

CRC SimPLER Quick Start Guide

Note: Hovering over drop downs and output components provides short descriptions. Click on the question mark for full descriptions and tool tips.

Input Screen

INPUTS

Select CRC, population and resource information below and click "estimate" for throughput calculations. Hover mouse over bolded drop-down labels for more information. For more detailed descriptions of the inputs, click the question icon.

Toggle Comparison Tool

Select information about the population arriving at your CRC: 1

Estimated Arriving Population During Shift ▼

Percent of Population Assumed Contaminated ▼

Enable Arrival Distribution Options **Arrival Distribution** ▼

Select the time your CRC will be open each day: 2

Operational Shift Length (Hours per shift) ▼

Select the number of resources used at your CRC: 3

Number of Portal Monitors	▼	Minimum Staff 1
Number of Handheld Detectors (Prior to Decon)	▼	0
Number of Individual Showers	▼	0
Number of Handheld Detectors (Post Decon)	▼	0
Number of Registration Lanes	▼	0
Total		1

Estimate 4

1. Select information about the arriving population at your CRC.

Select information about the population arriving at your CRC: 1

Estimated Arriving Population During Shift **A** 1000 ▼
Percent of Population Assumed Contaminated **B** 25 ▼
 Enable Arrival Distribution Options **Arrival Distribution** **C** uniform ▼

- A. The **Estimated Arriving Population During Shift** is the number of people you anticipate will arrive during the operational shift for your CRC. This is essentially your *desired throughput*.
- B. The **Percent of Population Assumed Contaminated** is based on the incident and will vary depending on the screening criteria used in the facility. This percent is applied to your estimated arriving population and will provide the estimated number of individuals that will require decontamination.

A contaminated individual is defined as someone that shows contamination at a level higher than the pre-defined threshold screening criterion set for the facility.

- C. The **Arrival Distribution** is the rate at which the population will be arriving to the CRC. The default arrival distribution is uniform, which represents a constant rate of arrival over the course of the shift.

To change the **Arrival Distribution**, select the **Enable Arrival Distributions Options** box. This allows you to select from other types of distributions for arrivals.

Enable Arrival Distribution Options **Arrival Distribution** uniform ▼

- 2. **Select the time your CRC will be open each day.** Operational shift length is the time, in hours, that your CRC will be open each day.

If you are operating more than one shift during the day with little to no stops in service, select the total number of hours your CRC will be open to see total throughput for the CRC over the course of the day.

If you are operating more than one CRC, you should calculate throughput estimates separately for each CRC.

- 3. **Select the number of resources used at your CRC.** If you do not have a resource or station in your plans, select "0". Greyed out drop downs for prior and post-decon will become available once you add showers.

As resources are selected, the minimum staff at each station will auto populate on the right.

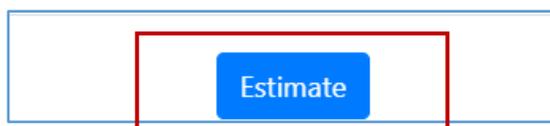
Select the number of resources used at your CRC: ?

Number of Portal Monitors	2	▼	3
Number of Handheld Detectors (Prior to Decon)	2	▼	2
Number of Individual Showers	2	▼	4
Number of Handheld Detectors (Post Decon)	2	▼	2
Number of Registration Lanes	6	▼	6
Total			15

[Estimate](#)

