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# Monitoring U.S. E-Cigarette Sales: *State Trends*

**This data brief highlights trends in e-cigarette unit sales in selected states. Data is presented from January 2018 through December 2023.**

- Notice of Revision to Previous Data Estimates
  - The data in this brief have been updated to capture new e-cigarette products coded by IRI. Historical sales estimates may differ from previous briefs.
- Federal Flavor Regulatory Initiatives
  - The U.S. Food and Drug Administration (FDA) issued an enforcement policy, effective February 2020, prioritizing enforcement of existing regulations against prefilled e-cigarette cartridges in flavors other than tobacco and menthol.
  - FDA began issuing marketing denial orders for flavored e-cigarette products as of September 9, 2021.
  - On April 15, 2022, FDA was granted authority to regulate products containing nicotine from any source, including synthetic nicotine produced in a laboratory.
- Other Relevant Issues
  - The e-cigarette or vaping product use-associated lung injury (EVALI) outbreak in late 2019 and COVID-19 pandemic may have affected e-cigarette sales.
  - During 2020-2023, additional flavored tobacco products continued to be marketed, such as flavored cigars; or entered the market, such as nicotine pouches.
  - Units of e-cigarettes are not adjusted to account for variations in unit size. Large-format disposable e-cigarettes that allow for thousands of "puffs" are now available. Declines in unit sales may not signify declines in prevalence of use or consumption.
  - Following California's prohibition of flavored tobacco product sales in December 2022, sales of products branded as clear, clear ice, and unflavored, likely containing non-menthol synthetic cooling agents, increased (e.g., Flum Pebble Clear, EB Design BC5000 Clear). These products are categorized as Clear/Other Cooling for the purposes of this data brief.
- State and Local Legislative Initiatives
  - As of December 2023, five states (Massachusetts, New York, New Jersey, Rhode Island, and California) have passed laws prohibiting the sale of all non-tobacco flavored e-cigarettes and two states (Maryland, Utah) restrict the sale of some flavored e-cigarettes. In addition, over 380 local jurisdictions enacted laws that restrict the sale of flavored e-cigarettes.
  - More information about state and local policies can be found on the **Truth Initiative's website**.

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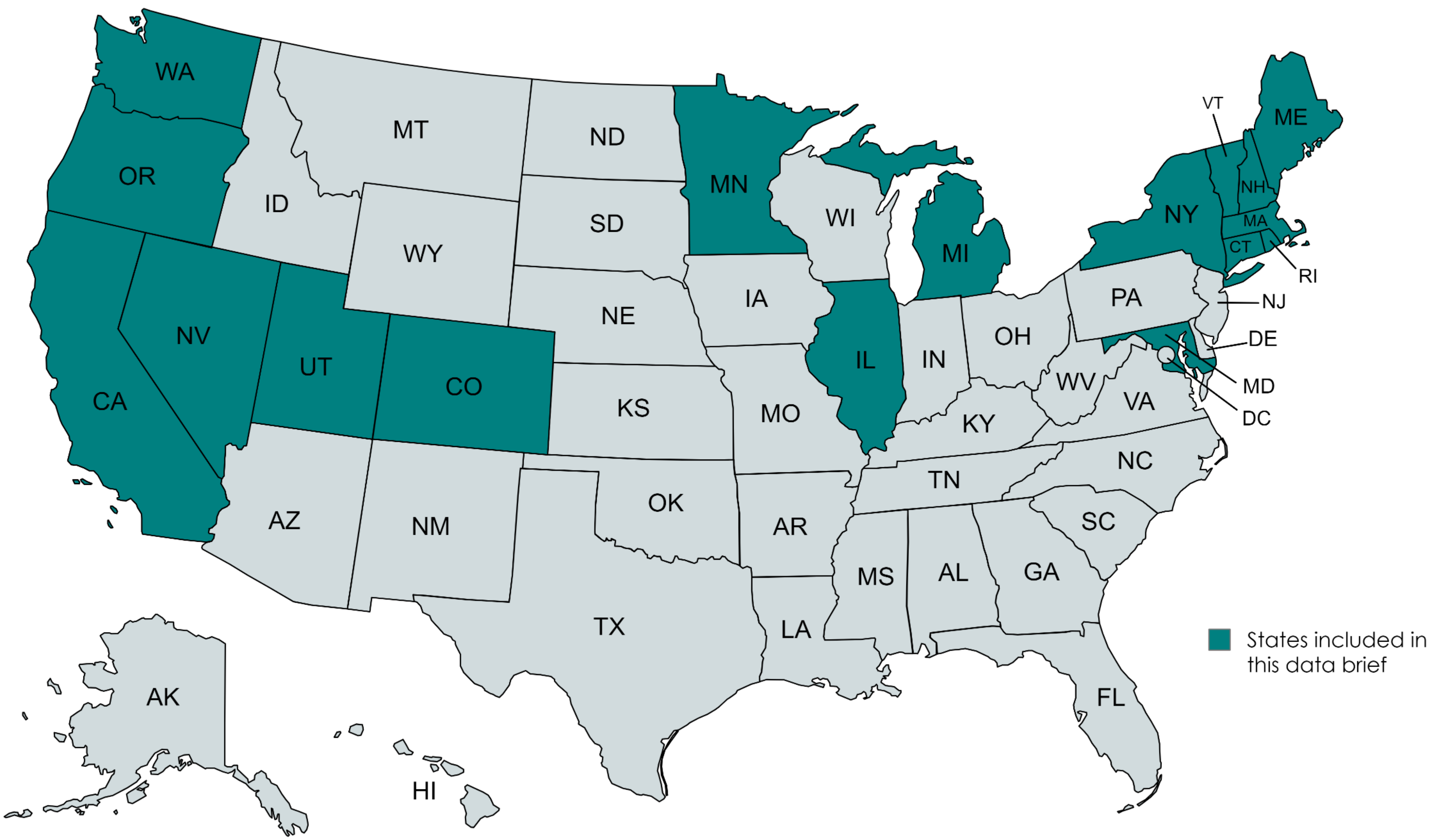
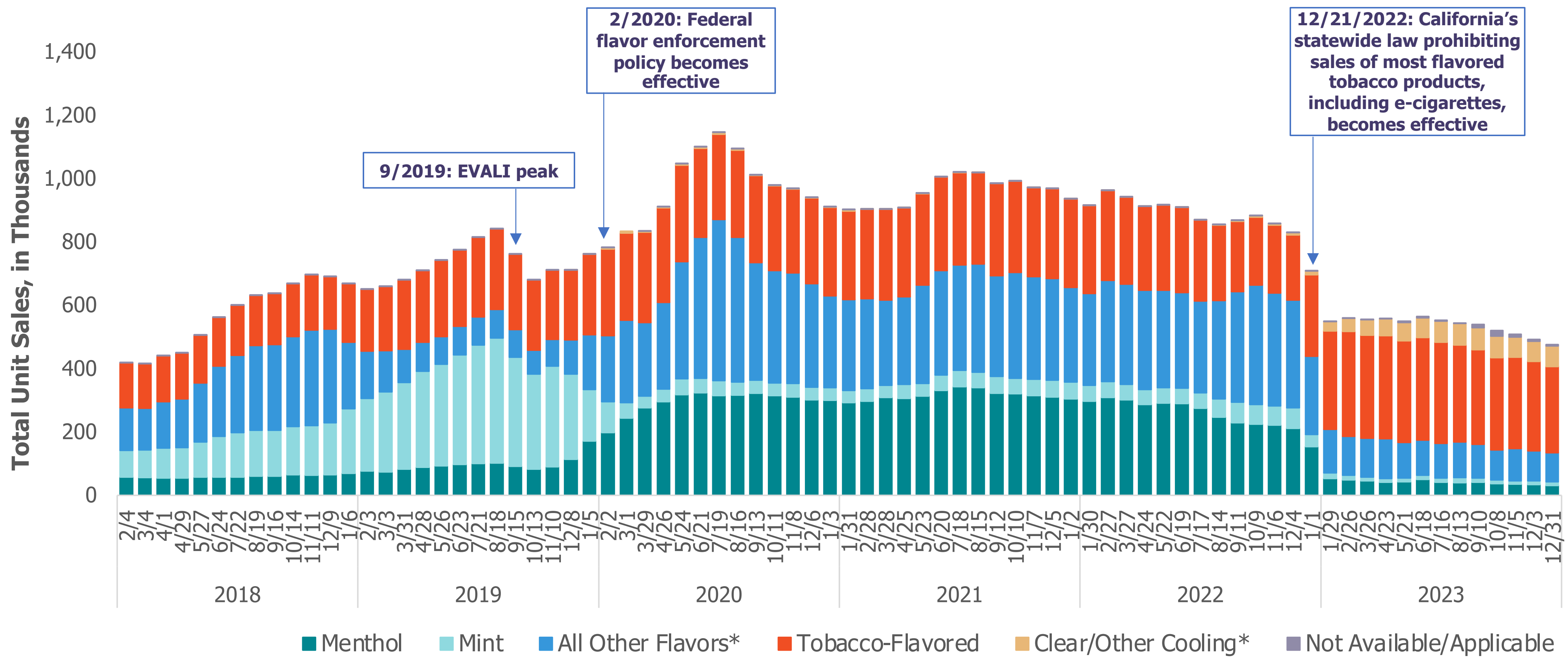
# States Presented in the Data Brief



# Figure 1. California E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following California's Flavor Sales Restriction

- Following California's flavored e-cigarette restrictions, monthly e-cigarette total unit sales decreased by 42.7% from December 4, 2022 to December 31, 2023 (from 831.2 thousand to 476.2 thousand). This decline represents 21.2% (i.e., 355.0 thousand units out of 1678.5 thousand units) of the decline in national e-cigarette sales that occurred during this period.
- From December 4, 2022 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales increased by 31.3% (from 206.1 thousand to 270.8 thousand); unit share increased from 24.8% to 56.9%.
  - Non-Tobacco-flavored (mint, menthol, clear/other cooling, other flavors) e-cigarette sales decreased by 67.7% (from 623.7 thousand to 201.6 thousand); unit share decreased from 75.0% to 42.3%.
    - Menthol-flavored e-cigarette sales decreased by 85.3% (from 211.8 thousand to 31.2 thousand); unit share decreased from 25.5% to 6.6%.
    - Mint-flavored e-cigarette sales decreased by 82.4% (from 64.7 thousand to 11.4 thousand); unit share decreased from 7.8% to 2.4%.
    - Clear/other cooling flavored e-cigarette sales increased by 782.1% (from 7.5 thousand to 66.4 thousand); unit share increased from 0.9% to 13.9%.
    - All other-flavored e-cigarette sales decreased by 72.7.0% (from 339.6 thousand to 92.6 thousand); unit share decreased from 40.9% to 19.4%.
- As of 12/31/2023, disposable e-cigarettes represent 90.1% of sales of prohibited flavored e-cigarettes in California. Sales of clear/other cooling accounted for 100% of disposable e-cigarette sales.



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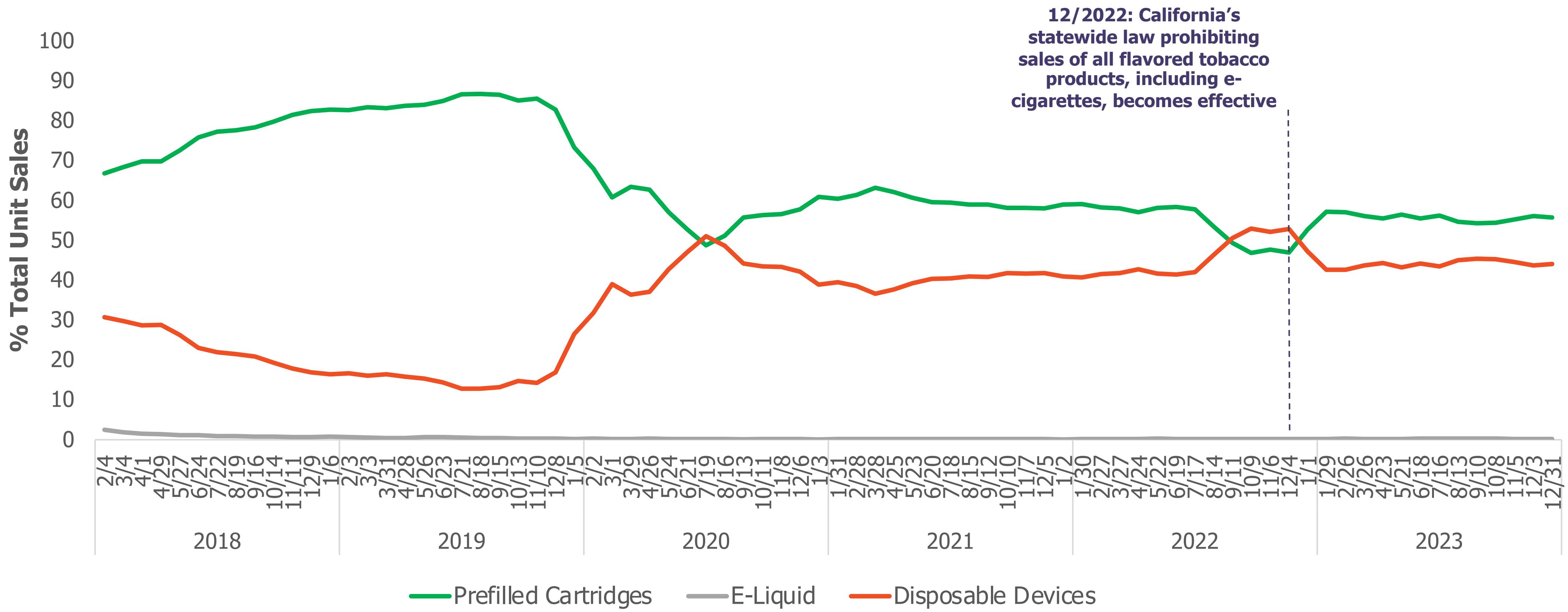
## Figure 2. California E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following California's Flavor Sales Restriction

- Following California's flavored e-cigarette restrictions, between December 4, 2022 and December 31, 2023:
  - Sales of disposable devices decreased by 52.2% (from 439.6 thousand to 210.0 thousand); unit share decreased from 52.9% to 44.1%.
  - Sales of prefilled cartridges decreased by 32.1% (from 390.4 thousand to 265.1 thousand); unit share increased from 47.0% to 55.7%.



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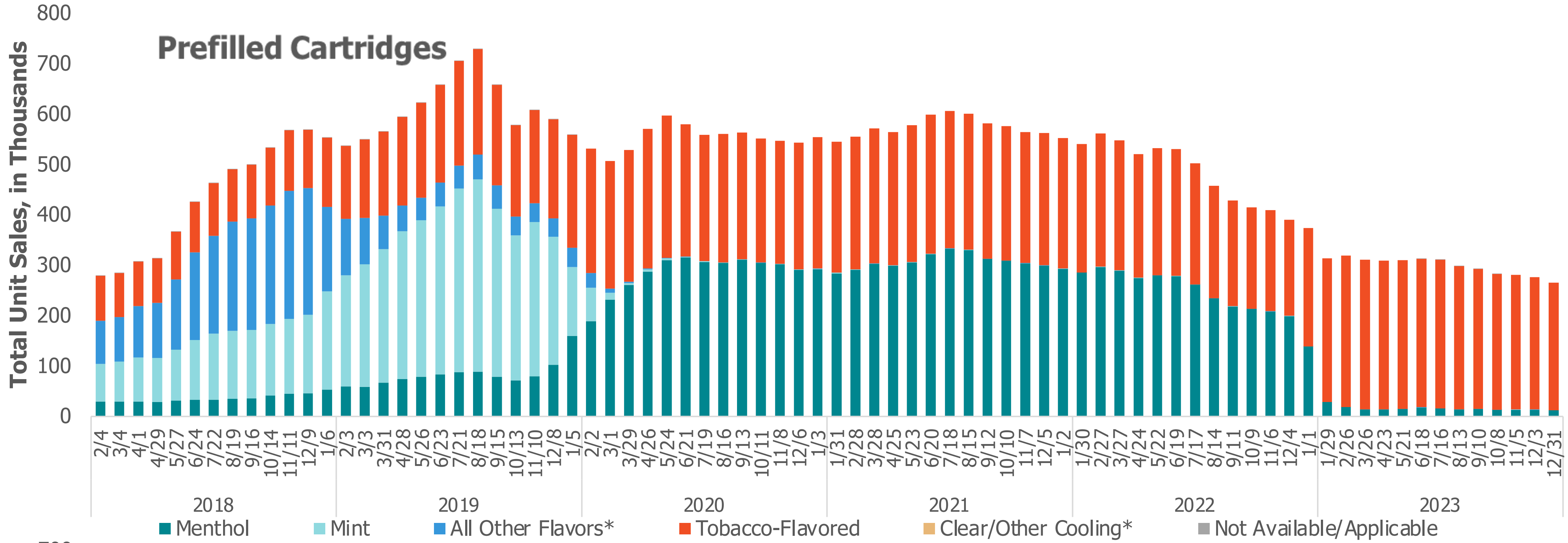
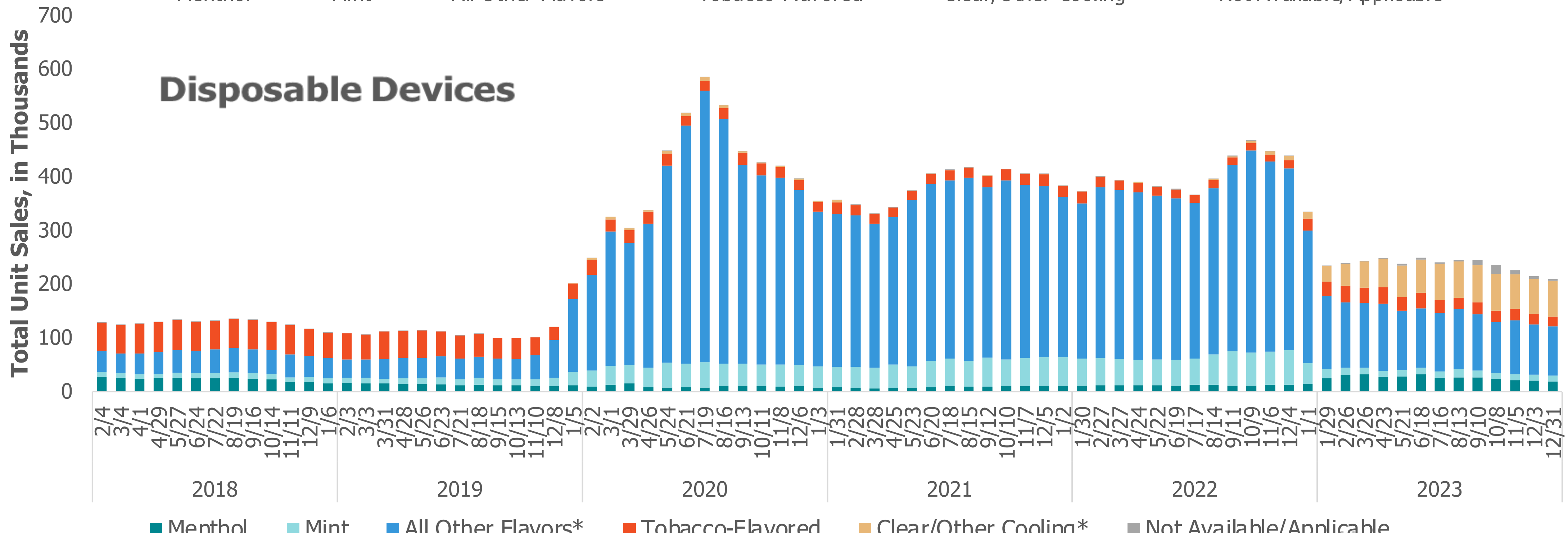
# Figure 3. California E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023





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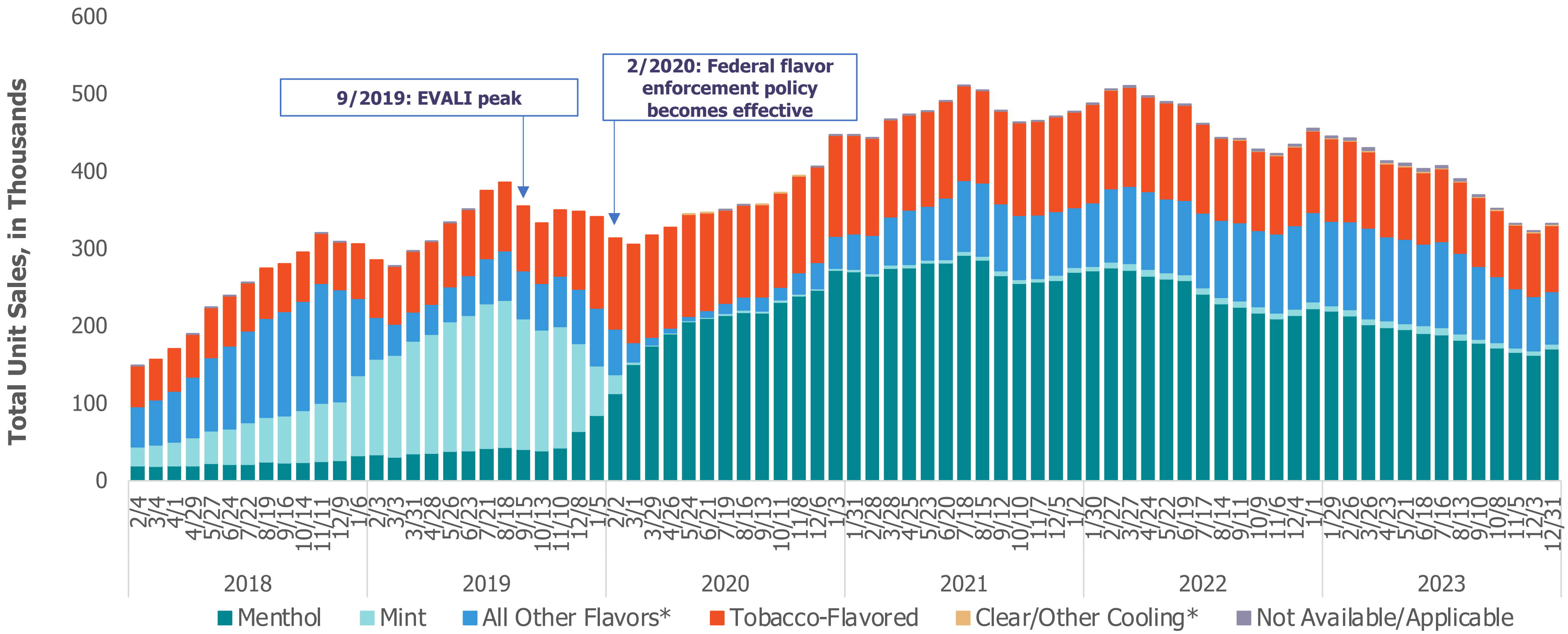
# Figure 4. Colorado E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




***Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 5.8% from 314 thousand to 332.2 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 27.1% (from 117.8 thousand to 85.8 thousand); unit share decreased from 37.5% to 25.8%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 25.4% (from 196.2 thousand to 246.1 thousand); unit share increased from 62.5% to 74.1%.
    - Menthol-flavored e-cigarette sales increased by 51.5% (from 112.7 thousand to 170.7 thousand); unit share increased from 35.9% to 51.4%.
    - Mint-flavored e-cigarette sales decreased by 73.5% (from 24.7 thousand to 6.5 thousand); unit share decreased from 7.9% to 2.0%.
    - All other-flavored e-cigarette sales increased by 14.4% (from 58.8 thousand to 67.3 thousand); unit share increased from 18.7% to 20.3%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Colorado increased by 47.1% (from 1.1 thousand to 1.5 thousand); unit share increased from 0.2% to 0.5%.



