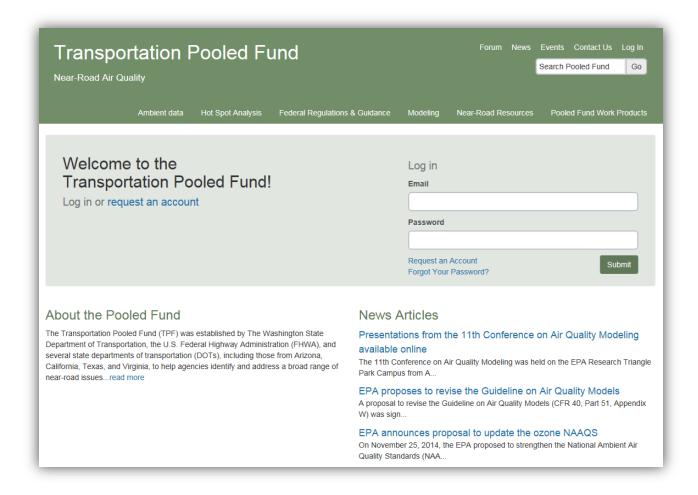
TPF-5(284) Near-Road Transportation Pooled Fund: Information Exchange Website



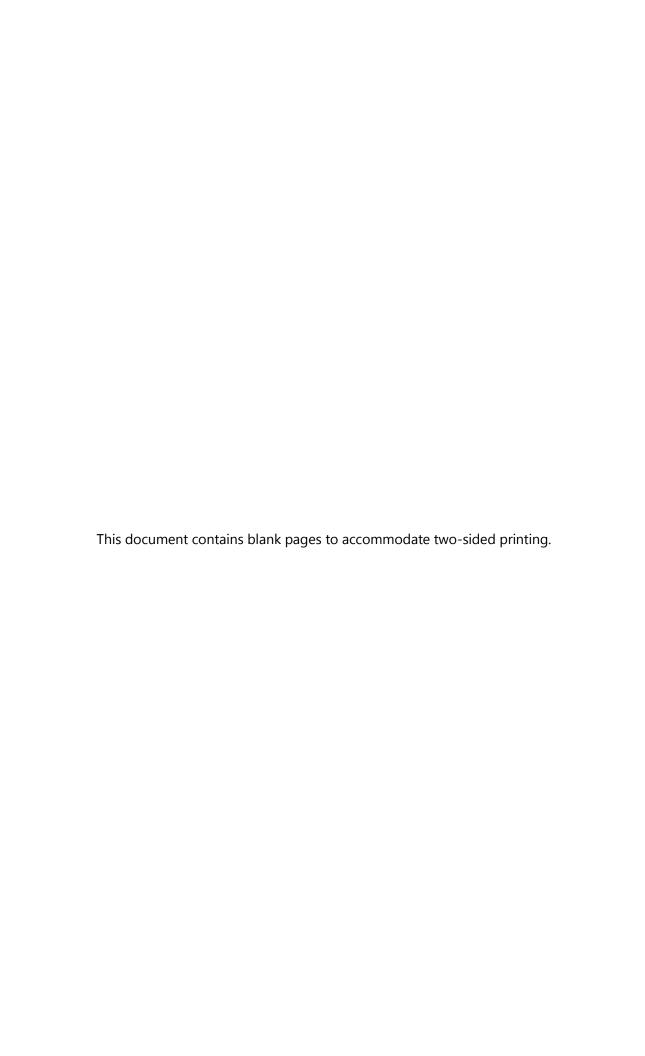
Illustrations from Delivered Website

Prepared for

Washington State Department of Transportation Seattle, WA



October 2015





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1. Introduction

This report illustrates the information exchange website created by STI to support the Near-Road Air Quality Transportation Pooled Fund (TPF) partnership, led by the Washington State Department of Transportation (WSDOT). WSDOT and its state and federal agency partners created the TPF to help agencies identify and address a broad range of near-road issues. As stated in the initial TPF announcement:¹

New federal regulations require state and local agencies to monitor near-roadway emissions and quantitatively assess potential for air quality impacts ("hot-spots"). State DOTs need to understand the implications of the new near-road data being collected; develop analysis methods and expertise to complete hot-spot modeling; and implement effective mitigation. Many states are unable to internally address all of the new emissions modeling and measurement requirements with existing resources. State DOTs need help meeting new near-road air quality analysis requirements and responding to stakeholder requests for information about near-road air pollution.

Currently, there is no forum dedicated to facilitating information and technology transfer related to near-road pollution issues. A pooled fund would allow for coordinated sharing of critical research developments, evaluation techniques, and study results to reduce overall costs and promote project delivery. It would provide a unique venue for collaboration between state DOTs and FHWA to clarify near-road emissions challenges, prioritize research needs, discourage redundant individual state efforts, and to quickly initiate research that develops solutions that meet the needs of multiple states.