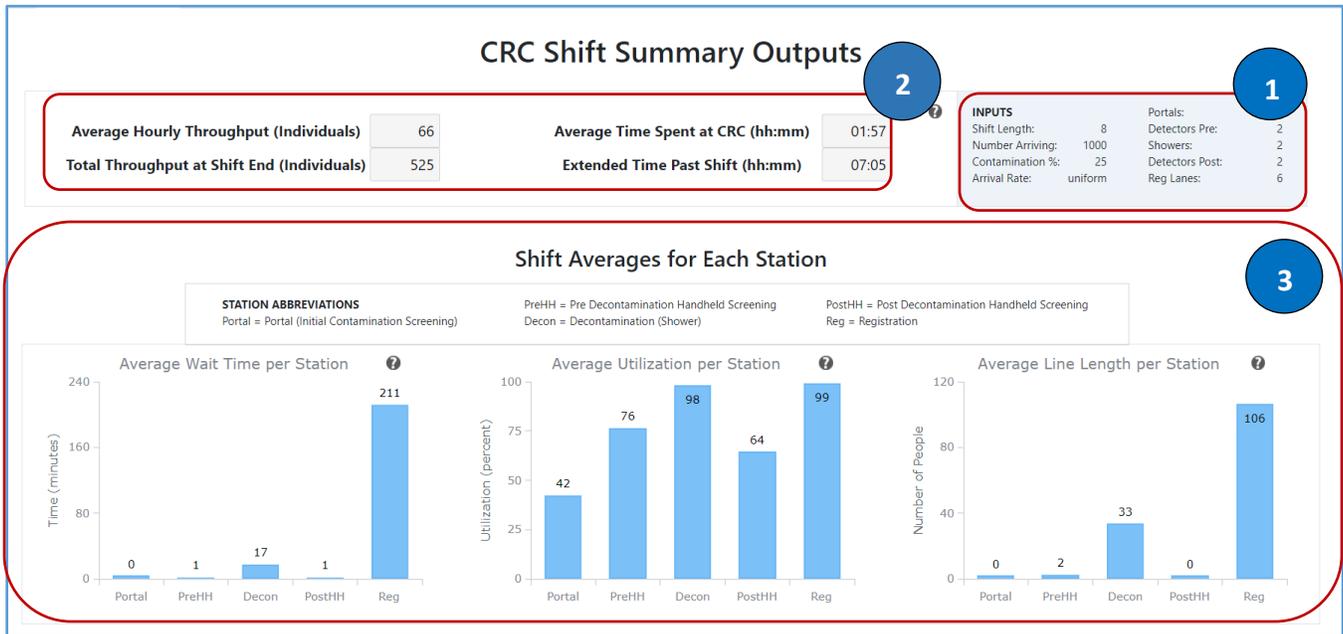
Note: It is possible to have more than the minimum staff assigned to equipment. For example, 2 staff per handheld detector versus the minimum of one. The minimum staff refers to staff assigned to that specific station and does not include other facility staff such as incident manager, safety officers, security, and traffic control, etc.

4. Click **Estimate** to view your CRC throughput estimates and results.



Summary Outputs Screen

This screen shows summary CRC outputs corresponding to the desired inputs. This page provides a snapshot of CRC throughput, bottlenecks, and resource utilization over the course of the shift.



For tooltips and suggestions on how to use the CRC Summary Outputs, click the question mark icon in each area.

- Inputs from the previous screen are in the top right corner of the Summary Output screen.
- Outputs corresponding to the entire CRC.
 - If **Total Throughput at Shift End** is less than the population arriving, then the CRC did not process all individuals during the shift. The additional amount of time needed to process the remaining individuals is **Extended Time Past Shift**.
 - Average Time Spent at CRC** is the amount of time, on average, that an individual is at the CRC for population monitoring services. Planners can pre-determine an ideal/ acceptable goal for processing time at the CRC and use that to compare with actual time spent.
- Station specific information is shown in the graphs at the bottom of the screen. Shift averages for each station are provided for **Wait Times, Utilization, and Line Length**.
 - Wait Times, Utilization, and Line Length** can be used to determine which stations have bottlenecks, where additional staff and resources might be needed or can be pulled from, as well as to check if the planned location of the CRC will accommodate the space needs of the lines.
- Select Hourly Outputs tab to view 24-hour data.

