

## Exhibit C – Credit Establishment and Tracking

### Credit Types

The ILF Program offers two credit types: (1) Aquatic Resource Credits; and (2) Vernal Pool Credits. Aquatic Resource Credits broadly cover impacts to Riverine, Lacustrine, and Palustrine wetlands, other Waters of the US, Waters of the State, and other aquatic resources including threatened or endangered anadromous fish. Vernal Pool Credits specifically cover impacts to Vernal Pool wetlands.

Aquatic Resource Credits and Vernal Pool Credits are generally defined as one acre of establishment or restoration, or are calculated as a percent adjustment in pre-and post- restoration CRAM evaluation and projected scores related to wetland enhancement activities. When Aquatic Resource Credits are utilized for anadromous fish impacts, credits for restoration will generally be designated as one acre of restored, enhanced, or preserved habitat for spawning, rearing, or fish passage, or improvement to biotic features (e.g., Shaded Riverine Aquatic habitat) which influence factors such as water temperature or food production. Credit transactions for anadromous fish impacts will be noted on the credit ledger.

Credits may also be allocated for the preservation of existing Waters of the U.S. or Waters of the State if all the following criteria are met: 1) the resource provides important physical, chemical, or biological functions, 2) the resource contributes significantly to the ecological sustainability of the watershed, 3) the IRT determines the preserving the resources are practicable and appropriate, 4) the preservation action removes a threat of destruction or adverse modification, and 5) the preserved site will be permanently protected. In addition, the ILF Program envisions that ILF Projects may benefit fish and wildlife species, such as through the preservation of habitat resources or individual threatened or endangered species. Fish and wildlife agencies may join as parties to this Instrument to allow credits under the ILF Program to serve as compensation for impacts to species under their regulatory jurisdiction.

#### Aquatic Resource Credits

Wetland features within the ILF Program Area are generally defined through a combined use of the Cowardian system and hydrogeomorphic designations. The Cowardian system has five classification systems (Riverine, Lacustrine, Palustrine, Estuarine, and Marine) with extensive modifying descriptors which allow for hundreds of distinct habitat categorizations. This form of classification is valuable for evaluating and tracking impacts on a project by project basis to generate equivalent compensation. However, consistent with the 2008 Rule, this ILF Program is a regional planning tool focused on implementing ILF Projects based on the highest priority restoration or preservation needs by and through the Compensation Planning Framework. Aquatic Resource Credits will be applied to restore, enhance, create, or in certain cases preserve any form of palustrine, lacustrine, and riverine wetlands, and other waters (excluding vernal pools), within individual River System Service Areas. As impacts are compensated based upon the watershed priorities as described in the Compensation Planning Framework (**Exhibit D**) using the project evaluation criteria (**Exhibit E**), segregating credit types for wetland impacts is

not necessary for the ILF Program. Therefore, Aquatic Resource Credits can fully compensate for all non-vernal pool wetlands in the Service Area.

Recovery efforts for anadromous fish in California's Central Valley is well defined in the California Central Valley Salmon and Steelhead Recovery Plan (2011). This ILF Program incorporates the recovery objectives and actions into the Compensation Planning Framework. As such, Aquatic Resource Credits are appropriate to compensate for impacts to anadromous fish and their habitat within the ILF Program Area.

### Vernal Pool Credits

Vernal Pool Credits will compensate for impacts to vernal pools (Palustrine non-persistent emergent wetlands). Vernal pools are addressed as a distinct component of the ILF Program because of the unprecedented historic loss of vernal pools in the ILF Program Area, the ongoing high threat level, and the significant ecological correlation between vernal pools and a high number of state and federally listed threatened and endangered species. Vernal Pool Credits address the uniquely critical need for this wetland type, and will be applied to restore vernal pools within individual Vernal Pool Service Areas consistent with the goals and objectives of the USFWS Vernal Pool Recovery Plan.

### **Credit Amounts**

The ILF Program proposes to establish 12 Vernal Pool Service Areas and 17 River System Service Areas, each of which will be allocated a baseline number of Advance Credits. The number of Advance Credits is based upon: (1) an evaluation of permitting and mitigation trends using USACE permitting data from the ORM Database, existing ILF tracking data, and guidance on future infrastructure needs from public agencies; and (2) minimum financial thresholds from Advance Credit Transfers to ensure sufficient funds are collected to develop and implement ecologically meaningful and logistically feasible ILF Projects.

