

ENVISION V3 CREDIT AMENDMENT #001

Incineration of Waste

Relevant Credits:

RA1.3 Reduce Operational Waste
RA1.4 Reduce Construction Waste

Issue

Credits RA1.3 and RA1.4 involve reducing waste and diverting waste streams from disposal to recycling and reuse. Are project teams allowed to count the incineration of waste materials as an acceptable method of diverting waste from landfills?

Amendment¹

Incinerating waste, even for waste-to-energy generation and regardless of material type (e.g., materials classified as biomass) is not considered an acceptable means of reducing waste for any level of achievement for RA1.3 or RA1.4. Any waste generated that is incinerated or planned to be incinerated should be included in the total waste generated during operations (RA1.3) or total waste generated during construction (RA1.4). Such waste may not be considered material diverted from landfills when calculating the percentage of waste diverted for a level of achievement, unless such waste is deemed hazardous and local, state/provincial, and federal laws require it to be incinerated. (Waste deemed hazardous should not be included in total waste calculations.)

Discussion

While several acceptable means of diversion are included in the Performance Improvement section for these credits, there remains some ambiguity based on the phrase: “*Acceptable means of diversion may include but are not limited to*” which precedes a list of means of diversion. ISI’s intent with this Credit Interpretation is to remove ambiguity about the incineration of waste as an acceptable means of diversion. Waste sent for incineration – regardless of whether or not it is biomass, and regardless of whether or not the incinerated materials will be used to generate energy – is not considered an acceptable means of diversion to earn a level of achievement for these credits. (High-performing waste-to-energy facilities may be eligible for levels of achievement for other credits.)

¹ The *Envision guidance manual* is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how *Envision credits* are assessed and verified in certain situations encountered by real projects.

Example

For credit RA1.4 Reduce Construction Waste, a project can earn an “Enhanced” Level of Achievement by demonstrating that during construction, at least 50% of waste materials are recycled, reused, and/or salvaged. Acceptable forms of diversion that contribute to the team’s ability to achieve at least 50% diversion from landfill may include a combination of waste-reduction measures and sourcing waste to other facilities for recycling or reuse. Incinerated waste may not count towards achieving the required diversion percentage.

ENVISION V3 CREDIT AMENDMENT #002

Defining Operational Waste and Applicability

Relevant Credits:

RA1.3 Reduce Operational Waste

Issue

The credit requirements for RA1.3 relate to “operational waste or byproducts”. It is unclear whether applicants should include only direct waste produced by the project, or also indirect waste produced as a result of the project (e.g., accumulated litter).

In addition, the applicability of this credit does not address the significance of the waste stream. This is inconsistent with the approach taken in credit RA2.1 Reduce Operational Energy Consumption which states,

“In rare cases, where the amount of operational energy use is insignificant in comparison to the scale of the project, teams may apply to have this credit deemed not applicable with supporting documentation. However, the reviewer may exercise his/her discretion in determining what constitutes an insignificant quantity of operational energy use in the context of the project.”

Amendment¹

For RA1.3 applicants should include both waste produced directly by the project, or received on site as a result of the project operation and managed by the project (e.g., litter).

The section *Applicability* is modified to read,

“This credit is applicable to all projects that produce or manage operational waste or byproducts. Projects that do not include operational waste may apply to have this credit deemed not applicable with supporting documentation. In rare cases, where the amount of operational waste is insignificant in comparison to the scale of the project, teams may apply to have this credit deemed not applicable with supporting documentation. However, the reviewer may exercise his/her discretion

¹ The Envision guidance manual is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how Envision credits are assessed and verified in certain situations encountered by real projects.

in determining what constitutes an insignificant quantity of waste in the context of the project.”

Discussion

Whether produced directly or indirectly as a result of the project, waste reduction and diversion from landfills to recycling or reuse is an environmental imperative. Project teams should look for opportunities to meet the RA1.3 requirements whenever possible.

It is also understood that in certain cases the amount of waste associated with a project may be so insignificant that factoring it into an Envision assessment would be contrary to the framework’s purpose of recognizing important achievements. In these cases, applicants should have the option of excluding credit RA1.3 in order to produce more accurate and meaningful results.

