudsonia, Inc., the Rensselaer Land Trust, Rensselaer Plateau Alliance, Berkshire Community Land Trust, Agricultural Stewardship Association (a land trust for Washington and Rensselaer counties), Hoosic River Watershed Association, and Wilton Wildlife Preserve and Park. Some contacts have resulted in potential partnering on specific sites.

6.8 Site specific ranking and quality assessment of potential sites

Once geographical regions are identified as priorities within each service area, we will evaluate parcels for potential mitigation sites to purchase. A "parcel" is defined as the tax parcel being purchased and a "site" as that portion of a tax parcel or multiple parcels that is the mitigation area. Sites on parcels for sale and those of significant interest for future acquisition will be ranked. We may discuss with a landowner the potential for purchase for certain high-ranking sites.

Desktop computer analysis and site visits will determine the quality of parcels nominated for further evaluation. The IRT will make specific site-by-site determinations for selecting parcels to include in the ILFP based on all available information and will use the specific success criteria in that site's approved mitigation plan to determine if a mitigation project has been successful. A quality assessment tool being developed by the Corps will be used to aid in selecting parcels when it becomes available.

6.9 Criteria for selecting specific mitigation sites

Each of the following factors will be considered during the site selection process; they are displayed not in priority order but in an attempt to group similar factors. Some factors may overlap with the previous screening exercises, such as the presence of endangered species, thus providing additional support for selection. Other criteria will also help determine the site's defensibility, long-term viability, and higher value over other sites.

1. Suitable soils (i.e., hydric soils, soils conducive to wetlands, site suitable for inducing hydric soils).
2. Hydrology and water quality on site and if the water source is adequate for long-term sustainability.
3. High quality upland component on the parcel or in close enough proximity to maximize wetland functionality[1].
4. Conducive to microtopography reestablishment (pit and mound type landscape), especially in forested wetlands.
5. Site can add to local wetland habitat connectivity.
6. Site is within or adjacent to a large wetland or potential wetland area or corridor.
7. Parcels are sufficiently large, likely in the 100-acre-plus range, to reduce outside influences.
8. Parcel adjacent to or near preserved lands.
9. Sites adjacent to, near or within rare communities (i.e., fens and bogs [2]) or NYS DEC Class I Wetlands[3], especially those not adequately preserved.[4]
10. Parcels with historically intact forests that potentially or are known to support rare species; endangered species will be addressed separately and thoroughly following state and federal guidelines.
11. Wetlands that support habitats or species that may be historically reduced or decreasing.

12. The site has the possibility of addressing climate change (i.e., can buffer or survive weather changes).
13. Presence of invasive species at the site or in close proximity.
14. Parcel cost within the credit cost structure established for the SA.

[1]a high quality upland is one with attributes that would provide habitat for the non-wetland life history stages, such as mature forest, pit and mound topography, shrubs for nesting, deep topsoil layer, diverse plant community
[2]the classic kettlehole bog is the only wetland type specifically named as a DEC Class 1 wetland and because of its rarity any bog that is found not fully protected will be a priority:

"Classic kettlehole bogs are wetlands which are at least 75 meters (approximately 246 feet) in diameter within a closed drainage basin, having a minimal or no surface inlet or outlet. These bogs have complete or virtually complete concentric zones of differing vegetative cover types. The innermost zone of the bog is open water that is of pH 5.00 or lower and is typically anoxic and dark brown. Surrounding this is a floating mat of sphagnum mosses, liverwort, and shrubby heath plants; this mat is surrounded in turn by coniferous swamps above deep deposits primarily of partly decayed sphagnum mosses.

Wetlands of this type are very rare, as are many of the life forms within them, and therefore they contribute to the ecological, geological, and aesthetic diversity of the state. This in turn provides educational and scientific research benefits."

[3]Other DEC Class I Wetlands include those that:
a.is resident habitat of an endangered or threatened animal species;
contains an endangered or threatened plant species; or
c.s supports an animal species in abundance or diversity unusual for the state or for the major region of the state in which it is found.