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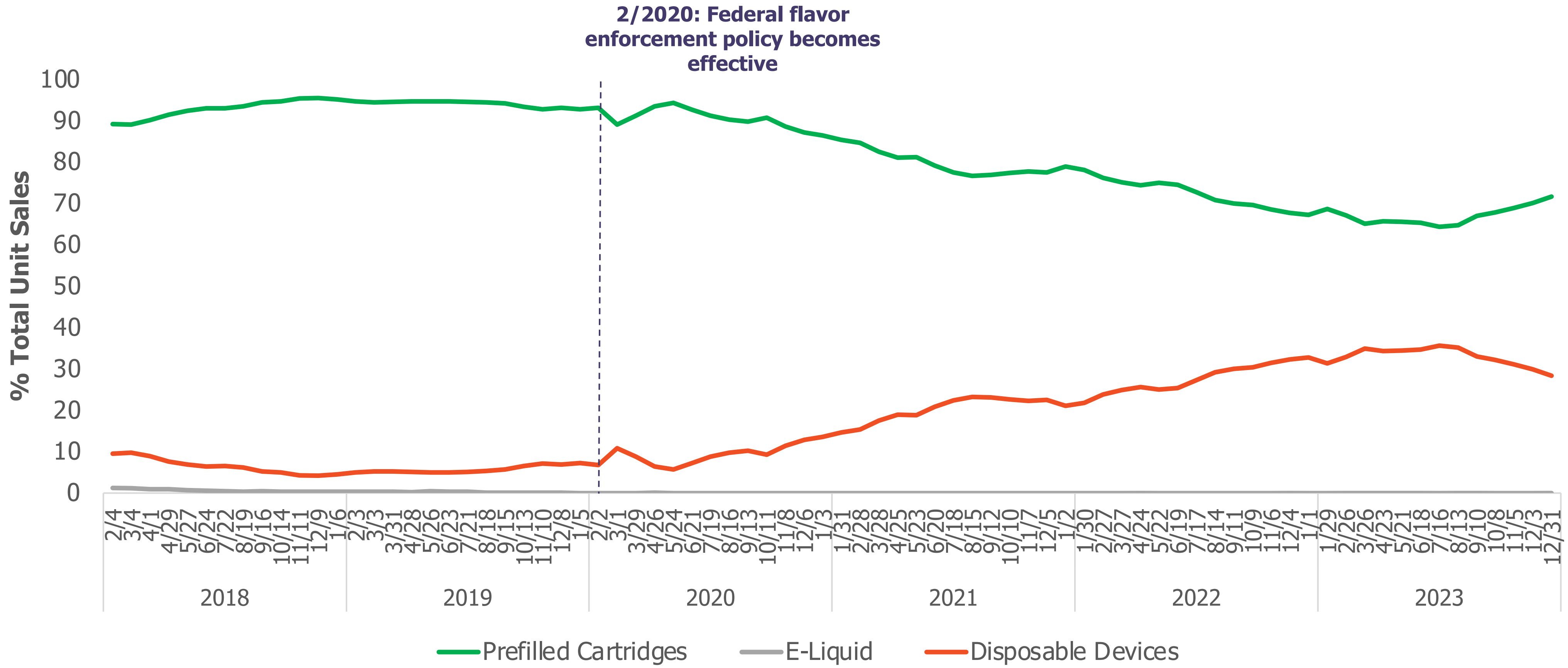
# Figure 5. Colorado E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 340.1% (from 21.4 thousand to 94.2 thousand); unit share increased 6.8% to 28.4%.
  - Sales of prefilled cartridges decreased by 18.6% (from 292.5 thousand to 237.9 thousand); unit share decreased from 93.2% to 71.6%.



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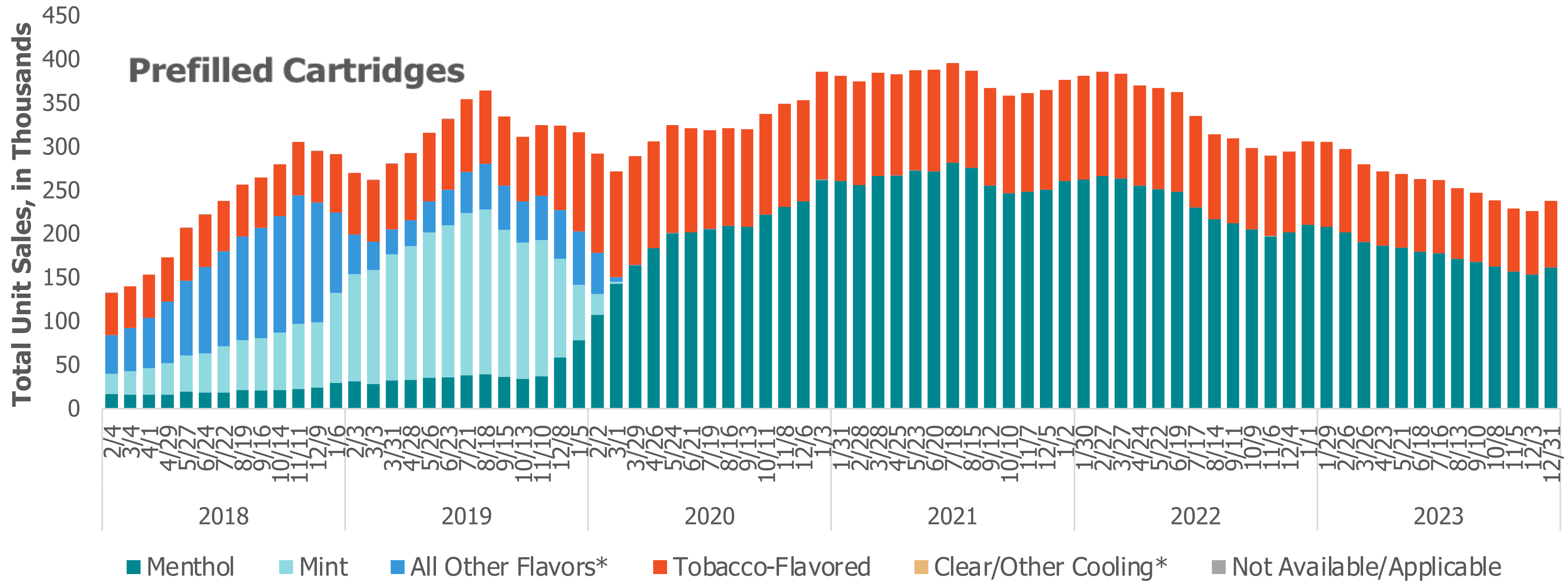
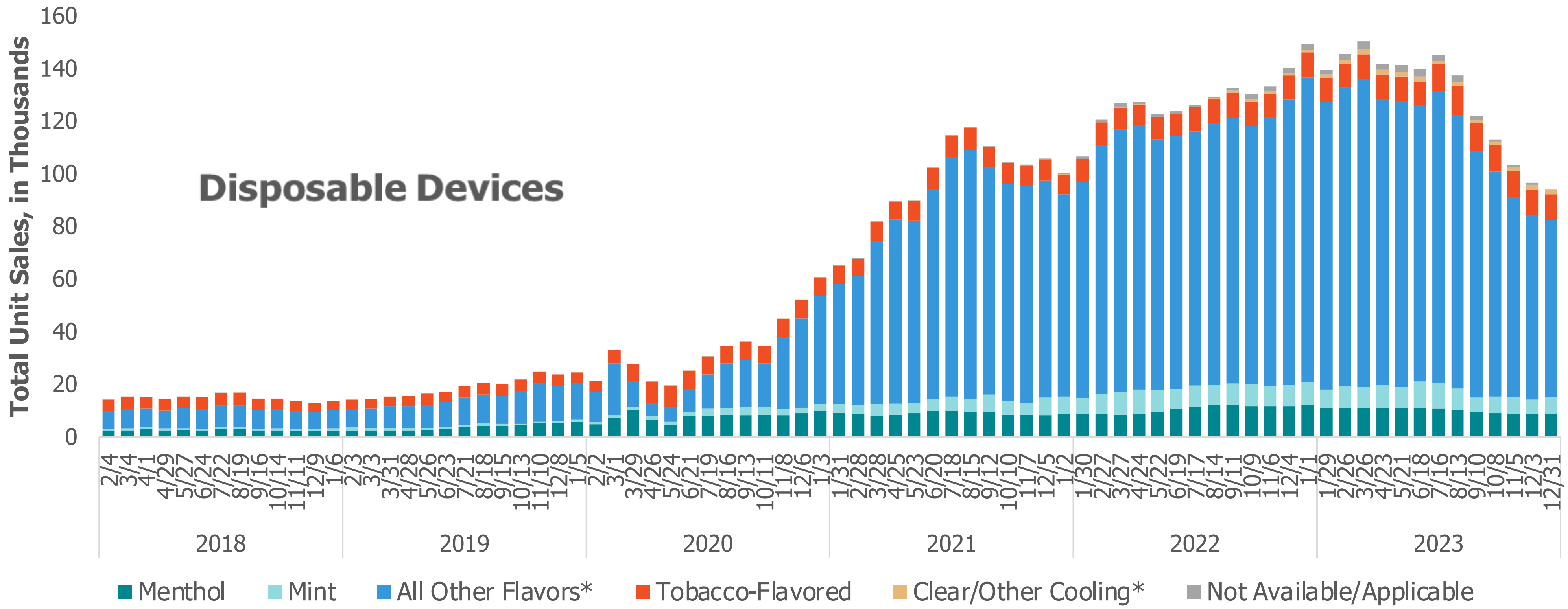
# Figure 6. Colorado E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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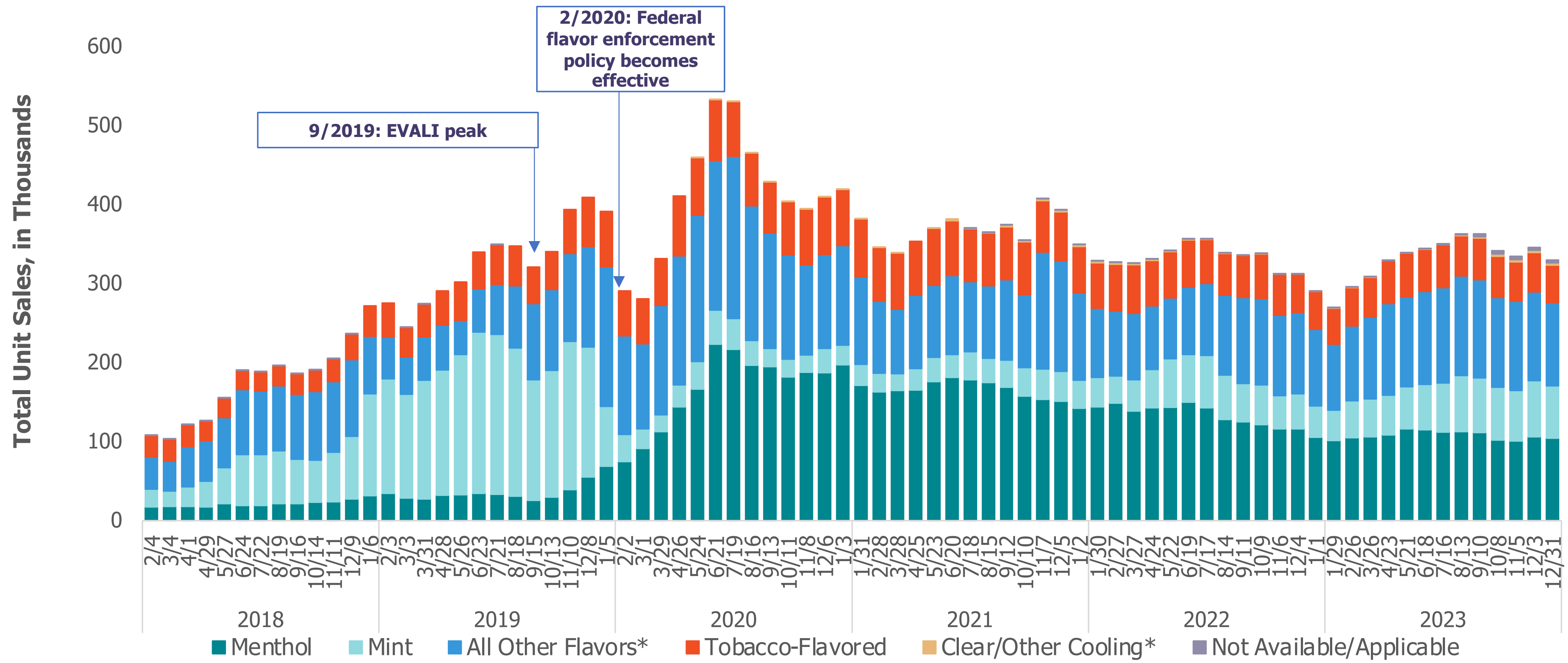
# Figure 7. Connecticut E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 13.4% from 290.7 to 329.7 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 16.6% (from 56.7 thousand to 47.3 thousand); unit share decreased from 19.5% to 14.3%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 19.1% (from 234.0 thousand to 278.7 thousand); unit share increased from 80.5% to 84.5%.
    - Menthol-flavored e-cigarette sales increased by 39.9% (from 74.7 thousand to 104.5 thousand); unit share increased from 25.7% to 31.7%.
    - Mint-flavored e-cigarette sales increased by 93.6% (from 34.3 thousand to 66.3 thousand); unit share increased from 11.8% to 20.1%.
    - All other-flavored e-cigarette sales decreased by 16.3% (from 125.1 thousand to 104.8 thousand); unit share decreased from 43.0% to 31.8%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Connecticut increased by 1375.7% (from 0.2 thousand to 3.2 thousand); unit share increased from 0.1% to 1.0%



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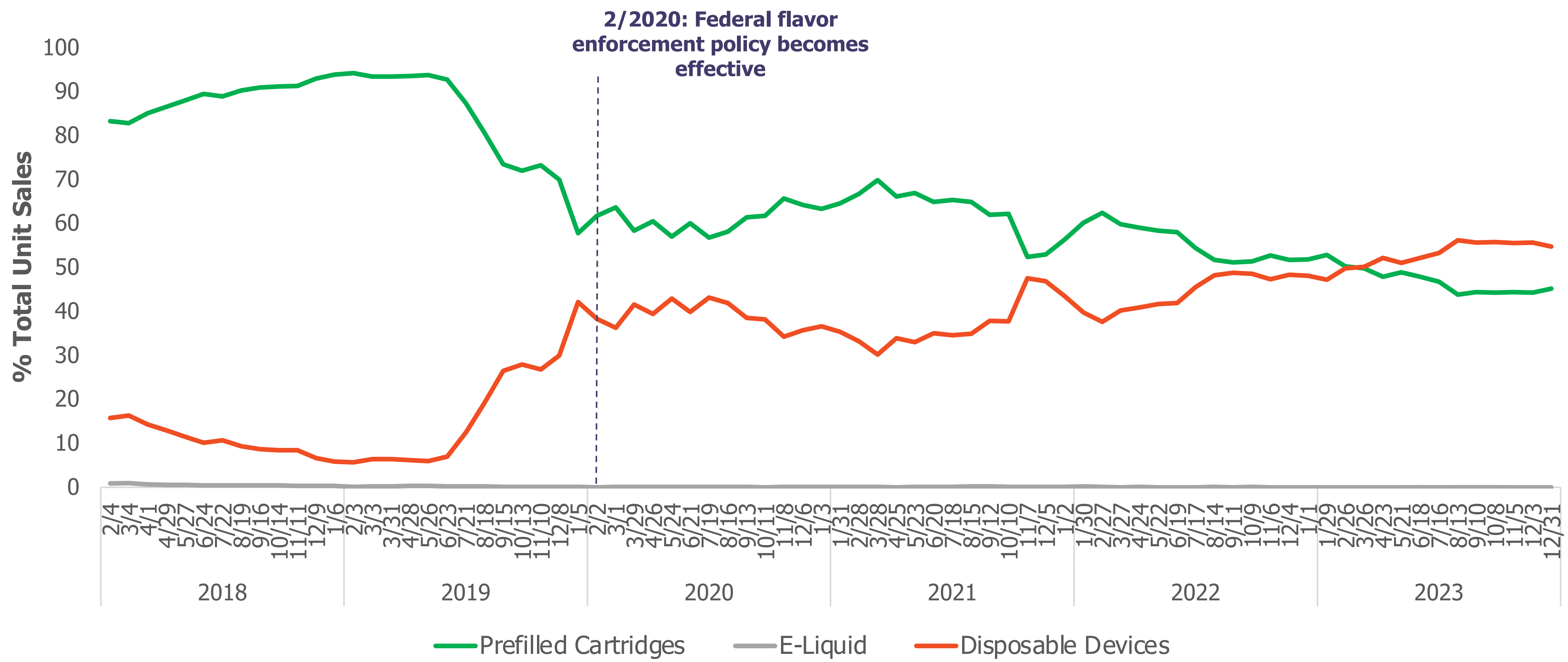
# Figure 8. Connecticut E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 62.4% (from 111.2 thousand to 180.7 thousand); unit share increased from 38.3% to 54.8%.
  - Sales of prefilled cartridges decreased by 17.0% (from 179.4 thousand to 149.0 thousand); unit share decreased from 61.7% to 45.2%.



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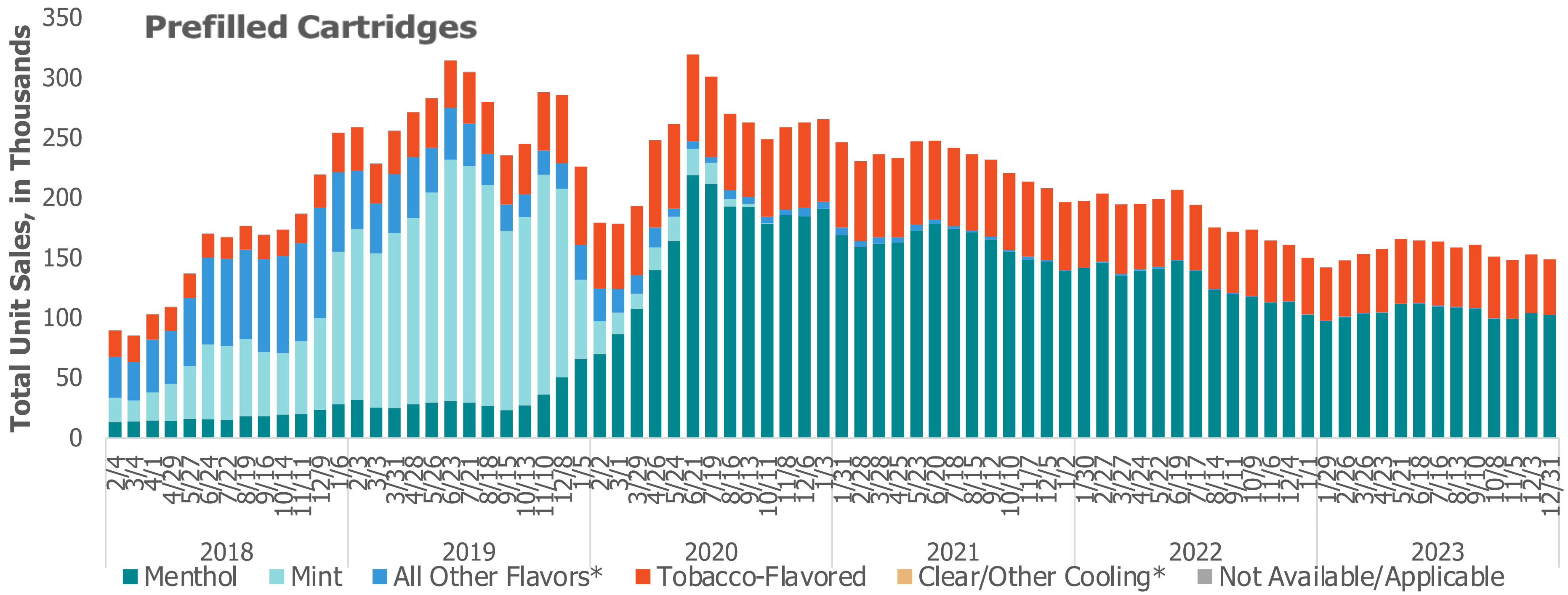
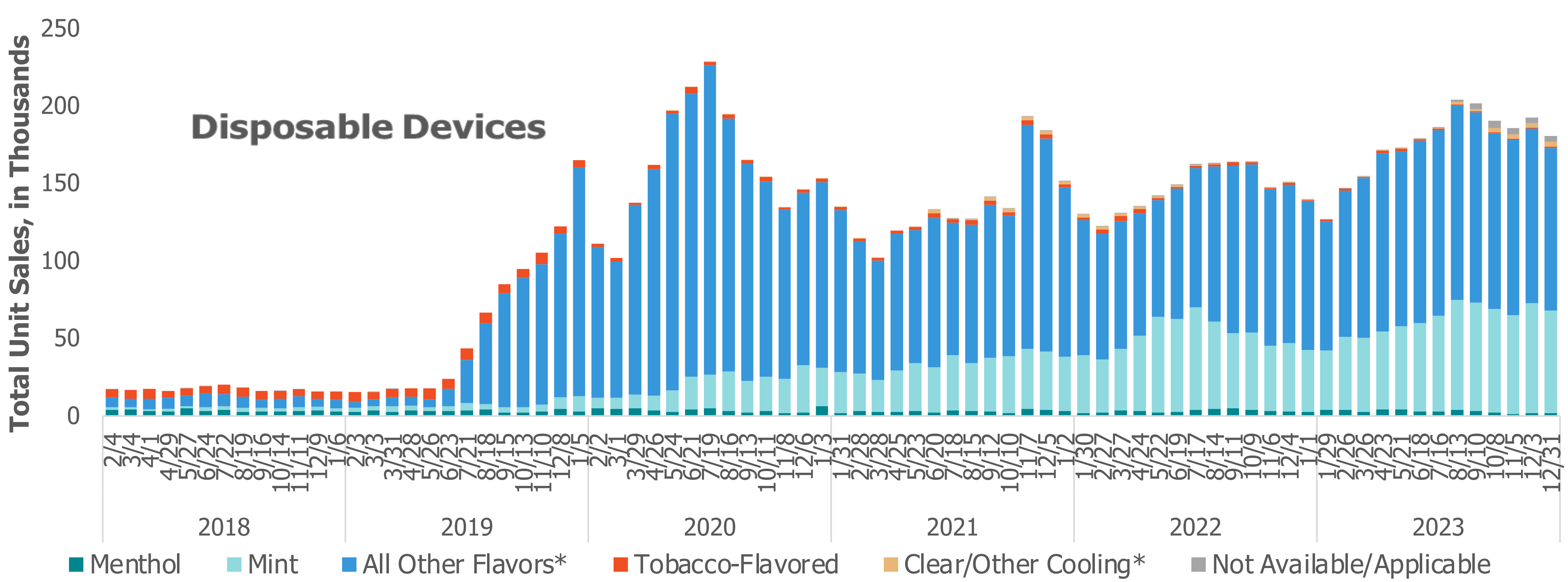
# Figure 9. Connecticut E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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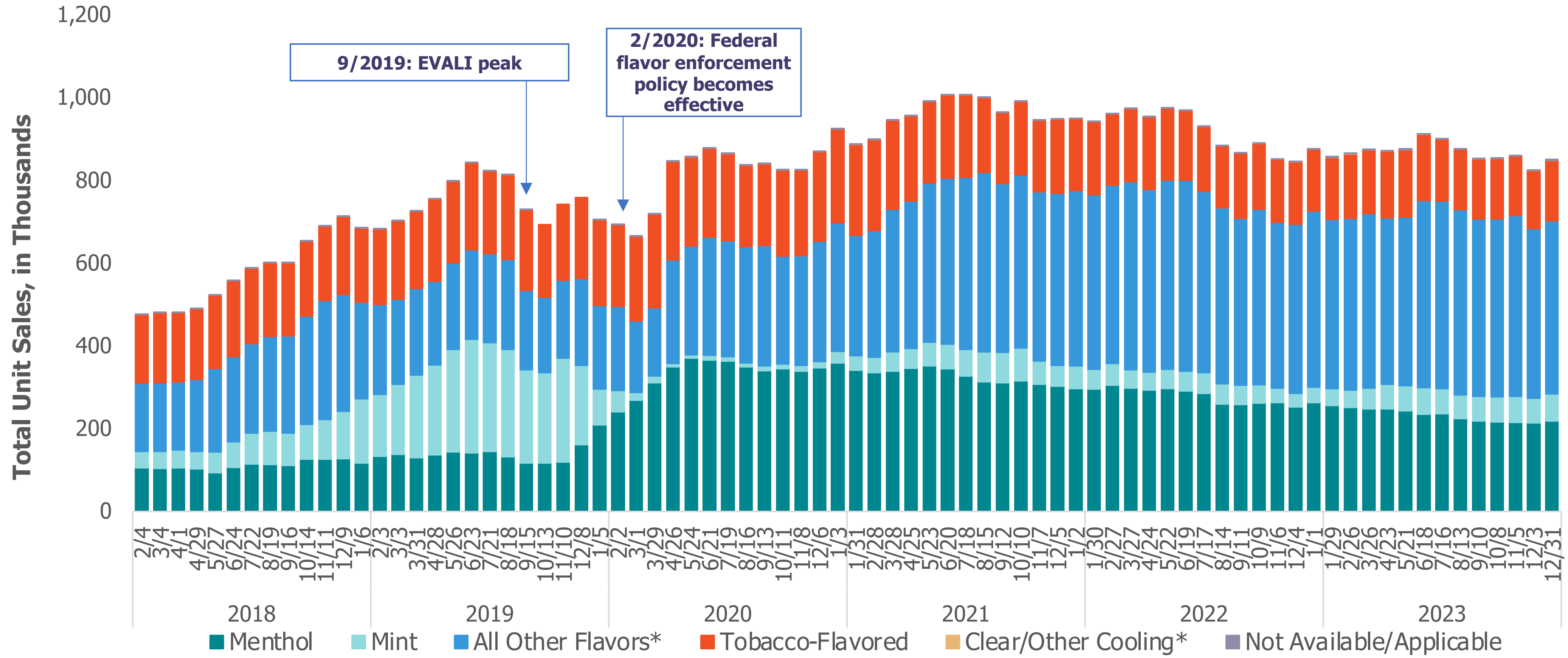
# Figure 10. Illinois E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 22.8% from 693.5 thousand to 851.3 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 26.2% (from 198.3 thousand to 146.3 thousand); unit share decreased from 28.6% to 17.2%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 41.8% (from 495.2 thousand to 702.2 thousand); unit share increased from 71.4% to 82.5%.
    - Menthol-flavored e-cigarette sales decreased by 9.2% (from 241.0 thousand to 218.9 thousand); unit share decreased from 34.7% to 25.7%.
    - Mint-flavored e-cigarette sales increased by 27.7% (from 50.9 thousand to 65.0 thousand); unit share increased from 7.3% to 7.6%.
    - All other-flavored e-cigarette sales increased by 105.7% (from 203.3 thousand to 418.3 thousand); unit share increased from 29.3% to 49.1%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Illinois were approximately zero.