Example

For credit RA1.3, projects must consider the waste received or disposed of onsite (e.g. litter), even though this waste is not generated by the project itself. Example projects include public roads, bridges, highways, parking lots, and parks.

Projects should also consider the scope of such waste generated in comparison to the entire project. In these cases, the credit could be deemed “Not Applicable”. Examples may include:

- A large wind farm that includes a small waste receptacle for the personal waste of infrequent maintenance staff visits.
- An environmental restoration project that includes a small handicap-accessible parking lot with a few waste receptacles that are emptied weekly as part of the Parks maintenance schedule.

ENVISION V3 CREDIT AMENDMENT #003

Clarifying Balance Earthwork Intent and Requirements

Relevant Credits:

RA1.5 Balance Earthwork On Site

Issue

For RA1.5, the credit title, *Level of Achievement* table, and *Performance Improvement* section clearly indicate that the credit requirements relate to balancing and minimizing earthwork, including excavated materials taken off site and/or fill brought onto the site. However, the *Intent* statement, *Metric* statement, and *Evaluation Criteria and Documentation Guidance* sections refer only to excavated materials taken off site.

Amendment¹

Credit RA1.5 includes both excavated materials taken off site and/or fill brought onto the site.

The *Intent* statement is modified to read, “Minimize the movement of soils and other excavated materials on or off site to reduce transportation and environmental impacts.”

The *Metric* statement is modified to read, “Reduction in transportation of earthworks on or off the site.

Criterion A is modified to read, “To what extent has the project team designed the project to balance cut and fill to reduce the excavated material taken off site and/or fill brought onto the site?”

Documentation guidance A.1 is modified to read, “Documentation showing how the project balanced cut and fill on site and calculations of the percentage of excavated or fill materials remaining on site.”

Documentation guidance A.2 is modified to read, “Documentation showing the source or destination of any materials transported on or off site and their proximity to the project site.

¹ The *Envision guidance manual* is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how *Envision* credits are assessed and verified in certain situations encountered by real projects.

Discussion

Since the intent of RA1.5 is to reduce the transportation and environmental impacts of moving soils and excavated materials, it is important that project teams address both materials removed from the site and those added to the site. Likewise, both opportunities should be explored to beneficially reuse material excavated from the project site on nearby sites or to use excavated material from nearby sites as fill for the project site.

Example

Project teams should strive to reduce both the excavated material removed from the site and additional fill material brought onto the site. To the extent this is not possible, project teams should look for options close to the project site to send or source these materials.

ENVISION V3 CREDIT AMENDMENT #004

Reclaim Brownfields Applicability

Relevant Credits:

NW2.1 Reclaim Brownfields

Issue

For NW2.1 the *Applicability* section reads,

“Project teams that were unable to identify a suitable site may apply to have this credit deemed not applicable with supporting documentation that efforts were made. If no evidence is provided that any consideration was given to locating the project on a brownfield, the credit is considered applicable and no points achieved.”

This text is intended to exclude the credit for projects that, through no fault of their own, may not have the option of locating their project on a brownfield and is consistent with applicability statements in other Natural World siting credits. However, the requirement to provide supporting documentation that efforts were made to locate the project on a brownfield overlooks two situations, (1) where no site alternative had the potential to be a brownfield, and (2) where projects do not undergo a site selection process because the location of the project is not a choice (e.g., resurfacing an existing airport runway, refurbishing an existing facility). In these cases it is often impossible for applicants to demonstrate that consideration was given to siting the project on a brownfield if no such option existed.

Amendment¹

For NW2.1 the Applicability section is modified to read,

“To deem this credit not applicable projects must provide documentation to meet two requirements.

- (1) Projects are not located on brownfields or sites determined to contain contamination by a Phase 1 Environmental Site Assessment, OR can demonstrate why no site analysis for contamination was warranted.**

¹ The *Envision guidance manual* is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how *Envision credits* are assessed and verified in certain situations encountered by real projects.