[4]*Wetlands that are regulated may not be adequately protected from degradation because selective logging, agricultural ditching, vehicular traffic and other activities are still allowed without restriction.*

6.10 How mitigation site are selected and developed

Most potential sites will be initially located through computer analyses, with others nominated by partner organizations. The parcels of interest are overlaid with a tax map parcel to determine ownership boundaries, and finally, contact with the owner is made to determine willingness to sell All major real estate internet sites are tracked to locate parcels listed for sale in areas of interest to TWT.

For sites expected to move through the mitigation process the sponsor will attempt to obtain an option to buy after it has been sufficiently vetted. Vetting includes site visits to determine mitigation potential, invasive species problems, potential for environmental hazards, hydrological issues and other related matters.

Each site is developed following its site specific, IRT approved mitigation plan. The plan includes an adaptive management approach to ensure weather conditions, equipment problems, soil anomalies and other such issues are addressed during the construction process.

A Mitigation Plan for each ILF site will be submitted for IRT review and approval and public comment. This plan will have the major elements required by 33CFR 332.4 that will specifically

describe the nominated site. These elements are:

1. Objectives
2. Site selection
3. Site protection instrument
4. Baseline information, including a review for potential endangered species on the site
5. Determination of credits
6. Credit release schedule
7. Mitigation work plan
8. Maintenance plan
9. Performance standards
10. Monitoring requirements
11. Long-term management plan, including financial arrangements
12. Adaptive management plan, including addressing invasive species control
13. Financial assurances

6.11 Strategy ensuring preservation addresses impacted wetlands

Preservation objective: The objective of the preservation strategy is to select sites to ensure preservation of the highest and best functions, values and wetland acres.

Preservation criteria: The criteria in Section 6.12 will also be used for the preservation strategy. Additional information on rare or high-quality communities (e.g., cedar swamps, hemlock/hardwood peat swamps, fens, and bogs), endangered species and species of special concern (Section 6.9) will be included. Preservation parcels with re-establishment potential will also be an important consideration.

Preservation strategy: TWT has compiled an extensive list of unique fens and bogs as well as other high-quality wetland communities that have unique functions, rare species, or other quantifiable qualities. The analysis includes a review of community types, some of which are described by Edinger et al. 2002. Rare wetland types such as bogs or fens will be priorities to ensure the highest quality sites are selected and to potentially address climate change. Research at SUNY-ESF is demonstrating that groundwater-supported wetland ecosystems (e.g., fens) not only support many boreal species at their southern range margins in New York State, but these areas are also buffered from changes in regional climate due to their steady flow of cold groundwater during the growing season (Raney 2014, Raney et al. 2014).

TWT will periodically update the list of potential sites, including nominations from local experts.

Because the region TWT covers has relatively few credit sales, there may be substantial time period between selecting sites.

Addressing temporal aspects of impacts: Preservation is based on the need to document a stressor that may impinge on the functions, values and acreage of a particular wetland. We suggest that there are two types of stressors that should be addressed, those that are "immediate" and most commonly observed (i.e., new housing developments, airport expansions or gas field development); and those that are "gradual cumulative impacts" that especially stress high quality, diverse wetlands and their fauna.

Gradual impacts resulting from continual long-term activities that accumulate and degrade wetlands are important wetland stressors. For example where the protection of a high quality wetland by the owner is not a priority or even a consideration the land can be easily impacted by many “seemingly” uneventful activities such as farming or recreation (e.g., ATV traffic). The concept of preservation to eliminate likely stressors aligns with the Corp's requirements that there be easements on mitigation lands that are already fully protected to ensure preservation "in perpetuity". We will use that same conservative approach and review all high-quality, biodiverse, and rare habitats that are not under some type of conservation control and make the case to the IRT that those parcels may be in jeopardy of impacts and available for inclusion into the preservation component of the Program.