### Aquatic Resource Credits

In order to undertake large and ecologically meaningful ILF Projects to produce Released Aquatic Resource Credits with economies of scale, a sufficient number of Advance Credits must be sold in order to secure opportunities on landscapes large enough to implement such mitigation. As such, the allocation of Advance Credits for each Service Area reflects a projected mitigation demand that is based on historic permitting data. The amount of Advance Credits estimated to meet needs based on historic permitting data is based on multiplying an average annual mitigation requirement by seven years. The seven year amount is based on three years to implement mitigation from the first Credit Transfer, plus an additional four years to allow for the construction and first years performance standard releases to generate a sufficient amount of Released Credits to recharge the available Advance Credit balance.

Each Service Area has been categorized as high volume or low volume based on an evaluation of the historic permitting data, specifically ORM data from 2007 to 2012. High

volume Service Areas are those in which the historic average mitigation required was equal to or greater than 5 acres per year. Low volume Service Areas are those in which the historic average mitigation required was less than 5 acres per year; in general the average was equal to or less than 2 acres per year. High volume Service Areas are allocated 35 Advance Credits (5 credits [average] multiplied by 7 years), whereas low volume Service Areas will be allocated 14 Advance Credits (2 credits [average] multiplied by 7 years). Low volume Service Areas require this minimum in part based on a threshold cost to implement a viable project, as well as the need to have a sufficiently large project or projects to generate enough Released Credits to have viable return of credit inventory on an annual basis. A listing of the number of Advance Credits allocated to each Service Area is listed in Table 1 below.

Table 1. Allocation of Advance Aquatic Resource Credits by Service Area

Low Volume Service Area	Advance Credits	High Volume Service Area	Advance Credits
Bear/Yuba	14	American	35
Carson/Walker Basin	14	Cache/Putah	35
Kaweah/Tule	14	Calaveras/Stanslaus	35
Kern	14	Cosumnes/Mokelumne	35
King	14	Feather	35
Merced/Tuolumne	14	Red Bluff	35
Modoc	14	Redding	35
Pit River Basin	14		
San Joaquin	14		
Tahoe	14		

#### Vernal Pool Credits

Vernal pool features tend to be disbursed on the landscape, and project applicants often have adequate project flexibility to avoid and minimize most impacts to these features. As such, impacts to vernal pools are anticipated at a significantly lower acreage than other wetland types. Currently, there is limited quantifiable information on the extent of vernal pool impacts, as the ORM database does not expressly differentiate between vernal pools and other more common forms of persistent emergent depressional wetlands. Thus mitigation needs for Vernal Pool Credits are anecdotal and are based on bank credit sales in RIBITs and the in-lieu fees collected under the Sacramento District Wetlands Conservation Fund for impacts under nationwide permits. Impacts per project tend to be less than one acre in size, although large infrastructure projects may result in larger impact amounts. Therefore a much lower number of Vernal Pool Advance Credits is appropriate per Service Area. In addition, vernal pool creation or restoration benefits from an economy of scale in implementation, but opportunities on large landscapes are very difficult and expensive to secure. Accordingly targeted, small scale restoration is anticipated for vernal pool features.

There are several vernal pool regions which only partially occur within the ILF Program Area; these partial regions form small Vernal Pool Service Areas which may have limited impacts and, therefore, a limited need for Vernal Pool Credits. Conversely, there are several large vernal pool

regions mostly or fully contained within the ILF Program Area which occur within high-potential future development areas. However, many of these vernal pool regions, including the Northeastern Sacramento Valley, Southeastern Sacramento Valley, and Solano-Colusa have mitigation banks with vernal pool creation credits to serve some component of future impacts.

Due to the variability and unpredictability of future impacts within each of the vernal pool regions, and the rarity of these wetland resources, the Vernal Pool Service Areas are all anticipated to have mitigation needs equivalent to the low volume Service Area described for Aquatic Resource Credits. Therefore a total of 14 Advance Credits will be allocation to each Vernal Pool Service Area. This restricted amount reflects the limited number of vernal pool impacts that are anticipated within each Service Area, which allows for and encourages rapid implementation of targeted restoration projects and generation of Released Credits.