Key motivators for the TPF include the U.S. Environmental Protection Agency (EPA) requirements to quantitatively evaluate potential particulate matter (PM) hot spots, EPA and Federal Highway Administration (FHWA) requirements to assess mobile source air toxics (MSATs), and recently implemented EPA requirements to monitor air quality near heavily traveled roads. As of October 2015, TPF participants include FHWA and several state DOTs, including those from Arizona, California, Texas, Virginia, and Washington. Sonoma Technology, Inc. (STI) was awarded a TPF support contract and is responsible for completing projects to meet TPF goals.

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¹ See: http://www.pooledfund.org/Details/Study/526.

2. Website Objectives and Completed and Ongoing Work

TPF partners asked STI to develop an interactive website that enables information-sharing for those involved with near-road air quality issues. Work objectives included providing a web-based forum that allows users to post messages and share links and documents; providing TPF partners with user name and password access; and enabling website testing, use, and updates. STI created and deployed the website in January 2015, and has continued to host and maintain the website. Ongoing work includes populating the website with sample links/documents; creating, deploying, and updating an interactive display of near-road air quality data collected from around the United States; and assisting TPF partners with website use and maintenance. The remainder of this report provides screenshots illustrating website functions.

3. Website Functions

3.1 Login and Home Pages

In this and subsequent sections, the report provides screenshots that illustrate the various website functions and content available to TPF participants. The figures generally provide partial views of available content. In most cases, users can scroll down a website page to access additional material not illustrated here. The website login screen (http://www.nearroadaqpf.com/auth/loginForm) is shown in Figure 1 and on the report cover.

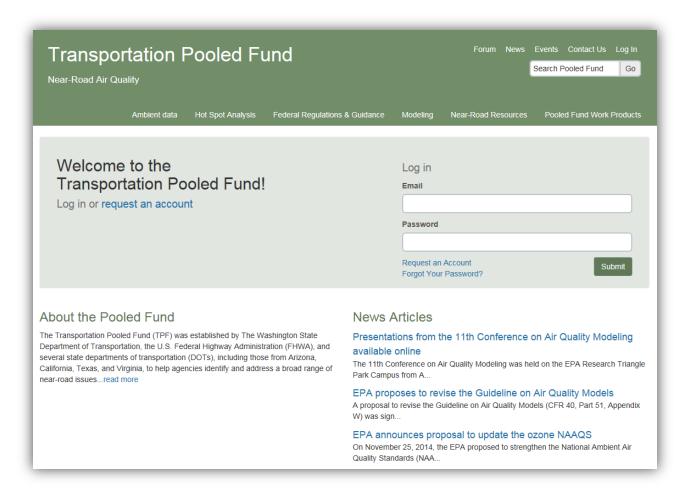


Figure 1. TPF website login screen.

Figure 2 illustrates a partial view of the home page. The user's name appears near the top of the home page, with a welcome message. Six main tabs provide access to content: Ambient Data, Hot-Spot Analysis, Federal Regulations & Guidance, Modeling, Near-Road Resources, and Pooled Fund Work Products. Depending on the main tab accessed, users may be offered multiple website pages from which to view and/or upload additional content related to the main tab heading.

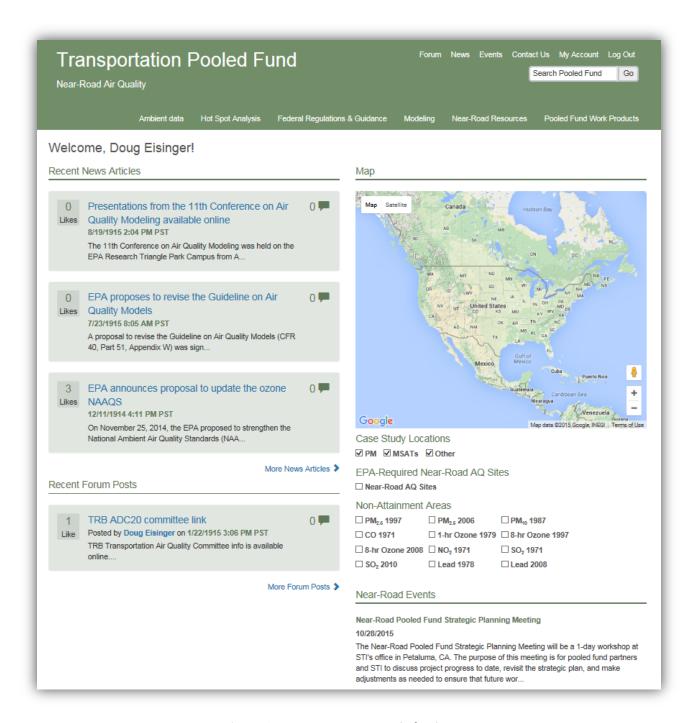


Figure 2. Home page (accessed after login).

