WAREHOUSE COLORADO ONLINE DASHBOARD

How to navigate the tool and understand warehouse pollution impacts in Colorado

The Warehouse Colorado Dashboard is a tool developed to help visualize and quantify the footprint and environmental impacts of warehouses in Colorado.

The Dashboard allows you to investigate warehouses in Colorado cities or counties of your choosing, or even in a radius around your home, or any other area of interest. You can see how many warehouses are in the area, how much space they occupy, and how many daily truck trips and associated pollution they generate.

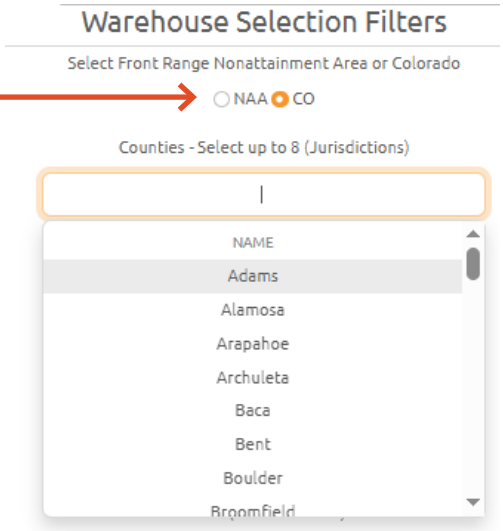
This factsheet will help you navigate the tool and understand the information and data it can provide.

To start, go to: https://radicalresearch.shinyapps.io/warehouseColorado/

You can view the footprint and location of warehouses anywhere in Colorado by zooming or scrolling in and out, and dragging to change the focal point of the map. Click on any area of the map to generate data.

In the upper left corner of the Dashboard are some Selection Filters:

The tool defaults to showing all warehouses in Colorado, but you can change this setting so that only warehouses in the NAA, or ozone Nonattainment Area, are visible::

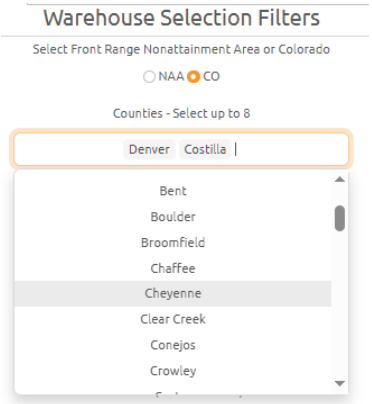


A Nonattainment Area is a designation established by the Environmental Protection Agency (EPA). It identifies geographic regions that exceed legal pollution limits for one or more of 6 criteria pollutants.

Colorado's NAA, visible in the Warehouse Colorado Dashboard, encompasses an area surrounding the Denver Metro / North Front Range, up to the Wyoming border. It has failed to meet the legal limits for ozone since 2008.

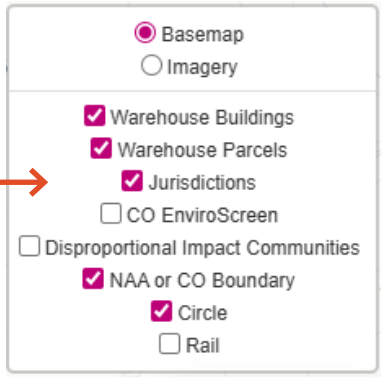
The vast majority of Colorado's warehouses are located within the NAA.

Clicking in the Counties or Cities boxes will bring up a list, from which you can select up to 8 of each per query:



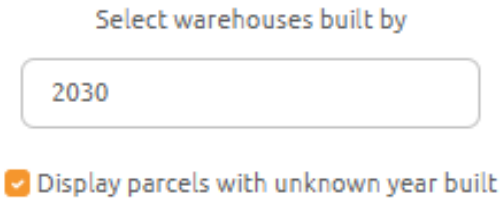
You can also start typing in the box to bring up the entries you're interested in, instead of scrolling through the list.