#### Unallocated Program Area Advance Credits

The ILF Program is intended to serve a diversity of mitigation needs that are not entirely predictable and may from time to time involve the large demands of large-scale regional planning or infrastructure projects that are permitted under a variety of permits or approvals issued by the IRT Members. The USACE ORM data revealed that these types of projects could require in the range of 15 to 50 mitigation credits for a single project. Within one or more service areas, more than one large infrastructure project could occur within the seven year life span of projects; if three large projects, such as that largest seen in the ORM data, were to occur within that seven year period, then 150 credits could be needed to meet the mitigation requirements created by those projects. The number of Advance Credits in any one Service Area could be insufficient to meet these unpredictable and possibly large mitigation needs, or a single large infrastructure project could end up depleting the available inventory of Advance Credits in applicable Service Area(s) for several years until Released Credits are generated. To address this possibility, a separate category of 150 Unallocated Program Area Advance Credits will be established. An initial allocation of 50 Unallocated Program Area Advance Credits will be available for Transfer by the Program Sponsor upon the Execution Date. Transfers of the remaining 100 Unallocated Program Area Advance Credits may be made by the Program Sponsor on a case-by-case basis to address large-scale projects, such as energy and infrastructure projects, that may occur within the Program Area and that are determined by the applicable IRT Member(s) providing permits for such projects to be eligible to purchase Credits from the ILF Program. ILF Project(s) to Fulfill these Unallocated Program Area Advance Credits will be implemented in the Service Area(s) where the relevant impacts occur. ILF Projects may draw funding from both the applicable Service Area Sub-Account and the Unallocated Program Area Sub-Account, and Released Credits will be allocated proportionately to serve as Fulfilled Credits. Advance, Released, and Fulfilled Credits associated with Unallocated Program Area Advance Credits will be tracked in a separate ledger.

#### **Credits Releases**

The ILF Program will be issued the full amount of Advance Credits for each Service Area (and for the Unallocated Program Area tranche) upon execution of the ILF Program Instrument. The Sponsor's Transfer of these Advance Credits will generate funds necessary to pay for the actual

development and implementation of ILF Projects. Upon reaching milestones associated with the development and implementation of an ILF Project within a Service Area, released credits (“Released Credits”) will be generated in accordance with the applicable credit release schedule developed in the Project Development Plan. The Released Credits will retire the mitigation obligations associated with the Advance Credits to which the Released Credits correspond.

*For example, upon the IRT’s certification that a Program-funded Project has successfully created 5 Aquatic Resource Credits, these will be deemed “Released Credits.” The 5 Released Credits will retire the mitigation obligation of 5 transferred Advance Aquatic Resources Credits. Five new Advance Credits will be available for transfer.*

Released Credits will be generated through a process of Project development and implementation that meets the requirements of the 2008 Rule. A detailed Project Development Plan, developed using current IRT template document as applicable, will be prepared for each ILF Project to ensure consistency and compliance with the 2008 Rule.

Any Released Credits generated by a Project in excess of the amount necessary for fulfillment of the Advance Credit obligations associated with that Project may be sold by the Program Sponsor, and the proceeds from such Transfer need not be deposited into the Program Account since there is not mitigation obligation on the Advance Credits associated with that Service Area.

### **Credit Transactions and Tracking**

Credit Transactions will utilize the *Agreement for Transfer of ILF Credits* (“Transfer Agreement”) as the mechanism to convey Credit transfers and record the details of each mitigation transaction. A template of this agreement is provided as **Attachment A**. In addition to the recoding of transaction details in the Transfer Agreement, a detailed Credit ledger will be kept for each Service Area and the ILF Program as a whole. Transfers of Advance Credits will be tracked with a corresponding date, permit number, mitigation requirement, habitat classification of the impacted habitat acreage, latitude and longitude, funds collected, and all other information required by the 2008 Rule. A sample credit ledger is provided as **Attachment B**. As ILF Projects are approved within a Service Area, the ledger will track Released Credits independent from Advance Credits, the allocating and assignment of Released Credits to fulfill Advance Credits, and credit availability.

A Geographic Information System (GIS) Database will be developed incorporating relevant information from the Credit ledger to geographically depict patterns associated with impacts by location, size, or type, and compensatory mitigation provided by Projects. If technically and financially feasible this GIS Database will be developed to link or interact with pre-existing regulatory wetland and mitigation databases such as Wetlands Tracker, RIBITs, and ORM.