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In addition, the home page enables users to share and access news and event items (Figures 3 and 4), provides a search function, facilitates user support, and provides website account information.

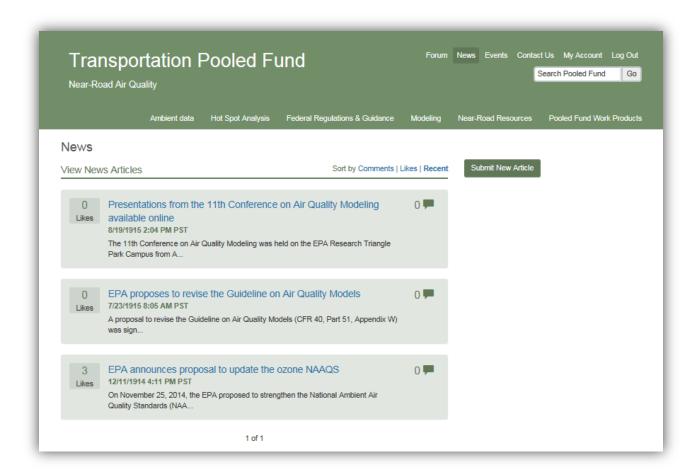


Figure 3. News page accessed via the home page.

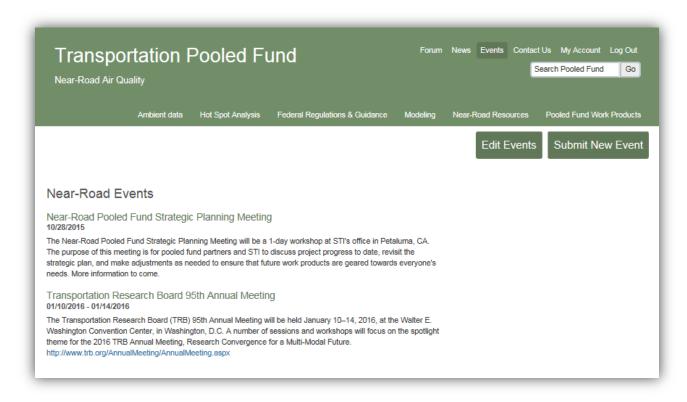


Figure 4. Events page accessed via the home page.

3.2 Ambient Data Pages

Figures 5 through 8 provide partial illustrations of the screens available from the Ambient Data tab.

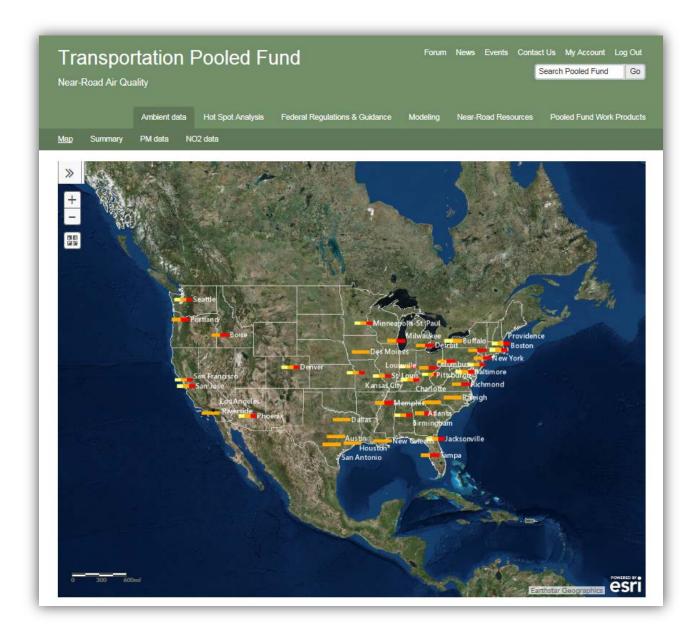


Figure 5. Ambient Data main tab, Map page. All website map displays are interactive, enabling users to obtain information such as monitoring site locations and data collected at each site.

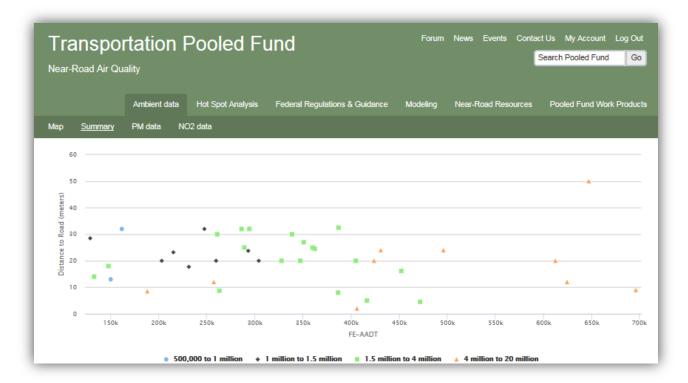


Figure 6. Ambient Data main tab, Summary page. Below the summary data display are data tables organized by region of the United States.