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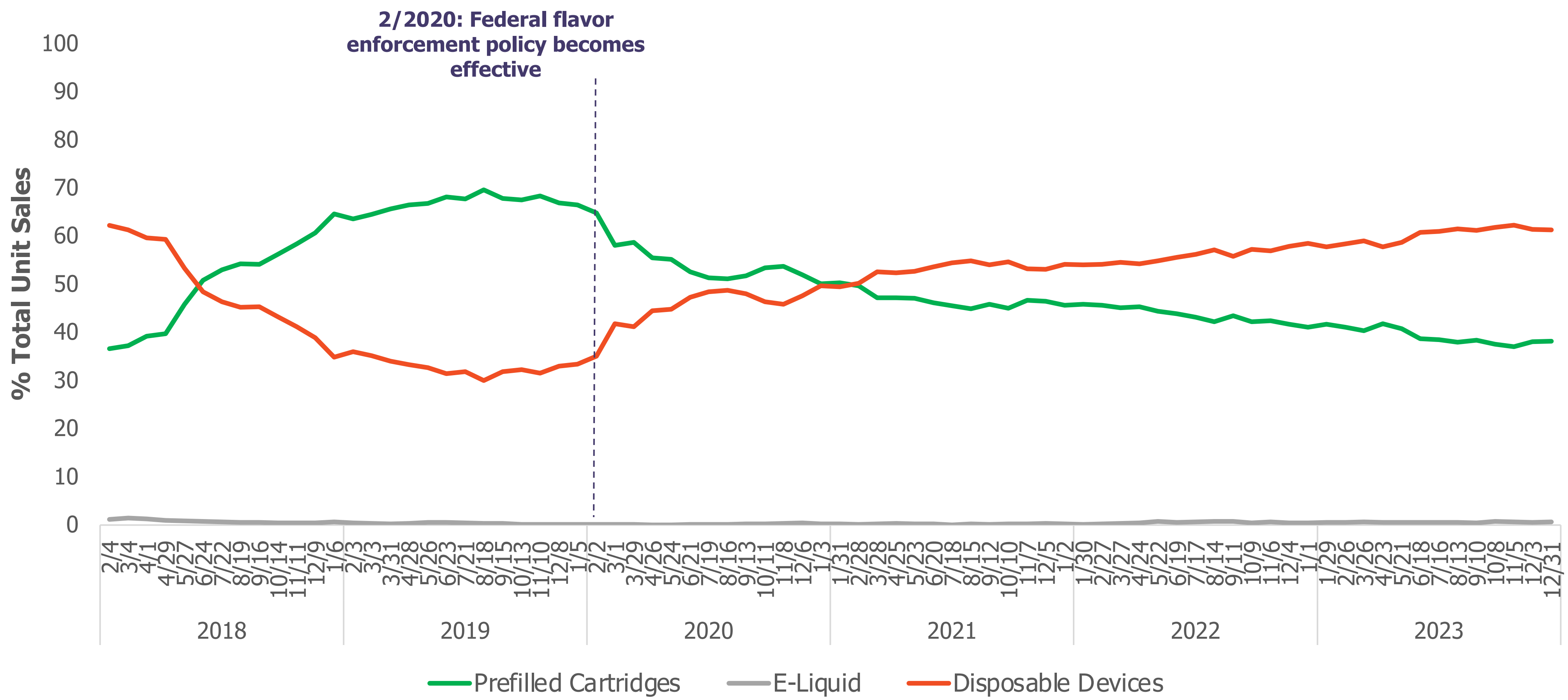
# Figure 11. Illinois E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 114.1% (from 243.4 thousand to 521.3 thousand); unit share increased from 35.1% to 61.2%.
  - Sales of prefilled cartridges decreased by 27.7% (from 449.1 thousand to 324.7 thousand); unit share decreased from 64.8% to 38.1%.



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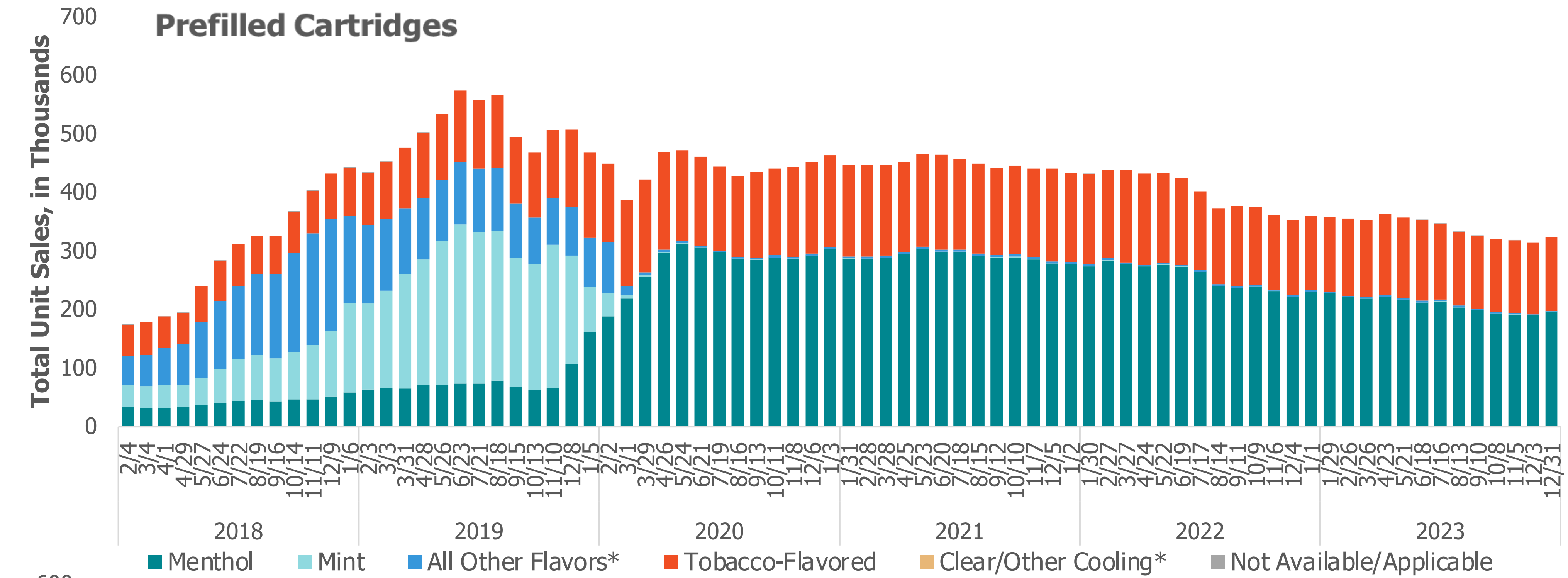
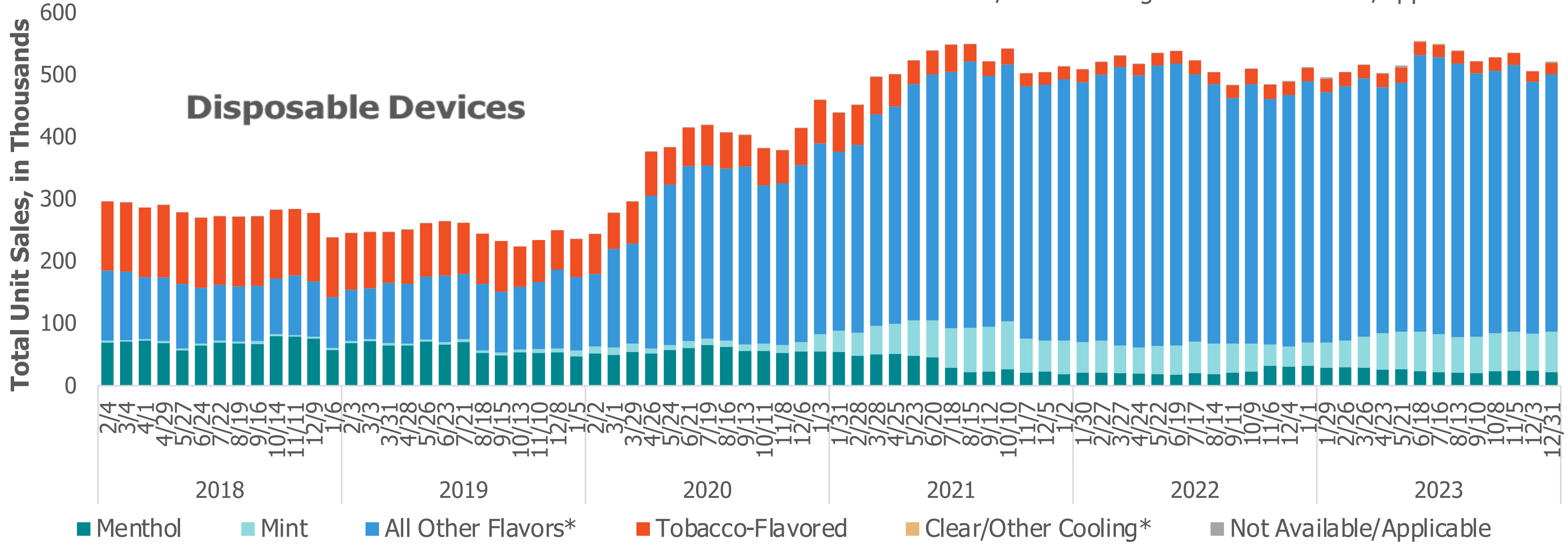
# Figure 12. Illinois E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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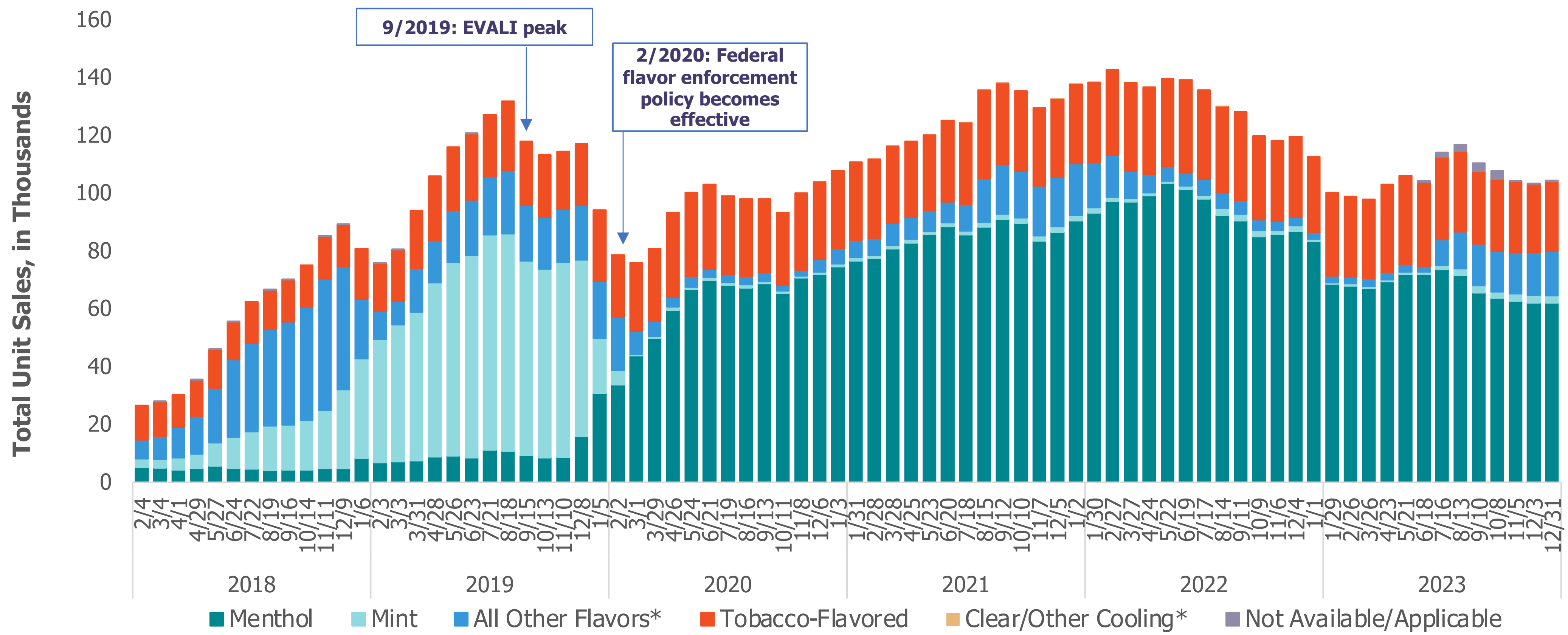
# Figure 13. Maine E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*

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## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 32.5% from 78.6 thousand to 104.2 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales increased by 12.3% (from 21.6 thousand to 24.3 thousand); unit share decreased from 27.5% to 23.3%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 40.1% (from 57.0 thousand to 79.9 thousand); unit share increased from 72.5% to 76.7%.
    - Menthol-flavored e-cigarette sales increased by 84.0% (from 33.7 thousand to 62.0 thousand); unit share increased from 42.8% to 59.5%.
    - Mint-flavored e-cigarette sales decreased by 50.8% (from 5.2 thousand to 2.5 thousand); unit share decreased from 6.6% to 2.4%.
    - All other-flavored e-cigarette sales decreased by 15.4% (from 18.1 thousand to 15.4 thousand); unit share decreased from 23.1% to 14.7%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Maine were approximately zero.



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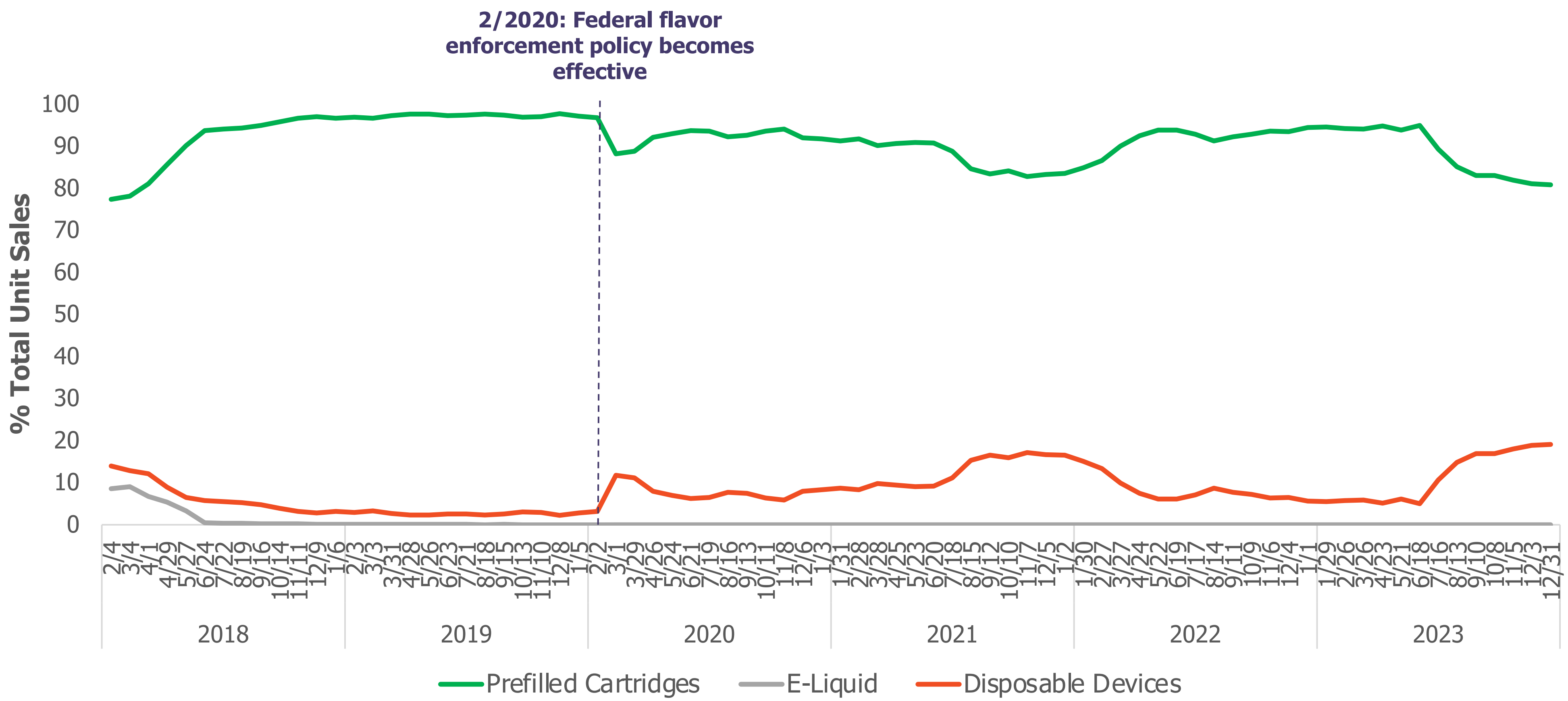
# Figure 14. Maine E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*

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## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 697.7% (from 2.5 thousand to 19.9 thousand); unit share increased from 3.2% to 19.1%.
  - Sales of prefilled cartridges increased by 10.7% (from 76.1 thousand to 84.3 thousand); unit share decreased from 96.8% to 80.9%.



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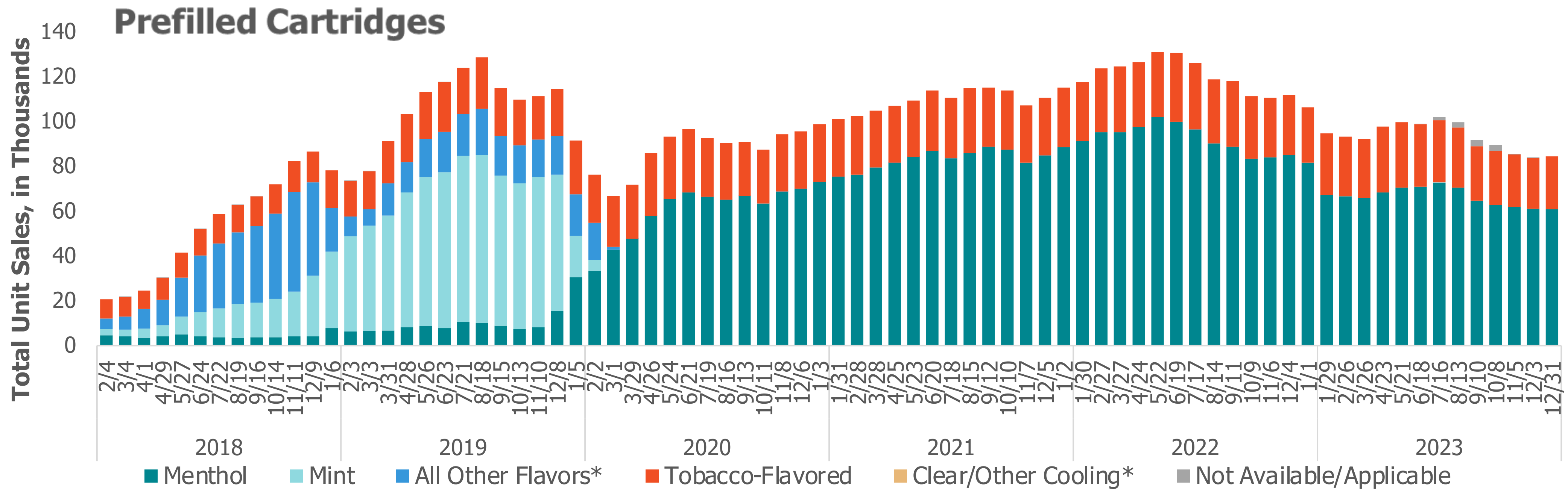
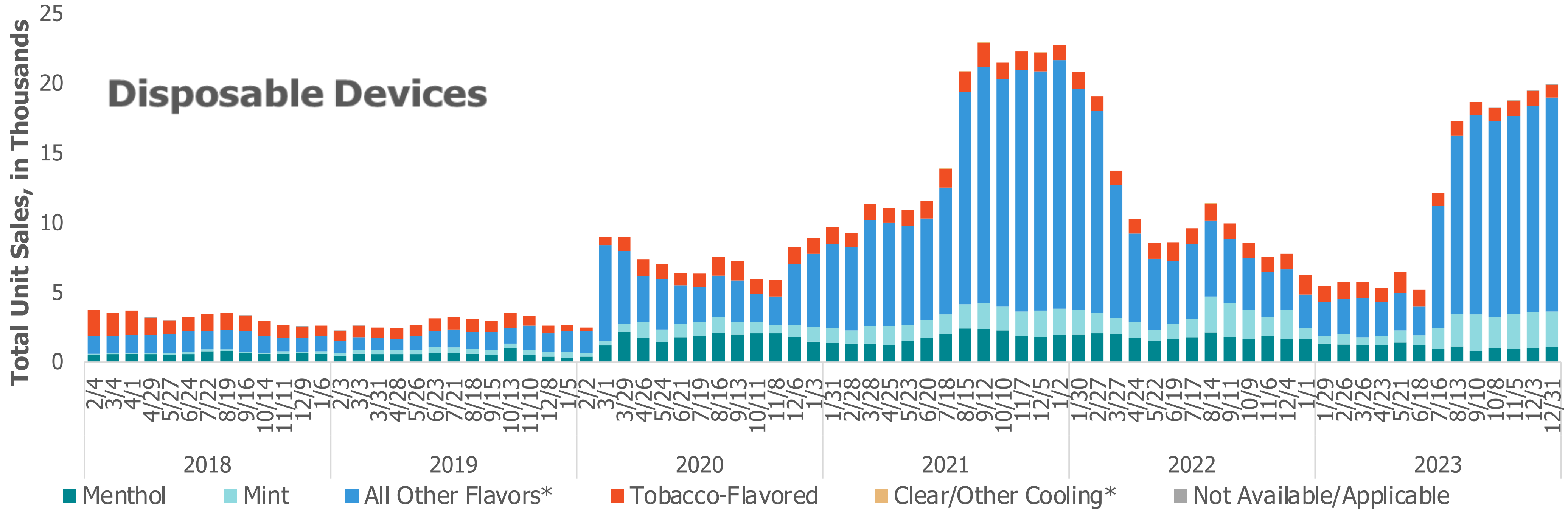
# Figure 15. Maine E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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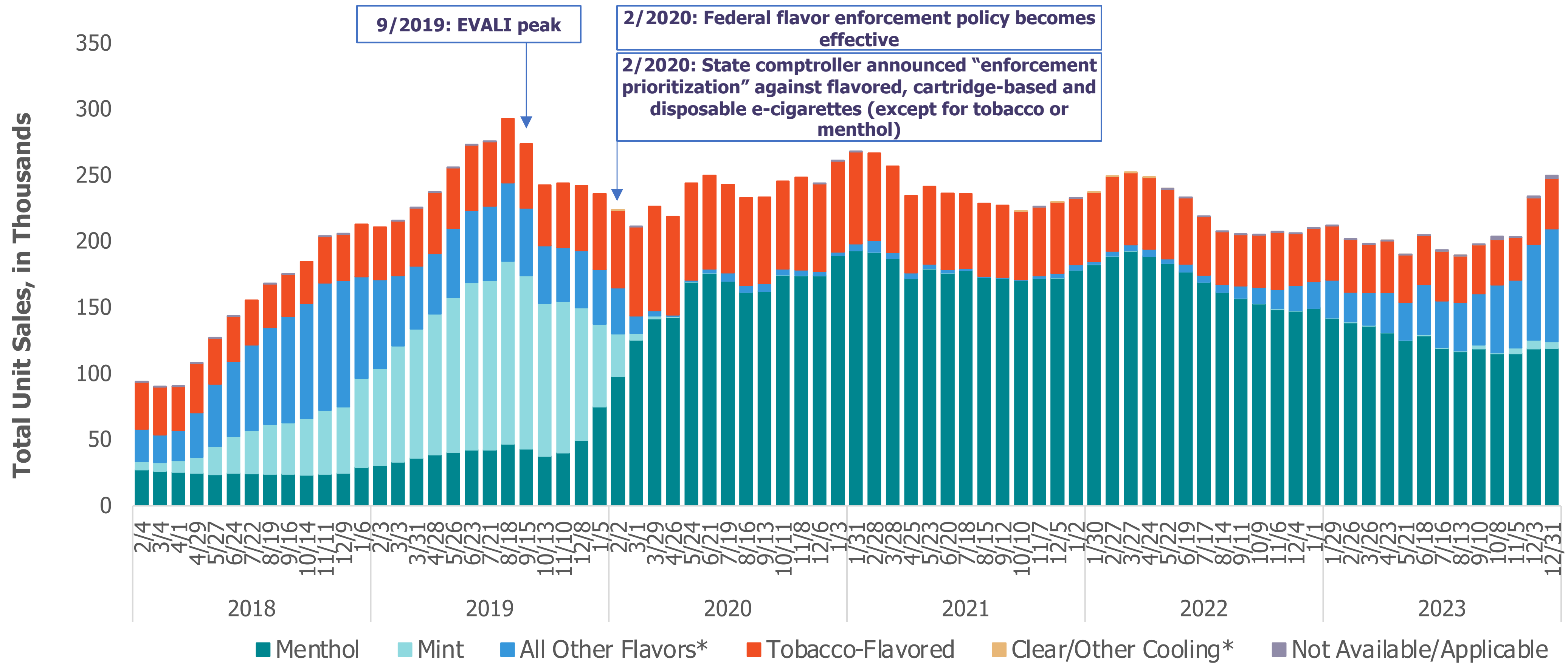
# Figure 16. Maryland E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31 2023, monthly e-cigarette unit sales increased by 11.8% from 223.6 thousand to 249.9 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 35.6% (from 58.7 thousand to 37.8 thousand); unit share decreased from 26.3% to 15.1%.
  - Non-Tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 27.4% (from 164.9 thousand to 210.0 thousand); unit share increased from 73.7% to 84.0%.
    - Menthol-flavored e-cigarette sales increased by 21.7% (from 98.0 thousand to 119.2 thousand); unit share increased from 43.8% to 47.7%.
    - Mint-flavored e-cigarette sales decreased by 84.4% (from 32.4 thousand to 5.1 thousand); unit share decreased from 14.5% to 2.0%.
    - All other-flavored e-cigarette sales increased by 147.8% (from 34.5 thousand to 85.5 thousand); unit share increased from 15.4% to 34.2%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Maryland were approximately zero.



