Ecosystem Credit Registry

Willamette Thermal Load Credit Verification Protocol

Draft

Version June 24, 2008

Table of Contents

Key Terms

Baseline	Data against which to measure temperature reductions over time, usually the project conditions in a base year before credit actions began.
Conflict of Interest	A situation in which, because of other activities or relationships with other persons or organizations, a person or firm is unable or potentially unable to render an impartial verification opinion of a Credit Owner's estimated credits.
Standard Agreement for Credit Registration ("Credit Report")	A report submitted to the Registry by a Credit Owner that provides an estimate of the quantity of credits generated from a project. The estimate is submitted with supporting documentation.
Client	Either a Credit Owner or a Buyer who participates in the Registry
Buyer	A likely buyer of credits.
Credit Owner	An individual or organization proposing a credit project for verification and entry into the registry.
Registry	The electronic platform used to submit and track information related to estimated credits, verification, and credits available for sale.
Verification activities	Activities undertaken during third-party verification that include reviewing a Credit Owner's estimated credits, verifying the accuracy of measurement, and submitting a Verification Report to the Registry.
Ecosystem Credit Registry	The governing body responsible for credit generation protocols, verification protocols, registration of credits, and other market activities.

Part I: Introduction

Overview

The Thermal Load Credit Verification Protocol[1] is meant to provide standardized guidance on the review and assessment of thermal load credit projects (riparian shade, flow augmentation, and treatment wetlands) to meet the objectives of the Willamette Temperature Total Maximum Daily Load. The protocol is designed for those who are doing the verification, but the guidance will also be useful for other market Clients. To become a Registry-approved third-party verifier, an individual[2] must successfully complete an application and be approved to become an accredited verifier.

Third party verification is defined as an independent expert assessment of the accuracy and conformity of a Credit Owner's Credit Report with agreed upon criteria. The purpose of verification is to provide confidence to Registry Clients that credits represent a faithful, true, and fair account of thermal load credit benefits- free of material misstatements and conforming with the Registry's accounting and credit generation standards. To do this, information should be complete (project eligibility, baseline information, proposed actions, credit calculations, and protections of credit quality), consistent (comparable data over time), accurate (findings should be repeatable), and transparent.

The protocol is organized into six parts:

Part I: Introduction
Part II: Definition of accredited verifiers and process for becoming accredited
Part III: Conducting verification
Part IV: Completing the verification process
Part V: Annexes

Who benefits from verification?

Reporting and verifying thermal load discharges into the Willamette River are the responsibilities of point sources dischargers holding a National Pollutant Discharge Elimination System (NPDES) permit and the Oregon Department of Environmental Quality. Reporting and verifying thermal load credit generating projects used to offset those discharges ultimately remains the responsibility of those same permit holders. This protocol provides a standardized verification process by which the Registry, its accredited verifiers, and Credit Owners assist the permittee in reporting and reviewing water quality credit performance.

---

[1] This protocol is modeled onThe Climate Registry's draft verification protocol, which in turn is consistent with ISO 14064-3 and forthcoming ISO 14066 standards on greenhouse gas verification
[2] Under special circumstances, an organization might become accredited as a verifier subject to review by the Registry

The quantity of thermal load credits generated by a given project is calculated using the Registry's set of Credit Generation Protocols. Verification is required for listing thermal load credits on the Registry, but is not a requirement to produce credits traded outside of the Registry. This protocol provides direction on how a verifier should review and verify a project's calculations of thermal load credits. All verifiers should be familiar with Credit Generation Protocols.

These protocols are available at the Registry's website: www.willamettepartnership.org. If you have difficulty accessing any of the documents, please call 503-434-8033.

Protocol Questions and Adaptive Management

The Registry's credit generation and verification protocols are designed to work together. If there is a conflict between any of the documents, or if you have questions, please contact the Registry at: 503-434-8033.

Protocols and the science and information behind them can always be improved. The Registry welcomes feedback and ideas on improving protocols. Comments can be submitted online at: www.willamettepartnership.org.

Verification Process Overview

Monitoring and reporting on thermal load project/credit performance occurs at least annually and is primarily the responsibility of the Credit Owner. Verification is conducted by individuals who have been accredited by the Registry and occurs on different cycles for different credit types as follows:

- **Riparian shade:** Full verification in years 1, 5, 10, and 20[3], and streamlined review of annual monitoring reports in other years.
- **Flow augmentation:** Full verification in year 1, and streamlined review of annual monitoring reports following release of water for that year.
- **Treatment wetlands:** Full verification in years 1, 5, 10, and 20, and streamlined review of annual monitoring reports in other years.