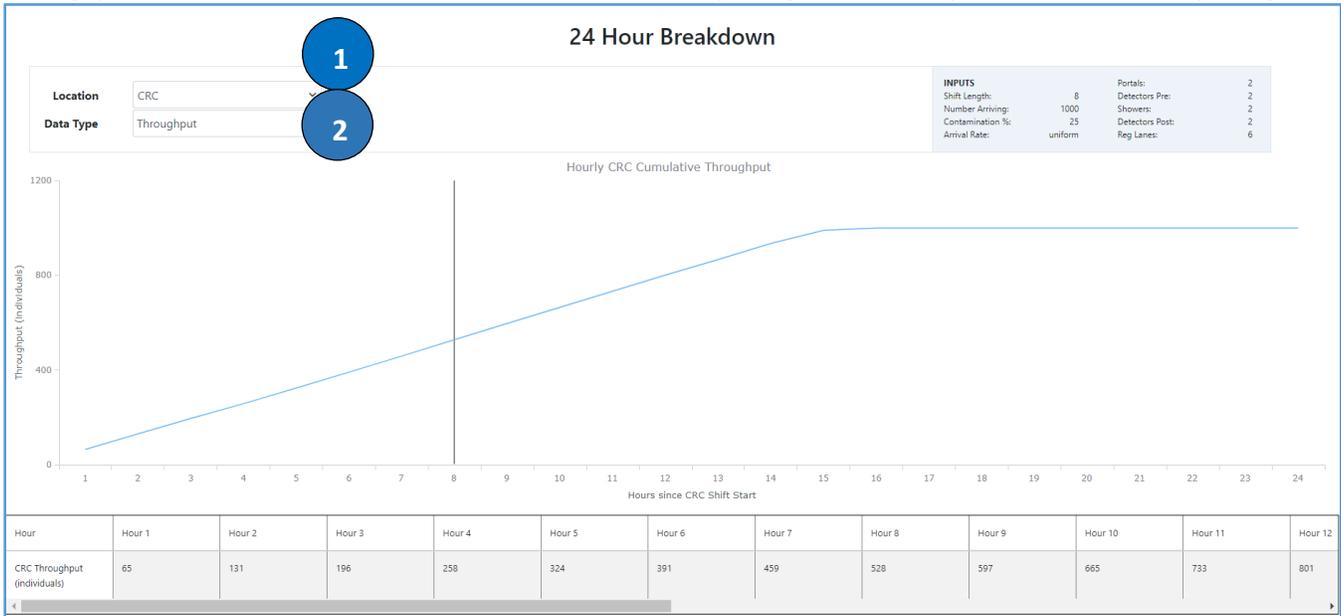


5. Select the Output Tables tab to view data in table format and export the data to Excel.

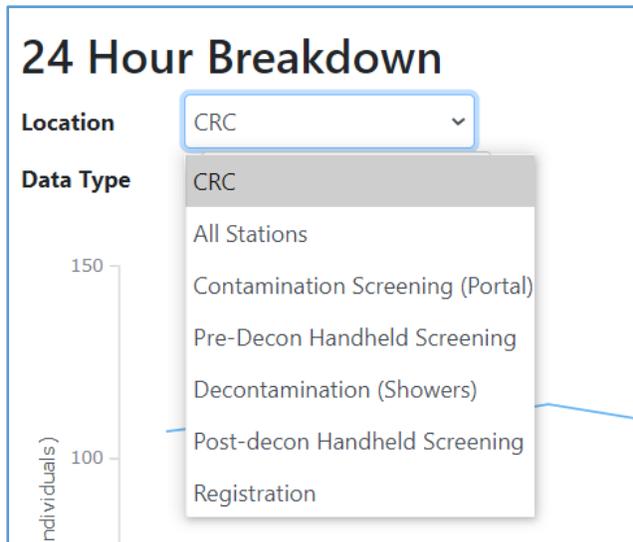


Hourly Outputs

This screen shows Hourly CRC outputs corresponding to the desired inputs. This page provides a hourly CRC throughput, bottlenecks, and resource utilization from the opening of the CRC up to 24 hours since opening.



1. Select the **Location** corresponding to the output you would like to view for the 24-hour plot.



- Selecting “CRC” for your location will allow you to view cumulative throughput for the CRC or individual processing times.
- Selecting any station will allow you to view station specific data such as wait times, line lengths, utilization, and cumulative station throughput.

2. Select the **Data Type** corresponding to the output you would like to view for the 24-hour plot

24 Hour Breakdown

Location

CRC

Data Type

Throughput

Wait Time

Line Length

Utilization

Throughput

Individual

150
100
duels)

Output Tables

CRC Outputs are presented in this tab as Summary (Shift Averages) and Detailed (Hourly). The Detailed tables present data for up to 24 hours from CRC opening. All data can be exported to an Excel File.

Output Data Tables

1
2

3

INPUTS

Shift Length:	8	Portals:	2
Number Arriving:	1000	Detectors Pre:	2
Contamination %:	25	Showers:	2
Arrival Rate:	uniform	Detectors Post:	2
		Reg Lanes:	6

Station Name	Average Wait Time (min)	Average Utilization (%)	Average Line Length (people)
Portal	0	42	0
Handheld Screening Pre Decontamination	1	76	2
Decontamination (Shower)	17	98	33
Handheld Screening Post Decontamination	1	64	0
Registration	211	99	106

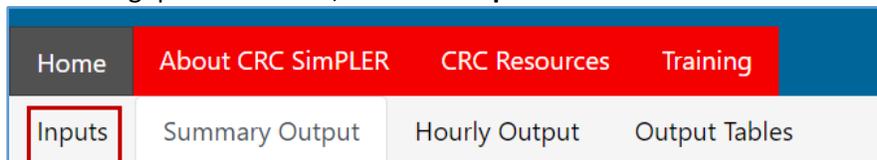
4

1. Select the **Table Type** you wish to view.
 - **Summary (Shift Average)** presents station data from the **Summary Outputs tab**
 - **Detailed (Hourly)** presents station data from the **Hourly Outputs tab**
2. Select the **Data Type** you would like to view.
 - Selecting **All** as the **Data Type** will include **Wait Time, Utilization, and Line Length**.
 - **Wait Time, Utilization, and Line Length** can be selected individually.
3. Select **Include Standard Deviation** to include it in the tables.
4. To export the data tables to an Excel file, click **Export Table**. This will include all input and output data.