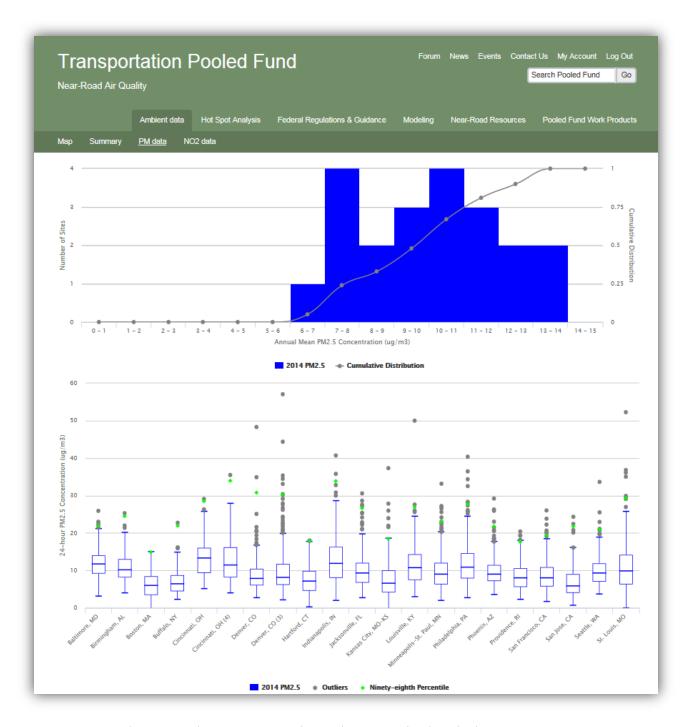


Figure 7. Ambient Data main tab, PM data page. The data display is interactive.

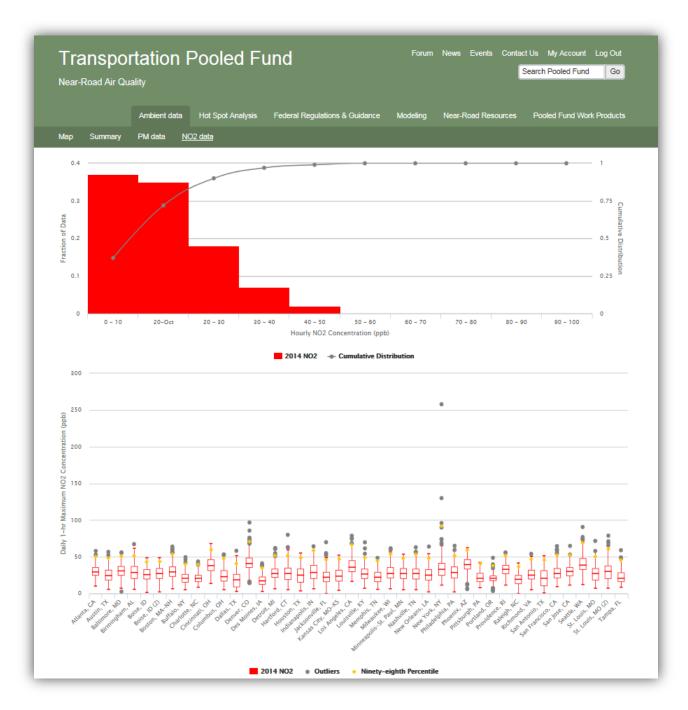


Figure 8. Ambient Data main tab, NO₂ data page. The data display is interactive.

3.3 Hot-Spot Analysis Pages

Figure 9 through 12 illustrate content available via the Hot-Spot Analysis tab. As shown in Figure 10, users can submit content to share with others. Users can also link submitted content with geographic location, and use GIS mapping tools to find materials. Figure 11, for example, shows hot-spot analysis case studies and the interactive map feature that enables users to search content by case study location.

