

TerraPass is pleased to build upon our ongoing participation in the Organic Waste Digestion Project Protocol working group by submitting the following written comments to the Public Draft of the OWD protocol:

1. **On the first-order decay model, forward crediting and related issues.** We recognize that the underlying principles used to determine project baselines and their related emission reductions suggest that credit calculations (and issuances) should be performed on an annual basis; the net environmental impact of the project activity is typically realized each year a project operates as compared to a baseline case without the project. In many cases, ex-post measurement of project variables such as gas flow and methane concentration represents both a convenient and scientifically defensible means of matching carbon credits earned to the real emission reductions over time. Diverting waste from a landfill baseline presents a unique challenge in this regard because the landfill baseline emissions occur over many years whereas the project emission reductions occur all at once, for any given quantity of waste.

As a result, it is impossible to perform ex-post assessments of nearly all OWD project variables after year 1 because the waste has already been irreversibly converted to methane and that methane destroyed. Since no annual comparison of project reductions vs. baseline emissions is possible, it raises the question of what purpose an annual verification would serve.

We therefore support and encourage the approach the Reserve has taken for “forward crediting” 10 years of emission reductions using the FOD model as the quantification method. This approach is credible because there is no assessment a verifier could perform regarding a given waste stream after the year of its diversion. We appreciate the Reserve’s concern about over-crediting a project, however, the conservative discounts built into the baseline emissions quantification coupled with the annual verification of methane destruction render the likelihood of issuing CRTs that would later be reversed or deemed ineligible is extremely low.

2. **On the regulatory test and local mandates.** Ensuring that a project is in surplus to a regulatory mandate is a key component of assessing additionality. We acknowledge the Reserve’s efforts to assess individual project adherence to this standard, however, the figures for national adoption of food waste diversion make project-level assessments unnecessary at this time. The text of the protocol states that in spite of a wide variety of local and state waste diversion mandates, targets and goals the nationwide adoption of food waste diversion remains at or below 3%. We feel that this falls so far below what could be considered common practice that all food waste diversion projects should be considered regulatory

surplus at this time. Given the complexity of local and municipal regulations related to OWD projects we recommend including those projects, in total, under this standard. The level of adoption of food waste diversion can and should be assessed each time the performance standard is revisited.

3. **On project complexity and size thresholds.** We recognize the Reserve’s desire to require robust and verifiable evidence of project operations. The intention of these efforts is to ensure against material or significant errors in the issuance of CRTs (especially over-crediting). We encourage the Reserve to view the requirements for metering, monitoring, sampling and verification in the context of overall project size and the relative risk and magnitude of errors. Requiring smaller projects to have the same metering and sampling procedures as very large projects is detrimental to those small projects in several ways. Foremost, they may result in small projects being financially infeasible (both due to equipment and verification costs). They also may require extraordinary measures to control against errors equivalent to very small numbers of CRTs. As a specific example from the OWD protocol, we call your attention to the requirement on page 35 that digester effluent flow be metered and sampled quarterly for chemical oxygen demand. For a livestock facility co-digesting a few hundred gallons of whey per month these requirements are onerous to the point of being prohibitive and may only result in correcting a variance of the model value from the actual value of a few hundred tons per year. We strongly encourage the Reserve to consider adopting project size thresholds which would simplify metering, sampling, monitoring and verification requirements for small facilities, thereby encouraging a greater adoption of these projects around the country.
4. **On metering and calibration requirements.** We strongly support the shift, across multiple protocols, to meter calibration requirements that are more in keeping with the suggestions from manufacturers of that equipment. We have several further recommendations as it relates to meter calibrations.

First, calibration requirements are not listed for methane analyzers. We recommend that manufacturer guidance should also be relied upon for these devices.

Further, it has been our experience in multiple projects that from time to time the required periodic calibration, field check, inspection and cleaning events do not occur at the scheduled time. Many devices and the equipment used in their calibration are able to perform “as found” tests which provide rigorous evidence of reading errors. We suggest that the Reserve provide guidance for circumstances where a meter has missed a scheduled calibration but an “as found” check or calibration finds the device to be within acceptable tolerances. To be clear, this is a different circumstance than a “failed calibration” described in the protocol and Appendix D. As the protocol currently reads a project that is late in performing a calibration but has meters that function properly could be issued fewer credits

than a project with meter drift that is checking or calibrating on schedule, which does not seem to be a result in keeping with the Reserve's goals.

Finally, this protocol and others require that projects monitor the hourly operational activity of gas destruction devices in order to ensure that gas is not being sent to an inoperable device and subsequently vented to the atmosphere. In most instances this requirement is unnecessary as the majority of destruction devices covered in these protocols, including generator sets, boilers and many flares *cannot* accept gas if the device is not operating. We suggest that if a destruction device can be verifiably demonstrated to be "closed" to gas flow when it isn't operating then an hourly record of operations is unnecessary.

5. **Clarifying unclear language.** There are several instances in the protocol that might benefit from additional clarifying language. In particular, on page 8 it would be helpful to define consistently in the phrase "...an OWD project must consistently digest at least one eligible waste stream...". Also, Section 5.2.6 on page 37 could be better explained, perhaps with an example. Finally, on page 50 in the bullet related to permits it should be clarified that projects need to maintain copies only of permits related to the project.