(2) Projects that make reasonable efforts, or are unable, to locate their project on a contaminated site in any of the following ways:

(a) the project team made efforts but were unable to identify a brownfield site for the project;

(b) a limited number of site choices were possible and none qualified as a brownfield; or

(c) the project team can demonstrate that no alternative sites were possible because the project is geographically constrained to a single site or alignment.

If no evidence is provided that any consideration was given to locating the project on a brownfield, or insufficient evidence is provided to meet any of the criteria above, the credit is considered applicable and no points achieved."

Discussion

In Envision v3 NW2.1 Reclaim Brownfields became an independent credit in recognition of the nuances and challenges of developing on a brownfield site, and to appropriately reward projects that can make such an important contribution to environmental restoration. The intent was not to penalize projects that do not have the option of utilizing a brownfield site.

Applicants should take care if pursuing option (c) designating no alternative sites were possible. This may often be a question of perspective and hinge on decisions made prior to the applicant's or project team's involvement in the project. A reviewer will be looking for the project team to demonstrate that at no point in the planning process were solutions with alternative sites considered as an option and that this was because the project inherently could not utilize any other site. If other solutions and/or sites were considered and none were suitable brownfields applicants are better advised to pursue option (b).

Applicants challenged with providing supporting documentation for deeming NW2.1 not applicable should consider contacting state/provincial, or federal brownfield programs for guidance and statements about the suitability or availability of brownfield sites for the project.

Example

To claim credit NW2.1 as Not Applicable, a project must show that the project is not located on a brownfield or site determined to contain contamination and that there were no alternatives to locating the project on a brownfield site.

In all cases, project teams must show that the site selected is not designated as a remediated, active, or potential brownfield site. In addition, the project team must demonstrate that no options were available to place the project on such a site. Examples of this may include:

- A bridge replacement project located in the same footprint as the original.

- A dechlorination facility located within an existing wastewater treatment plant.
- A new urban park sited to restore bicycle and pedestrian connectivity between specific neighborhoods and a regional trail network.
- A wind farm located to maximize wind currents in an area where no designated brownfield options are in the vicinity.

A project team cannot submit for Not Applicable if a seriously considered alternative site was not selected because it was a designated brownfield.

ENVISION V3 CREDIT AMENDMENT #005

LD1.1 Clarifying Requirements for Key Members of the Project Team

Relevant Credits:

LD1.1 Provide Effective Leadership and Commitment

Issue

Credit LD1.1 has specific requirements under criterion D for actions taken by “key members” of the project team. The LD1.1 Description states,

“The intention of referencing the project team is to capture major decision makers involved in the project, as well as those who act as primary advisors, consultants, or specialists on behalf of decision makers. This will almost always include the owner, those who act as lead designers (engineers, architects, landscape architects, etc.), and those who manage and execute the project through construction, but ideally would also include those responsible for funding, operating, regulating, subconsulting, or otherwise utilizing the project (e.g., community groups).”

While it is implicit, the manual does not explicitly state that ALL key members must meet the requirements. In addition, if all key members must meet the requirements additional guidance is needed for identifying project team members that qualify as “key”.

Amendment¹

The criterion D requirements apply to ALL key members of the project team. Key members include the (1) owner, (2) lead designer(s), and (3) lead construction contractor(s).

Lead designers and lead construction contractors may be those contracted directly to the owner. Some Envision assessments may encompass multiple components each with a lead designer and construction contractor, or a project with multiple lead designers and lead construction contractors, contracted directly to the owner. In these cases, all key members must still meet the criteria.

In cases where the role of owner, lead designer, or lead construction contractor changed during the project, applicants should choose the most appropriate of the following options,

¹ The Envision guidance manual is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how Envision credits are assessed and verified in certain situations encountered by real projects.

(1) the current key member, (2) the key member responsible for the majority of the relevant project work.

In cases where a key member has not yet been identified applicants may submit documentation that meeting the credit requirements will be part of the key member selection process or a requirement of the contract agreement.

A joint venture may meet the requirements as an independent entity, or by documenting how the partners in the joint venture that fill the roles of lead designer(s) and lead construction contractor(s) meet the requirements.

Key members do not include project team members sub-contracted under the lead designer or lead contractor.

Key members do not include those contracted to the owner who do not perform work relevant to the Envision assessment, or who do not function as lead designers or lead construction contractors.