If you have turned on the "Jurisdictions" layer in your map legend (on the right side of the map), boundaries will appear on the map around your selected municipalities.



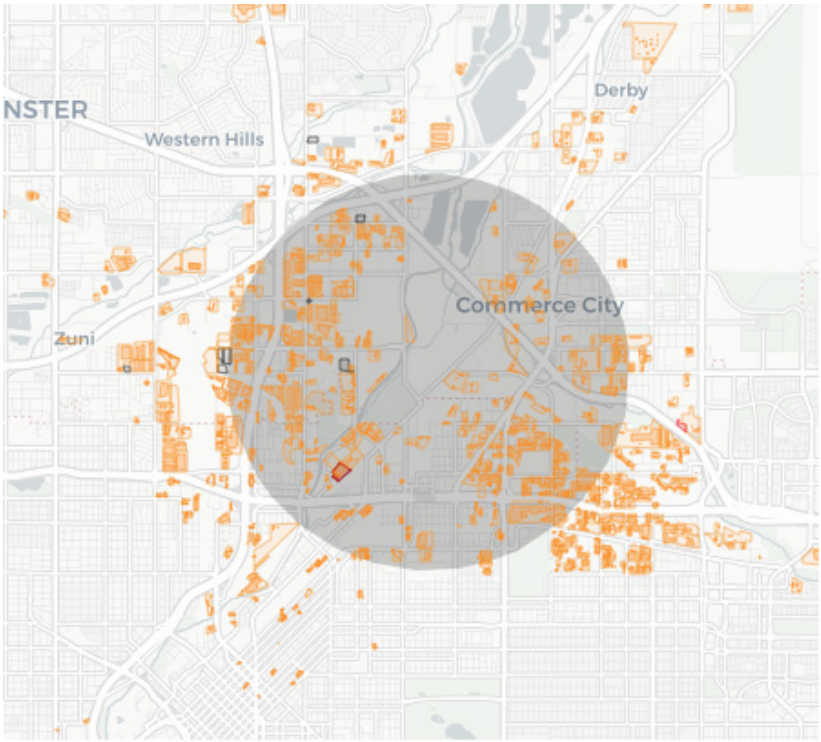
(More on the legend and available layers below.)

You can also select a "built by" date to refine your search to either existing warehouses, or existing and planned warehouses. Any warehouse with a built by date after 2026 is in the planning stages.

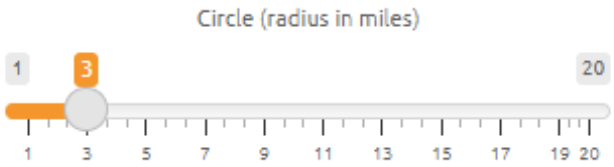


If you're interested in looking at your own neighborhood, or an area on the map where you can see there's a high concentration of warehouses, you can use the "Circle" feature.

Just click anywhere in the map, without dragging or double clicking. A darker gray shaded area will appear on the map, centered around the spot on which you clicked:



A slider on the left hand side of the Dashboard allows you to choose the radius of your Circle, either before or after generating it:



Once you have selected an area that you're interested in, a Summary Table of statistics for your selected area appears at the top-center of the Dashboard.

This table includes statistics about cumulative warehouse space in your chosen area, the number of daily truck trips associated with warehouses in that area, and the amount of pollution generated by those trips.

> The pollutants considered in the evaluation are limited to particulate matter (PM), nitrogen oxides (NOx), and carbon dioxide (CO2).
>
> The statistics shown in the Summary Table update automatically whenever you choose different query parameters. They do not change as you navigate around the map.