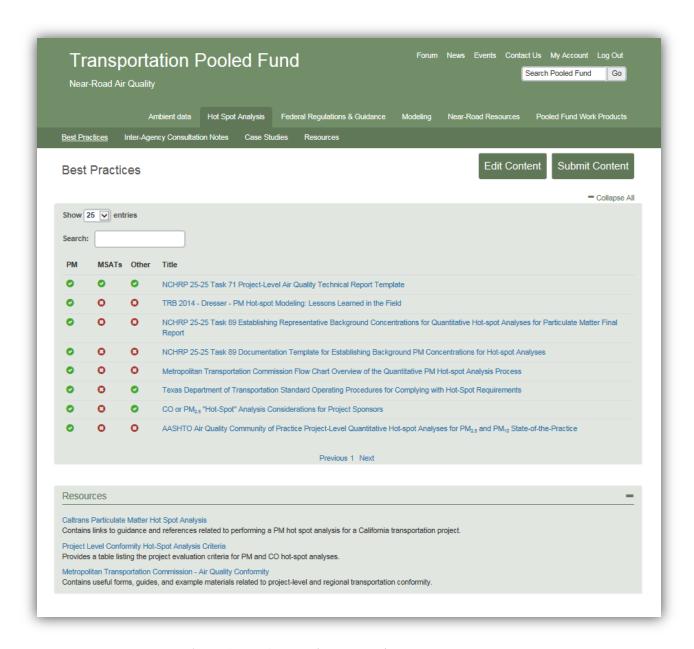


Figure 9. Hot-Spot Analysis main tab, Best Practices page.

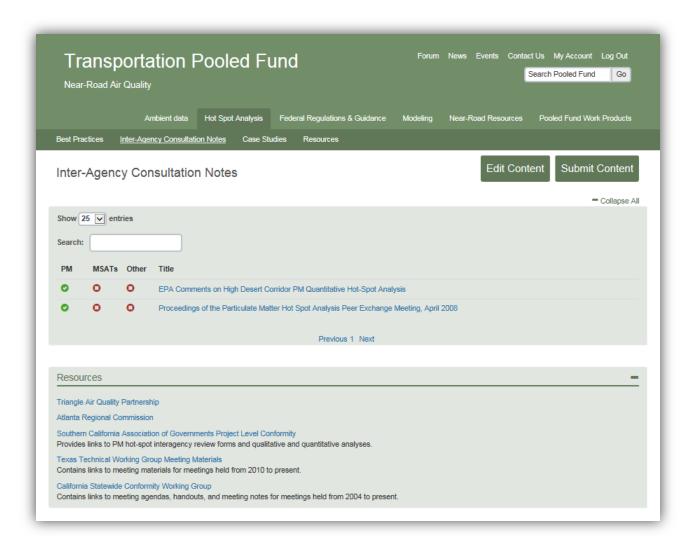


Figure 10. Hot-Spot Analysis main tab, Inter-Agency Consultation Notes page.

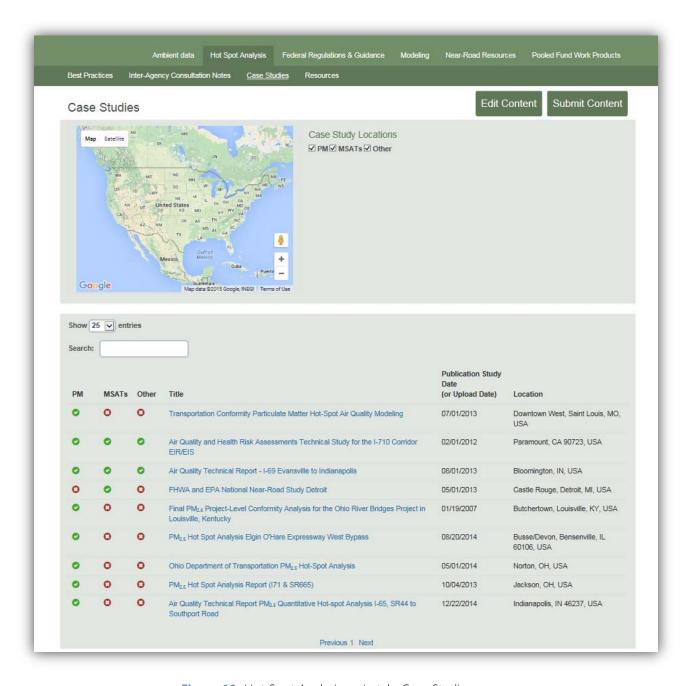


Figure 11. Hot-Spot Analysis main tab, Case Studies page.

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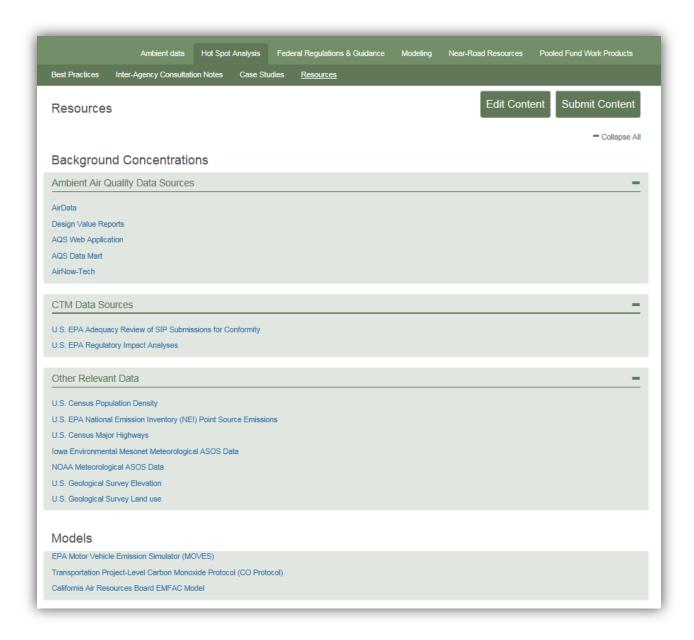