The goal of verification is to confirm:

1. Credit generation protocols were followed completely and accurately
2. Proposed actions have been completed per the Credit Report
3. Appropriate monitoring and maintenance plans are in place to ensure longevity of credits
4. Verify the quantity of estimated thermal load credits

For a credit to be verifiable, the Credit Report must be free of material misstatements. A material misstatement must be declared if the reported credit generation information does not appropriately describe project conditions and differs greatly from the verifier's

[3] These years were chosen to match the permit cycle used for issuing NPDES permits every five years. Full verification in years 5 and 10 are designed to provide potential information to Buyers and to Oregon DEQ for use in drafting future permits.

assessment of that same information. To be verifiable, a verifier's estimates of credit quantity must be within 15% of information proposed by the Credit Owner. The Registry recognizes that there is inherent uncertainty involved in field data collection. The 15% standard is meant to capture differences in reporting uncertainty, stemming from sampling and calculation differences. If the difference in estimates is greater than 15%, the difference is material, and the verifier must use best professional judgement in determining the quantity of credits to verify.

Once successful verification is complete, the verifier submits their Verification Report to the Registry, which is attached to the credit records.

Part II. Definition of accredited verifiers and process for becoming accredited

Becoming an Accredited Verifier

Verifiers must be accredited by the Registry before they are eligible to conduct verification activities on behalf of Registry Clients. The Registry will accredit verifiers that are qualified to review one or more types of thermal load credit generation protocols. A verifier is an individual that has demonstrated their ability to assess thermal load credits. They must also demonstrate the means to accept financial liability[4] for verification activities undertaken for a Registry Client. This liability will be determined in the Verification Services Agreement signed between the verifier and the Client. The Registry will release a Request for Applications (RFA) annually or as needed to allow interested verifiers to apply for Registry accreditation. Interested verifiers must complete the following steps:

1. Submit an application in response to the Registry's RFA.
2. Receive notice from the Registry that the application has been approved.
3. Attend a Registry Verification Training Session (held approximately two months following the Registry's notification of acceptance from its RFA).
4. Keep the Registry informed of any changes affecting the accreditation (e.g. potential conflicts of interest)

Accreditations are effective for 5 years from the time they are issued. After the 5 years has expired, verifiers must re-apply for renewal by responding to the RFA in the year their accreditation will expire.

Conflict of Interest

The independence of verification is important. Verifiers acting on behalf of the Registry must work in a credible, independent, nondiscriminatory, and transparent manner, complying with applicable state and federal law. This includes disclosing any pre-existing relationships between the Credit Owner or Buyer and the verifier. Verifiers must provide a Notice of Verification and Conflict of Interest Form to the Registry at least 10 business days before verification activities can proceed.

As an added protection, a verifier can only provide verification services to a Registry Client for a period up to five years. If a verifier violates these conditions, the Registry at its discretion, may disqualify an accredited verifier for a period of up to five years. See the Registry's Conflict of Interest Code for full detail.

The Oregon Department of Environmental Quality[5] may send representatives to accompany verifiers in the course of verification activities for primarily for but not limited to information and educational purposes. In the very rare instance when a Credit

---

[4] This is meant to cover standard liability coverage of consultants. This does not imply that verifiers bear additional liability under credit protocols beyond what is in current Federal, Oregon, and local statutes.
[5] Other representatives may accompany verifiers at the discretion of the Credit Owner.

Owner may request that information resulting from these visits be kept confidential, the state agency and Registry will consider the request to the limited extent authorized by ORS 468.095(2)governing state confidentiality and EPA's Regulations on the Confidentiality of Business Information (see 40 CFR Part 2).

Part III: Conducting verification

The primary goals of verification are to ensure a Credit Owner's Credit Report and Monitoring Reports meet the required level of accuracy. This does not include re-collecting data. Verification looks to see that data collection methodologies are consistent with the Credit Generation Protocols, actions are implemented as planned, and all the contracts are in place to ensure protection, maintenance, and monitoring of those credits. The Registry currently recognizes riparian shade, flow augmentation, treatment wetlands, and water reclamation/reuse as credit projects.

