AASHTO WEBINAR
Practitioner’s Handbook 18: Air Quality Analyses in the NEPA Process for Highway Projects

March 6, 2017
Today’s Webinar

- Welcome
  - Melissa Savage, AASHTO

- Presentation: Addressing Air Quality Issues in the NEPA Process for Highway Projects
  - Bill Malley, Perkins Coie LLP

- Q&A with Panel
  - Cecilia Ho, FHWA
  - Tim Sexton, Minnesota DOT
  - Bill Malley (moderator)
Center for Environmental Excellence

- Visit our website: http://environment.transportation.org/
- Use our resources:
  - Weekly Website Updates
  - Broadcast Emails
  - Practitioner's Handbooks
  - Climate Change Webinars
  - Programmatic Agreement Library
  - Case Law Database (CLUE)
    - Recently updated with 2016 cases
Goals of the handbooks:
- Easy-to-read synthesis of requirements
- Practical advice on how to comply
- List of reference sources

Topics covered:
- NEPA and related environmental requirements

Where to find them:
- [http://www.environment.transportation.org](http://www.environment.transportation.org)
The Air Quality Practitioner’s Handbook

- **Authors:**
  - Rich Denbow, Cambridge Systematics
  - Bill Malley, Perkins Coie LLP

- **Work Group:**
  - Cecilia Ho, FHWA
  - Victoria Martinez, FHWA
  - Karen Perritt, FHWA
  - Marilee Mortenson, Caltrans
  - Daniel Burgin, Kentucky Transportation Cabinet
  - Tim Sexton, Minnesota DOT
  - Michael Baker, Pennsylvania DOT
  - Jackie Ploch, Texas DOT
Target audience: NEPA practitioners – ‘generalists’
  - Air quality conformity specialists may also find it useful.

Primer on topics an air quality analysis in a NEPA document may need to cover, including:
  - Criteria pollutants
  - Conformity determinations
  - Mobile source air toxics (MSATs)
  - Greenhouse gas (GHG) emissions

Practical tips on:
  - Deciding what issues to cover in the air quality analysis
  - Coordinating NEPA with conformity
  - What to look for when reviewing an air quality analysis
  - Considering air quality issues after completion of NEPA
Caveats

- What the handbook is not ...
  - Not agency guidance
  - Not a detailed compliance manual

- Keep in mind:
  - Agency policies and interpretations may change
  - Court decisions, legislation, etc. could affect requirements
  - Always be sure to check federal agency regulations and guidance to ensure you have current information.
Additional Information Sources

- **NEPA**
  - FHWA NEPA Technical Advisory
  - FHWA MSAT interim guidance
    [https://www.fhwa.dot.gov/environment/air_quality/air_toxics/](https://www.fhwa.dot.gov/environment/air_quality/air_toxics/)
  - CEQ climate change guidance

- **Transportation Conformity**
  - FHWA conformity resources
  - EPA conformity resources
    [https://www.epa.gov/state-and-local-transportation](https://www.epa.gov/state-and-local-transportation)
Presentation:
Air Quality Analyses in the NEPA Process for Highway Projects
NEPA and Air Quality

A Very Quick Review of Current Requirements and Practices
Overview

- What does NEPA require in an air quality analysis?
- What are the basics of transportation conformity and how are those requirements met in the NEPA process?
- What are mobile source air toxics and how are they addressed in the NEPA process?
- Under the new CEQ guidance, how should greenhouse gas emissions be addressed in the NEPA process?
NEPA Requirements for Air Quality Analysis

- **NEPA ‘101’ – NEPA requires ...**
  - Comparative analysis of reasonably foreseeable direct, indirect, and cumulative effects of the alternatives
  - Documentation of compliance with other legal requirements
  - Public involvement and agency coordination

- **For air quality, NEPA compliance may address:**
  - ‘Criteria pollutants’ and air quality status of project area
  - Documentation of transportation conformity findings
  - Mobile source air toxics (MSATs)
  - Greenhouse gas (GHG) emissions
  - Construction emissions
  - Indirect/cumulative effects on air quality
  - Mitigation, if appropriate
Transportation Conformity Requirements

- **Transportation Conformity ‘101’**
  - Prohibits federal agencies from funding, approving, supporting in any way projects that do not conform to States’ plans for achieving the National Ambient Air Quality Standards (NAAQS)

- **Key Concepts:**
  - NAAQS – established for six ‘criteria pollutants,’ four of which are associated with vehicle emissions: CO, PM, NO$_2$, Ozone.
  - Nonattainment Area – area where NAAQS are not met
  - State Improvement Plan (SIP) – plan for achieving the NAAQS

- **Conformity Determination:**
  - Regional: for a transportation plan or TIP in an MPO area
  - Project-Level: for an individual FHWA or FTA project