Projects that can demonstrate additional members of the project team meet the credit requirements may be eligible for innovation points for exceeding credit requirements under credit LD0.0 Innovate or Exceed Credit Requirements.

Discussion

Credit LD1.1 focuses on the value of systemic and collective action. For those engaged in developing high-quality infrastructure sustainability leadership must be shared core values. If LD1.1 requirements are embedded within all key members of the project team there is reason to expect those core values will underpin decision-making throughout the project. In addition, these key members serve as an example and growth opportunity for other members of the project team who have not yet taken the necessary steps toward becoming sustainability leaders.

Example

Projects must show that the criterion D requirements apply to ALL key members of the project team. Examples may include:

- In a Design-Bid-Build contract pursuing Pathway A, project team submits materials for owner and lead design firm. As the contractor has not yet been selected, project team submits this credit as “Pending” and provides the project’s special provisions stating that contractors will be required to provide their organizational commitments to sustainability.
- In a Design-Bid-Build contract pursuing Pathway B, the role of the contractor was changed at 65% construction completion. While the original contractor met the intent of criterion D, the replacement contractor does not. Project team may submit

materials for the original contractor, as they were the key member responsible for a majority of the relevant construction work.

- A large project, pursuing Pathway A, will undergo multiple phases with different Design-Build firms selected for each phase. Taking this as a programmatic approach, the project team submits materials for owner and any Design-Build firm currently under contract. Further, they submit this credit as Pending and supply a letter from the owner stating that the selection criteria for future Design-Build firms will require documentation of organizational commitments to sustainability.
- A large project, pursuing Pathway A, will undergo multiple phases with different Design-Build firms selected for each phase. The owner has selected a Joint Venture to act as an Owner's Representative and manage the program, including contracting with the Design-Build firms. As the Joint Venture is acting on behalf of the owner, the project team must submit materials for owner, the Joint Venture, and any Design-Build firm currently under contract. Further, they submit this credit as Pending and supply a letter stating that the selection criteria for future Design-Build firms will require documentation of organizational commitments to sustainability.
- The owner and lead design firm provide materials to meet the intent of criterion D. The contractor meets the intent, but they are concerned as 66% of the construction work will be subcontracted to other firms. The project team only needs to provide materials related to the owner and those contracted directly to the owner.

ENVISION V3 CREDIT AMENDMENT #006

Demonstrating Commitments to Equity and Social Justice

Relevant Credits:

QL3.1 Advance Equity and Social Justice

Issue

Criterion C requires documentation of, “*policies and commitments concerning equity and social justice. This should include, but not be limited to; a) non-discrimination, b) diversity and inclusion, c) pay equity.*” The wording of the requirement is unclear and can be interpreted that both policies and commitments are required for each of the three items listed, as well as unidentified items beyond the list. This ambiguity also exists in the *Level of Achievement* table under criterion C.

Additionally, the text falls short of emphasizing the credit intent that, “equity and social justice are fundamental considerations”. This can and should go beyond written policies and commitments to include actions.

Amendment¹

For QL3.1 the *Level of Achievement* table criterion C text is modified to read, “Key members of the project team demonstrate institutional commitments to equity and social justice.”

Evaluation Criteria and Documentation C.1 text is modified to read, “Documentation of corporate/organizational policies, commitments, or actions concerning equity and social justice. This may include, but is not limited to: a) Nondiscrimination, b) Diversity and inclusion, c) Pay equity.”

Discussion

The intent of credit QL3.1 is to, “Ensure that equity and social justice are fundamental considerations within project processes and decision making.” The specific intent of criterion C is to ensure that equity and social justice are fundamental considerations within the organizations of project decision-makers. ISI recognizes that demonstrating this fundamental consideration may require a mixture of policies, commitments, and actions

¹ The *Envision guidance manual* is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how *Envision* credits are assessed and verified in certain situations encountered by real projects.

taken. Similarly, ISI recognizes the challenge of demonstrating a commitment to a concept as broad as equity and social justice. Therefore, ISI identifies key topics that may be indicators of a broader commitment: nondiscrimination, diversity and inclusion, and pay equity. The intent is not to suggest that these topics comprise the entirety of equity and social justice or that they be prerequisites for organizations comprehensively addressing equity and social justice in other ways.