Indeed, Brooks et al. (2005) make a strong case to have a program that includes protecting against the loss of wetland functions. He argues that not preserving existing high-quality wetlands leads over time to a homogeneity of wetlands in a region as subtle stressors will slowly degrade high quality wetlands unless they are under a preservation envelope. Thus, TWT believes a preservation component within a mitigation plan is of utmost importance.

Preserved versus Regulated wetlands: Preserved wetlands are those owned by organizations or agencies whose mission is long-term resource protection. Regulated wetlands, as defined by NYSDEC, are wetlands greater than 12.4 acres in 2025 and greater than 7.4 acres in 2028 (https://dec.ny.gov/nature/waterbodies/wetlands/freshwater-wetlands-program), provide protection from impacts that require a permit, but are still vulnerable to gradual impacts from exempt activities, including:

1. "Normal agricultural practices, except filling, clear cutting of trees or construction of non-agricultural structures." This would include drainage ditches and tile lines that attempt to dry out an

agricultural field but also can reduce an adjacent wetland's hydrology. Farmers can also stress or eliminate certain wetland wildlife species by clearing natural upland areas necessary to complete their annual life cycle (i.e., overwintering, egg laying, feeding). Trees can legally be cut within a wetland to reduce shading on the adjacent crop field or as a source of fence posts. Runoff from the unabated use of fertilizers, pesticides, and herbicides in many farming operations also degrade wetland quality over time and are not addressed by regulated wetlands.

2."The harvesting of natural products and recreational activities (fishing, hunting, trapping, hiking, swimming, picnicking, or firewood collection)". Private landowners can greatly impact wetlands through tree cutting, log removal and combined with heavy ATV use trails and roads can divert water flows as well as directly impact both vegetation and wildlife.

3. "Continuance of lawfully existing land uses"; and

4."Selective cutting of trees and harvesting of fuel wood (not clear cutting)." Loggers can still substantially harvest trees from regulated wetlands. In the NY Susquehanna Basin SA the cutting of northern white cedar for furniture and posts is a niche industry that appears to be a substantive threat to white cedar swamps.

Purchase strategy: Because priority parcels only rarely come up for sale, there will be great vigilance applied to find and acquire parcels when an opportunity arises. This will include a swift and confidential request to the IRT for approval of a preservation site to be included into the ILFP. We may submit for a preliminary review before a parcel becomes available or early in the negotiation phase. To add further functional value to the preservation strategy, the key preservation purchases will act as an anchor property to be expanded with additional wetland types (through re-establishment or establishment) and uplands to ensure there is biological diversity not only in species but also in functionality (i.e., nesting or overwintering habitat available).

6.12 Public and private involvement, coordination with federal, state, and local aquatic agencies

TWT's efforts to ensure public and private involvement are through outreach to farmers, small watershed groups, community groups, private citizens, academics, and government agencies.

TWT has already developed a working relationship with federal, state, and local agencies that deal with wetland issues and will continue to do so, incorporating the ILFP into this mix. TWT Board members and partners provide a direct link with academia. Several board members are SUNY ESF graduates who work closely with Dr. Donald Leopold and Dr. James Gibbs of SUNY ESF.

Several Board members actively participate in the Upper Susquehanna Conservation Alliance (USCA) and the Lake Plains/Prairie Peninsula bog turtle recovery unit meetings, which are led by the U.S. Fish Wildlife Service; they include a variety of agencies and NGOs who may offer valuable information on sites, mitigation techniques, and recovery strategies for rare species. TWT will support academic research through grants outside of the ILFP to develop further information and academic involvement in the mitigation process.

TWT already works closely with local land trusts such as The Finger Lakes Land Trust (a TWT board member is on the FLLT Land Committee), the Otsego Land Trust, Central NY Land Trust, and the Chemung Valley Conservancy. Private landowners and energy companies may also be a source for potential mitigation sites.