If you'd like, you can download this Summary Table in either CSV or Excel spreadsheet format by clicking on one of the buttons shown here:

CSV Excel

Category	Parcel count	Acreage	Warehouse floor space (Sq.Ft.)	Building count	Daily Truck trips	Daily Diesel PM (pounds)	Daily NOx (pounds)	Daily CO2 (metric tons)
Proposed	8	44	767,000		500	0.5	15.6	6.6
Under Construction	2	14	244,000		200	0.2	6.3	2.6
Existing	547	2,706	37,678,000	818	25,200	24	788.5	331.3

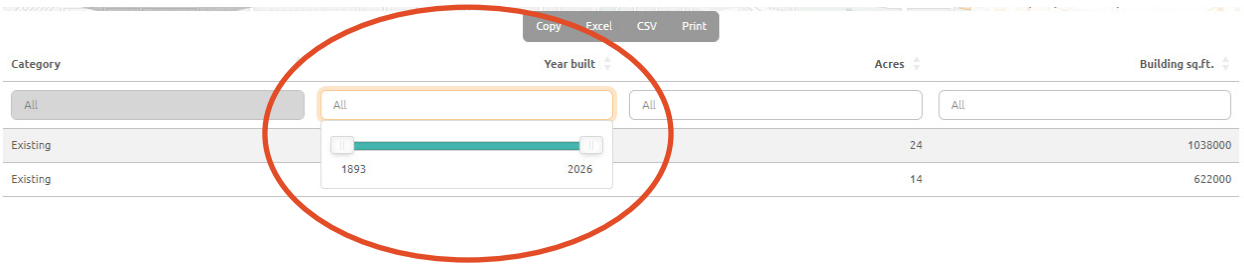
> If you decide to download a table, make sure you take note of the area covered in that particular search. The tool will export only the table, with no indication of the area searched. You can either edit the document itself to include an area description, or save the file with a name that will indicate the location searched.
>
> Viewing these summary statistics for different areas may be all you need to inform your understanding of the impact of warehouses in Colorado, but the Dashboard offers additional tools for deeper analysis.

A much larger Detail Table of warehouses in your selected area will also appear at the bottom of the Dashboard.

This larger table does not provide the cumulative statistics that the Summary Table does.

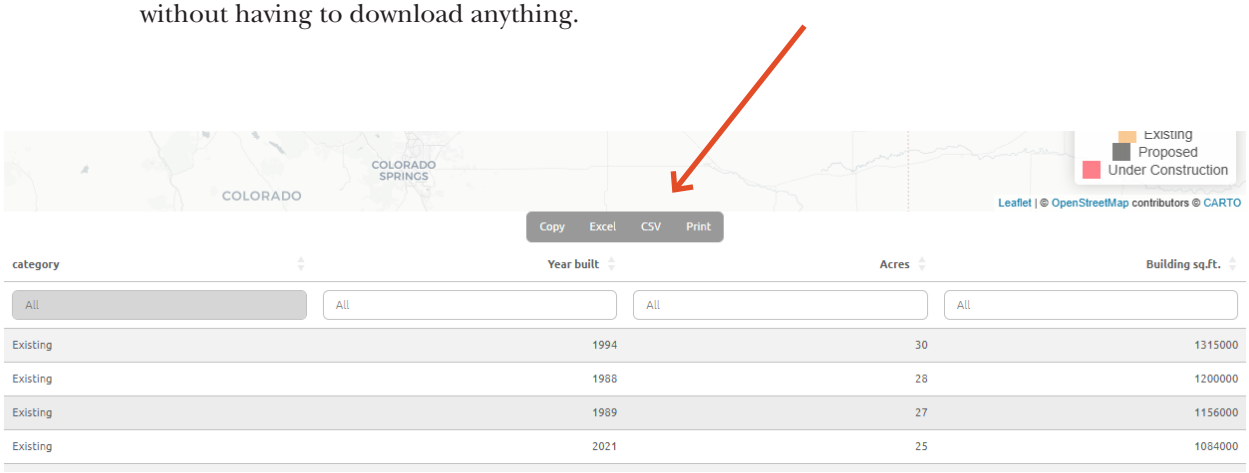
It does include individual records for all warehouses in your selected search area. You can take a closer look at the time period during which these warehouses were or will be built, and the size of each warehouse.