See Annex 1 for detailed explanation of verification process. All steps must be completed by the verifier to submit their report to the Registry. The schedules below outline the minimum frequency and requirements for verification. A Credit Owner or a contract between Credit Owner and credit purchaser can require more frequent verification or additional steps. To meet the Registry's conflict of interest policies, one verifier would be able to complete verifications in years 1-5 for shade, flow, and wetlands. Following that verification cycle, a new verifier must be chosen in year 6 for the next cycle. Under normal circumstances, verification activities should occur as follows:

Riparian Shade

Year	*Activities*
1	Review credit generation information Confirm planting is complete Confirm contracts are in place for protection, maintenance, monitoring
2-4	Streamlined review of annual monitoring reports
5	Visit site to confirm data in annual monitoring reports
6-9	Streamlined review of annual monitoring reports
10	Visit site to confirm data in annual monitoring reports
11-19	Streamlined review of annual monitoring reports
20	Visit site to confirm final performance report and submit credit retirement report to the Registry

Flow Augmentation

Year	*Activities*
1	Confirm quantity of flow released over contracted time period Confirm protection of that water to contracted point
Proceeding years	Streamlined review of annual monitoring reports every year flow is augmented

Treatment Wetland

Year	*Activities*
1	Review credit generation information Confirm design and construction is complete Confirm planting is complete Confirm contracts are in place for protection, maintenance, monitoring
2-4	Review of annual monitoring reports for vegetation and hydrology

5	Visit site to confirm data in annual monitoring reports
6-9	Streamlined review of annual monitoring reports
10	Visit site to confirm data in annual monitoring reports
11-19	Streamlined review of annual monitoring reports
20	Visit site to confirm final performance report and submit credit retirement report to the Registry

Credit Owners will have already collected and entered their data into the Registry's system. Once a verifier has been selected, the verifier will have access to this information to use. Verifiers will also need to enter their reports into the Registry's system. In reviewing annual Monitoring Reports on years where site visits are not required, verifiers must complete a cursory check of reported information to ensure the Credit Owner has not overlooked an event that significantly impacts the status of their temperature credits. Credit Owners need to report any significant changes that might affect their credits (tree removals, significant natural disturbances, ownership change, etc.) These reports may also contain optional information beyond what is required (e.g. biodiversity benefits, additional protections, etc.). This data is optional and does not require verification.

Dispute Resolution

There may be instances where a verifier and a Client cannot agree on the findings in a Verification Report. In such instances, both parties can request the Registry Dispute Resolution Committee (composed of PEOPLE) to come to a unanimous, binding decision. Both the verifier and the Client will pay an equal filing fee to submit their case to the committee. As part of every Verification agreement, both the verifier and the Client will need to sign agreeing to this Dispute Resolution Policy.

Part IV: Completing the verification process

There are a number of core verification activities needed for all credit types. Table 1 contains the verification elements:

Table 1: Verification Process

Review Credit Owner and project eligibility	
1. Can the sponsor demonstrate ownership of the proposed credits?	2. Review contracts, land ownership, easements, etc.
1. Is the project in the Willamette Basin and appropriate?	2. Review site location map and geographic boundaries of the project 3. Confirm project has met the minimum requirements described in the credit generation protocol
1. Does the project provide additional benefits?	2. Review proof the project is not fully funded by public dollars dedicated to restoration 3. Review proof that trees have not been recently cleared, water rights are valid, and wetlands do not currently exist
Year 1 activities	
1. Verifier validates Credit Report submitted to the Registry (Verifier must discuss with the Credit Owner how the baseline was selected and measured, how sampling points were selected, and the methods used to estimate credits)	2. Review supporting documentation (current conditions data, sampling points, data inputs into credit generation calculations, model outputs, contracts, etc.) 3. Confirm completion of appropriate implementation steps (planning docs, invoices, photos, etc.) 4. Conduct site visit 5. Revise credit estimates as necessary based on verifier feedback
Year 2-4	
1. Verifier reviews annual monitoring reports in the Registry	2. Review supporting documentation (data sheets, model outputs, contracts, etc.) 3. Conduct site visit if needed

Once these core verification activities are completed, the verifier can complete a Verification Report that contains a summary which will be available to the public, an opinion on the credit estimates, and a log of activities and findings. This report needs to be submitted to the Registry's system. Annual reports will need sign-off from verifiers for projects to remain in the Registry. The Registry will consider the Verification Report and before certifying credits and accepting the project into the Registry. Table 2 describes the certification process.