At this time, although NY State is a member of the IRT, it may not become a signatory of this Instrument. Current NYS freshwater wetland regulations limit the use of ILF for Article 24 wetlands. Thus, it remains for future modifications of this Instrument to address potential mitigation of wetlands regulated by NY State under Article 24 because at present that option is not available. (per NYSDEC)

6.13 Long term protection and management strategies by the sponsor

TWT's long-term protection and management strategy is to own the sites as fee simple property. Every property in the program will be supported by an endowment investment that will provide long-term funding for future management actions. TWT, being a 501c(3) nonprofit will own the properties, tax exempt under section 420-a of the NY Real Property Tax Law.

Additional information under Section 4. Default and Closure Provisions, describes the process of transferring the parcels to other land stewards, such as NYS DEC, should that issue arise. Should another land steward other than TWT be involved, TWT will propose to the IRT such an approach to be incorporated in the site's mitigation plan.

6.14 Periodic evaluation

An annual review and report will ensure that goals and priorities are still valid. The review would include the following topics:

1. The annual reporting required and submitted as part of the ILFP accounting as described in Section 5. Financial and Credit Accounting Reporting Protocols.
2. A five -year review of wetland compensation-related topics conducted by TWT and other its academic partners with regard to wetland communities, wetland diversity, rare species, wetland

siting, and other related topics. This review will be used to develop an updated/enhanced/expanded ILF Compensation Planning Framework for review and approval by the IRT.

Section 7. Advance Credits

Mitigation credits will be identified as Advance Credits or Released Credits. Advance Credits are made available before the ILF mitigation plans have been written or implemented and are allocated by service area (Table 4). Released Credits are generated from mitigation projects when performance measures and milestones have been achieved. These Released Credits are first used to retire any Advance Credits that have been sold within the same service area. If there are no advance credits outstanding, then Released Credits can be sold directly to permittees. Once previously sold Advance Credits have been fulfilled, an equal number of Advance Credits may be re-allocated to the sponsor for sale consistent with the Instrument. The number of Advance Credits available to the Sponsor at any given time to sell to permittees in a given service area is equal to the number of Advance Credits specified in the Instrument in Table 4, minus any that have already been sold but not yet fulfilled through released credits from mitigation sites.

The number of advance credits was determined based on several assumptions:

- Marcellus shale development impacts (largely pipelines from PA) would be greatest in the eastern three Susquehanna Service Areas and particularly in Service Area 2050101.
- Enough credits need to be available to accommodate projects other than gas development.
- Each mitigation site is closely planned, monitored and approved by the IRT; having a liberal amount of advance credits does not provide any less assurances for success as they will be developed over time and the IRT always has the ability to reduce the credit number.
- To the extent possible ILF sites will be developed as soon as is possible using TWT internal funds, if necessary, to ensure a minimal time lag. This concept was initiated in the Unadilla/Susquehanna Service Area.

Table 4. Advance Credits by Service Area.

Service Area Name	8-digit HUA	Size (acres)	Number of Advance Credits	Cost for one credit
NY Susquehanna Basin	02050101	1,286,275	50	**$115,578**
	02050102	1,027,924		
	02050103	578,368		
	02050104	455,957		
	02050105	659,586		
Mohawk River	02020004	1,631,397	20	**$123,708**
Genesee River	04130002	683,224	18	
	04130003	851,375		
Finger Lakes	04140201	2,213,707	18	
Oneida/Oswego	04140202	957,947	20	
	04140203	92,822		
Hudson-Hoosic	02020003	822,202	10	

7.1 Insuring ILF sustainability

TWT shall complete land acquisition and initial physical and biological improvements by the third full growing season after the sale of Advance Credits in compliance with 33CFR 332.8. The reason for this requirement is to reduce the temporal loss of wetland functions on ILFP mitigation sites. Mitigation banks are the preferred mitigation type as they generally mitigate before the impact. Indeed, as a result of increases in precipitation intensity, the impacts of temporal wetland loss may be magnified in terms of their contribution to increased flooding severity and degradation of property (DeGaetano 2009). If TWT fails to meet these deadlines, the DE 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 TWT to disburse funds from the ILF Program account to another mitigation provider to provide alternative compensatory mitigation to fulfill those compensation obligations.