- **Exempt and non-exempt projects**
  - Exempt: conformity does not apply (neutral/positive effect on AQ)
  - Non-Exempt: all other projects; conformity applies
Regional Conformity

- When it’s required:
  - Required in nonattainment and maintenance areas each time an MPO updates or amends a transportation plan or TIP

- What it involves:
  - Regional emissions analysis for all projects in a plan or TIP
  - Air quality conformity determination for the plan/TIP as a whole
    - Modeling shows total emissions within SIP’s emissions budget
  - Fiscal constraint determination
    - Funding is ‘reasonably available’ for all projects in plan/TIP

- How long it takes:
  - Months-long lead time to allow for modeling, public involvement

- NEPA practitioners should know:
  - Project must be in conforming plan/TIP before NEPA completion
Project-Level Conformity

- **When it’s required:**
  - Required for all non-exempt projects in nonattainment and maintenance areas
  - Must be done prior to completion of NEPA for the project

- **What it involves:**
  - Regional conformity determination must have been made for the plan/TIP that includes the project
    - Project definition must be ‘consistent in design concept and scope’
  - Hot-spot analysis also may be required
    - Required only for CO, PM2.5, PM10 nonattainment areas
    - Must demonstrate no localized exceedances of the NAAQS

- **NEPA practitioners should know:**
  - Plan/TIP may be need to be amended if project to be approved is not ‘consistent in design concept & scope’ with plan/TIP
Mobile Source Air Toxics

- What are MSATs?
  - Seven pollutants associated with mobile sources (cars, trucks)
  - Believed to cause cancer or other serious health effects
  - Not criteria pollutants, therefore not subject to conformity

- How did they become a NEPA issue?
  - Lawsuits challenging FHWA NEPA docs for failing to consider public health effects of air toxics on near-roadway populations
  - Solution = guidance to standardize MSAT analysis

- What the MSAT guidance requires:
  - If “no potential for meaningful effects” – analysis not required
  - If “low potential for meaningful effects” – qualitative analysis
  - If “higher potential for meaningful effects” – quantitative analysis
  - Discussion of unavailable/incomplete information regarding effects of MSATs on public health – per 40 CFR 1502.22
Greenhouse Gas Emissions

- What are greenhouse gas (GHG) emissions?
  - CO2 and other pollutants that contribute to global warming
  - CO2 = 95% of transportation GHG emissions
  - Effects are not localized – global total is what matters

- Do GHG emissions need to be addressed in NEPA?
  - Case law mixed on this issue ... But August 2016 CEQ guidance calls for considering GHG emissions as part of NEPA process

- What does the CEQ guidance require?
  - Qualitative or quantitative analysis depending on ‘significance’ of GHG emissions (and no bright line for determining significance)
  - Use quantity of GHG emissions as ‘proxy’ for effects
  - Also requires consideration of effects of climate change
Air Quality & NEPA: Odds and Ends

- **NEPA Assignment**
  - Conformity decision *can* be assigned to State DOT under CE assignment program (23 USC 326)
  - Conformity decision *cannot* be assigned to State DOT under ‘full’ NEPA assignment program (23 USC 327)

- **Tiering**
  - Project must be included in conforming plan/TIP by the completion of the Tier 2 (project-level document)
  - Required at Tier 1 if it includes a project-level approval

- **Outside MPO Areas**
  - Conformity applies in nonattainment and maintenance areas that are located outside MPO boundaries
    - Called ‘donut areas’ and ‘isolated rural nonattainment areas’
  - Conformity decision made at the project level in these areas.
Tips for Practitioners

How to Make Sure You’ve Covered the Bases in an Air Quality Analysis in a NEPA Document
Overview

- Practical tips for:
  1) Determining what air quality issues need to be covered
  2) Determining whether a conformity determination is needed
  3) Coordinating NEPA and conformity determinations
  4) Reviewing an air quality analysis for sufficiency
  5) Preparing a hot-spot analysis
  6) Keeping air quality analysis current after NEPA completion
  7) What to include in an air quality technical report

- Issues to watch out for when preparing an air quality analysis for a highway project
1) What Air Quality Issues to Cover?

- Determine the universe of issues to be covered and level of detail needed in the air quality analysis.

- Key issues:
  - Criteria pollutants
    - Existing conditions and attainment status
    - Projected emissions with No Action and Action alternatives
  - MSATs
    - Which ‘level’ of review is required under MSAT guidance?
  - GHGs
    - Qualitative or quantitative analysis required under CEQ guidance?
  - Construction emissions
    - Analysis needed? If so, what level of detail?
  - Indirect and cumulative impacts
    - Any notable issues requiring discussion?
2) Is a Conformity Determination Needed?

- Determine if a conformity determination is needed, and if so, for which pollutants.