Applicants seeking achievement in this credit should note that reviewers expect demonstrating equity and social justice as a fundamental consideration will include more than statements that organizations meet minimum legal requirements.

Example

For QL3.1 key members of the project team must demonstrate institutional commitments to equity and social justice. These policies, commitments, or actions must go beyond regulatory requirements, such as an Equal Employment Opportunity statement. Examples of these policies, commitments, or actions may include, but are not limited to:

- Documentation of equity and social justice training programs delivered to staff;
- Policy statements on nondiscrimination and a training program on diversity;
- Documentation showing participation in a voluntary pay equity disclosure program;
- Documentation of race bias training delivered to all staff;
- An evaluation of hiring practices and an action list to increase worker diversity; and/or
- Recruitment videos and training incentives directed toward women and underemployed workers in the community.

ENVISION V3 CREDIT AMENDMENT #007

QL3.1 Clarifying Requirements for Key Members of the Project Team

Relevant Credits:

QL3.1 Advance Equity and Social Justice

Issue

Credits QL3.1 has specific requirements under criterion C for actions taken by key members of the project team. Criterion C states,

“Key members’ of the project team refers to major decision makers involved in the project, as well as those who act as primary advisors, consultants, or specialists on behalf of decision makers. This will almost always include the owner, those who act as lead designers (engineers, architects, landscape architects, etc.), and those who manage and execute the project through construction.”

While it is implicit, the manual does not explicitly state that ALL key members must meet the requirements. In addition, if all key members must meet the requirements additional guidance is needed for identifying project team members that qualify as “key”.

Amendment¹

Key members include the (1) owner, (2) lead designer(s), and (3) lead construction contractor(s). The criterion C requirements for the Level of Achievement table are changed to scale the necessary commitments for key members according to the following list:

- **Improved: Criterion C must be met by the owner.**
- **Enhanced: Criterion C must be met by the owner and lead designer(s).**
- **Superior and above: Criterion C must be met by ALL key members of the project team including owner, lead designer(s), and lead construction contractor(s).**

Lead designers and lead construction contractors may be those contracted directly to the owner. Some Envision assessments may encompass multiple components each with a lead designer and construction contractor, or a project with multiple lead designers and lead

¹ The Envision guidance manual is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how Envision credits are assessed and verified in certain situations encountered by real projects.

construction contractors, contracted directly to the owner. In these cases, all key members must still meet the criteria.

In cases where the role of owner, lead designer, or lead construction contractor changed during the project, applicants should choose the most appropriate of the following options, (1) the current key member, (2) the key member responsible for the majority of the relevant project work.

In cases where a key member has not yet been identified applicants may submit documentation that meeting the credit requirements will be part of the key member selection process or a requirement of the contract agreement.

A joint venture may meet the requirements as an independent entity, or by documenting how the partners in the joint venture that fill the roles of lead designer(s) and lead construction contractor(s) meet the requirements.

Key members do not include project team members sub-contracted under the lead designer or lead contractor.

Key members do not include those contracted to the owner who do not perform work relevant to the Envision assessment, or who do not function as lead designers or lead construction contractors.

Discussion

Credit QL3.1 focuses on the value of systemic and collective action. For those engaged in developing high-quality infrastructure equity and social justice must be shared core values. If QL3.1 requirements are embedded within all key members of the project team there is reason to expect those core values will underpin decision-making throughout the project. In addition, these key members serve as an example and growth opportunity for other members of the project team who have not yet taken the necessary steps toward becoming proactive advocates for equity and social justice.

Example

Projects must show that criterion C is met at increasing levels by key members of the project team. For an Improved level of achievement, project teams must demonstrate the owner's commitment. For an Enhanced level of achievement, project teams must include both owner and lead designer(s). For a Superior level of achievement or higher, all key members of the project team must meet criterion C. Examples may include:

- In a Design-Bid-Build contract pursuing Pathway A, project team submits for an Enhanced level of achievement and provides materials for both the owner and lead design firm. Project team does not need to supply lead contractor materials to achieve an Enhanced level of achievement.
- In a Design-Bid-Build contract pursuing Pathway B, project team submits for a Conserving level of achievement. The role of the contractor was changed at 65%

construction completion. While the original contractor met the intent of criterion C, the replacement contractor does not. Project team may submit materials for the original contractor, as they were the key member responsible for a majority of the relevant construction work.