TWT has developed several alternative compensatory mitigation approaches to address this time lag issue. Some have been incorporated into the Program's compensatory planning framework, and others are proposals for the DE to consider to ensure timely implementation should the 3-year deadline

become a looming issue that may not be met. To reduce or eliminate the time lag problem, TWT has several approaches:

a) TWT focuses on developing sizeable ILF sites that provide for a larger number of credits before they are needed.

b) TWT begins the site selection process before credits are sold using TWT internal funding. TWT is using its own limited funding source where it purchases and begins collecting information necessary for developing a mitigation plan for the site, then is reimbursed once credits are sold. The funds are then reinvested to develop another site. This is the ideal paradigm, as wetlands are developed ahead of impacts, and small credit sales that would otherwise be difficult to offset, due to limited funding availability are no longer an issue. TWT fully realizes that there is no guarantee that the site will be approved by the IRT, but if it closely follows its scientific approach, it believes this risk is worth the chance to reduce or eliminate the time lag issue inherently built into an ILF Program.

As in all cases, the DE will approve the specifics of any such transaction. TWT will develop a request after year two where a small credit sale has occurred to further reduce the temporal lag in wetland functions.

Section 8. Fee Calculations

The cost of one credit was based on the analysis of developing 8 potential mitigation credits on a hypothetical 80-acre parcel, which we considered to be a realistic credit number and parcel size, with past ILF experience informing the parcel size and credit number, which could range from 30 to 160 acres, and credits generated are usually in the 30 percent range of the total acreage. TWT used a mix of cost considerations for establishing various mitigation types (re-establishment, establishment, rehabilitation, enhancement, and preservation) and had wetland staff biologists develop independent estimates for comparisons and averaging. As additional service areas were added, TWT factored in costs difference due to location. Land prices, professional services charge rates, cost of travel, and accommodations are important variables TWT considered based on past knowledge and advice from staff and TWT Board members who live and work in the various service areas. The final credit price was developed with the underlying objective that the credit price was consistent with full cost accounting, where under reasonable expectations funds raised from a particular site's credit sales would cover the complete "build out" of the site, including final closure. The categories and costs listed in Table 5 are considered to be a consistent and comprehensive estimate. These costs were

adjusted in 2025 to include an adjustment for previous inflation using the US CPI starting in 2019 (https://www.bls.gov/data/inflation_calculator.htm).

Table 5. Details for developing the price of one mitigation credit. **CONFIDENTIAL**

Credit Component	Sub-component description	NY Susquehanna Basin 02050101,02,03,04,05	All other SA's 02020004; 04130002,03; 04140201; 04140202,03; 02020003
Land acquisition	Parcel(s) cost boundary survey closing costs/legal fees land acquisition/search	40,000	42,908
Project planning and design*	watershed planning wetland mitigation plan permits (SWPPP) SHPO Wetland delineation, VIBI	7,880	9,213
Construction*	site layout construction equipment and labor erosion control planting	10,250	11,748
Plants and other materials*	plants and seeds erosion control supplies signs water well/data logger (2) herbicide applications	9,000	9,023
Monitoring, based on 10 years and the resulting adaptive management activities*	annual monitoring surveys report writing	5,679	5,679
	re-grading replanting erosion control	2,500	2,524
Long-term management and protection	Stewardship long-term investment	12,600	12,620
	Conservation easement held by others	1,500	1,893
Contingency costs*	funds for unexpected occurrences	1500	1,578
Program administration (15%)	tracking credits bookkeeping for ILF payroll audit/accounting office/supplies TWT/IRT negotiations	17,333	18,555
Financial assurances for TWT	Bond or equivalent	7,389	7,963
TOTAL *differences reflect regional costs.*		$115,578	$123,708

Table 5. Details for developing the price of one mitigation credit.
Estimate is based on an assumed purchase of 80 acres that holds 8 credits worth of potential mitigation of any kind (re-establishment, establishment, rehabilitation, preservation and enhancement). Differences reflect regional costs.