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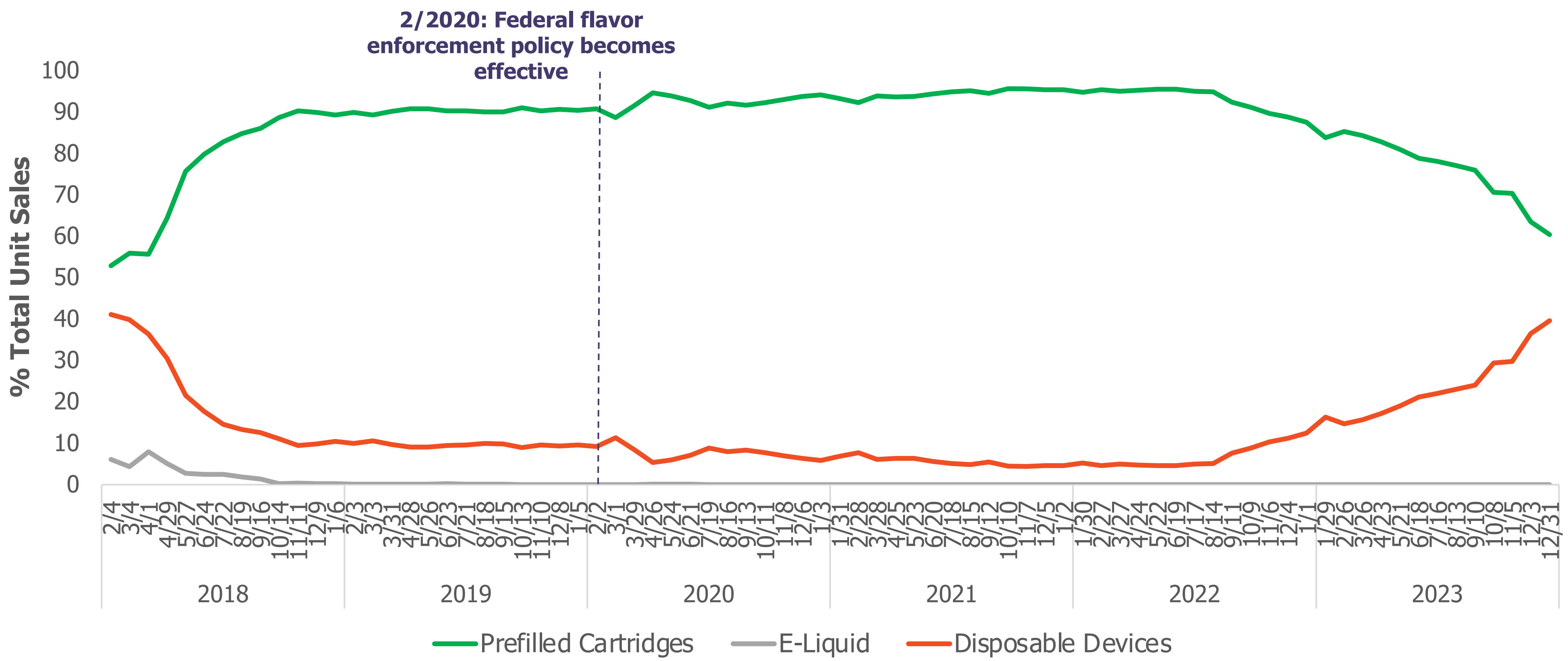
# Figure 17. Maryland E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 378.8% (from 20.7 thousand to 99.0 thousand); unit share increased from 9.3% to 39.6%.
  - Sales of prefilled cartridges decreased by 25.6% (from 202.9 thousand to 150.9 thousand); unit share decreased from 90.7% to 60.4%.



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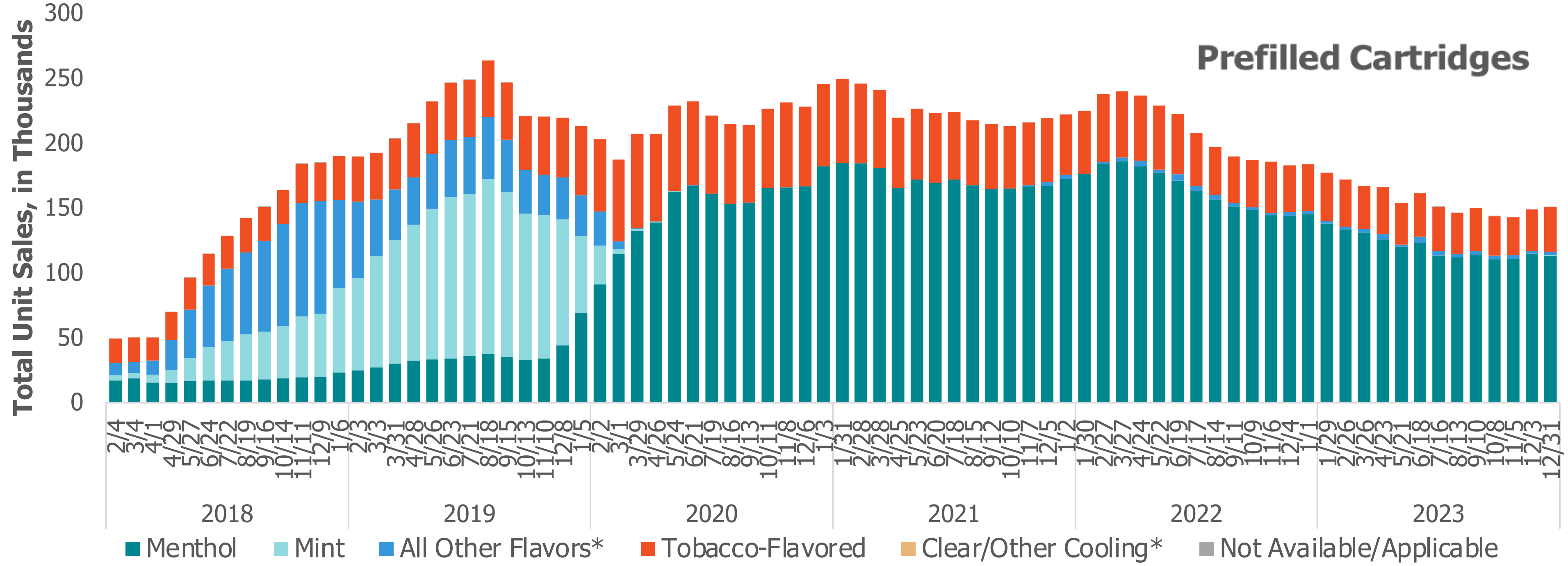
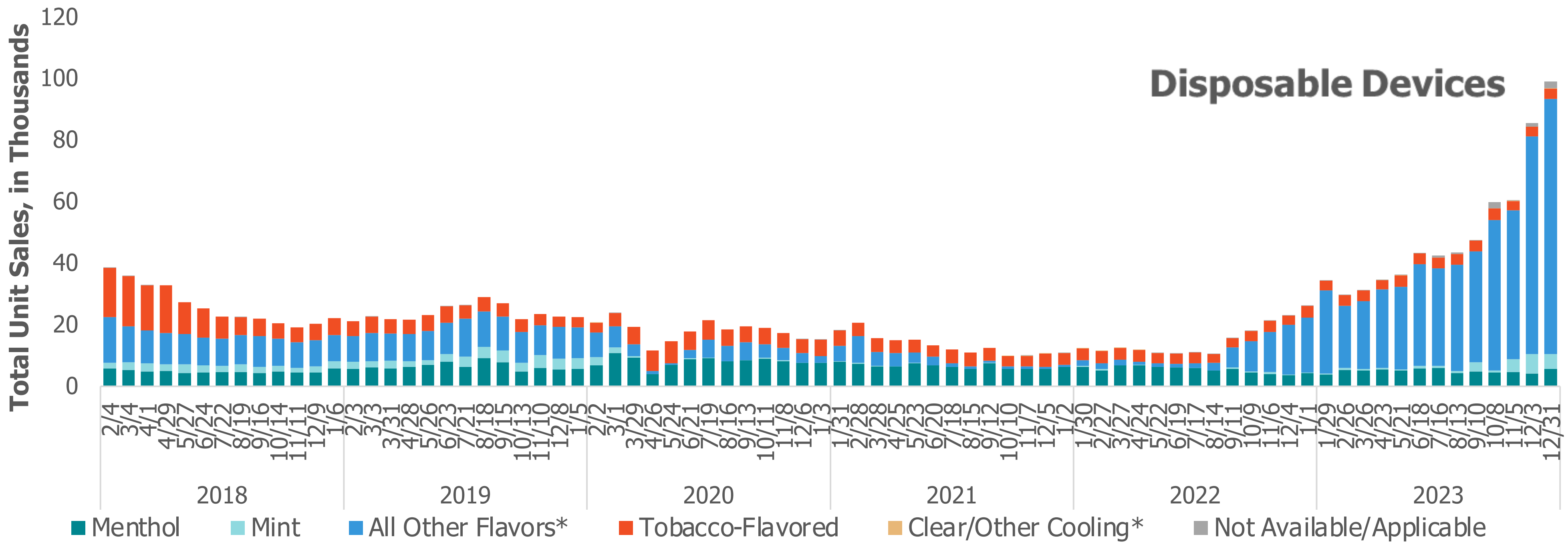
# Figure 18. Maryland E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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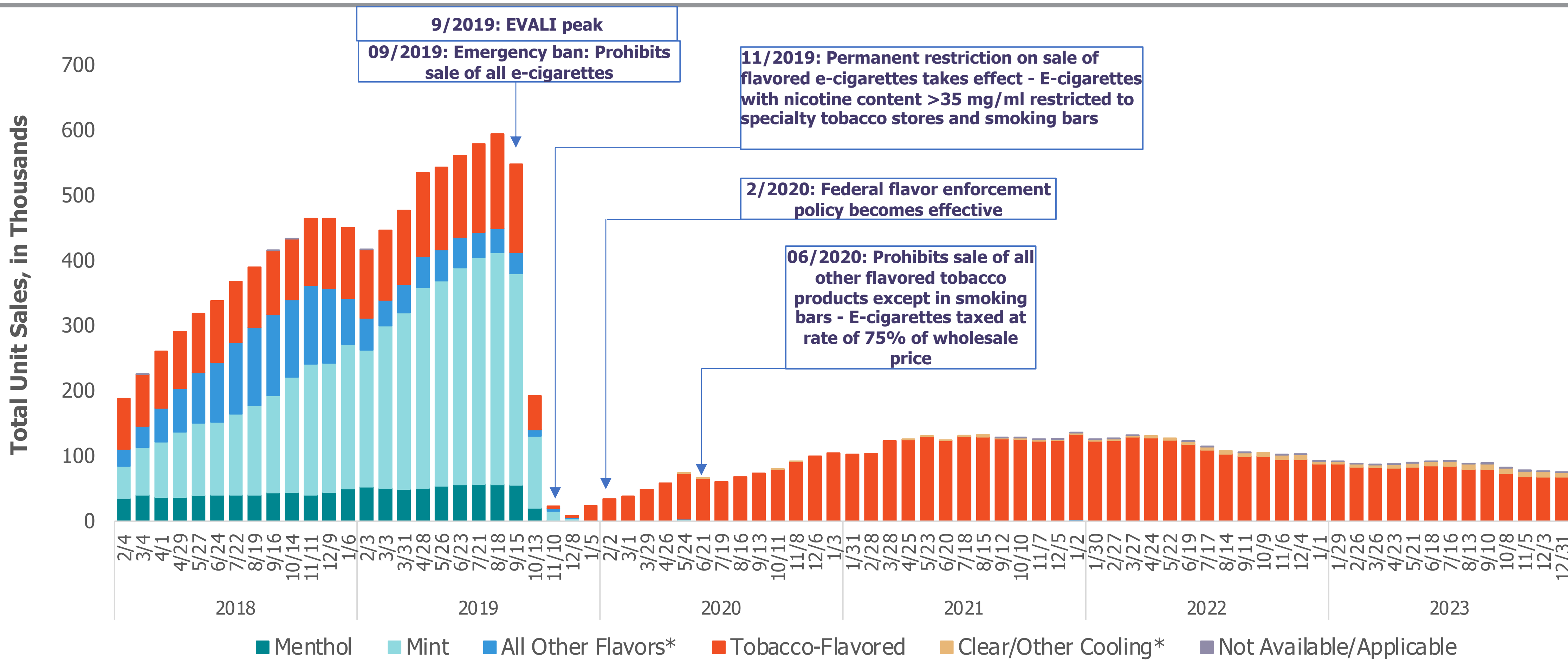
# Figure 19. Massachusetts E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor following Massachusetts's Flavor Restrictions

- Following Massachusetts's flavored e-cigarette restrictions, monthly e-cigarette total unit sales decreased by 86.2% from September 15, 2019 to December 31, 2023 (from 548.6 thousand to 75.9 thousand). During this period, monthly e-cigarette total unit sales of flavors other than tobacco decreased by 98.2% (from 412.8 thousand to 7.6 thousand).
- From September 15, 2019 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased 50.4% (from 135.8 thousand to 67.4 thousand); unit share increased from 24.8% to 88.8%.
  - Non-Tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales decreased 98.2% (from 412.8 thousand to 7.6 thousand); unit share decreased from 75.2% to 10.1%.
    - Menthol-flavored e-cigarette sales decreased by 99.0% (from 55.5 thousand to 0.5 thousand); unit share decreased from 10.1% to 0.7%.
    - Mint-flavored e-cigarette sales decreased by 100.0% (from 324.9 thousand to 0.0); unit share decreased from 59.2% to 0.0%.
    - All other-flavored e-cigarette sales decreased by 98.9% (from 32.3 thousand to 0.4 thousand); unit share decreased from 5.9% to 0.5%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Massachusetts decreased by 11.0% (from 7.6 thousand to 6.7 thousand); unit share increased from 7.4% to 8.9%. Disposable e-cigarette sales account for 100% of cooling sales by December 2023. Among disposable e-cigarettes, unit share of cooling sales increased from 36.8% to 63.9%



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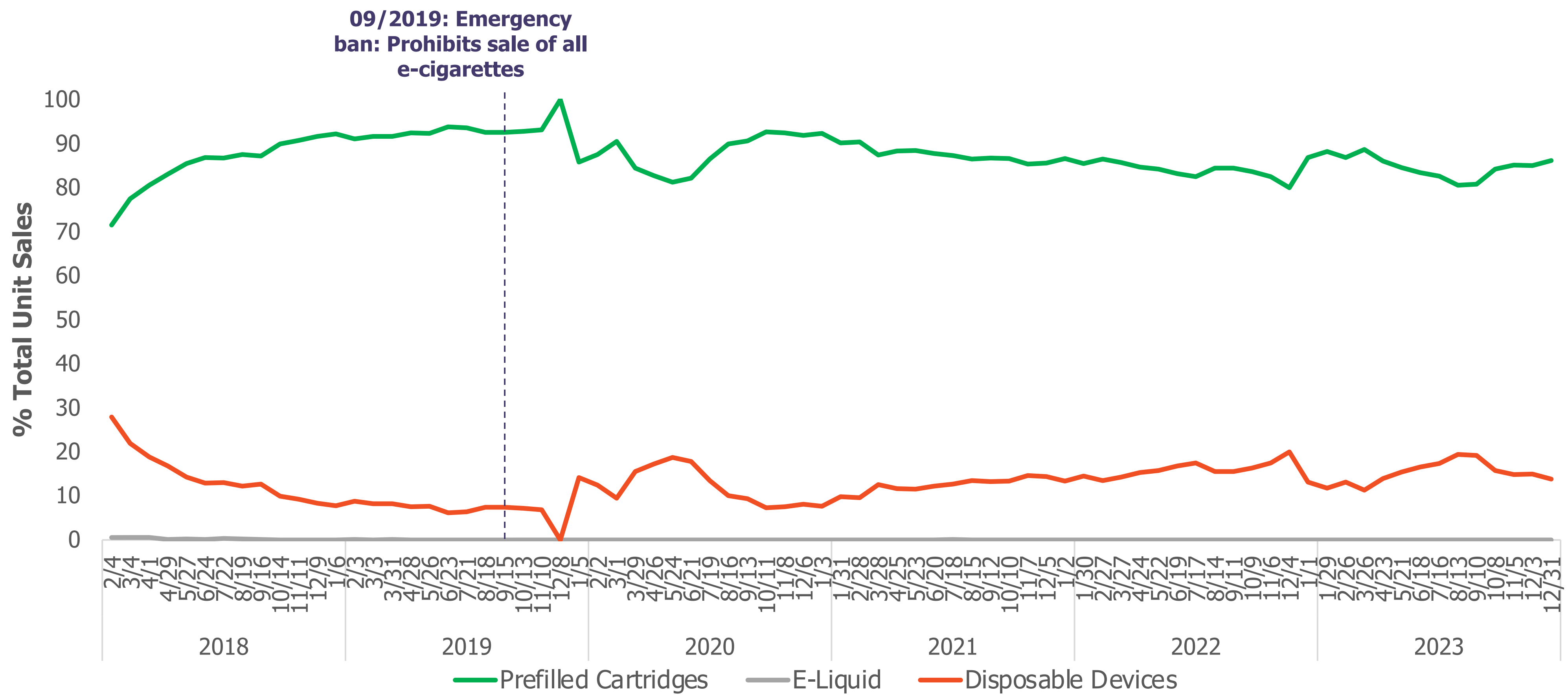
# Figure 20. Massachusetts's E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following Massachusetts's Flavored E-cigarette Restriction

- Following Massachusetts's flavored e-cigarette restriction, between September 15, 2019 and December 31, 2023:
  - Sales of disposable devices decreased by 74.1% (from 40.6 thousand to 10.5 thousand); unit share increased from 7.4% to 13.9%.
  - Sales of prefilled cartridges decreased by 87.1% (from 508.0 thousand to 65.4 thousand); unit share decreased from 92.6% to 86.1%.