New Throughput Calculation

NOTE: If you would like to save your data tables, make sure to export them.

1. To begin a new throughput calculation, select the **Inputs tab**.



2. Select new inputs from **Input** screen. Click Estimate when you are finished to see new throughput estimates and results.

Number of Handheld Detectors (Post Decon)

0

Number of Registration Lanes

0

To

Estimate

Comparison Tool

Input Screen

Clicking the Toggle Comparison Tool button enables the option to compare two CRC SimPLER estimates side-by-side. A second input column will appear for the user to input an additional CRC setup as seen in the dashed line box. 1 and 2 will be used to show CRC setups and their corresponding outputs.

INPUTS

Select CRC, population and resource information below and click "estimate" for throughput calculations. Hover mouse over bolded drop-down labels for more information. For more detailed descriptions of the inputs, click the question icon.

Toggle Comparison Tool

Select information about the population arriving at your CRC:

Estimated Arriving Population During Shift

Percent of Population Assumed Contaminated

Enable Arrival Distribution Options **Arrival Distribution**

1

▼

▼

▼

?

2

▼

▼

▼

Summary Outputs Screen

Key additions to the Summary Output screen when using the comparison tool are the addition of another set of CRC information. The lighter shade information and bars on the left or each bar graph pairing represent the corresponding outputs for CRC setup 1. The darker shade information and bars on the right or each bar graph pairing represent the corresponding outputs for CRC setup 2.

CRC Shift Summary Outputs

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Average Hourly Throughput (Individuals)</td> <td style="text-align: right; padding: 5px;">65</td> </tr> <tr> <td style="padding: 5px;">Total Throughput at Shift End (Individuals)</td> <td style="text-align: right; padding: 5px;">522</td> </tr> </table>	Average Hourly Throughput (Individuals)	65	Total Throughput at Shift End (Individuals)	522	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Average Time Spent at CRC (hh:mm)</td> <td style="text-align: right; padding: 5px;">01:59</td> </tr> <tr> <td style="padding: 5px;">Extended Time Past Shift (hh:mm)</td> <td style="text-align: right; padding: 5px;">07:20</td> </tr> </table>	Average Time Spent at CRC (hh:mm)	01:59	Extended Time Past Shift (hh:mm)	07:20	<div style="border: 1px solid #0070C0; padding: 5px; background-color: #f0f8ff;"> <p style="margin: 0;">INPUTS</p> <p style="margin: 0;">Shift Length: 8 Portals: 6</p> <p style="margin: 0;">Number Arriving: 1000 Detectors Pre: 8</p> <p style="margin: 0;">Contamination %: 25 Showers: 10</p> <p style="margin: 0;">Arrival Rate: uniform Detectors Post: 8</p> <p style="margin: 0;">Reg Lanes: 6</p> </div>
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Extended Time Past Shift (hh:mm)	10:50									

Shift Averages for Each Station

STATION ABBREVIATIONS

Portal = Portal (Initial Contamination Screening)

PreHH = Pre Decontamination Handheld Screening

Decon = Decontamination (Shower)

PostHH = Post Decontamination Handheld Screening

Reg = Registration

Average Wait Time per Station

Station	Setup 1 (min)	Setup 2 (min)
Portal	18	0
PreHH	0	88
Decon	21	59
PostHH	1	1
Reg	98	1

Average Utilization per Station

Station	Setup 1 (%)	Setup 2 (%)
Portal	86	43
PreHH	37	99
Decon	96	99
PostHH	60	63
Reg	98	79

Average Line Length per Station

Station	Setup 1 (people)	Setup 2 (people)
Portal	9	0
PreHH	0	84
Decon	39	86
PostHH	0	0
Reg	193	1

Hourly Outputs

Key additions to the Hourly Output screen when using the comparison tool are the addition of another set of CRC information. The lighter shade information and the solid line on the graph corresponding outputs for CRC setup 1. The darker shade information and the dashed line on the graph represent the corresponding outputs for CRC setup 2.