Credit Component	Sub-component description	NY Susquehanna Basin 02050101,02,03,04,05	All other SA's 02020004; 04130002,03; 04140201; 04140202,03; 02020003
Land acquisition	Parcel(s) cost boundary survey closing costs/legal fees land acquisition/search		
Project planning and design*	watershed planning wetland mitigation plan permits (SWPPP) SHPO Wetland delineation, VIBI		
Construction*	site layout construction equipment and labor erosion control planting		
Plants and other materials*	plants and seeds erosion control supplies signs water well/data logger (2) herbicide applications		
Monitoring, based on 10 years and the resulting adaptive management activities*	annual monitoring surveys report writing		
	re-grading replanting erosion control		
Long-term management and protection	Stewardship long-term investment		
	Conservation easement held by others		
Contingency costs*	funds for unexpected occurrences		
Program administration (15%)	tracking credits bookkeeping for ILF payroll audit/accounting office/supplies TWT/IRT negotiations		
Financial assurances for TWT	Bond or equivalent		
TOTAL		$115,578	$123,708

The ILFP will generate credits based on the net increase in benefits to aquatic resources that meet or exceed its Mitigation Plan's success criteria. The IRT will determine credit ratios based on Table 6 during the final review of each site's Mitigation Plan, including:

- determination of an adequate buffer of at least 100 feet, 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 its assessment tool when it becomes available.

Table 6. Ratios for various compensation techniques to develop one (1) credit of compensation. Site specific ratios are subject to IRT approval.	
Wetland Re-establishment	1:1
Wetland Establishment	1:1
Wetland Rehabilitation	2:1 to 4:1
Wetland Enhancement	3:1 to 4:1
Wetland Preservation	10:1 to 40:1
Upland Buffer Re-establishment or Establishment	10:1 to 20:1
Upland Buffer Preservation	10:1 to 20:1
Multiplier for 100 ft. Setback along unprotected property lines	4

Section 11. Program Accounting Information

11.1 Providing an acceptable FDIC program account

The ILFP Account will have a separate checking account for each service area established by TWT at a bank that is a member of the Federal Deposit Insurance Corporation (FDIC). Each will be named "TWT Central New York In-Lieu Fee Instrument, *_SA name_* Service Area". Each ILF site will have a separate budget within the account, with sufficient specificity to track cost items (i.e., property purchase, construction, plant materials, etc.), as shown in Table 5. These checking account(s) will be separate and different from other TWT accounts.

Once a project is implemented, the budget in the account will stay open to track the long-term items such as monitoring, adaptive management, and financial assurances and will not be closed until all of the credits that are available from that site are released. Each credit or portion of a credit sold to support the site will have its original funds dispersed based on Table 5 and tracked by a project budget for that ILFP Site as shown in that table. Funds remaining once the DE has released all credits at a site will remain in the service area account for continued program

development and dispersed, with Corps approval, for additional tasks depicted in one or more of the project component categories described in Table 5. Any and all interest and other funds accruing in the account will be used to provide compensatory mitigation for impacts to aquatic resources in the same service area from which the credits were sold.

11.2 Financial accounting

Requirements for financial reporting are described in Section 5. Financial and Credit Accounting Reporting Protocols. 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 program account will be established after this instrument is approved and before any fees are accepted.

If the Corps determines that TWT is failing to provide compensatory mitigation by the third full growing season after the first advance credit is secured, the Corps may direct the funds to be turned over to other mitigation providers. Additional information on failure to fulfill the terms of the instrument is discussed in Section 4. Program Default and Closure Provisions.