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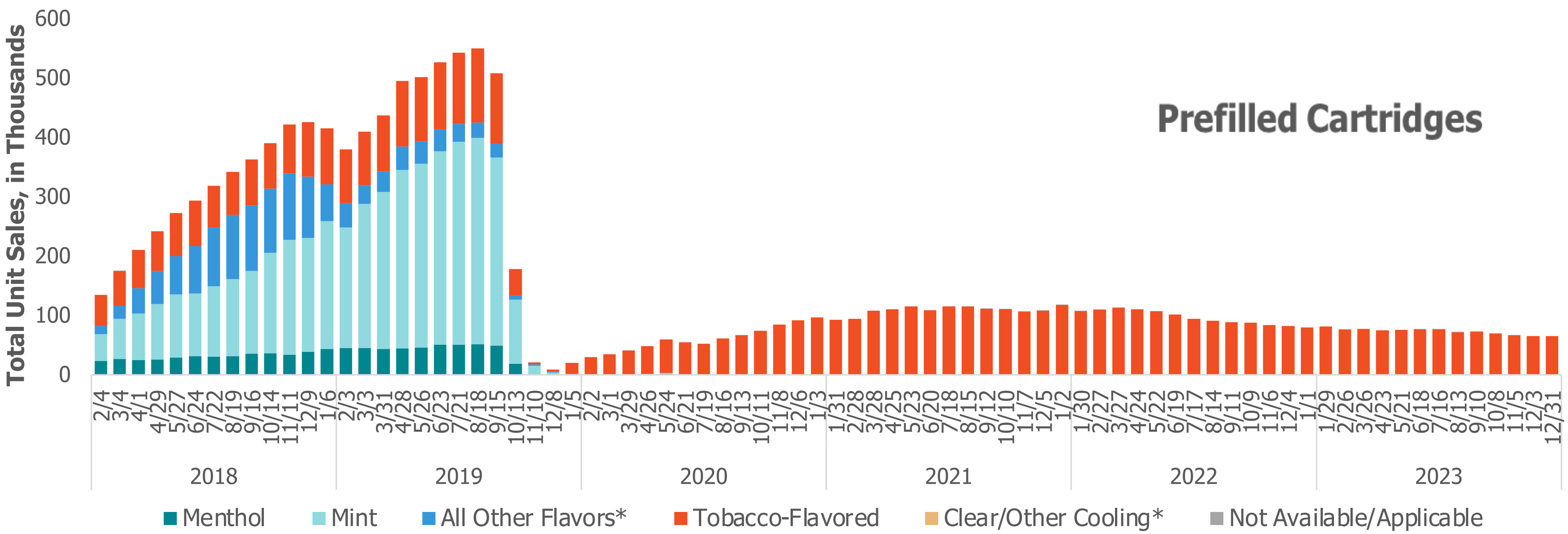
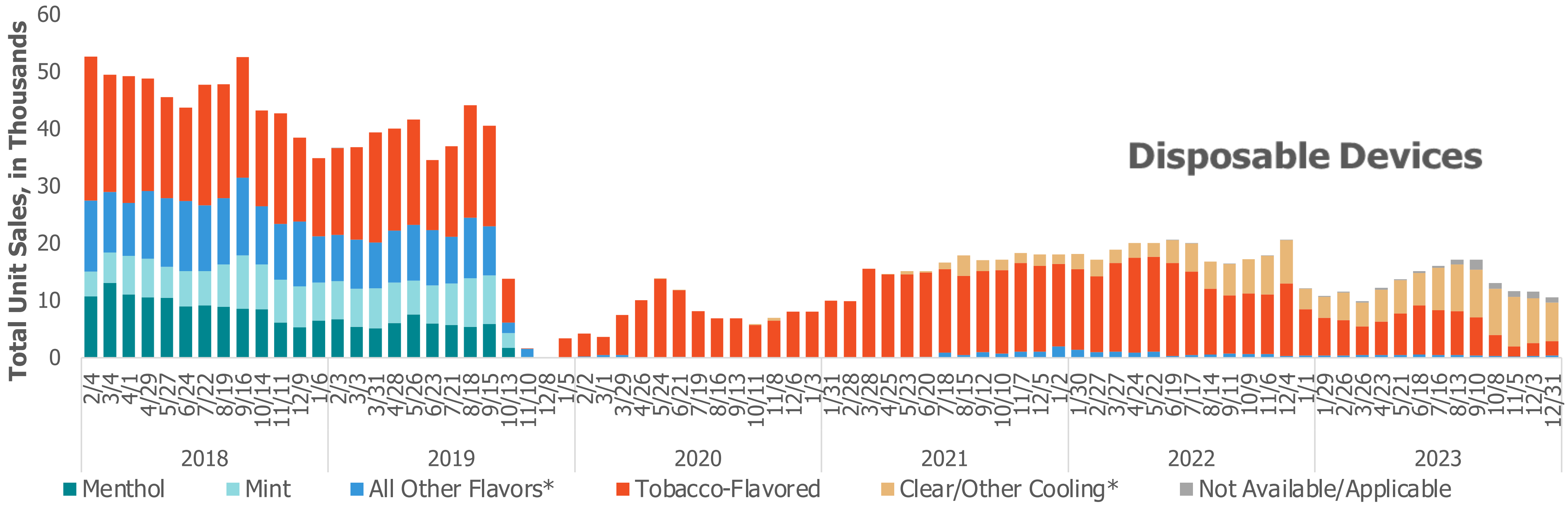
# Figure 21. Massachusetts E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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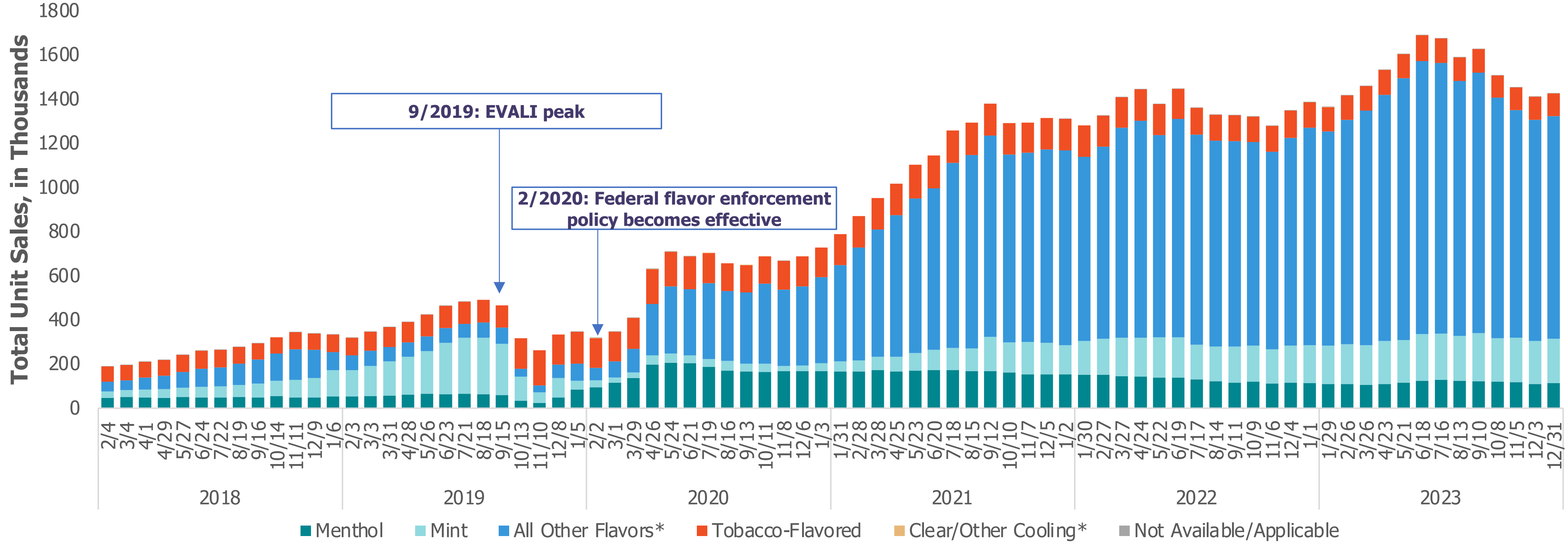
# Figure 22. Michigan E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 347.4% from 318.7 thousand to 1425.7 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 23.1% (from 135.6 thousand to 104.2 thousand); unit share decreased from 42.5% to 7.3%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 622.3% (from 183.0 thousand to 1321.5 thousand); unit share increased from 57.4% to 92.7%.
    - Menthol-flavored e-cigarette sales increased by 21.4% (from 94.3 thousand to 114.4 thousand); unit share decreased from 29.6% to 8.0%.
    - Mint-flavored e-cigarette sales increased by 537.2% (from 31.4 thousand to 200.2 thousand); unit share increased from 9.9% to 14.0%.
    - All other-flavored e-cigarette sales increased by 1692.0% (from 56.2 thousand to 1006.8 thousand); unit share increased from 17.6% to 70.6%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Michigan were approximately zero.



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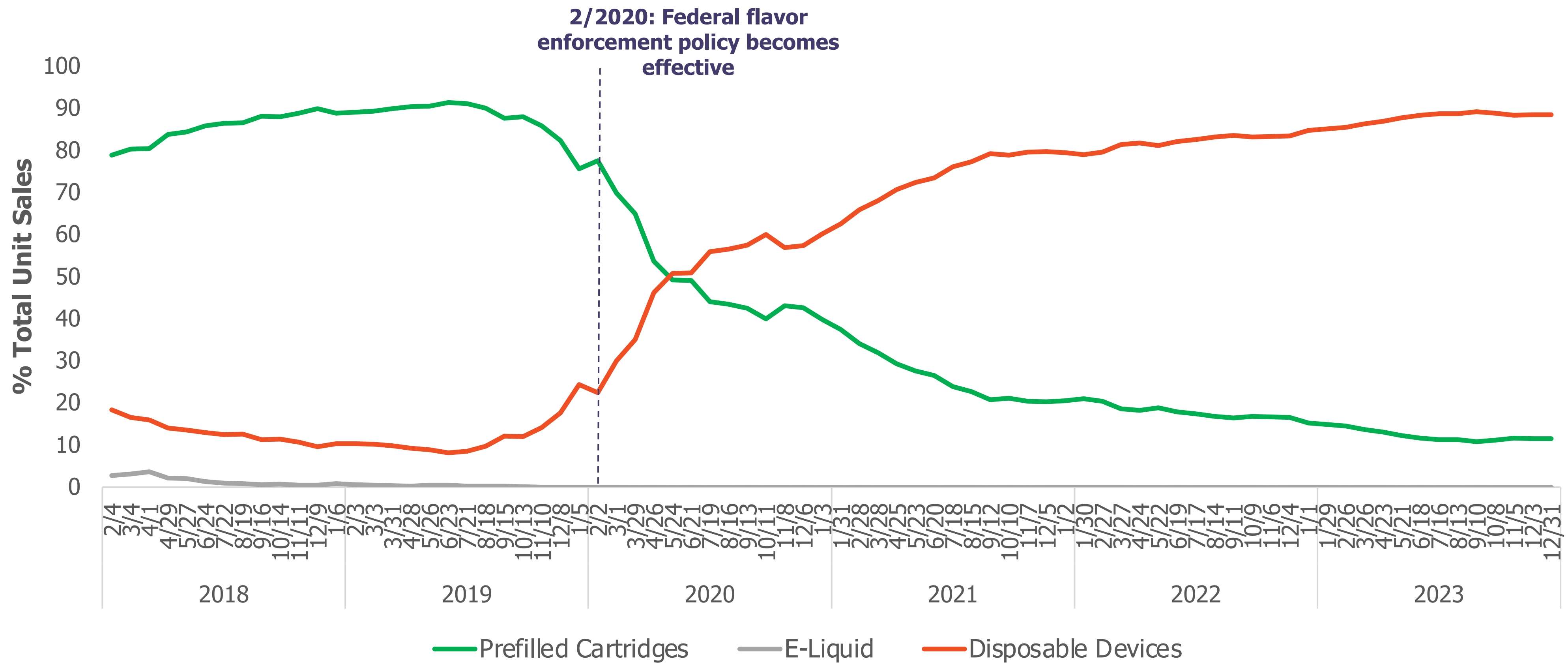
# Figure 23. Michigan E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following Michigan's flavored e-cigarette restriction, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 1659.8% (from 71.7 thousand to 1262.1thousand); unit share increased from 22.5% to 88.5%.
  - Sales of prefilled cartridges decreased by 33.7% (from 247.0 thousand to 163.7 thousand); unit share decreased from 77.5% to 11.5%.



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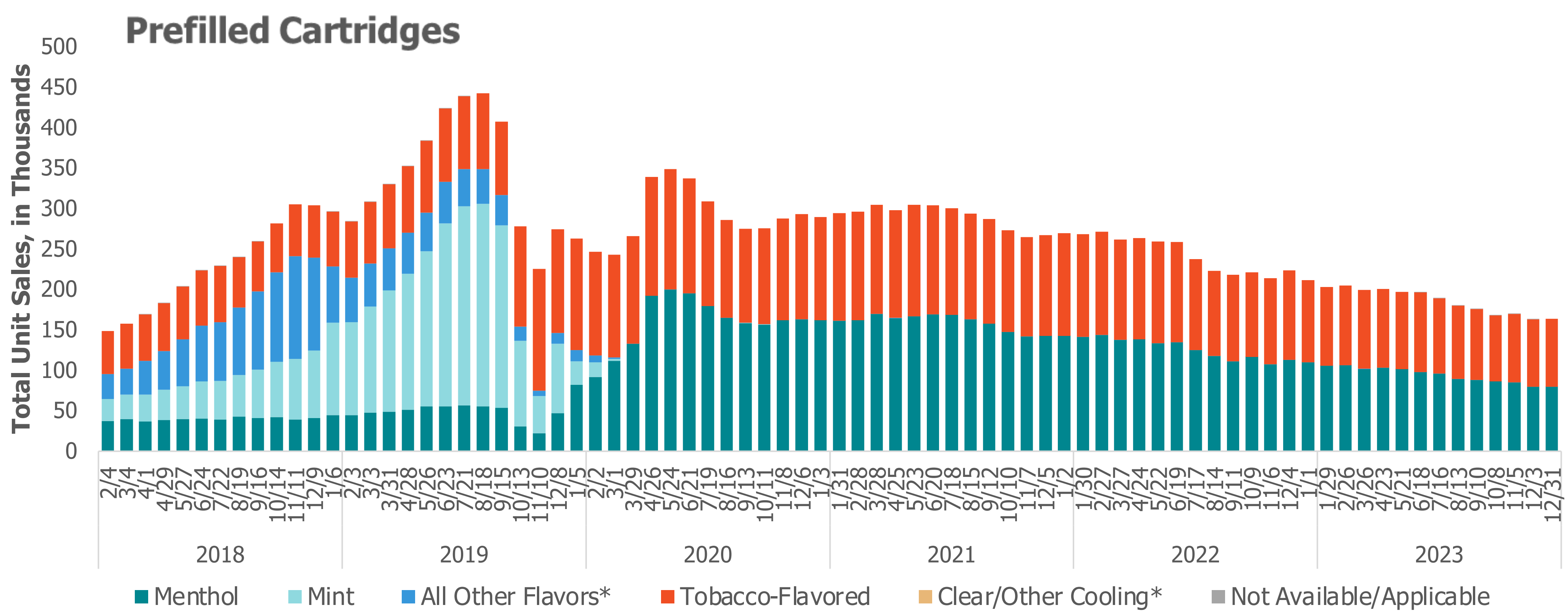
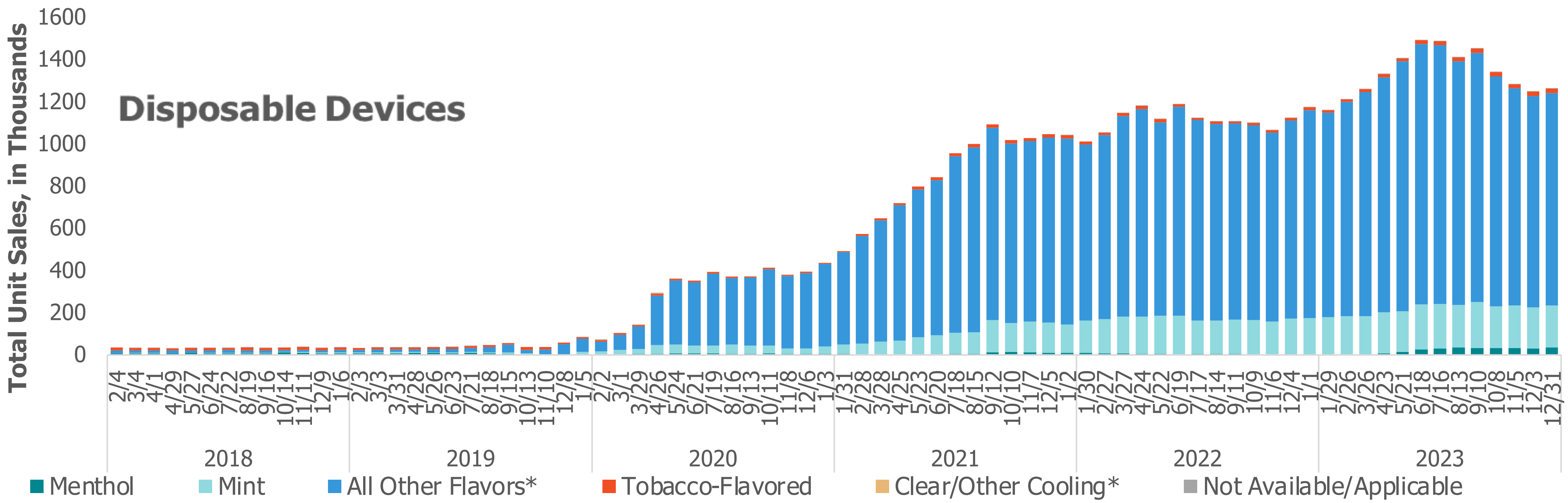
# Figure 24. Michigan E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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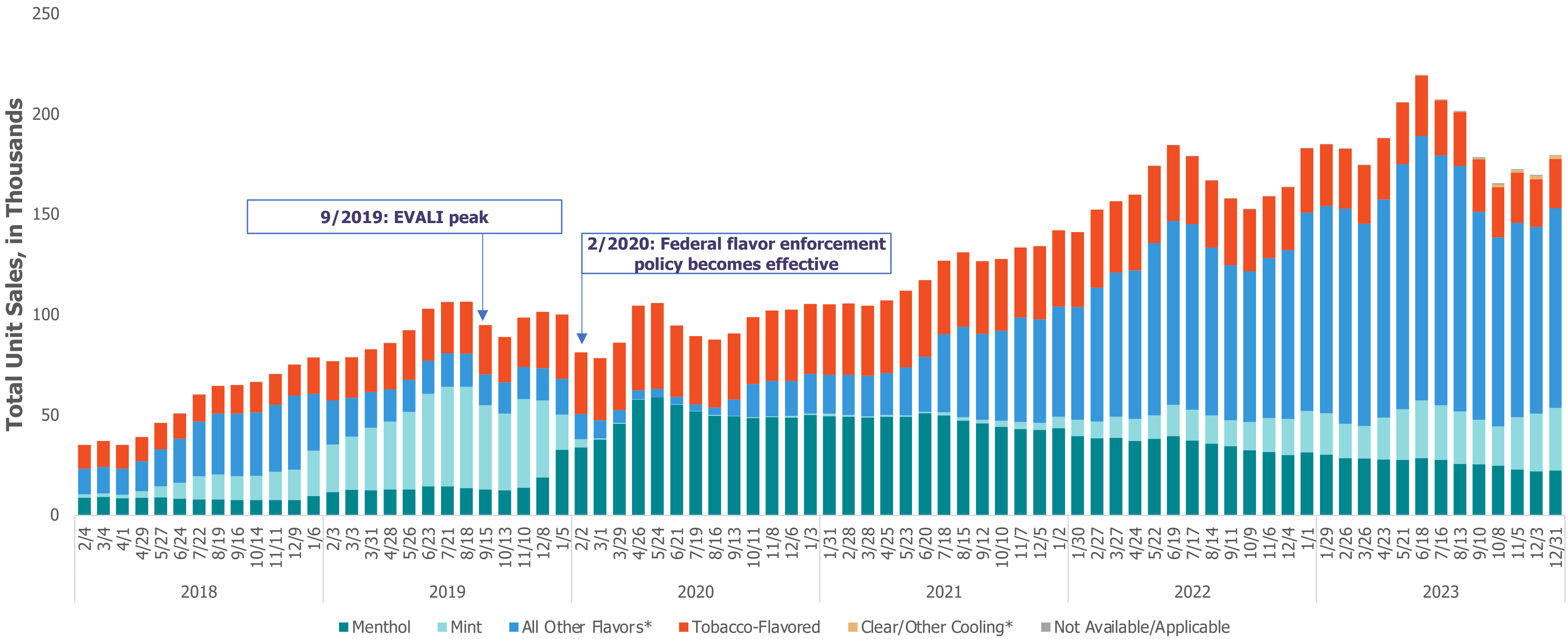
# Figure 25. Minnesota E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 121.2% from 81.2 thousand to 179.7 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 19.9% (from 30.8 thousand to 24.7 thousand); unit share decreased from 37.9% to 13.7%.
  - Non-Tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 206.9% (from 50.4 thousand to 154.8 thousand); unit share increased from 62.1% to 86.1%.
    - Menthol-flavored e-cigarette sales decreased by 33.7 (from 33.9 thousand to 22.5 thousand); unit share decreased from 41.7% to 12.5%.
    - Mint-flavored e-cigarette sales increased by 680.7% (from 4.0 thousand to 31.1 thousand); unit share increased from 4.9% to 17.3%.
    - All other-flavored e-cigarette sales increased by 693.2% (from 12.5 thousand to 99.4 thousand); unit share increased from 15.4% to 55.3%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Minnesota increased from 0 to 1,779 units; unit share increased from 0.0% to 1.0%.



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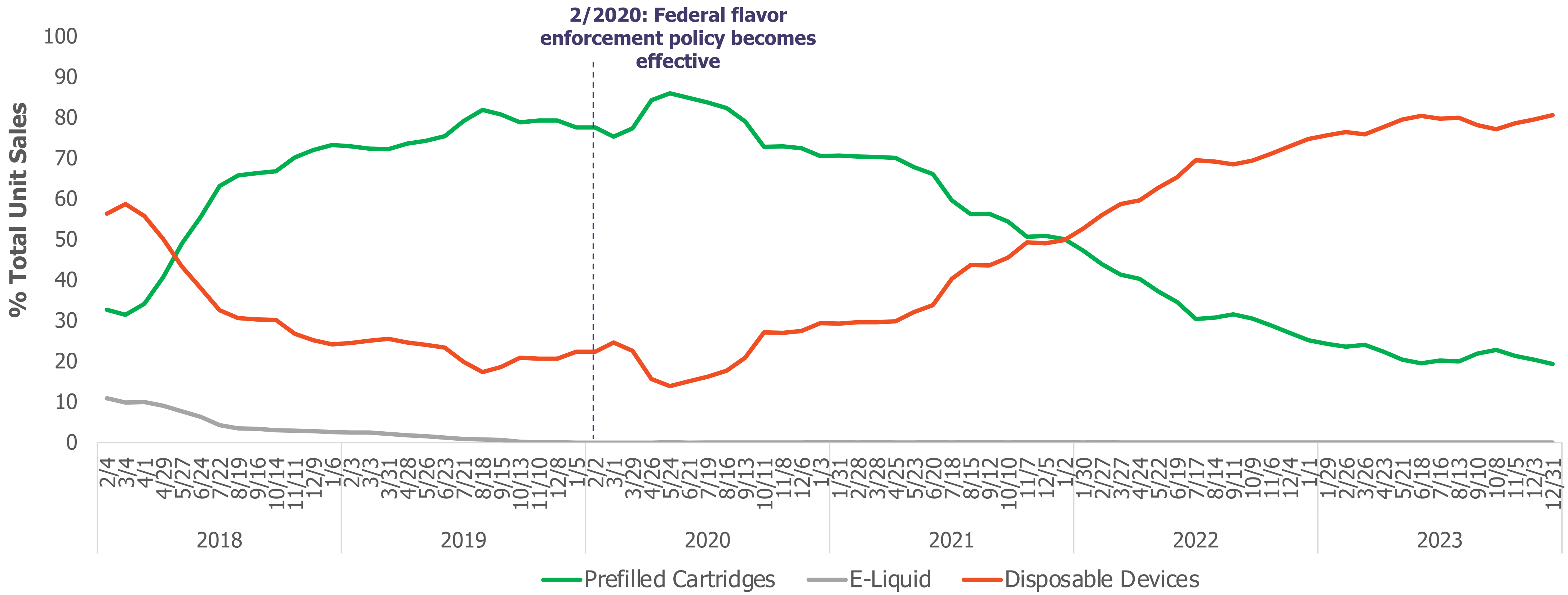
# Figure 26. Minnesota E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 696.5% (from 18.2 thousand to 144.9 thousand); unit share increased from 22.4% to 80.6%.
  - Sales of prefilled cartridges decreased by 44.8% (from 63.0 thousand to 34.8 thousand); unit share decreased from 77.6% to 19.4%.



