## Self-Assessment: 16.0 Transportation Systems Management and Operations

This self-assessment tool is a worksheet designed to help State transportation agencies assess their current level of engagement with GHG in transportation systems management and operation (TSM&O) and determine next steps for increasing their level of engagement.

#### Primary GHG Interests and Responsibilities

The TSM&O unit/functional area can estimate and influence GHG emissions through:

* Traffic signal timing and coordination.
* Incident response procedures.
* Integrated corridor management for freeways and arterials.
* Bus priority operations.
* Work zone management.
* Incentives to encourage use of electric vehicles and alternative fuel vehicles, such as high-occupancy vehicle (HOV) or ‌high-occupancy/toll (HOT) lane access.
* Traveler information and incentive programs to encourage mode shift and more efficient driving

#### Staff Responsibilities

List the key staff person(s) responsible for ensuring GHG is considered in TSM&O. **Lead** = management/oversight; **Support** = technical or procedural support (e.g., emissions calculations).

| Unit | Title/Position/Topic | Name | Role (Lead/Support) |
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#### Level of Engagement

Select the level that best describes how engaged your agency, as a whole, is now in addressing GHG in TSM&O activities and how engaged you might want to be within the next few years.

| Now | Within 3 Years? | Does Your Agency Consider GHG Impacts in TSM&O? | Level |
| --- | --- | --- | --- |
| \_\_\_\_\_ | \_\_\_\_\_ | No consideration of GHG emissions in TSM&O planning, work programming, operations, and reporting. | 1 |
| \_\_\_\_\_ | \_\_\_\_\_ | GHG reduction is stated as a goal or objective for the agency’s TSM&O program. GHG reduction benefits are considered qualitatively in work program development. | 2 |
| \_\_\_\_\_ | \_\_\_\_\_ | Quantitative estimates of the GHG benefits of the agency’s TSM&O activities for GHG reduction are developed. Qualitative consideration of GHG benefits is made in work program development. | 3 |
| \_\_\_\_\_ | \_\_\_\_\_ | GHG benefits of TSM&O activities are comprehensively evaluated and considered quantitatively in work program development. GHG benefits of individual projects, as well as the overall program, are monitored and reported on a regular basis. | 4 |

#### Strategies to Estimate and Reduce GHG Emissions

Identify specific strategies your unit/functional area is undertaking now and which ones you might want to be undertaking in a few years. The table indicates what “level of engagement” (1–4) the strategy may be associated with. More advanced strategies indicate higher levels of engagement that also require more effort.

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| --- | --- | --- | --- |
| Doing Now? | Within 3 Years? | Programmatic Strategy | Level of Engagement |
| \_\_\_\_\_ | \_\_\_\_\_ | Identify GHG reduction as a goal or objective for TSM&O (e.g., in agency strategic plan, TSM&O workplan, or congestion management plan). | 2 |
| \_\_\_\_\_ | \_\_\_\_\_ | Include GHG reduction as a qualitative criterion in TSM&O workplan development/project selection. | 2 |
| \_\_\_\_\_ | \_\_\_\_\_ | Estimate program-wide GHG reductions for TSM&O. | 3 |
| \_\_\_\_\_ | \_\_\_\_\_ | Apply simple quantitative methods to estimate GHG reduction from TSM&O projects (e.g., speed-based emission factors). | 3 |
| \_\_\_\_\_ | \_\_\_\_\_ | Apply advanced quantitative methods to estimate GHG reduction from TSM&O projects (e.g., microsimulation models). | 4 |
| \_\_\_\_\_ | \_\_\_\_\_ | Apply methods that account for induced demand and mode shift in TSM&O evaluation. | 4 |
| \_\_\_\_\_ | \_\_\_\_\_ | Implement new/additional TSM&O strategies that reduce GHG emissions. | 4 |
| \_\_\_\_\_ | \_\_\_\_\_ | Work with external partners to develop and implement GHG reducing TSM&O (e.g., transit agencies and municipalities for bus operations and multimodal information). | 4 |
| \_\_\_\_\_ | \_\_\_\_\_ | Implement strategies to simultaneously manage traffic operations and demand. | 4 |

#### Action Plan

What actions will you take to implement the strategies you identified above to increase your agency’s engagement?

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| Action | Timeframe | Lead Responsibility |
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