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, abstracts, filing fees, title insurance, etc.), implementation, and management (of the entire project parcel and the mitigation site within) of in-lieu fee compensatory mitigation projects. This may include fees associated with securing a permit for conducting mitigation activities, activities related to the re-establishment, establishment, rehabilitation, enhancement, and preservation of aquatic resources, maintenance and monitoring of project parcels, and the mitigation sites they contain.

Fifteen percent of all fees paid into the ILF Program will be set aside and 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 ILP reporting to the Corps, bookkeeping, audits, mailing expenses, printing, office supplies, computer hardware or software, training, travel, contractor hiring, and office space.

11.3 Credit accounting

TWT shall establish and maintain an annual report ledger that tracks the production of released credits for its ILF Program and for each individual in-lieu fee project. Reporting requirements for the annual report ledger are described in **S**ection 5. Financial and Credit Accounting Reporting Protocols, and Appendix B. On the income side, TWT shall track the fees and all other income received, the source of the income (i.e., state or local permitted impact, state or local resolution of violations, 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 Corps permit number, the service area in which the specific authorized impacts are located, the amount (acreage) 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. TWT shall establish and maintain a report ledger for the 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).

TWT will also track funds by cost category. The ledger (Appendix B) shall also include, for each project, the permit numbers for which the in-lieu site 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., re-establishment, establishment, rehabilitation, preservation, and enhancement), the aquatic resource type(s) represented (e.g., Cowardin class), the amount of compensatory mitigation being provided in acres, 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.

Section 12. ILF Project Site Closure Specifications

A specific mitigation will be closed after meeting the requirements of its site-specific mitigation plan, including:

- all applicable performance measures have been achieved;
- all available credits for that site have been sold, debited or otherwise been extinguished;
- the Sponsor has prepared a Long-Term Management and Maintenance Plan, that has been

approved by the IRT;

- the Sponsor has prepared and submitted to the IRT and the appropriate locality a GIS shapefile or similar exhibit depicting the location and extent of project site contained within the ILF Program;
- the Sponsor has either
    - (i) assumed responsibilities for accomplishing the Long-Term Management and Maintenance Plan, in which case the Sponsor will fulfill the role of Long-Term Manager, or
    - (ii) has assigned those responsibilities to another Long-Term Manager;
- the stewardship endowment has been funded and its contents have been transferred to the long-term manager, if it is not the Sponsor; and
- the Sponsor has complied with all other terms of the Instrument.

Upon ILF closure, no further credit transfer may occur and the period of long-term ownership and preservation will commence. The IRT will issue a written certification of satisfaction to the Sponsor and to the escrow agent (if there is one) who is holding any assurance "bonding" deposits. Thereafter any remaining funds will be released to the Sponsor for use in that SA on any and all tasks that are sanctioned under this Instrument.

Section 13. Transfer of Long-Term Management Responsibilities

The long-term manager for each mitigation site will be identified at the time that the site is proposed to the IRT. TWT fully intends to be the fee simple owner and long-term manager of all mitigation properties. However, should TWT choose to transfer the responsibilities for long-term management to another long-term steward, TWT must first seek Corps approval in writing. The Corps must also be given the option of being a signatory to any contract or other arrangement assigning the rights and delegating the responsibilities to the steward.

Transfer of long-term stewardship responsibilities for any site shall not occur until after performance standards have been achieved and all Released Credits have been sold. Once long-term management has been transferred to a land stewardship entity, said party is thereby responsible for meeting any and all long-term management responsibilities outlined in the project-specific mitigation plan.

If a transfer occurs, TWT shall transfer long-term management responsibilities to a land stewardship entity, such as a public agency or non-governmental organization. Possible entities to receive long-term stewardship responsibilities in the event of a transfer are the NYS DEC, the Finger Lakes Land Trust, and other local land trusts. Until such time as long-term management responsibilities are transferred to another party, TWT will be considered responsible for all long-term management of the mitigation project. TWT shall transfer long-term management account funds or otherwise arrange for disbursements to be accessible should another land steward take over stewardship responsibilities.