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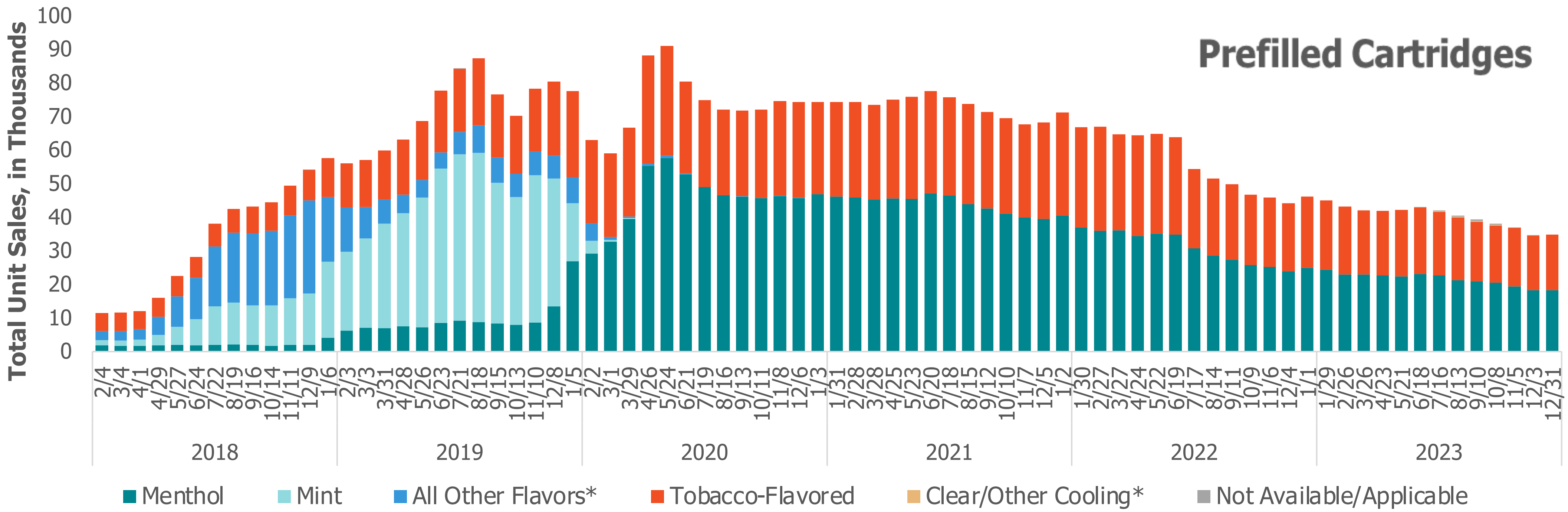
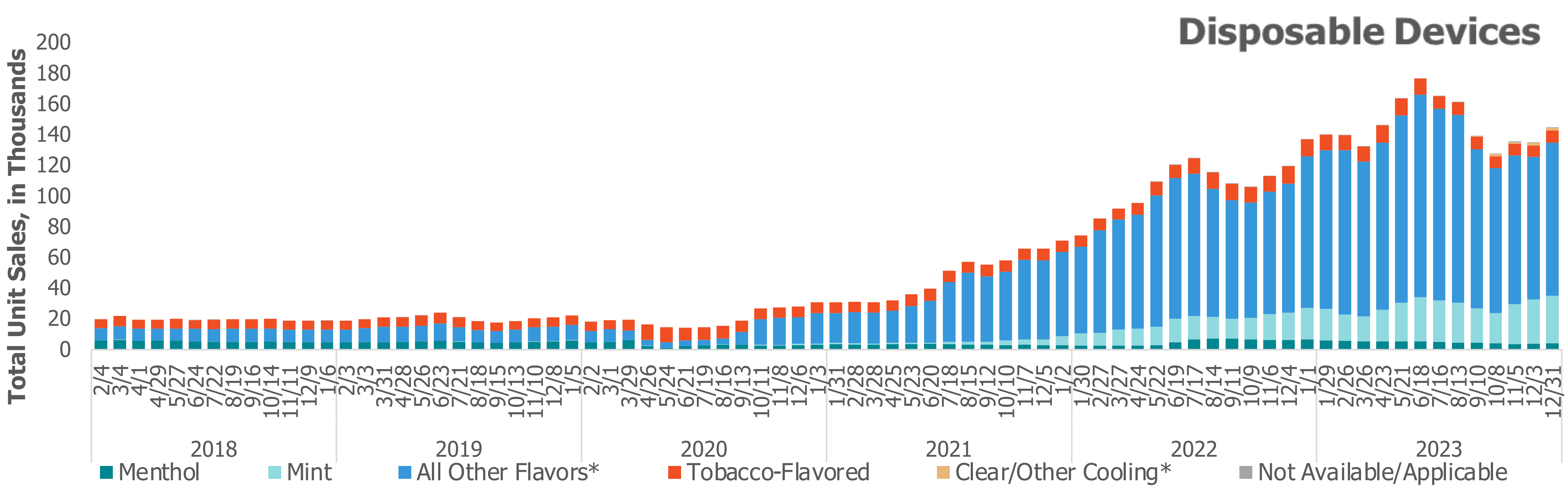
# Figure 27. Minnesota E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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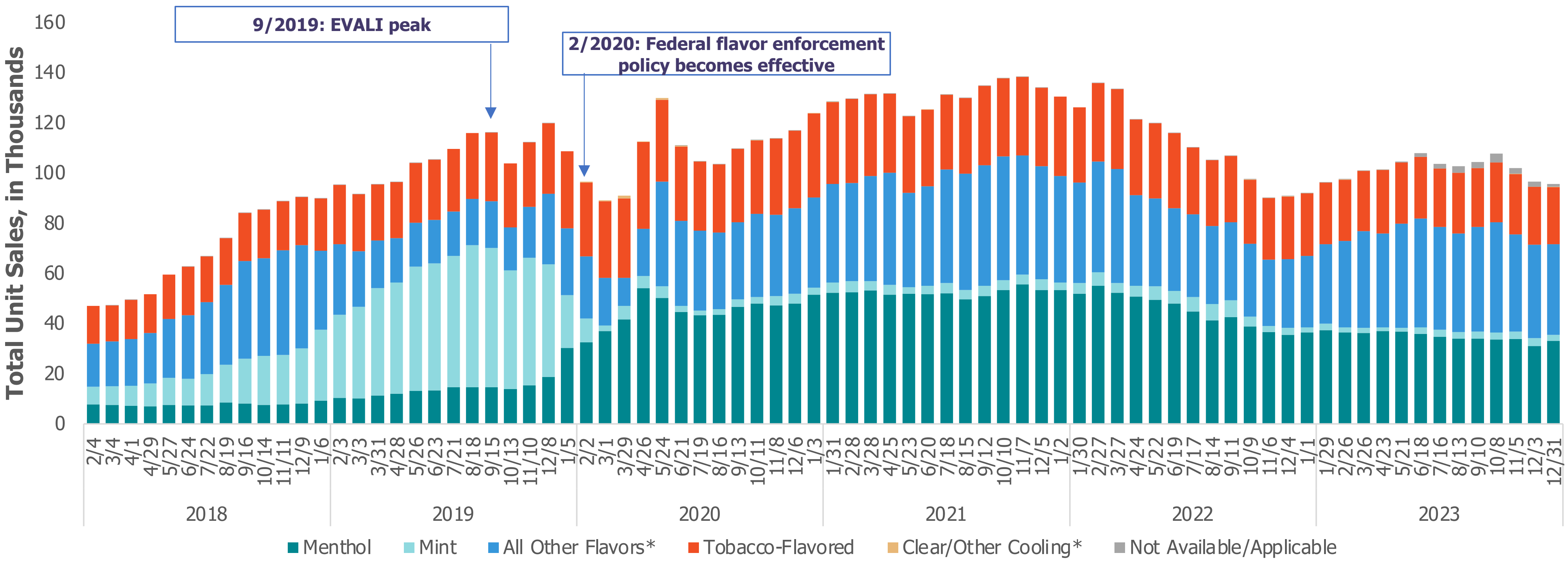
# Figure 28. Nevada E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales decreased by 0.8%% from 96.5 thousand to 95.7 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 22.6% (from 29.5 thousand to 22.9 thousand); unit share decreased from 30.6% to 23.9%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 6.9% (from 66.9 thousand to 71.6 thousand); unit share increased from 69.4% to 74.8%.
    - Menthol-flavored e-cigarette sales increased by 1.8% (from 32.5 thousand to 33.1 thousand); unit share increased from 33.7% to 34.6%.
    - Mint-flavored e-cigarette sales decreased by 74.9% (from 9.6 thousand to 2.4 thousand); unit share decreased from 9.9% to 2.5%.
    - All other-flavored e-cigarette sales increased by 46.2% (from 24.6 thousand to 36.0 thousand); unit share increased from 25.6% to 37.7%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Nevada were approximately zero.



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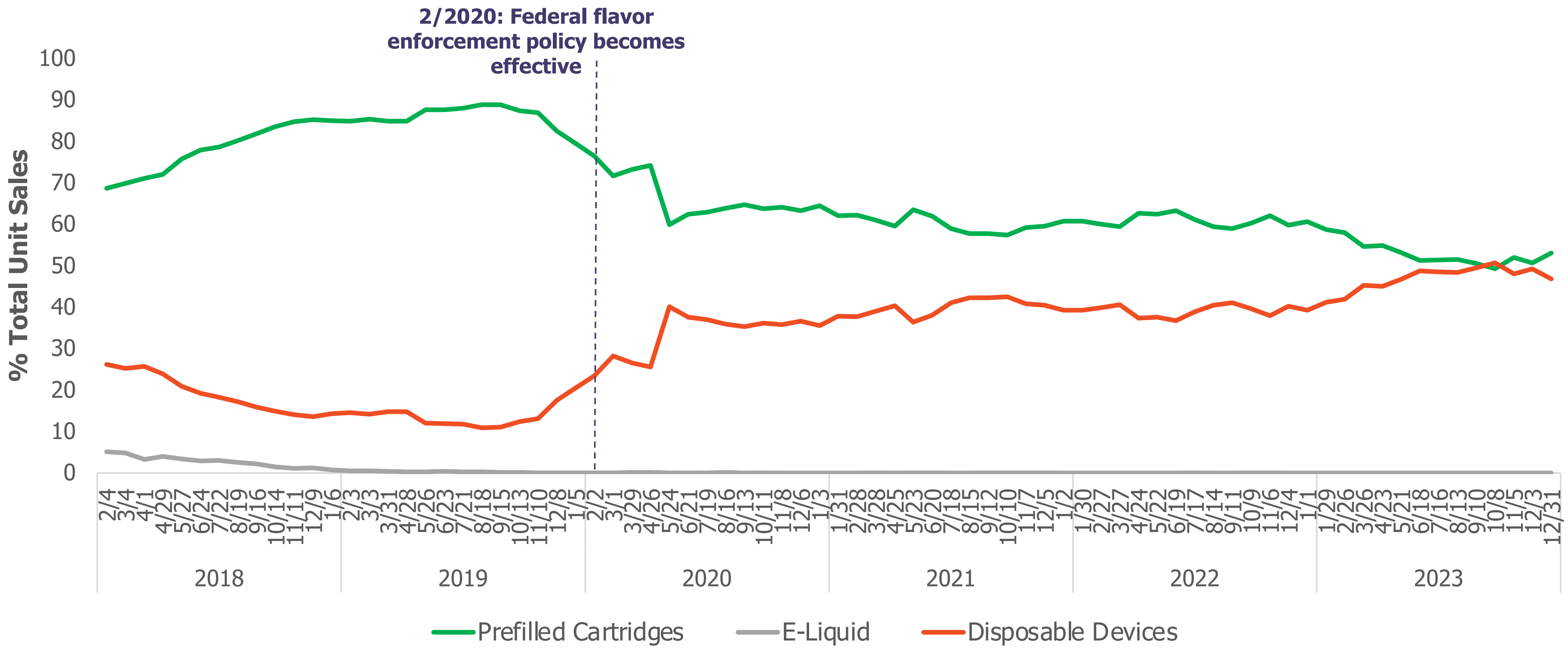
# Figure 29. Nevada E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following Nevada's flavored e-cigarette restriction, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 98.9% (from 22.6 thousand to 44.9 thousand); unit share increased from 23.4% to 46.9%.
  - Sales of prefilled cartridges decreased by 31.2% (from 73.8 thousand to 50.8 thousand); unit share decreased from 76.5% to 53.1%.



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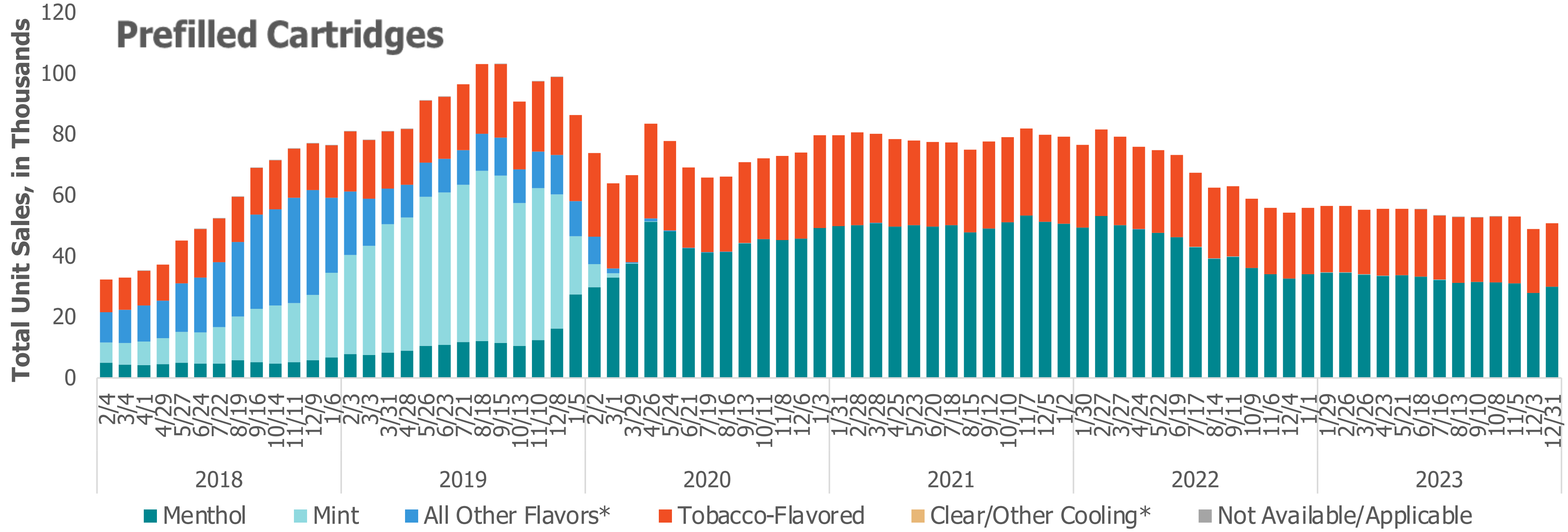
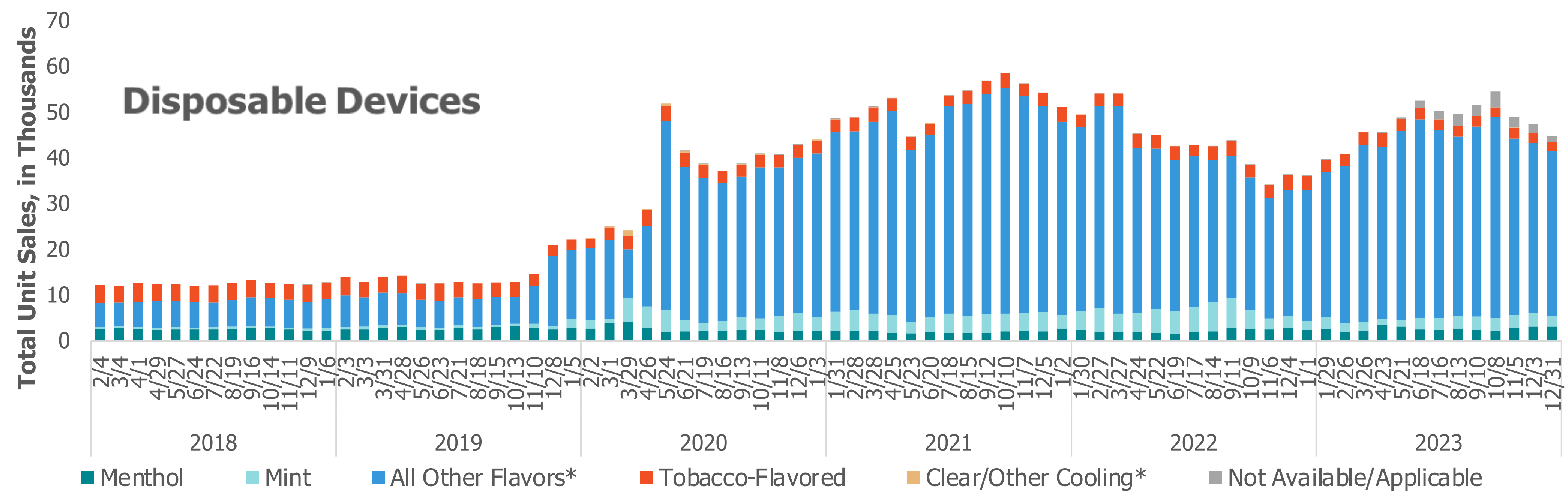
# Figure 30. Nevada E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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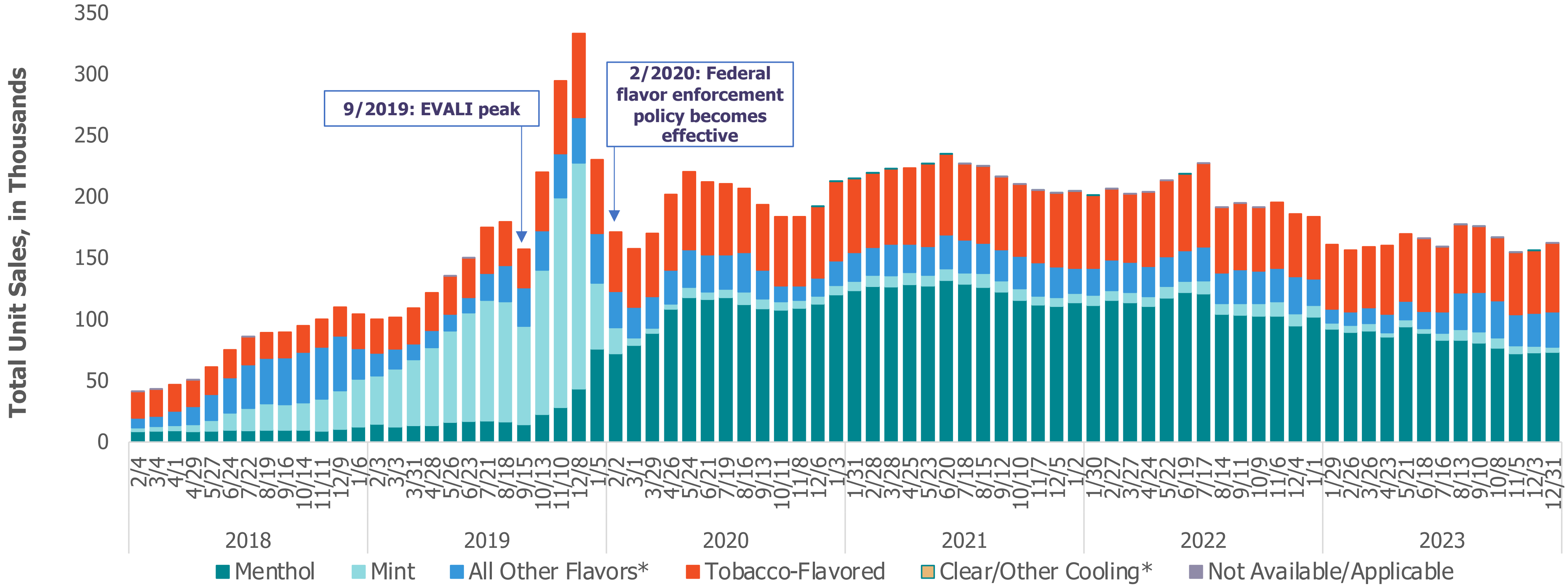
# Figure 31. New Hampshire E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023 monthly e-cigarette unit sales increased by 5.2% from 171.2 thousand to 162.3 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales increased by 15.6% (from 48.3 thousand to 55.8 thousand); unit share decreased from 28.2% to 34.4%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales decreased by 13.4% (from 122.9 thousand to 106.4 thousand); unit share decreased from 71.8% to 65.6%.
    - Menthol-flavored e-cigarette sales increased by 1.6% (from 72.3 thousand to 73.5 thousand); unit share increased from 42.2% to 45.3%.
    - Mint-flavored e-cigarette sales decreased by 80.3% (from 21.1 thousand to 4.2 thousand); unit share decreased from 12.3% to 2.6%.
    - All other-flavored e-cigarette sales decreased by 2.3% (from 29.5 thousand to 28.8 thousand); unit share increased from 17.2% to 17.7%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in New Hampshire were approximately zero.



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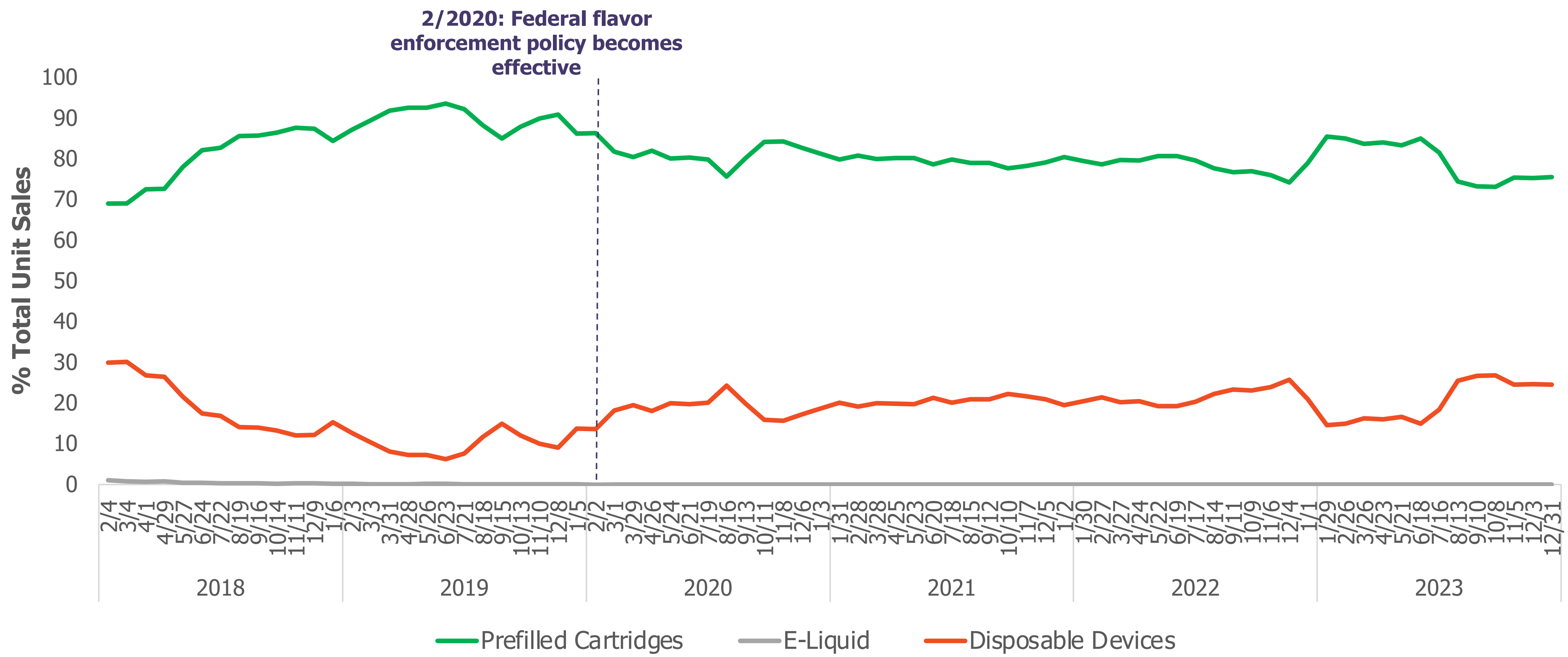
# Figure 32. New Hampshire E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December, 2023:
  - Sales of disposable devices increased by 70.9% (from 23.3 thousand to 39.8 thousand); unit share increased from 13.6% to 24.5%.
  - Sales of prefilled cartridges decreased by 17.2% (from 147.9 thousand to 122.5 thousand); unit share decreased from 86.4% to 75.5%.



