



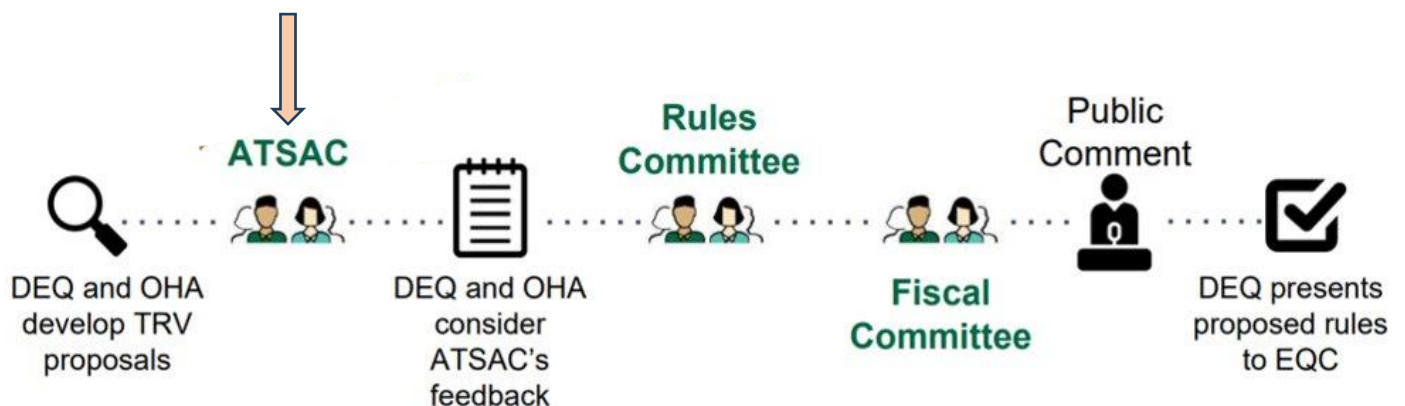
1: Overview of TRV Review

Background

The Oregon Department of Environmental Quality (DEQ) and Oregon Health Authority (OHA) are currently reviewing the inhalation toxicity reference values (TRVs) used in DEQ's air quality programs. Oregon Administrative Rules (OAR), adopted by the Oregon Environmental Quality Commission (EQC), specify sources of toxicity information considered to be authoritative in terms of their scientific rigor and comprehensive methods for deriving TRVs [[OAR 340-247-0030](#)]. There are four authoritative sources in rule: (1) the U.S. Environmental Protection Agency (EPA), (2) U.S. Agency for Toxic Substances and Disease Registry (ATSDR), (3) California's EPA (CalEPA), and (4) Oregon DEQ in consultation with the Air Toxics Science Advisory Committee (ATSAC).

The purpose of this document is to provide an overview of the proposed TRV review process during the 2025 [TAC Review and Update Rulemaking](#) and to provide descriptions of and links to the documents and workbooks ATSAC will need to review to provide input to DEQ on their proposed TRVs.

- What is a TRV? A toxicity reference value, or **TRV**, is the amount of an air contaminant that may cause health problems when inhaled or that corresponds to a one in a million excess cancer risk when inhaled. TRVs are derived from a variety of authoritative sources. DEQ uses the term TRV when referring to similarly derived health-based toxicity values developed by other agencies. ATSAC members can find more details on DEQ's authoritative sources and TRV definitions in the document titled [Proposed TRV Update and Selection Process for ATSAC Review](#).
- Rulemaking process: DEQ and OHA review TRVs at regular intervals and propose new values if needed through rulemaking. The graphic below describes the rulemaking process for updating TRVs, including ATSAC's role and ending with a vote by DEQ's governing body, the EQC.



Agency Work Since Last ATSAC Meeting

To date, DEQ has held three ATSAC meetings. In the second ATSAC meeting (held January 20th, 2023), DEQ and OHA staff presented the agencies' overall plan for reviewing toxicity information and updating TRVs (See [Proposed TRV Update and Selection Process for ATSAC Review](#)). ATSAC provided [feedback](#) on DEQ and OHA's proposed process. DEQ and OHA updated their plan based on ATSAC feedback. Changes DEQ and OHA made are summarized [here](#). DEQ and OHA:

- Checked all authoritative sources for updates to candidate TRV options since the original rulemaking.
- Collected information for derivation of all candidate TRVs including (but not limited to):
 - Date of candidate TRV publication.
 - Test species.
 - Citation of critical study.
 - Critical effects/target organs.
 - Uncertainty factors applied.
 - Dosimetric adjustments.
 - Type of point of departure.
 - Exposure duration in critical study.
- Selected TRVs from among candidate options for proposal based on:
 - Recency of publication.
 - Recency and robustness of critical study.
 - Applicability of exposure duration to TRV type (e.g. short-term exposures for acute TRVs).
 - Degree of health protectiveness.

In this review DEQ and OHA started from a list of 660 toxic air contaminants (TACs) developed by compiling reporting lists from authoritative sources, with a significant number coming from CalEPA.

DEQ then developed an Excel-based tool (hereafter, called "TRV tool") for OHA staff to systematically review candidate TRVs for TACs on that list. That tool was updated after the January 2023 ATSAC meeting to accommodate additional parameters on each candidate TRV.

Since the January 2023 ATSAC meeting, OHA staff have individually reviewed approximately 51 pieces of information for each of 377 TACs, which is around 20,000 data points. The result of that effort is the two Excel Workbooks linked in this document. Table 1 below lists some high-level statistics about the overall findings of that process.