Section 14. Financial Arrangements for Long-Term Management

Financial arrangements will be specified in each site's mitigation plan. TWT fully intends to be the fee simple owner and long-term manager of all mitigation properties. All long-term management funds will be deposited in a separate account from the project implementation account and will be clearly named Long-Term Management Account, SA name. Table 7 provides an outline of anticipated long-term expenses and the method by which TWT will provide funding in perpetuity for those expenses (see row 18). Upon receipt of funds from each credit sale, the long-term line item is deposited in the long-term account to keep the assurance fund current with the total of credit sales. Assurance options include a traditional stewardship endowment in a secure investment but may include other assurance methods, only as approved by the DE acting in consultation with the IRT.

Table 7. Budget estimate for long-term management and maintenance tasks for SA _____, ____acres

Category	Task	Frequency Estimate *Modified by site*	Estimated Cost	Yearly set aside
Potential Adaptive Management Tasks	Replanting	5		
	Reshaping terrain	15		
	Invasive species removal	2		
	Other techniques	3		
Potential Maintenance Tasks	Boundary posting	10		
	mowing	1		

	Site manipulation	10		
Additional Potential Long-Term Management Tasks	Other corrective, adaptive management, Actions to ensure natural stability of site	5		
Monitoring	To determine implementation tasks	1		
Administration	For all tasks above and including tax exempt status	1		
Total cash needed per year to cover both maintenance and long-term management tasks, with some funds rolled over for less frequent implementation tasks.				
Contingency (5%)				
Total				
Total Stewardship investment to support all tasks, with an principal investment of 4% return , large enough so that 2% for stewardship covers all tasks above, and 2% rolled over for inflation. Unused funds are rolled over to increase the stewardship investment or used as needed for the above tasks.				

Section 15. Signatures

The Wetland Trust, Inc.	Title	Date
District Engineer, USACE LRB District	Title	Date
District Engineer, USACE NAN District.	Title	Date
US Fish and Wildlife Service	Title	Date

US Environmental Protection Agency Region 2.	Title	Date

NY State Department of Environmental Conservation	Title	Date

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Appendix A: TWT Central New York In-Lieu Fee Program: Credit Transaction Form

Appendix B: TWT Central New York In-Lieu Fee Program: Annual Program Report

1 January through 31 December _____

Annual Report - General							
Service Area	Income Received	Disbursements	Interest Earned	Advanced Credits Available[1]	Advanced Credits Sold	Advanced CFulfille d lfilled	Released Credits Remaining
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
Total							

[1]Explain any changes in credit availability, such as a change in the number of credits developed at a specific ILF site.

Annual Report - Accounting by Expenditure Category for Each Service Area (SA)

Expenditure	NY Susquehanna Basin	Finger Lakes	Mohawk	Oswego/Oneida	Hudson-Hoosic	Program Total
Land acquisition						
Planning/design						
Construction						
Plants and other materials						
Monitoring and adaptive management						
Long-term management and protection						
Contingencies						
Financial assurances						
Administration						
Total						

Annual Report - Accounting by Permit Number					
USACE Permit Number	Service Area[1]	Authorized Impacts by Acre and Type[2]	Compensatory Mitigation by Credit[3]	Amount Paid	Date Funds Received

[1] if Impact is not in the same Service Area as Compensation, make note
[2]PEM, PSS, PFO or Other, describe (e.g., fen, bog)
[3] an In-Lieu Fee Credit always equals an acre in this program

Annual Report - Project Budget for each ILFP Site			
Service Area:			
Project Site name and number:			
Income: (list by permit number, date and total funds deposited)			
Project Component	Expense	Budget	Balance
Land acquisition			
Project plan and design			
Construction			
Plants and other materials			
Labor			
Monitoring, based on the number of years planned			
Remediation/adaptive management and contingency costs			
Program administration			
Long-term management and preservation: stewardship endowment			
Financial assurances			
Third party easement			
TOTAL			