# SACRAMENTO DISTRICT CALIFORNIA IN-LIEU FEE PROGRAM

## CREDIT TRANSFER AGREEMENT

Contract #: \_\_\_\_\_

This Credit Transfer Agreement ("Agreement") is entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between THE NATIONAL FISH AND WILDLIFE FOUNDATION ("Program Sponsor") and \_\_\_\_\_ ("Project Applicant"), jointly referred to as the "Parties," as follows:

### RECITALS

A. The Program Sponsor has developed the Sacramento District California In-Lieu Fee Program ("ILF Program") covering the geographic area within the jurisdictional limits of the U.S. Army Corps of Engineers, Sacramento District within California; and

B. The ILF Program was approved by the Sacramento District of the U.S. Army Corps of Engineers ("USACE"), Region IX of the U.S. Environmental Protection Agency ("USEPA"), the Central Valley Regional Water Quality Control Board ("Central Valley Water Board"), the Lahontan Regional Water Quality Control Board ("Lahontan Water Board"), and the National Oceanographic and Atmospheric Administration's National Marine Fisheries Service ("NMFS") (jointly referred to as "Agencies") on *[enter date approved]*, and is currently in good standing with the Agencies; and

C. The ILF Program has received approval from the Agencies to offer Aquatic Resource Credits and Vernal Pool Credits pursuant to the ILF Program Instrument ("ILF Instrument"), as compensation for impacts to aquatic resources regulated by the Agencies, and

D. Project Applicant is seeking to implement the project described on Exhibit "A" attached hereto ("Project"), which would unavoidably and adversely impact \_\_\_\_\_ *[enter species or habitats to be impacted by the project]*, and seeks to compensate for the loss of \_\_\_\_\_ *[enter species/habitat affected]* by purchasing credits from ILF Program; and

E. Project Applicant has been authorized according to the following permit(s) *[enter regulatory agency name and permit #(s)]* to purchase from the ILF Program \_\_\_\_\_ *[enter number of credits and credit type]* Credits upon confirmation by the Program Sponsor of credit availability in the required Service Area(s); and

F. Project Applicant desires to purchase from the ILF Program and the Program Sponsor desires to transfer to Project Applicant \_\_\_\_\_ *[enter number of credits and credit type]* Credits;

### NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. The Program Sponsor hereby agrees to transfer to Project Applicant from the ILF Program \_\_\_\_\_ *[enter number of credits and credit type]* Credits for the purchase price of \_\_\_\_\_ ("Purchase Price"). This Agreement is expressly conditioned upon the Program Sponsor's receipt of the Purchase Price for said Credits, in accordance with this Agreement.

2. The sale and transfer of the Credits is not intended as a sale or transfer to Project Applicant of a security, license, lease, easement, or possessory or non-possessory interest in real property, nor the granting of any interest in any of the foregoing.

3. Project Applicant shall have no obligation whatsoever by reason of the purchase of the Credits, to support, pay for, monitor, report on, sustain, continue in perpetuity, or otherwise be obligated or liable for the success or continued expense or maintenance in perpetuity of the Credits transferred, or the ILF Program. The Program Sponsor shall be fully and completely responsible for satisfying any and all conditions placed on the Credits transferred and the ILF Program.

4. The Credits sold and transferred to Project Applicant shall be non-transferable and non-assignable, and shall not be used as compensatory mitigation for any other Project or purpose, except as set forth herein.

5. Project Applicant must deliver to Project Sponsor by cashier's check or wire transfer (in accordance with written instructions to Project Applicant from Program Sponsor) within thirty (30) days of the execution of this Agreement, or this Agreement will be considered null and void.

6. Upon receipt of the Purchase Price, transfer of the Credits specified in Section 1 above, shall be effectuated and evidenced by Program Sponsor's delivery to Project Applicant of an executed Bill of Sale in the form attached hereto and marked Exhibit "B." The Program Sponsor shall submit to the parties listed in the Notices section of the ILF Instrument, copies of the: a) Credit Transfer Agreement; b) Bill of Sale; c) Payment Receipt; and d) an updated credit ledger reflecting the transfer of Credits to the Project Applicant.

IN WITNESS WHEREOF, the parties have executed this Agreement the day and year first above written.