- A large project, pursuing Pathway A, seeks an Improved level of achievement for this credit. The project team submits the owner's materials to satisfy criterion C. If criteria A and B are also met, then only the owner's materials for criterion C are required for an Improved level of achievement.
- A large project, pursuing Pathway A, seeks a Restorative level of achievement. The project will undergo multiple phases with different Design-Build firms selected for each phase. The owner has selected a Joint Venture to act as an Owner's Representative and manage the program, including contracting with the Design-Build firms. As the Joint Venture is acting on behalf of the owner, the project team must submit materials for owner, the Joint Venture, and any Design-Build firm currently under contract. Further, they submit this credit as Pending and supply a letter stating that the selection criteria for future Design-Build firms will require documentation of organizational commitments to equity and social justice.
- The owner and lead design firm provide materials to meet the intent of criterion C. The contractor meets the intent, but they are concerned as 66% of the construction work will be subcontracted to other firms. For this credit, the project team only needs to provide materials related to the owner and those contracted directly to the owner. If all other criteria are satisfied, the project team could submit for a Superior level of achievement or higher for this credit.

ENVISION V3 CREDIT AMENDMENT #008

CR1.2 Accounting for Mode Shift when Quantifying Reductions in Greenhouse Gas Emissions

Relevant Credits:

CR1.2 Reduce Greenhouse Gas Emissions

Issue

Credit CR1.2 is silent on how to demonstrate the potential reduction of emissions through efficiency and displacement, e.g., “mode shift,” which is particularly pertinent to transit projects.

Amendment¹

The following paragraph is added at the end of the documentation guidance provided for criterion A:

“For transit projects, calculations may account for mode shift (inclusive of any induced demand factors) and should be aligned with industry standards / best practices, such as the American Public Transportation Association’s (APTA’s) Recommended Practice pertaining to quantifying greenhouse gas emissions from transit.”

Discussion

CR1.2 Reduce Greenhouse Gas Emissions is silent on how to demonstrate the potential reduction of emissions through efficiency and displacement. Within the context of public transportation, this is often referred to as “mode shift,” e.g., shifting away from one form of transportation to another. Including language in CR1.2 about mode shift allows project teams working in this sector to align their Envision submissions with industry best practices. It will similarly make for a more consistent verification process. The American Public Transportation Association (APTA) has issued a recommended practice document called “Quantifying Greenhouse Gas Emissions from Transit,” widely considered industry best practice.

Project teams submitting for Envision verification should take care to align their submission with the specific requirements included in CR1.2 but may explicitly include mode shift in

¹ *The Envision guidance manual is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how Envision credits are assessed and verified in certain situations encountered by real projects.*

their calculations to demonstrate a percentage reduction in greenhouse gas emissions. When mode shift is factored into calculations to support achievement for this credit, project teams need to also take into account (and include in their calculations) any estimated induced demand or the “fill-in effect” that could occur when, for example, cars are taken off roads (due to people switching from cars to transit), but then new traffic is generated as a result of new capacity on the roads being created, population increases, and other factors.

Example 1

A railway project demonstrates a 10% reduction in greenhouse gas emissions compared with the existing conditions, i.e., the existing systems the project will replace. Mode shift – people switching from one form of transportation (e.g., single-occupancy vehicles) to another form of transportation (in this example, rail) inclusive of induced demand factors – form part of the calculations the team provides to demonstrate this reduction in greenhouse gas emissions. In this case, the project team would earn an Improved level of achievement.

Example 2

A subway project demonstrates a 52% reduction in greenhouse gas emissions compared with existing conditions. Calculations to support this reduction in greenhouse gas emissions account for mode shift. An induced demand factor of near zero was included in the calculations as supported by the ridership model, local demand travel model, and other analyses. In this case, the project team would earn a Superior level of achievement.