Figure 12. Hot-Spot Analysis main tab, Resources page.

3.4 Federal Regulations & Guidance Pages

Figures 13 through 15 illustrate content available via the Federal Regulations & Guidance tab.

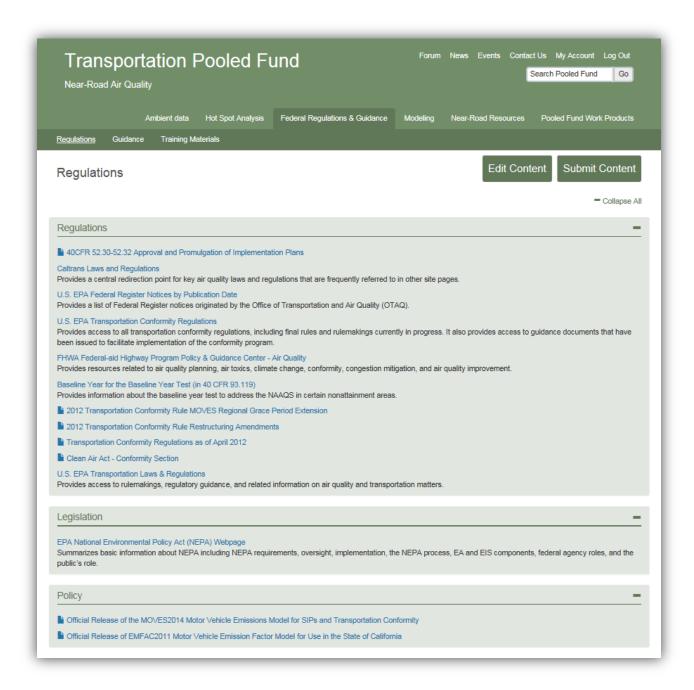


Figure 13. Federal Regulations & Guidance main tab, Regulations page.

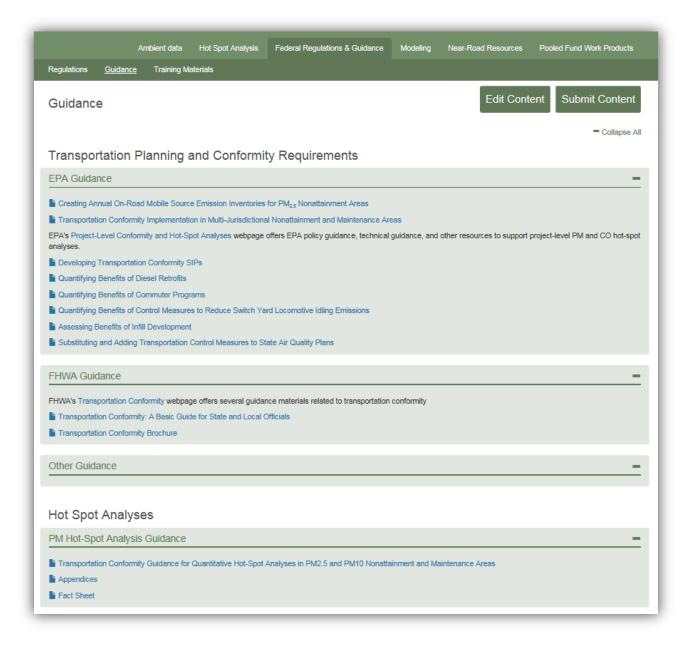


Figure 14. Federal Regulations & Guidance main tab, Guidance page.