- Key issues:
  - Is the project an ‘exempt project’?
    - If so, conformity does not apply.
  - Is the project in a nonattainment or maintenance area?
    - If so, for which specific pollutants?
    - Are there any recent or anticipated changes in area’s status?
  - Is the project included in the applicable Plan and TIP?
    - If not, are there plans to include it? If so, when?
    - Are there any known obstacles to including it?
      - Fiscal constraint? Ability to meet emissions budget?
  - Will the project require a hot-spot analysis (for CO or PM)?
3) How to Fit Conformity Into NEPA Schedule?

- Determine the *timing* of regional and project-level conformity determinations relative to NEPA schedule.

- Key issues:
  - MPO’s schedule for plan/TIP approves
    - What is MPO’s schedule for plan/TIP updates, amendments?
    - When will project be amended into the plan/TIP?
    - How much lead time is needed for modeling etc.
  - Inconsistencies in design concept and scope
    - If project is already in plan/TIP, it is consistent in design concept and scope w/ project that is to be approved in NEPA?
    - If inconsistencies arise, when will plan/TIP amendment occur and how will it affect NEPA schedule?
  - Other factors that could cause delay
    - Changes in air quality status, new version of emissions model, etc.
4) How to Review an Air Quality Analysis?

- Review the air quality analysis in the NEPA document for clarity, completeness, & consistency.

- Key issues:
  - Uses terminology correctly
  - Covers all relevant topics (or explains why not addressed)
    - Criteria pollutants
    - MSATs
    - GHGs
  - Explains choices regarding data, models, level of detail
  - Uses tables to present key data
  - Describes agency coordination, especially re: conformity.
  - Includes conformity findings – uses correct language
  - Avoids overstating air quality benefits
  - Include supporting data in appendices
5) What’s Needed in a Hot-Spot Analysis?

- If hot-spot analysis is needed, ensure analysis closely follows applicable EPA regs and guidance.

- Key issues:
  - Required only for three pollutants: CO, PM2.5, PM10
  - May be qualitative or quantitative.
    - CO: for certain congested intersections as defined in regs.
    - PM: ‘projects of air quality concern’ as defined in regs.
  - Must use ‘latest planning assumptions’ & ‘latest emissions model’
  - Must follow detailed requirements in EPA regs and guidance
  - No hot-spot analysis needed for CO if “categorical” CO hot-spot determination applies (only in CO maintenance areas).

- For additional information:
6) What to Consider after NEPA Completion?

- Monitor changes in air quality status, conditions, and project impacts after NEPA is completed.

- Key issues:
  - **NEPA issue**: Is there new info that requires a reevaluation of air quality impacts? Or even a supplemental EIS?
  - **Conformity issue**: Is a new conformity determination needed? Triggered by:
    - significant change in the project's design concept and scope;
    - three years since most recent major step to advance project; or
    - a supplemental NEPA document is initiated for air quality purposes.
  - **Planning Issue**: Is the MPO required to update its plan/TIP? (req’d every 4 years)
    - If so, new fiscal constraint and conformity determination needed.
7) What to Include in Air Quality Tech Report?

- Use the air quality technical report to document methodology and provide supporting data.

- Key points:
  - Technical report typically should include:
    - Description of methodology, including model versions used
    - Summary of traffic data used in analyses
    - Detail on air quality modeling analyses, including tables of results
    - Full documentation of project-level (hot-spot) analyses for EPA and/or for transportation conformity
    - Documentation of agency coordination relating to air quality, including meeting notes and correspondence where applicable.
  - Maintain electronic copies of all supporting data and model runs in project files
Potential wrinkles and complications ...

- MPO changes the land use assumptions in its model
  - Conformity must be based on ‘latest planning assumptions’
- New emissions model is released
  - Conformity must be based on ‘latest emissions model’
- Project area is newly designated as nonattainment
  - Conformity requirements apply within 1 year after designation
- Changes made to project after being included in plan/TIP
  - Must ensure consistency in ‘design concept and scope’
- Project located in proximity to sensitive populations
  - May need to address comments regarding potential ‘health effects’ of air MSATs on near-roadway populations
  - May warrant consideration of opportunities to avoid, minimize, mitigate
Potential wrinkles and complications (cont’d)

- Project induces development that will itself have air quality impacts
  - May need to be address in indirect effects analysis
- Project area has other major emitters – e.g., power plant
  - May need to be address in cumulative impacts analysis
- Project changes or new information arises about air quality effects after NEPA has been completed
  - May require NEPA reevaluation and/or supplement
  - May require new conformity determination
Q&A Panel

We want your questions!

Submit questions via text in the panel on your screen.
Q&A Panel

- Panelists
  - Cecilia Ho, FHWA
  - Tim Sexton, Minnesota DOT

- Moderator:
  - Bill Malley, Perkins Coie LLP