SAC CA ILF Program:

National Fish and Wildlife Foundation (Program Sponsor)

By: \_\_\_\_\_ Date: \_\_\_\_\_

PROJECT APPLICANT:

*[Enter NAME OF PROJECT APPLICANT/COMPANY]*

By: \_\_\_\_\_ Date: \_\_\_\_\_

Exhibit "A"

**DESCRIPTION OF PROJECT  
TO BE  
MITIGATED**

[Name of Project (Regulatory permits and permit No's. \_\_\_\_\_)],  
\_\_\_\_\_ County, California

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Exhibit "B"

**SACRAMENTO DISTRICT CALIFORNIA IN-LIEU FEE PROGRAM  
BILL OF SALE**

Contract # \_\_\_\_\_ *[ILF Program Transfer Number]*

In consideration of \$\_\_\_\_\_, receipt of which is hereby acknowledged, the National Fish and Wildlife Foundation ("Program Sponsor") does hereby sell and transfer to \_\_\_\_\_ ("Project Applicant"), \_\_\_\_\_ Credits from the \_\_\_\_\_ Service Area of the SAC CA ILF Program, which has been approved by the Sacramento District of the U.S. Army Corps of Engineers ("USACE"), Region IX of the U.S. Environmental Protection Agency ("USEPA"), the Central Valley Regional Water Quality Control Board ("Central Valley Water Board"), the Lahontan Regional Water Quality Control Board ("Lahontan Water Board"), and the National Oceanographic and Atmospheric Administration's National Marine Fisheries Service ("NMFS") (jointly referred to as "Agencies")

Program Sponsor, represents and warrants that the ILF Program is in good standing with the Agencies, has available the specified number of \_\_\_\_\_ Credits, and has authorization from the Agencies to transfer the Credits to the Project Applicant.

Project Sponsor also represents and warrants to the Project Applicant that it has all right, title, and interest in the Credits necessary to transfer them to the Project Applicant.

DATED: \_\_\_\_\_

National Fish and Wildlife Foundation, Program Sponsor

By: \_\_\_\_\_

Exhibit "C"

**SACRAMENTO DISTRICT CALIFORNIA IN-LIEU FEE PROGRAM—  
Payment Receipt**

**PROJECT APPLICANT INFORMATION**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Contact: \_\_\_\_\_

**PROJECT INFORMATION**

Project Description: \_\_\_\_\_

Agency File Number's: \_\_\_\_\_

Species/Habitat Affected: \_\_\_\_\_

Credits Transferred: \_\_\_\_\_

ILF Program Service Area: \_\_\_\_\_

Payment Amount: \_\_\_\_\_

Project Location: \_\_\_\_\_

County/Address: \_\_\_\_\_

**PAYMENT INFORMATION**

Payee: \_\_\_\_\_

Payer: \_\_\_\_\_

Amount: \_\_\_\_\_

Method of payment: Wire Transfer \_\_\_\_\_ Check No. \_\_\_\_\_ Money Order No. \_\_\_\_\_

Received by: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

Name: \_\_\_\_\_ Title: \_\_\_\_\_

**SAC CA ILF PROGRAM - SAMPLE SERVICE AREA CREDIT LEDGER**  
**Date Submitted to IRT -**

	Authorized Advance Credits	Credits Sold to Date	Authorized & Allocated Released Credits	Available Advance Credits	Authorized & Unallocated Released Credits	Available Credits
<b>Aquatic Resource Service Areas</b>						
American						
Bear/Yuba						
Cache/Putah						
Calaveras/Stanslaus						
Carson/Walker Basin						
Cosumnes/Mokelumne						
Feather						
Kaweah/Tule						
Kern						
King						
Merced/Tuolumne						
Modoc						
Northeast Sacramento River						
Northwest Sacramento River						
Pit River						
Red Bluff						
Redding						
San Joaquin						
Tahoe						
Unallocated Program Area						
<b>Vernal Pool Service Areas</b>						
Carrizo						
Central Coast						
Lake-Napa						
Livermore						
Modoc						
Northeast Sacramento Valley						
Northwest Sacramento Valley						
San Joaquin Valley						
Solano-Colusa						
Southeastern Sacramento Valley						
Southern Sierra Foothills						
All Other Vernal Pool Areas						