Table 2: Certification Process

Task	Date Completed
Project Credit Report is complete and submitted to Registry	
Credit Report is verified (Verification Report are submitted to the Registry)	
Annual reports are submitted and verified	
Verified credits are certified by the Registry and made available for sale	

Annex 1. Overview of Verification Process

1. **Credit Owner and/or Buyer selects Verifier:** Clients contact one or more of Registry-accredited verifiers to discuss verification activities. Clients select a verifier and begin to negotiate agreement terms.

2. **Verifier and Client finalize Agreement and send Notice to Registry:** When the verifier and Client finalize a Verification Agreement, they must submit a Verification Notice to the Registry. The Notice must be submitted 10 business days prior to beginning verification activities, and must include a Conflict of Interest Form from the verifier to establish the likelihood of a conflict of interest between the parties is low.

3. **Verifier conducts verification activities:** Verifier follows the guidance in the verification protocol to evaluate Credit Owner's Credit Report.

4. **Verifier prepares Verification Report for Client:** Verifier prepares a detailed summary of the verification activities for the Client. This includes a draft opinion for Client's review.

5. **Verifier and Client discuss Verification Report:** Verifier meets with Client to discuss Verification Report.

6. **Verifier submits final Verification Report to the Registry:** Once authorized by a Client, a Verifier completes the Verification Report Form on the Registry.

7. **Registry completes reporting process:** Registry reviews the Verification Report and evaluates Credit Owner's Credit Report. Once accepted into the Registry, the credit will be available for sale and a project summary available to the public.

***Steps 2-7 are completed for years 2-4 of a Verification Cycle as well.**

Annex 2. Verification Notice and Conflict of Interest Form

Ecosystem Credit Registry

VERIFICATION NOTICE & CONFLICT OF INTEREST FORM

Last updated June 19, 2008. For questions, contact: David Primozich at Primozich@verizon.net.

Date:

Credit Owner Name:
Company/Agency: Title:
Telephone:
Email:
Mailing address:
Seller account number:

Verifier Name:
Company/Agency: Title:
Telephone:
Email:
Mailing address:
Verifier accreditation number: Valid until:

The parties listed above have entered into a verification services agreement to verify the following credits at these sites:____________________________________

Serial #	Quantity	Type	Service area
1			
2			

To the best of my knowledge, I (*printed name*) attest that the information provided in support of this conflict of interest form is true and complete and that I have complied with the Registry's current *Conflict of Interest Code*.

__________________ __________________
Verifier signature Date

Based on the information provided in the following pages, we believe our risk of Conflict of Interest for verification of the following site(s) is:

High ☐ Medium ☐ Low ☐

For Registry purposes only:
Date received:
Date application found to be complete:

Annex 3: Verification Report

Ecosystem Credit Registry

VERIFICATION REPORT

Last updated June 19, 2008. For questions, contact: David Primozich at Primozich@verizon.net.

Verification Opinion

Name of Verifier_____________________

This is to verify that CREDIT OWNER has been reviewed for the DATE reporting year, and has been verified according to the Ecosystem Credit Registry's Temperature Credit Verification Protocol against the standards set forth in the Registry's Credit Generation Protocol.

Verification Opinion:

Serial #	Credit Report Quantity	Credits verified without qualification	Credits unable to verify	Type	Vesting Date	Service area
1						
2						
3						

Base Year:

Attestation:

________________ ____________________

Verifier Date

Authorization:

I CREDIT OWNER NAME authorize the above named verifier to submit an electronic version of this Verification Report to the Ecosystem Credit Registry.

____________________ ____________________

Credit Owner Date

Verification Log

Preparing for Verification	Date Achieved
Bid on a verification agreement	*
Negotiate agreement with Client	*
Submit Notice and Conflict of Interest Form to Registry	
Conduct kick-off meeting with Client	*
Plan verification activities	*
Determining Eligability	**Task Completed**
Project completed a pre-screening	*
Project is in the Willamette Basin	
Project meets minimum requirements	
Initiated in year 2006 or later	
Project is an eligable type	
Project conforms with applicable laws	
Project is additional	
Disclosure of public matching funds	
Determining Credit Quantity	**Task Completed**
Description of baseline conditions	
Description of activity and dates completed	
Sampling methodology	
Credit calculation methodology	
Determining Adequate Maintenance	**Task Completed**
Contracts in place to protect activities for required times and geographies	
Monitoring plans in place	
Contracts in place for maintenance for required times and geographies	
Completing Verification	**Task Completed**
Prepare detailed Verification Report for Client	*
Conduct meeting with Client to discuss report	*
Submit Report to the Registry	
Submit Report to Client for their records	

*Optional fields