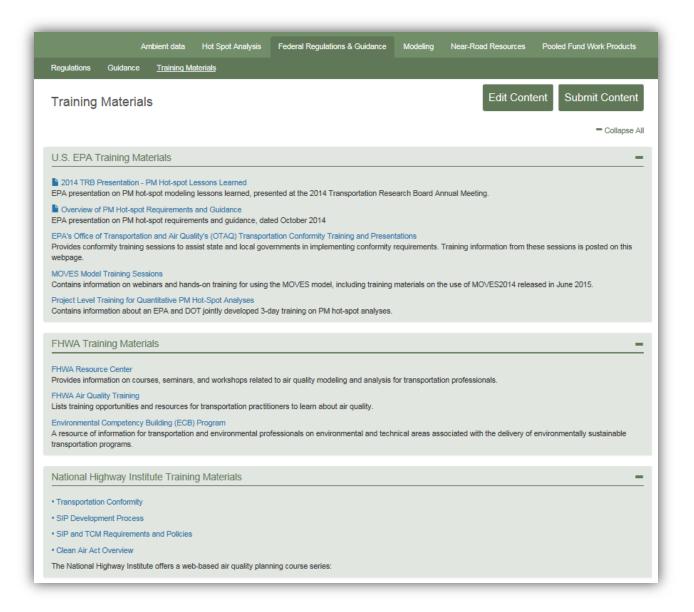


Figure 15. Federal Regulations & Guidance main tab, Training Materials page.

3.5 Modeling Pages

Figures 16 and 17 illustrate the Tools and Resources pages available to support near-road modeling.

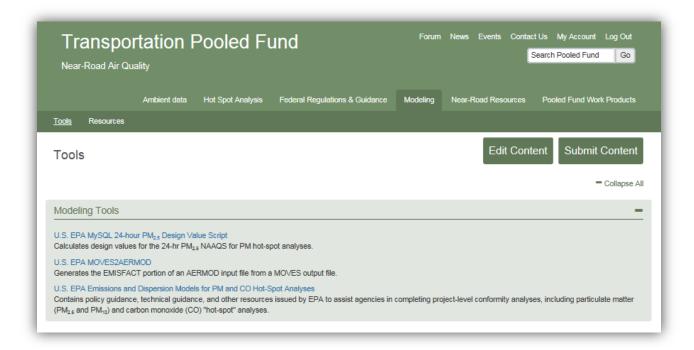


Figure 16. Modeling main tab, Tools page.

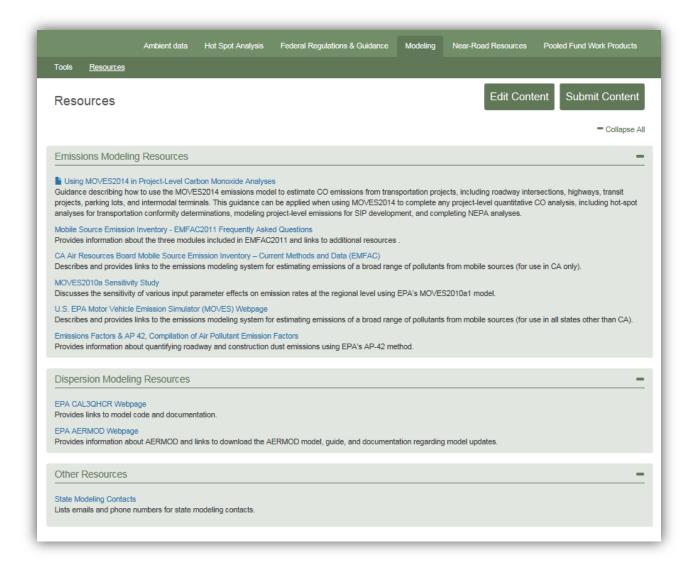


Figure 17. Modeling main tab, Resources page.

3.6 Near-Road Resources Pages

Figures 18 through 20 illustrate Near-Road Resources pages; these pages include abstracts from recent publications of interest, links to various support documents, and resources specific to mitigation.

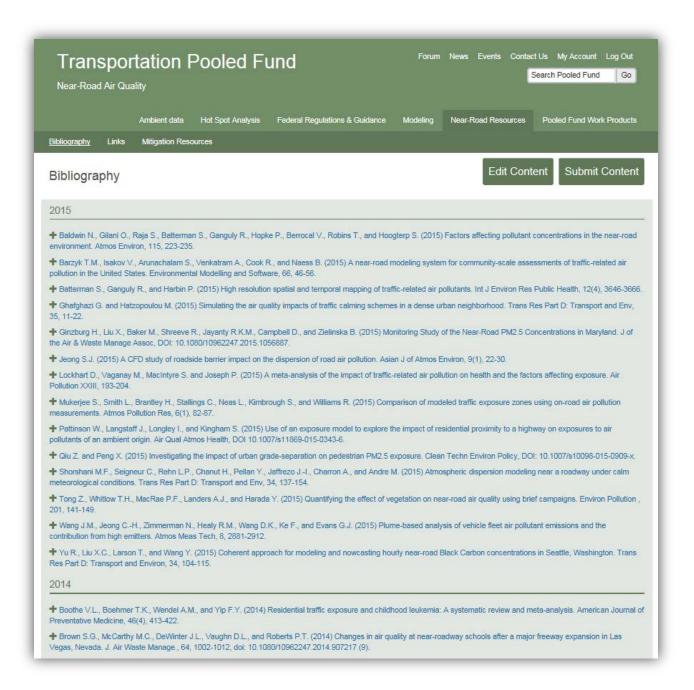


Figure 18. Near-Road Resources main tab, Bibliography page.