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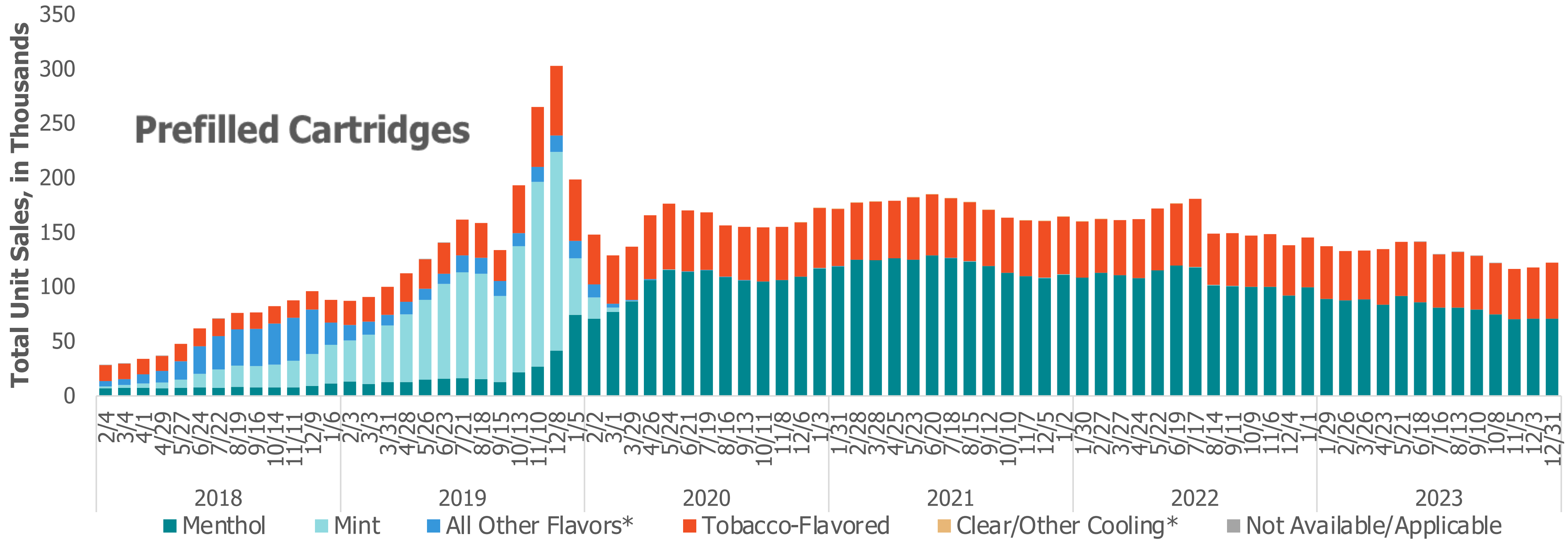
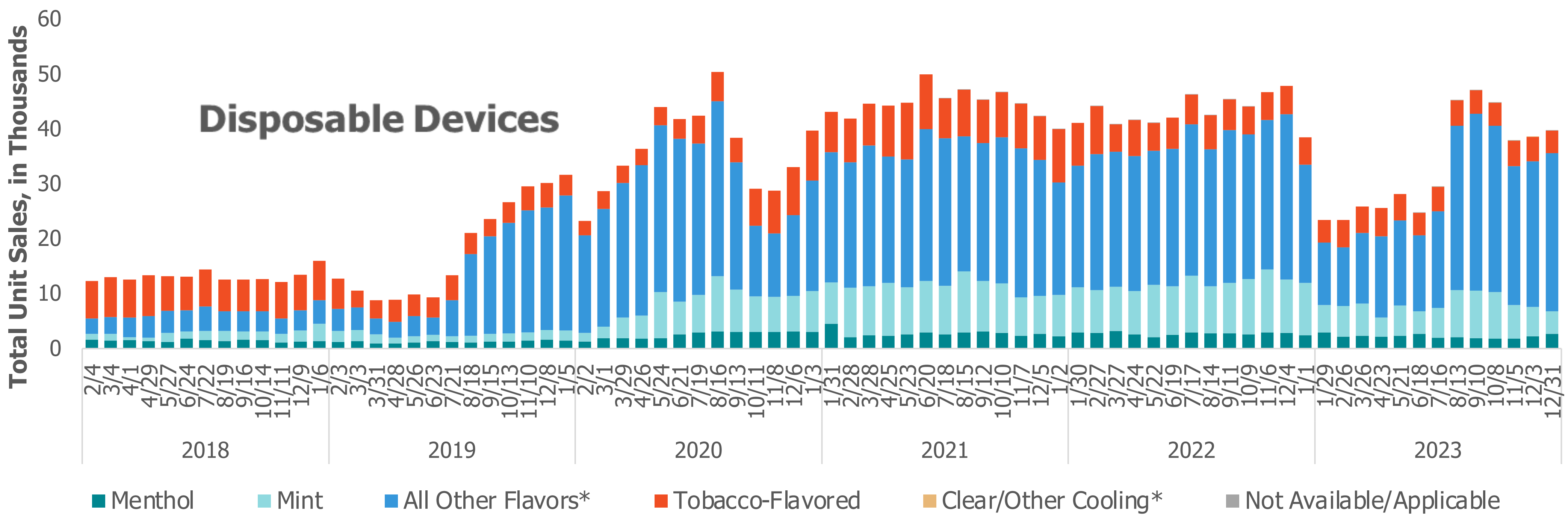
# Figure 33. New Hampshire E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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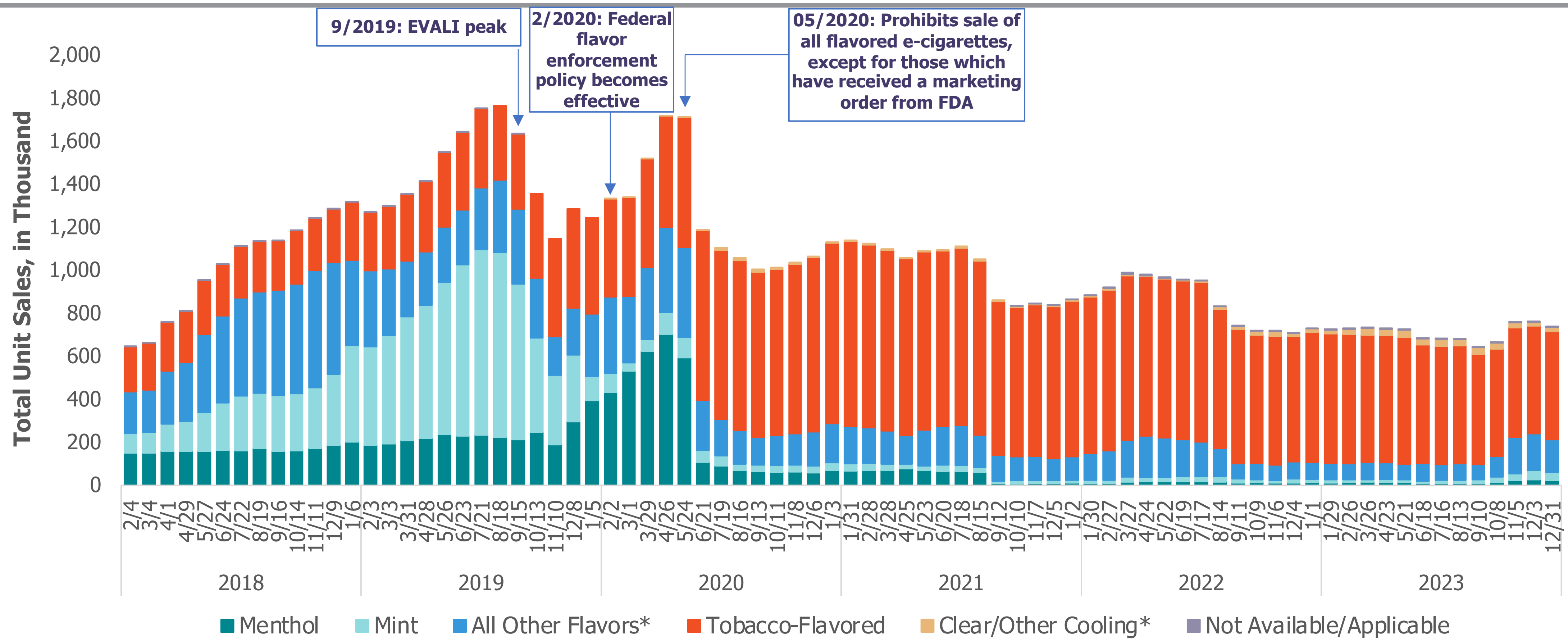
# Figure 34. New York E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor following New York's Flavored E-cigarette Restriction

- Following New York's flavored e-cigarette restriction, monthly e-cigarette total unit sales decreased by 56.8% between May 24, 2020 and December 31, 2023 (from 1712.3 thousand to 739.7 thousand). During this period, monthly e-cigarette total unit sales of flavors other than tobacco decreased by 79.1% (from 1,109.0 thousand to 231.9 thousand).
- From May 24, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 16.5% (from 603.3 thousand to 503.4 thousand); unit share increased from 35.2% to 68.1%.
  - Non-Tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales decreased by 79.1% (from 1,109.0 thousand to 231.9 thousand); unit share decreased from 64.8% to 31.3%.
    - Menthol-flavored e-cigarette sales decreased by 96.1% (from 594.6 thousand to 23.3 thousand); unit share decreased from 34.7% to 3.1%.
    - Mint-flavored e-cigarette sales decreased by 60.3% (from 93.9 thousand to 37.3 thousand); unit share decreased from 5.5% to 5.0%.
    - All other-flavored e-cigarette sales decreased by 63.6% (from 419.4 thousand to 152.9 thousand); unit share decreased from 24.5% to 20.7%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in New York increased by 59.1% (from 11.6 thousand to 18.5 thousand); unit share increased from 1.6% to 2.5%. Disposable e-cigarette sales account for 100% of cooling sales by December 2023. Among disposable e-cigarettes, unit share of cooling sales increased from 6.9% to 7.2%
- As of December 31, 2023, disposable e-cigarettes represent 89.2% of sales of prohibited flavored e-cigarettes in New York.



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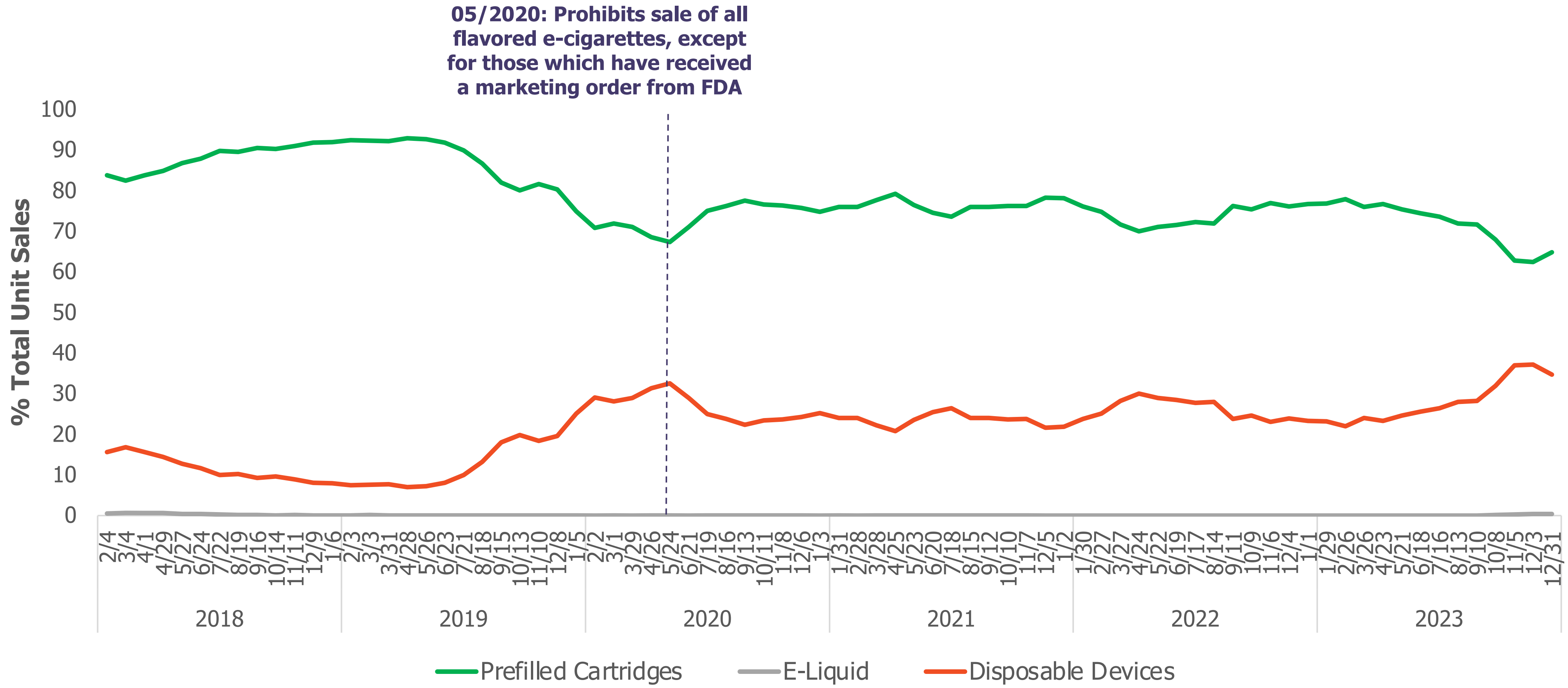
# Figure 35. New York E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following New York's Flavored E-cigarette Restriction

- Following New York's flavored e-cigarette restriction, between May 24, 2020 and December 31, 2023:
  - Sales of disposable devices decreased by 54.0% (from 558.5 thousand to 257.1 thousand); unit share decreased from 32.6% to 34.8%.
  - Sales of prefilled cartridges decreased by 58.4% (from 1153.8 thousand to 480.0 thousand); unit share increased from 67.4% to 64.9%.



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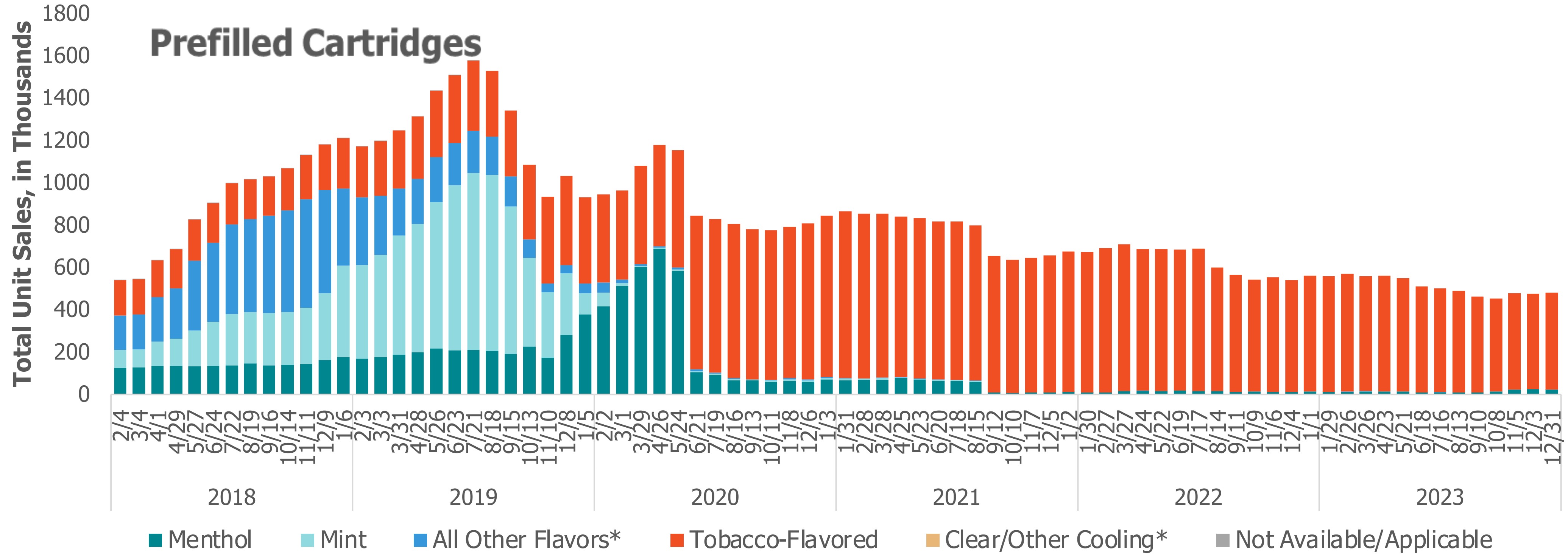
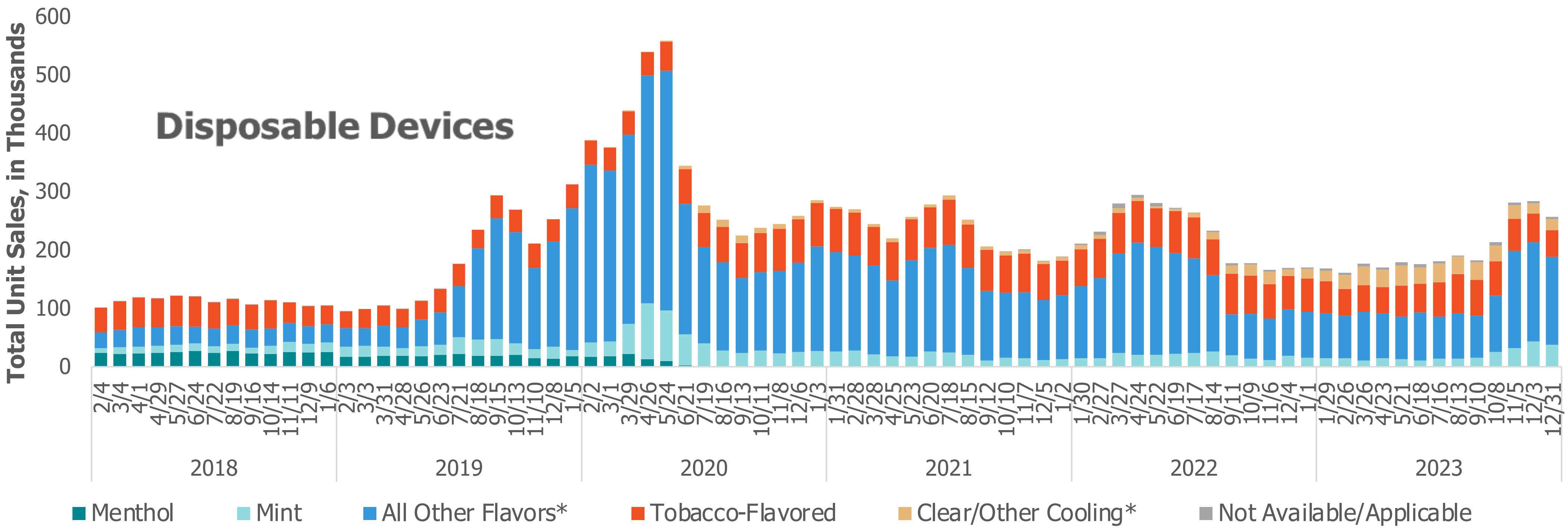
# Figure 36. New York E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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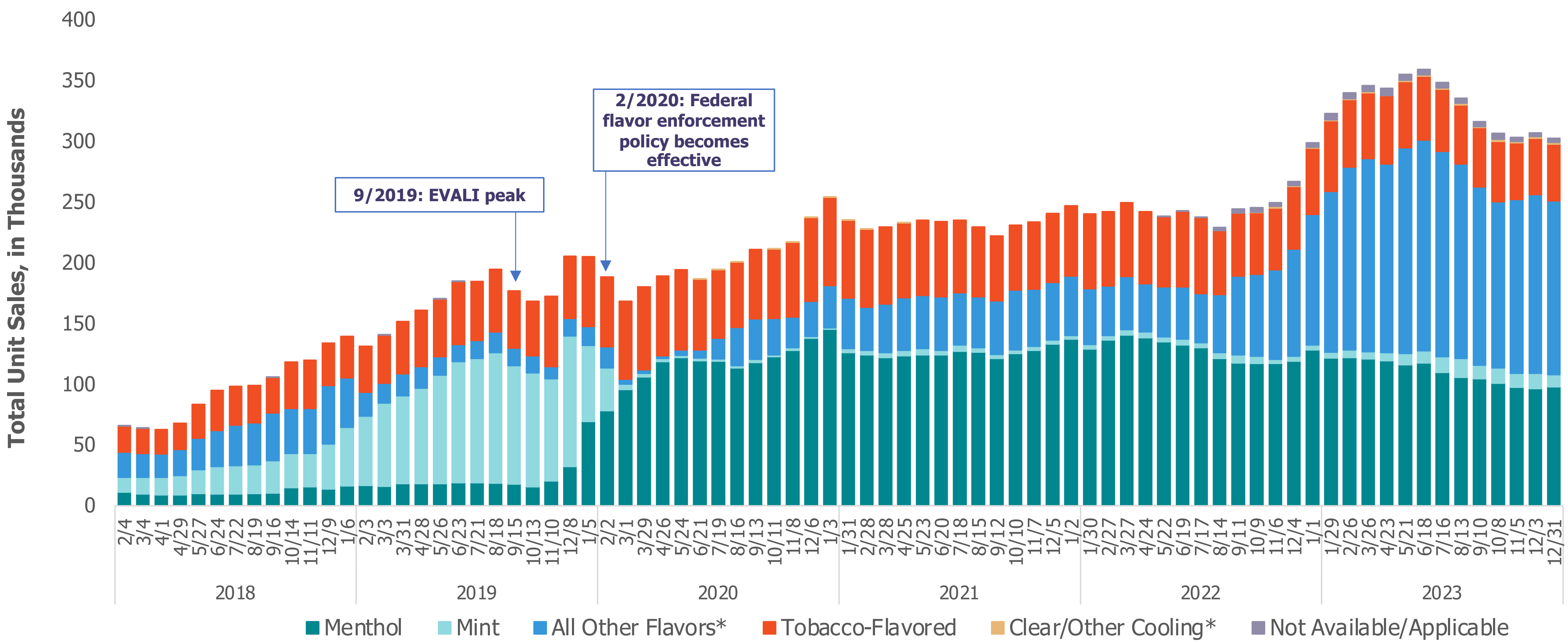
# Figure 37. Oregon E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 60.5% from 188.5 thousand to 302.5 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 18.9% (from 57.4 thousand to 46.5 thousand); unit share decreased from 30.4% to 15.4%.
  - Non-Tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 92.6% (from 131.2 thousand to 252.6 thousand); unit share increased from 69.6% to 83.5%.
    - Menthol-flavored e-cigarette sales increased by 25.1% (from 78.3 thousand to 98.0 thousand); unit share decreased from 41.6% to 32.4%.
    - Mint-flavored e-cigarette sales decreased by 71.5% (from 35.3 thousand to 10.1 thousand); unit share decreased from 18.7% to 3.3%.
    - All other-flavored e-cigarette sales increased by 717.9% (from 17.5 thousand to 143.1 thousand); unit share increased from 9.3% to 47.3%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Oregon increased by 84.2% (from 0.8 thousand to 1.4 thousand); unit share increased from 0.3% to 0.5%.



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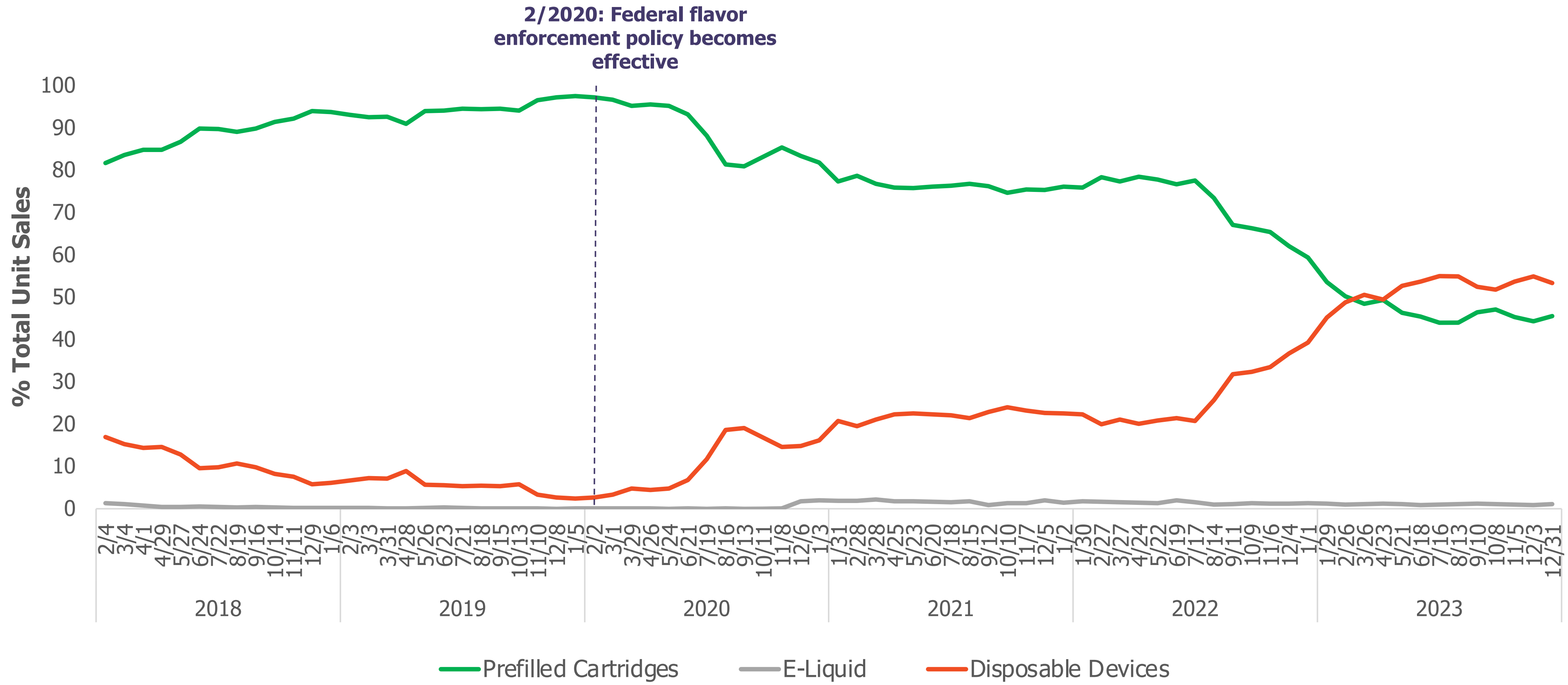
# Figure 38. Oregon E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 3066.5% (from 5.1 thousand to 161.4 thousand); unit share increased from 2.7% to 53.4%.
  - Sales of prefilled cartridges decreased by 24.8% (from 183.3 thousand to 137.9 thousand); unit share decreased from 97.2% to 45.6%.