If you click in the boxes for the "Year built," "Acres," or "Building sq. ft." categories, sliders will appear that allow you to refine your query to time periods or warehouse sizes that you're most interested in:



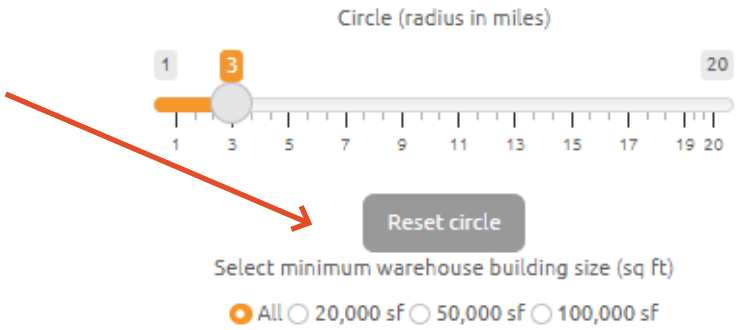
Using these sliders will not change the statistics in the Summary Table for your search area, but it will change the entries included in the larger Detail Table.

You can download this entire Detail Table also, in Excel or CSV formats, or by printing to pdf. You can also select the "Copy" option, which will allow you to paste the contents of the entire table into your own Word document or Excel spreadsheet, without having to download anything.

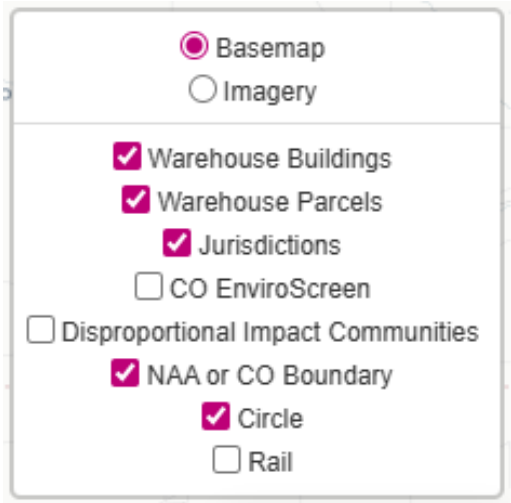


The entries in both the Summary Table and the Detail Table will update automatically as you make your selections. You can export these at any time to keep a record of your investigations.

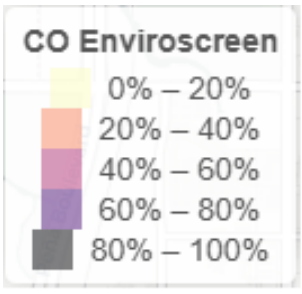
When you're done, you can "Reset circle," and it will disappear, and so will the associated statistics and entries in the two tables.



A list of map layers on the right hand side of the map allows you to turn certain features on and off:



- Warehouse Buildings show the building footprint, while Warehouse Parcels show the property parcel upon which the warehouse building sits.
- CO EnviroScreen is a multi-layered data set published by the Colorado Department of Public Health and Environment. It includes 35 indicators of public and environmental health. Selecting the "CO EnviroScreen" item in the legend allows you to see the CO EnviroScreen percentile score for each census block group in the state.



This score is an assessment of cumulative impacts of health, pollution, climate, and social factors. The higher the percentile score, the higher the cumulative impacts faced by the resident population.
More detailed information about the evaluated indicators and methodology can be found on the CDPHE website.

- A Disproportionally Impacted Community is defined by CO HB23-233 as having two or more of the following characteristics: Low-Income population above 40%, Housing-Cost Burdened population above 50%, People of Color population above 40%, Linguistically Isolated population above 20%, EnviroScreen Percentile Score above 80.
- The "NAA or CO Boundary" element in the legend is a dotted black line that will appear around either the state of Colorado, or the NAA, depending on which area you have chosen.

The Advanced User Input Options allows those with some advanced knowledge of pollutant and transportation issues to perform additional calculations. After checking the box on the left, users can adjust several default factors to explore the range of potential truck trips and emissions. For more information on the default factors, please review the "Readme" tab, available toward the top of the page.