ENVISION V3 CREDIT AMENDMENT #009

NW2.3 Removing Language Inconsistencies and Clarifying Requirements for Pesticide and Fertilizer Selection

Relevant Credits:

NW2.3 Reduce Pesticide and Fertilizer Impacts

Issues

- (1) **Documentation requirements:** compliance with the documentation requirements for evaluation criterion D is proving problematic as measures of bioavailability and persistence are often not available for pesticides and fertilizers, unlike measures of toxicity which are often readily available.
- (2) **Language inconsistencies:** The description of evaluation criterion D in the levels of achievement table, the wording for Superior in the performance improvement section, and the wording of criterion D are inconsistent and need to be aligned with the amended documentation requirements for criterion D.

In the levels of achievement table, the description for evaluation criterion D reads,

*“When needed, pesticides and fertilizers with low toxicity, persistence, **and/or** bioavailability are specified.”* [Emphasis added.]

The wording for the Superior level of achievement in the performance improvement section reads,

*“When absolutely necessary, pesticides and fertilizers are selected based on reduced impacts. This may include toxicity, persistence (i.e., how long it remains in the environment), **and/or** bioavailability (i.e., how readily it is absorbed by biological organisms).”* [Emphasis added.]

The wording of evaluation criterion D in the evaluation criteria and documentation guidance section reads,

*“To what extent has the project team selected pesticides and fertilizers that have lower toxicity, persistence, **and** bioavailability?”* [Emphasis added.]

Amendments¹

- (1) **Documentation requirements:** Evaluation criterion D and its associated documentation guidance is amended as follows:

“To what extent has the project team selected pesticides and fertilizers that have lower toxicity, persistence, and bioavailability?”

1. **Documentation showing the pesticides and fertilizers to be used on the finished project.**
 2. **Measurements of pesticide and fertilizer toxicity, ~~persistence, and bioavailability~~ along with recommended application rates and procedures.**
 3. **~~Documentation showing how lower toxicity, persistence, and bioavailability were incorporated into the choice of pesticides and fertilizers.~~ Measurements of pesticide and fertilizer persistence and bioavailability, where available.**
- (2) **Language inconsistencies:** The description of evaluation criterion D in the levels of achievement table and the wording for Superior in the performance improvement section is amended as follows:

In the levels of achievement table, the description for evaluation criterion D is amended as follows,

“When needed, pesticides and fertilizers with low toxicity, persistence, ~~and/or~~ and bioavailability are specified.”

The wording for the Superior level of achievement in the performance improvement section is amended as follows,

“When absolutely necessary, pesticides and fertilizers are selected based on reduced impacts. This ~~may~~ must include toxicity, and, if the information is available, should also include persistence (i.e., how long it remains in the environment), ~~and/or~~ and bioavailability (i.e., how readily it is absorbed by biological organisms).”

Discussion

While all three categories (toxicity, persistence, and bioavailability) are important considerations outlined in the credit’s intent statement and description, toxicity information is typically readily available (e.g., on product MSDS sheets). In contrast, measurements of persistence and bioavailability for pesticides and fertilizers are not always readily available

¹ *The Envision guidance manual is the official reference for project assessments. Credit Amendments from ISI modify the manual to clarify how Envision credits are assessed and verified in certain situations encountered by real projects.*

for specific substances. In these cases, the project team could research the chemical and biological components of the pesticides and fertilizers to determine if there are any emerging concerns or issues related to them.

Suppose an owner's policy is used to demonstrate that criterion D is met. In that case, the policy must state that pesticides and fertilizers are selected based on reduced impacts, including low toxicity, persistence, and bioavailability. A list of acceptable pesticides and fertilizers that meet this requirement should be provided.

Example

A project specifies the use of pesticides and fertilizers that have lower toxicity, persistence, and bioavailability and provides recommended application rates and procedures for each; however, for one of the four pesticides that will be used on the finished project, only toxicity information is available, despite the project team's best efforts to determine measures of persistence and bioavailability as well.

In this example, the project team would satisfy the requirements for criterion D. Provided criteria A, B, and C were met; this project would attain a Superior level of achievement.