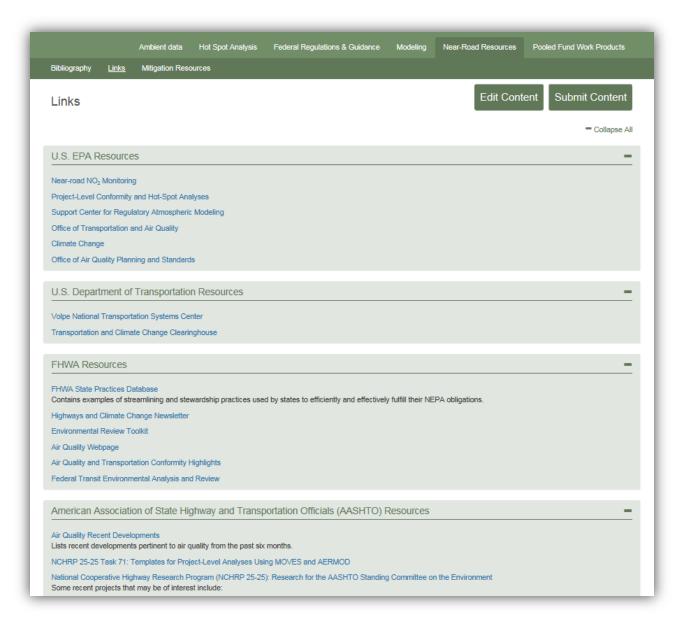


Figure 19. Near-Road Resources main tab, Links page.

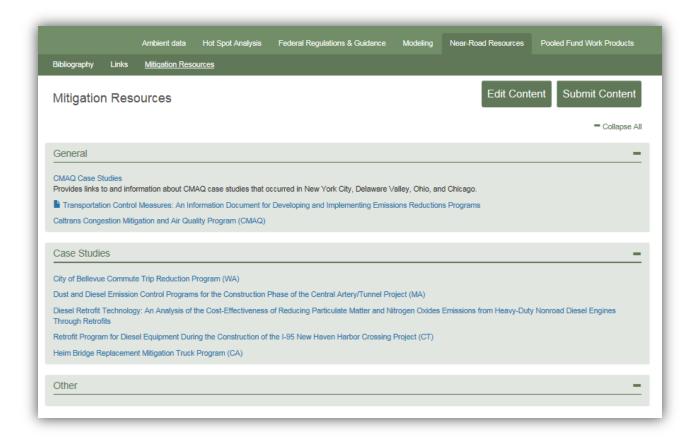


Figure 20. Near-Road Resources main tab, Mitigation Resources page.

3.7 Pooled Fund Work Products Page

Figure 21 illustrates the Pooled Fund Work Products main tab. From this part of the website, users can access and download task order work plans, draft and final reports, and presentation materials.

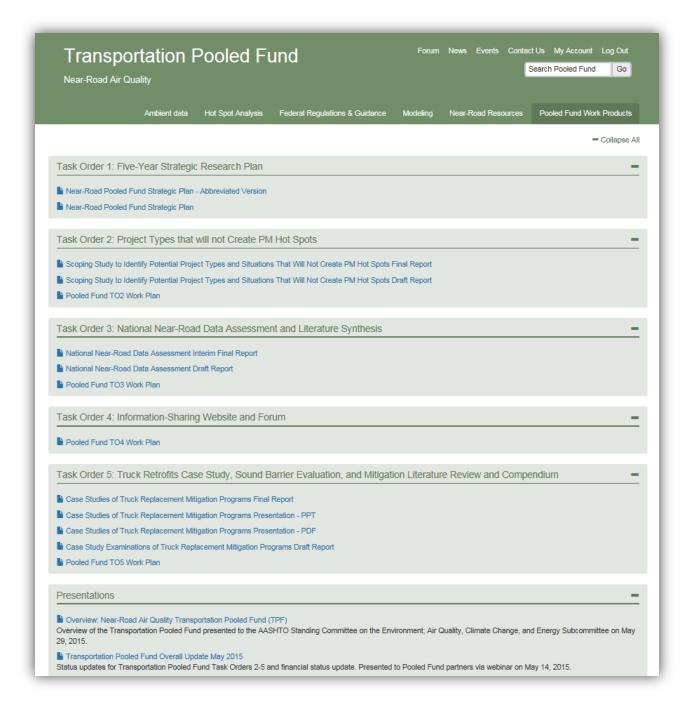


Figure 21. Pooled Fund Work Products main tab.