

# R&D PROJECT PLAN

## 10\_DEVELOPMENT OF A STATE-LOCAL-TRIBAL EMISSION FACTORS COMPENDIUM

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### OVERVIEW

#### 1. Participants

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#### 2. Project Description

Development of a compendium of emission factors that will support state, local and tribal authorities (SLTs) and other relevant stakeholders that utilize and are in need of emission factor information. The compendium could also, eventually, be used as one of several inputs to the Common Emissions Form (CEF). The CEF is a conceptual design under development in the CAER project, which would provide reporters the tools to share data across reporting programs, including EF data.

#### 3. Project Steps

- A. Investigate and research the development of a compendium of State-Local-Tribal (SLT) emission factors (EF) that states could share and use for their emissions development needs. Data will be compiled from EF data provided by SLTs from the previous SCC/EF project's Phase I Survey, data from the states on the team and database development will be iterative.
  1. Review databases submitted with the survey from PDT Phase I and collect additional information as needed
  2. Review databases from states in the team.
  3. Review format of WebFIRE data elements, as a starting point for compendium
  4. Identify metadata for the compendium (source, use, etc).

- B. Develop compendium business rules and guidelines, including: data elements to be included (level of detail, data sources and documentation, state-specific parameters); database maintenance (who contributes and how), and limits on EPA involvement in database maintenance and data vetting.

It is important to note that we should address the controls SLTs will have over EFs used in the CEF as it is presented to facilities in their jurisdiction.

We will include both discrete emission factors as well as the use of formulas for emissions calculations.

1. Determine data elements
2. Compile draft database
3. Compile and draft business rules associated with database

- C. Explore electronic venues for the repository of the database for potential leveraging via web services, that will allow compendium updates and maintenance, including potential future automatic EF data export or batch upload from SLT, if and when possible and workable. It will be important to understand how SLTs may send updates to the compendium. Some may have their EF data in their own systems already but it may be possible to set up a webservice that pushes that data automatically so the state in question doesn't have to do anything to maintain their part of the compendium.

- D. Explore how the compendium can be used with the common emissions form (CEF). Compendium data could be one input database to the CEF's menu of EF. Additional business rules on compendium use with the CEF (e.g. state controls over EF presented to facilities) will be developed. A future step might include the possibility that EF data could also be entered via the CEF and sent to the compendium automatically.

Caveats to the team's scope of work:

- Development will be iterative in that, first, the compendium will be developed to work for the states participating in the workgroup as a starting point. It will not be necessary to know all data fields for every state for the compendium to begin to be useful. The compendium can be developed and expanded as the work progresses to incorporate more data and be of help to more SLTs.
- One aspect that may emerge during compendium development may have to do with facility attribute fields that may need to be included. States have facility-specific (and perhaps process-specific) EFs that they may want to include. Since this adds complexity, this aspect may or may not be within the scope of this project time and resources permitting.
- It is not envisioned for the compendium to be tied to WebFIRE or for it to be an EPA vetted source of emission factors. Time and resources would be needed to invest in WebFIRE that are not available currently. Even so, for an emission factor to become published in WebFIRE requires a lengthy process involving reviews and public comment. Under the current scope the goal is for a state to get their own emission factor data into the compendium and eventually the CEF so that it is shown on the "end user" side. End users (either other SLTs or industry) would be able to access the compendium to look up emission factors they need that they don't have. It will also be made clear in the compendium if an emission factor has received approval for use from a state.
- Will begin with the more popular formulas and can define more complex formulas later. Depending on the team's findings, the database will be adjusted to reflect more complex formulas time and resources permitting. The database will contain emission factors at SCC level. If the team finds that more detail at the sub-facility level is also needed, then the team will investigate and determine how to incorporate it.
- We will consider speciation factors to be included in the compendium but will need to also consider how they can be used in the CEF, time permitting or in a future phase to this project.

## 4. Prior Work

This project is based on results from a survey conducted in the SCC WebFIRE PDT, a Phase I project: The results were reported in the SCC WebFIRE PDT Final report. A question in that survey asked states to submit any emission factor databases they use to Mark Wert. Those databases are the starting point of the compendium being developed in this project.

The state of Minnesota has already taken significant steps towards the creation of their state emission factor database. The team will learn from this effort and apply any lessons learned to the development of the compendium.

## 5. Deliverables

- A. Documentation of draft guidelines, business rules, and data elements for the compendium entries and input information, CEF EF menu creation and general data retrieval and usage.
- B. Database containing the draft compendium of state emission factors (i.e. given the scope and time of this project, not all states or all factors available from the survey may be included in this first stage).
- C. Documentation of the exploration of electronic venues for the repository of the database for potential leveraging via web services and the possibility of creating such a repository, and recommendations for next steps.
- D. Documentation of recommendations on using SLT compendium in CEF.

Deliverables A, C and D will be part of a final report produced by the PDT documenting the team's work.

## 6. Resource Needs

As of the initiation of this PDT's work, we have not identified any resource needs. However, this may change if we realize that we require assistance with data compilation or communications materials.

## 7. Expected Workload

We will meet every 2 weeks, or as needed, for one hour. Team members will participate in these discussions and take on individual tasks as time permits them to.

## DELIVERABLES & EXPECTED COMPLETION DATES

Deliverable	Expected Completion Date
Completed A	March 19, 2018
Complete B	April 9, 2018
Complete C	May 21, 2018
Complete D	June 29, 2018

**Sharepoint Site for shared documents the team can access:**

[https://usepa.sharepoint.com/sites/OCFO\\_Work/E\\_Enterprise/Air%20Emissions/Forms/AllItems.aspx?id=%2Fsites%2FOCFO%5FWork%2FE%5FEnterprise%2FAir%20Emissions%2FProduct%20Design%20Team%20%28PDT%29](https://usepa.sharepoint.com/sites/OCFO_Work/E_Enterprise/Air%20Emissions/Forms/AllItems.aspx?id=%2Fsites%2FOCFO%5FWork%2FE%5FEnterprise%2FAir%20Emissions%2FProduct%20Design%20Team%20%28PDT%29)

This link is to the PDT Main folder. From there choose the folder for the PDT 10 project. If you have trouble accessing this folder, please email Julia Gamas (gamas.julia@epa.gov).