

This document provides a history of updates to the NCDEQ Risk Calculator and other risk evaluation resources.

### **What's New - January 2022**

1. The January 2022 NCDEQ Risk Calculator has been updated with the revised US EPA Regional Screening Levels (RSL) information released in November 2021. Changes in toxicity values, exposure parameters, chemical-specific parameters, equation formats and any other screening level changes. can be found on the EPA RSL What's New web page at: <https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new>

There are no updates to the associated risk evaluation resources.

### **What's New - June 2021**

1. The June 2021 NCDEQ Risk Calculator has been updated with the revised US EPA Regional Screening Levels (RSL) information released in May 2021. Changes in toxicity values, exposure parameters, chemical-specific parameters, equation formats and any other screening level changes. can be found on the EPA RSL What's New web page at: <https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new>

There are no updates to the associated risk evaluation resources.

### **What's New - February 2021**

1. The January 2021 NCDEQ Risk Calculator has been updated with the revised US EPA Regional Screening Levels (RSL) information from November 2020. Changes in toxicity values can be found on the EPA RSL What's New web page at: <https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new>
2. Specific chemicals are highlighted blue in the Risk Calculator to indicate that there are data entry notes for that chemical that can be found on the PSRG Preliminary Soil Remediation Goals Table or in the NCDEQ Risk Calculator User Guide.
3. The NCDEQ Risk Calculator User Guide has been updated to include the following:
  - a. Added or clarified the underlined language on page 3: "Note, contaminants with concentrations demonstrated to be within naturally occurring background levels should be included in the initial risk evaluation and any unacceptable risk noted for communication purposes. Reasons for excluding naturally occurring contaminants from the risk evaluation must be well-documented. Cleanup of contaminants above naturally occurring levels is not required."
  - b. Added or clarified the underlined language on page 5: "Facilities whose chemical exposures fall under the purview of the Occupational Safety and Health Administration (OSHA) should have those risks evaluated separately. As stated in the DWM Vapor Intrusion Guidance document, If OSHA standards currently govern the amount of chemical allowed in indoor air, future exposures from subsurface contamination should

be evaluated using soil gas data to account for potential changes in use of the building or changes in land use.”

- c. Added the underlined language on page 5: “**Construction Worker** – Assumes that adult construction/utility workers may be exposed to soils through large-scale redevelopment activities that disturb at least ½ acre of contaminated soil. The associated exposure parameters assume a shorter exposure duration and higher contamination exposure relative to residential and non-residential worker scenarios. The additional particulate emission factor (PEF) and volatilization factor (VF) equations are unique to this scenario.”
- d. Updated the version of the Risk Calculator’s Main Menu page on page 7.
- e. Added to the “Notes on the Construction Worker Scenario” on page 12 that USEPA does not provide RSLs for this pathway.
- f. Instructions on how to enter chemicals highlighted in blue in the calculator have been updated on page 20. These instructions are similar to those provided in the PSRG Table Notes.
- g. The links to the DWM vapor intrusion screening levels and what to do if a screening level is exceeded is added to page 25. In addition, A list of mutagens has been added to the Vapor Intrusion Calculators section on page 27.

### **What’s New - July 2020**

1. The July 2020 NCDEQ Risk Calculator has been updated with the revised US EPA Regional Screening Levels (RSL) information from May 2020. Changes in toxicity values can be found on the EPA RSL What’s New web page at: <https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new>
2. The NCDEQ vapor intrusion (VI) screening levels are now only accessible in the Risk Calculator. If a VI screening level is exceeded, the user is directed to enter the site data into the Risk Calculator to calculate risk. See the *NCDEQ Risk Calculator User Guide* for detailed instructions. **It is NCDEQ policy to base mitigation decisions on risk to human health and not screening levels.**

Note that the NCDEQ Risk Calculator does not allow modification of the residential VI exposure duration for mutagens and conservatively applies a default of 26-years regardless of the site-specific exposure duration entered into the calculator. Consult with a NCDEQ toxicologist if you need to adjust exposure parameters at a site with mutagenic contaminants.

3. The *Risk Evaluation Equations and Calculations* document was updated according to the May 2020 US EPA RSLs.

### **What’s New - April 2020**

1. The *Technical Guidance for Risk-Based Environmental Remediation of Sites* was revised and posted in April 2020.
2. The *Administrative Procedures for Risk-Based Environmental Remediation of Contaminated Sites* and associated forms were revised and posted in April 2020.

## **What's New - December 2019**

1. The December 2019 NC DEQ Risk Calculator has been updated with the revised US EPA Regional Screening Levels (RSL) information from November 2019. Changes in toxicity values can be found on the EPA RSL What's New web page at: <https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new>

## **What's New - May 2019**

1. The May 2019 NC DEQ Risk Calculator has been updated with the revised US EPA Regional Screening Levels (RSL) information. Changes in toxicity values can be found on the EPA RSL What's New web page at: <https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new>.
2. The Risk Calculator Main Menu updates include:
  - a. links to the User Guide, PSRG Table, Risk Evaluation Equations and Calculations, and this What's New update;
  - b. combining the Soil and Subsurface Soil Exposure Point Concentration tables into one table (see User Guide for details);
  - c. simplifying nomenclature of the Direct Contact Soil and Water Calculators and the Contaminant Migration Worksheets to reduce confusion;
  - d. flagging the Protect/Unprotect buttons as NC DEQ Use Only and moving them to the bottom of the Main Menu; and
  - e. adding a Sitewide Risk output sheet (see User Guide for details).
3. Updates to the Complete Exposures Pathway sheet include:
  - a. having only the Resident and Non-Residential Worker Soil pathways (for Direct Contact Pathways) checked as "complete"; and
  - b. adding pop-up boxes to provide additional information when pathways for Resident Groundwater Use, Non-Residential Worker Groundwater Use, Construction Worker, or Recreator/Trespasser are checked as complete.
4. Updates to the Soil, Groundwater, and Surface Water Exposure Point Concentrations sheets include:
  - a. requiring that Total Chromium data be entered as Chromium (III) and/or Chromium (VI) based on speciated analytical results and site knowledge; and
  - b. adding a pop-up box that provides instruction for entering Chromium (III) concentrations.
5. The NCDEQ Risk Calculator User Guide was Updated to reflect the changes.