Table 1. High level summary statistics for proposed changes to TRVs

Parameter	Count
Total TACs on starting list	660
Total TRVs (from 377 toxic air contaminants)	624
New TRVs (i.e., no 2018 TRV)	197
TRVs proposed to change since 2018	107
TRVs proposed to change due to more recent science (40)	
TRVs proposed to change due to exposure time adjustments (26)	

Parameter	Count
TRVs proposed not to change since 2018	320
TRVs for which multiple candidate TRVs were available from authoritative sources	238
Proposed TRVs where DEQ in consultation with ATSAC is the authoritative source	183

DEQ contracted with Eastern Research Group (ERG) to review each of the values entered in the tool. Document 2, dated July 2024, describes the QC process (see Table 2 below).

DEQ also contracted ERG to research and compile candidate TRVs for a small number of selected priority TACs from sources beyond the four officially recognized authoritative sources. DEQ also contracted ERG to collect derivation information about those additional candidate TRVs. ERG provided a memo summarizing that body of work, and DEQ annotated it to make clear which candidate TRVs DEQ selected for proposal. That annotated summary, dated July 2024, is available here ([9: ERG Summary of Inhalation Toxicity Values Annotated by DEQ](#)).

As DEQ and OHA staff went through the process summarized above, they encountered themes and topics for ATSAC review and consideration. The section below lists and describes the documents DEQ and OHA prepared to frame those themes and topics for the upcoming ATSAC meetings and discussions.

Agency’s Request of ATSAC Members

DEQ and OHA request that ATSAC members carefully review documents 2-8, which are intended to frame up and inform the discussion questions in document 3 and appendix B of document 8. DEQ and OHA have developed a list of guiding discussion questions for ATSAC members (Document 3 below). The agency’s main request of ATSAC members is to come to the next series of ATSAC meetings prepared to share their perspectives on and discuss those questions. The questions in document 3 and appendix B of document 8 are grouped according to the document or resource in Table 2 below that frames up the theme for that group of questions. The discussion questions associated with document 8 are in document 8 itself as appendix B.

The agendas for the next series of ATSAC meetings are based off the list of discussion questions in document 3, taking them in order and covering as many as possible as time allows in each meeting.

After the final meeting, the agencies also request that ATSAC members record their final thoughts on each question, informed by the group discussions, in the worksheet space provided for each question on their own copy of document 3 and discussion questions for document 8.

Materials for ATSAC to Review

Table 2 below is intended to serve as a Table of Contents for ATSAC members to help them keep track of the numerous documents and to consolidate links to the online locations of those documents and resources. It lists and describes all of the resource documents DEQ and OHA have prepared for their review.

Table 2. Documents for ATSAC to Review.

Resource Title and Website Link		Description
Document 1	Overview of TRV Review	This is document 1. Intended to serve as table of contents of resources and consolidate links to those resources.
Document 2	QC of Toxicity Reference Values	This document was authored by ERG on behalf of DEQ and describes the process ERG followed to check, or quality control (QC), the entries OHA staff made to the TRV update tool.
Document 3	ATSAC Meetings #5-7 Discussion Questions	<p>These are the key questions DEQ and OHA are seeking ATSAC feedback on. Questions are grouped by topic and correspond to certain documents in this table. After the final meeting in this series, DEQ and OHA request that ATSAC members record their final thoughts on each question in the worksheet space provided and send them to DEQ and OHA.</p> <p>Note: OHA and DEQ will provide an editable version of this document to ATSAC members in Microsoft Word format so that they can write and submit their thoughts and share with the agencies. DEQ and OHA will compile responses from all ATSAC members to create a version with all ATSAC input together.</p>
Document 4	Proposed TRVs Where DEQ is the Authoritative Source	This document contains derivation information about every TRV where DEQ is listed as the authoritative source. These are very important TRVs for ATSAC feedback as the rule lists DEQ as an authoritative source only when “in consultation with ATSAC.”
Document 5	Proposed Groupings of Toxic Air Contaminants	Many TACs belong to families or groups of chemicals, and this document explains how DEQ and OHA propose to group and apply TRVs in these cases.
Document 6	Proposed TRVs Using PPRTV Screening Values as the Authoritative Source	In rare cases, the only candidate TRV available for a TAC came from a “Screening PPRTV.” This document describes screening PPRTVs and frames up this topic for ATSAC discussion questions related to them.
Document 7	Proposed TRVs Not Yet Finalized by Authoritative Sources	In rare cases, DEQ proposes to adopt a candidate TRV from an authoritative source that is still considered a draft value by that authoritative source. This document frames up this topic for ATSAC discussion questions related to these cases.

Resource Title and Website Link		Description
Document 8	Diesel Particulate Matter Framing Document	<p>This is the only TAC-specific framing document in the list because the proposed cancer TRV for this TAC has a significant amount of information to review for ATSAC to consider and provide feedback on.</p> <p>Note: The discussion questions for this document are in Appendix B of this document. DEQ and OHA will provide ATSAC members with an editable Word version of the discussion questions associated with Document 8.</p>
Workbook 1	DEQ Proposed TRVs	This workbook contains all proposed TRVs along with information about whether the proposed value is different from the one in existing rule and, if so, a very brief reason for the change.
Workbook 2	TRV Derivation	This workbook contains derivation information for all TRVs and highlights those that are proposed to change with this round of revisions, especially when there were multiple candidate TRVs available to choose from. Derivation information is available not only for the TRV selected for proposal, but also for all candidate TRVs. This is so that ATSAC can verify that DEQ and OHA selected the most scientifically robust TRV when there were multiple options to choose from.

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