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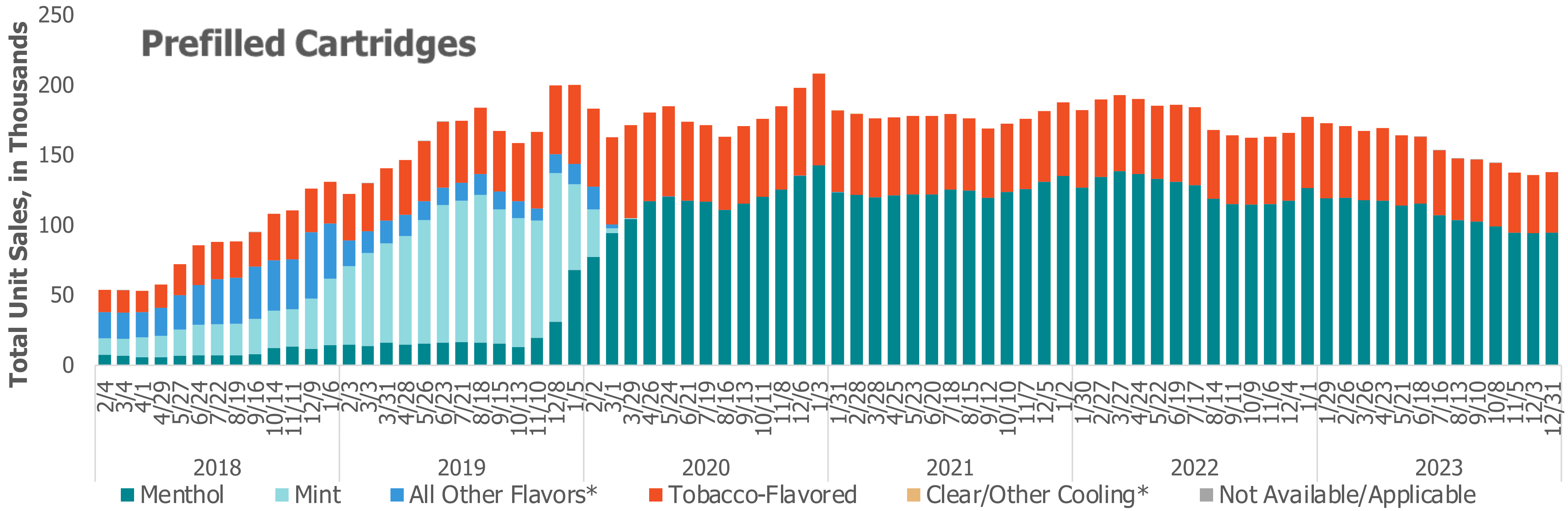
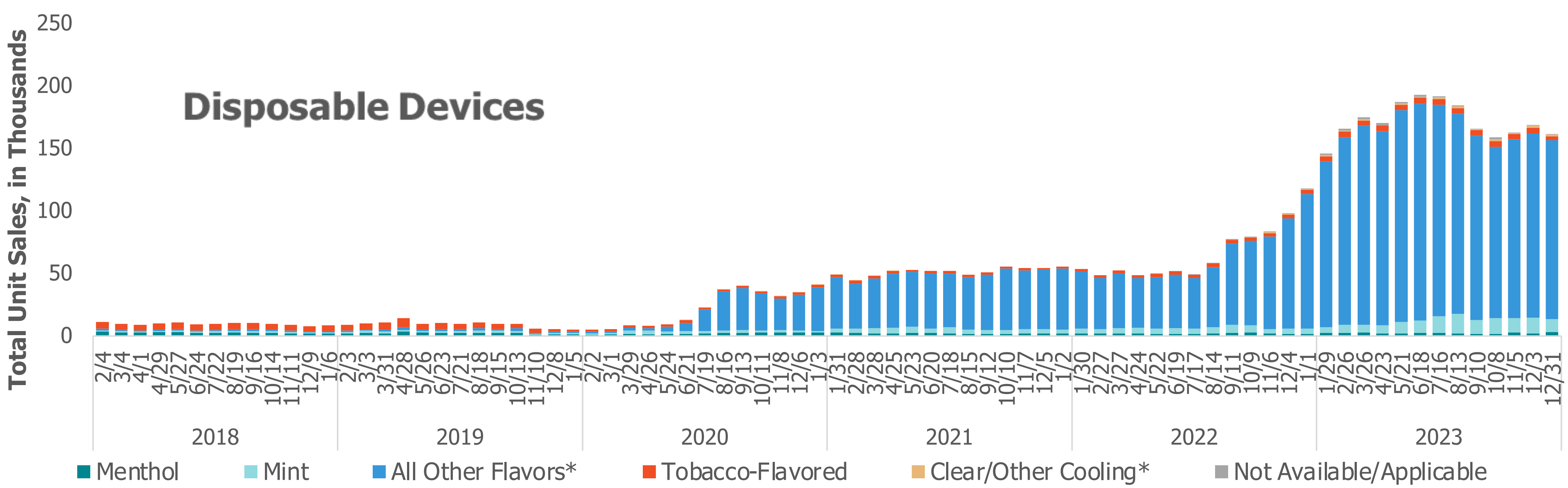
# Figure 39. Oregon E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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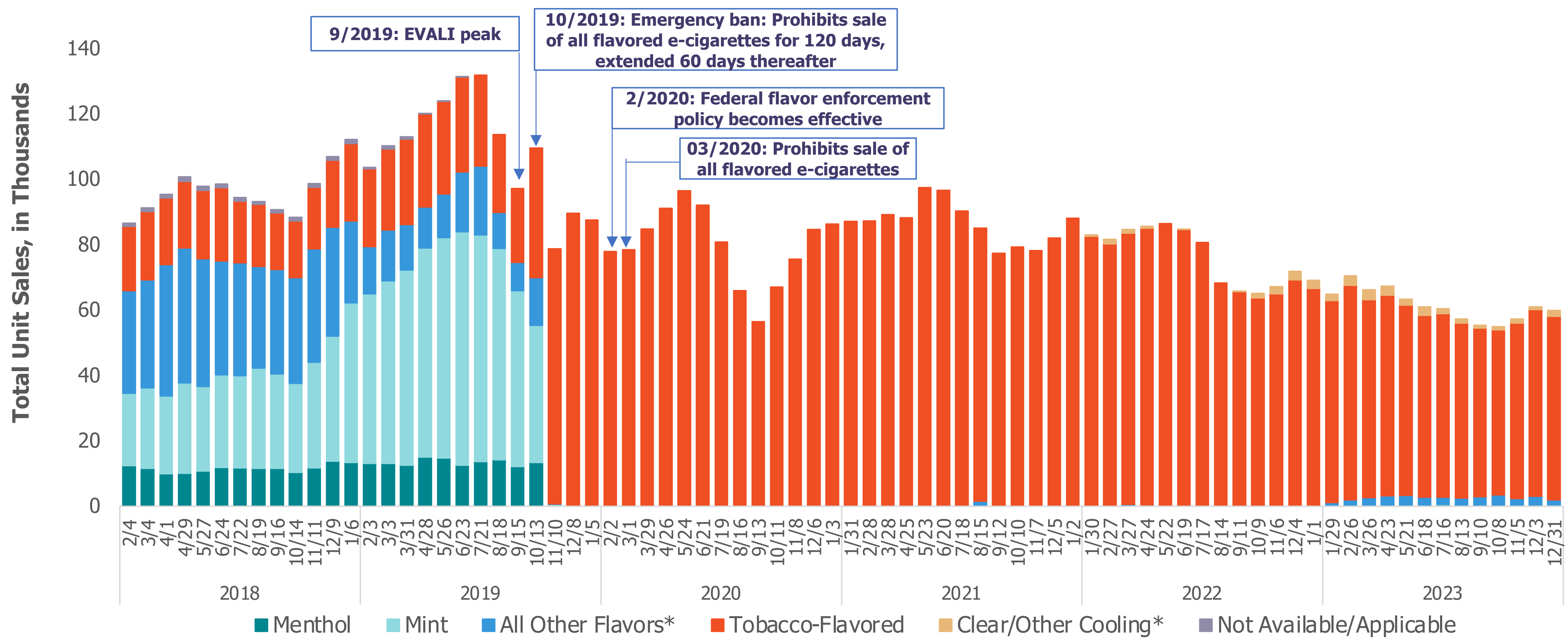
# Figure 40. Rhode Island E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor following Rhode Island's Flavored E-cigarette Restriction

- Following Rhode Island's flavored e-cigarette restriction, monthly e-cigarette total unit sales decreased by 45.4% from October 13, 2019 to December 31, 2023 (from 109.5 thousand to 59.8 thousand). During this period, monthly e-cigarette total unit sales of flavors other than tobacco decreased by 94.8% (from 70.0 thousand to 3.6 thousand).
- From October 13, 2019 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales increased by 42.3% (from 39.5 thousand to 56.2 thousand); unit share increased from 36.1% to 94.0%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales decreased by 94.8% (from 70.0 thousand to 3.6 thousand); unit share decreased from 63.9% to 6.0%.
    - Menthol-flavored e-cigarette sales decreased by 100.0% (from 13.4 thousand to 0.0 thousand); unit share decreased from 12.3% to 0.0%.
    - Mint-flavored e-cigarette sales decreased by 98.8% (from 41.8 thousand to 0.5 thousand); unit share decreased from 38.2% to 0.8%.
    - All other-flavored e-cigarette sales decreased by 90.3% (from 14.7 thousand to 1.4 thousand); unit share decreased from 13.4% to 2.4%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Rhode Island decreased by 36.1% (from 2.6 thousand to 1.7 thousand); unit share decreased from 3.7% to 2.8%. Disposable e-cigarette sales account for 100% of cooling sales by December 2023. Among disposable e-cigarettes, unit share of cooling sales decreased from 47.3% to 38.4%



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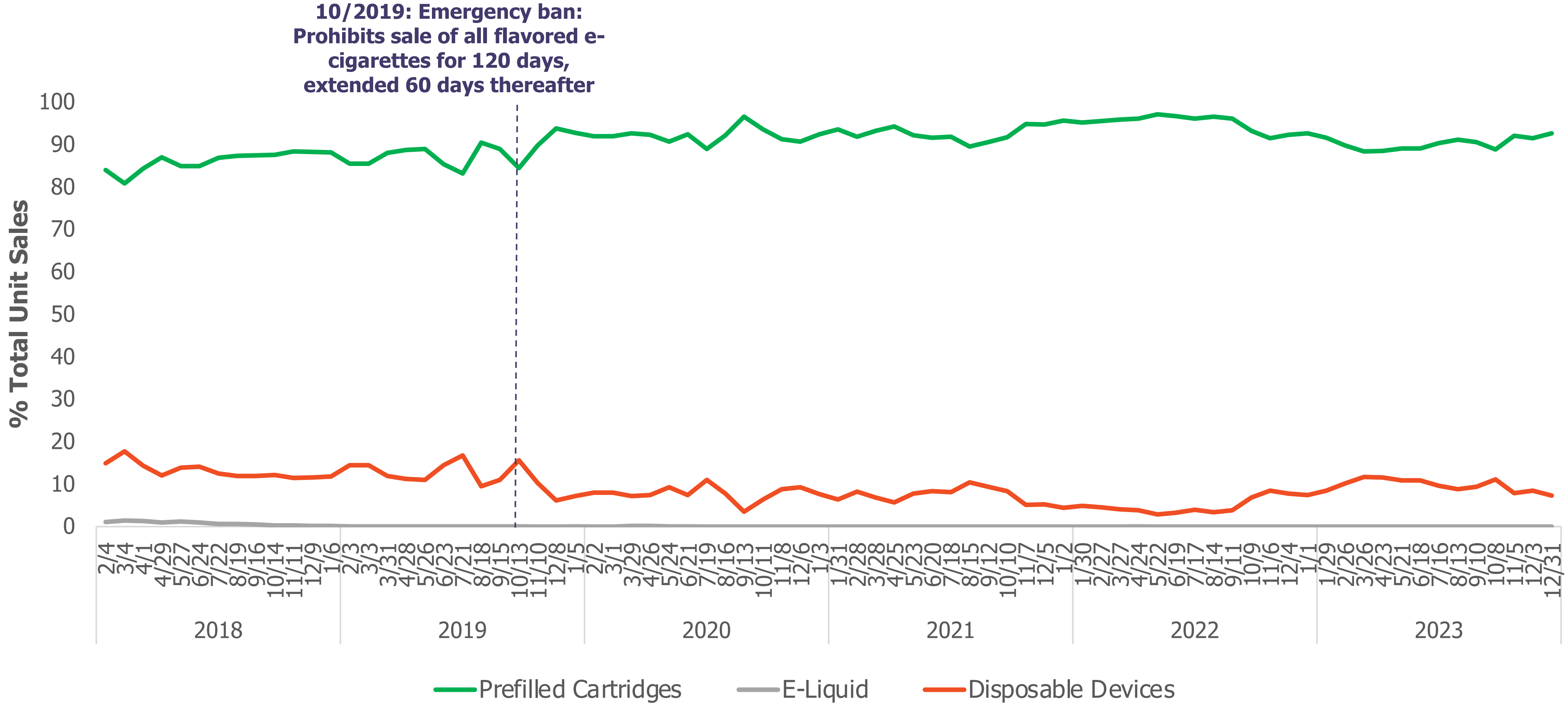
# Figure 41. Rhode Island E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following Rhode Island's Flavored E-cigarette Restriction

- Following Rhode Island's flavor restriction, between October 13, 2019 and December 31, 2023:
  - Sales of disposable devices decreased by 74.4% (from 17.1 thousand to 4.4 thousand); unit share decreased from 15.6% to 7.3%.
  - Sales of prefilled cartridges decreased by 40.0% (from 92.4 thousand to 55.5 thousand); unit share increased from 84.4% to 92.7%.



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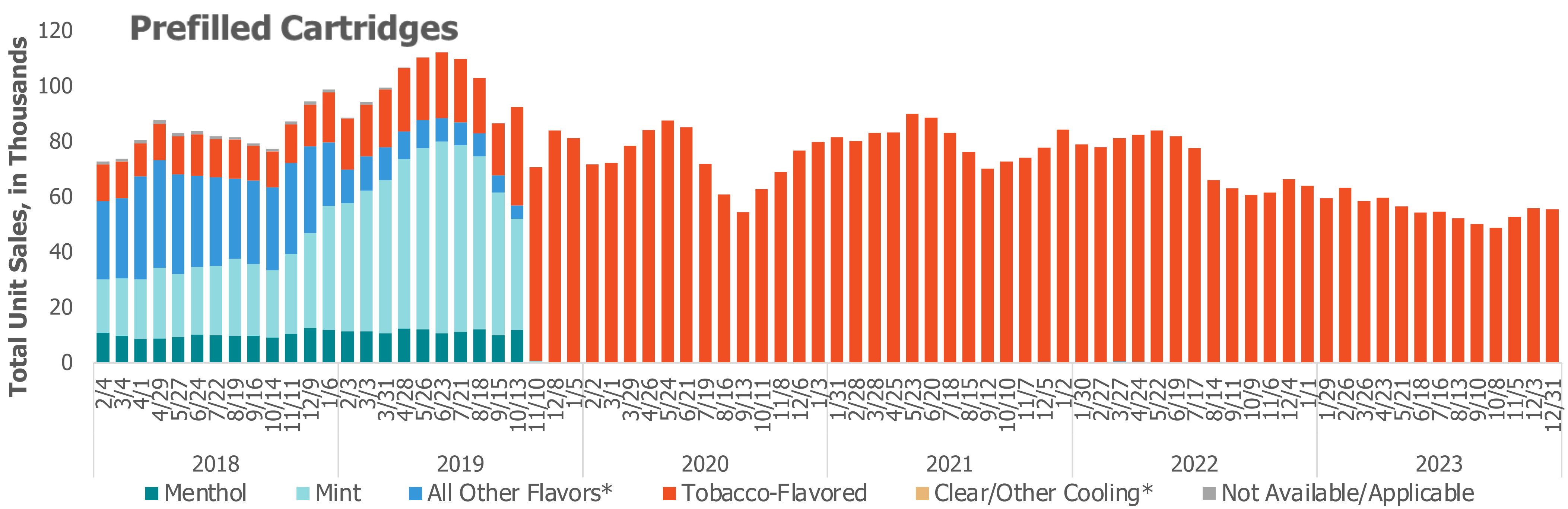
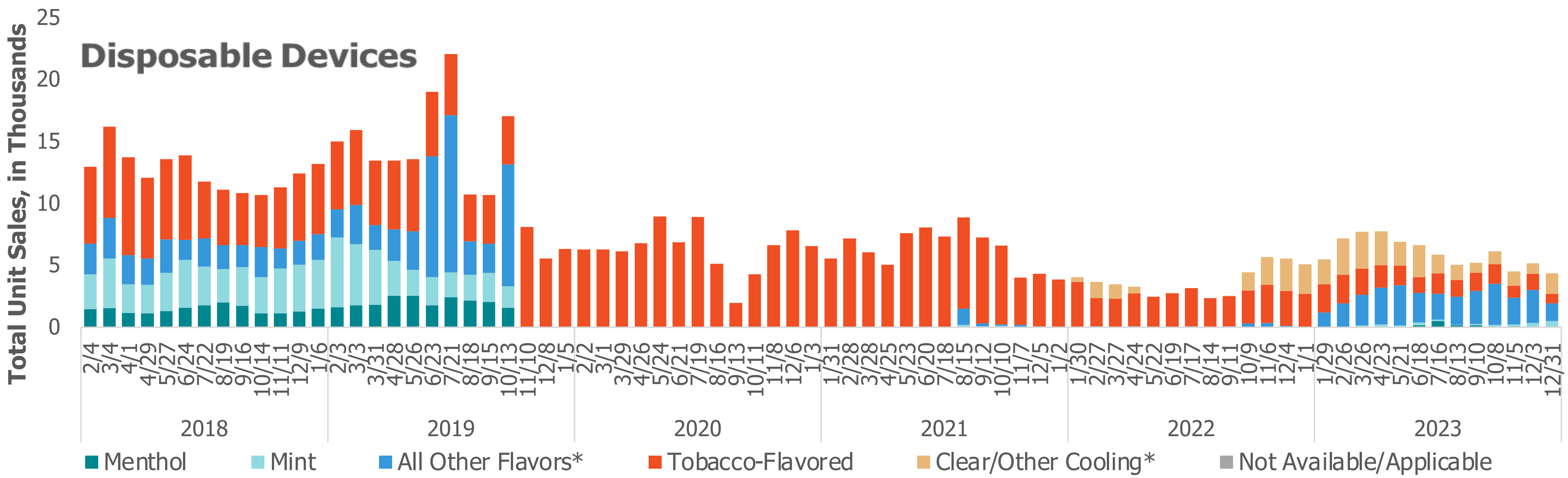
# Figure 42. Rhode Island E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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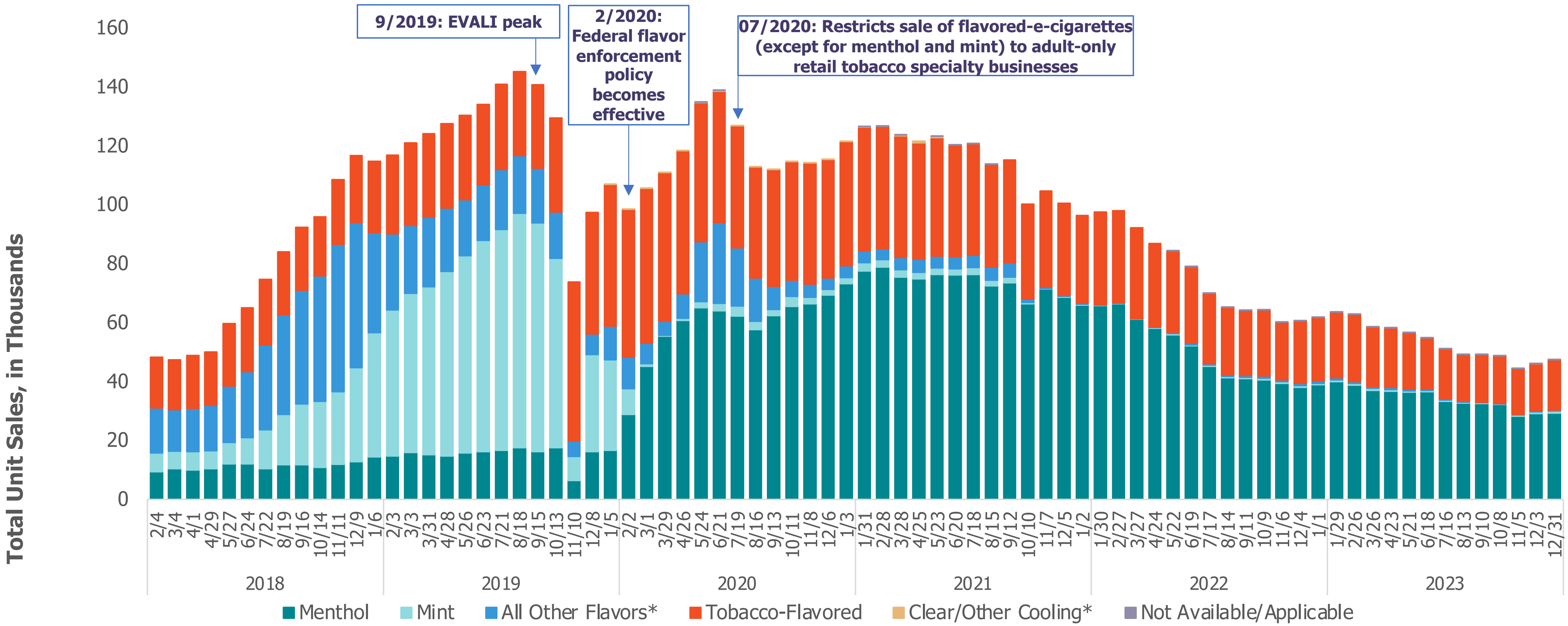
## Figure 43. Utah E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales decreased by 51.8% from 98.5 thousand to 47.4 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 65.9% (from 50.2 thousand to 17.1 thousand); unit share decreased from 51.0% to 36.1%.
  - Non-Tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales decreased by 37.2% (from 48.2 thousand to 30.3 thousand); unit share increased from 49.0% to 63.9%.
    - Menthol-flavored e-cigarette sales increased by 1.6% (from 28.8 thousand to 29.2 thousand); unit share increased from 29.2% to 61.6%.
    - Mint-flavored e-cigarette sales decreased by 91.7% (from 8.8 thousand to 0.7 thousand); unit share decreased from 9.0% to 1.5%.
    - All other-flavored e-cigarette sales decreased by 96.9% (from 10.6 thousand to 0.3 thousand); unit share decreased from 10.8% to 0.7%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Utah were approximately zero.



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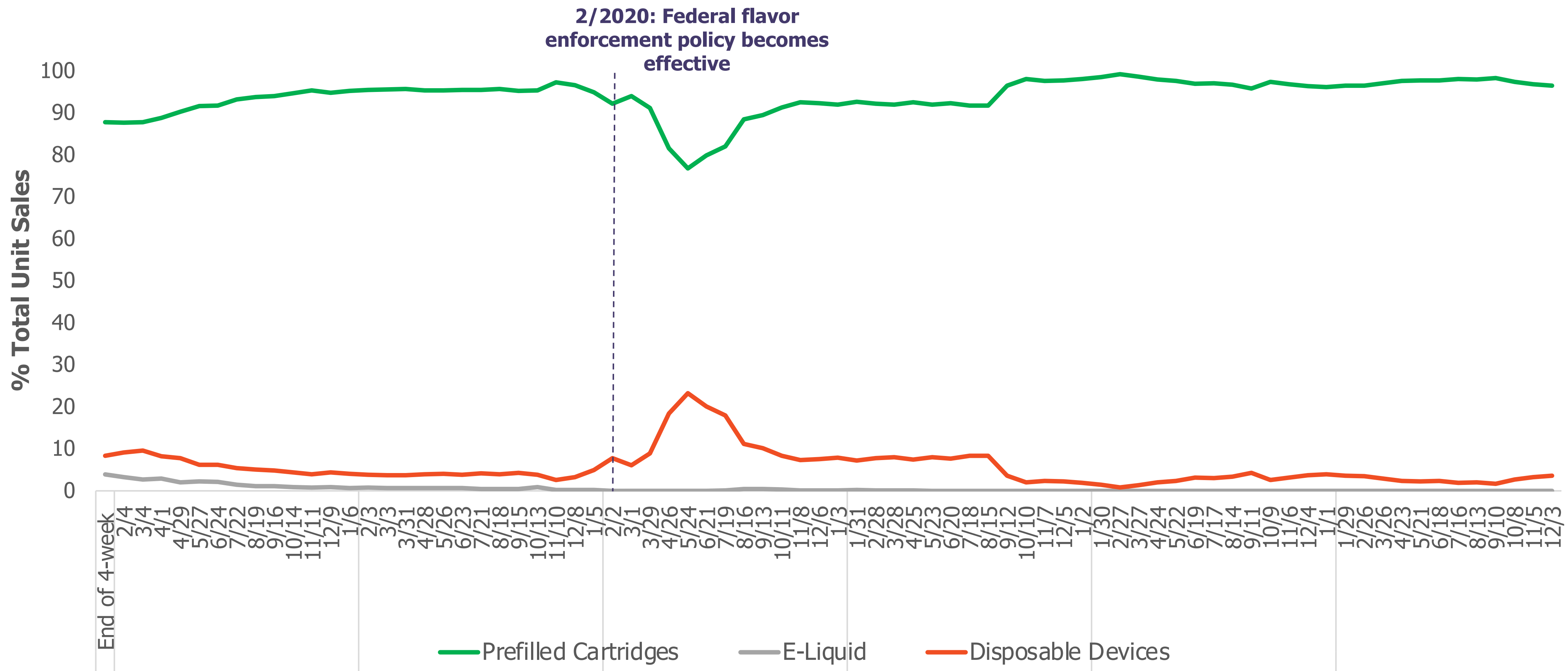
# Figure 44. Utah E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices decreased by 65.6% (from 4.9 thousand to 1.7 thousand); unit share decreased from 5.0% to 3.6%.
  - Sales of prefilled cartridges decreased by 51.0% (from 93.4 thousand to 45.7 thousand); unit share increased from 94.8% to 96.4%.



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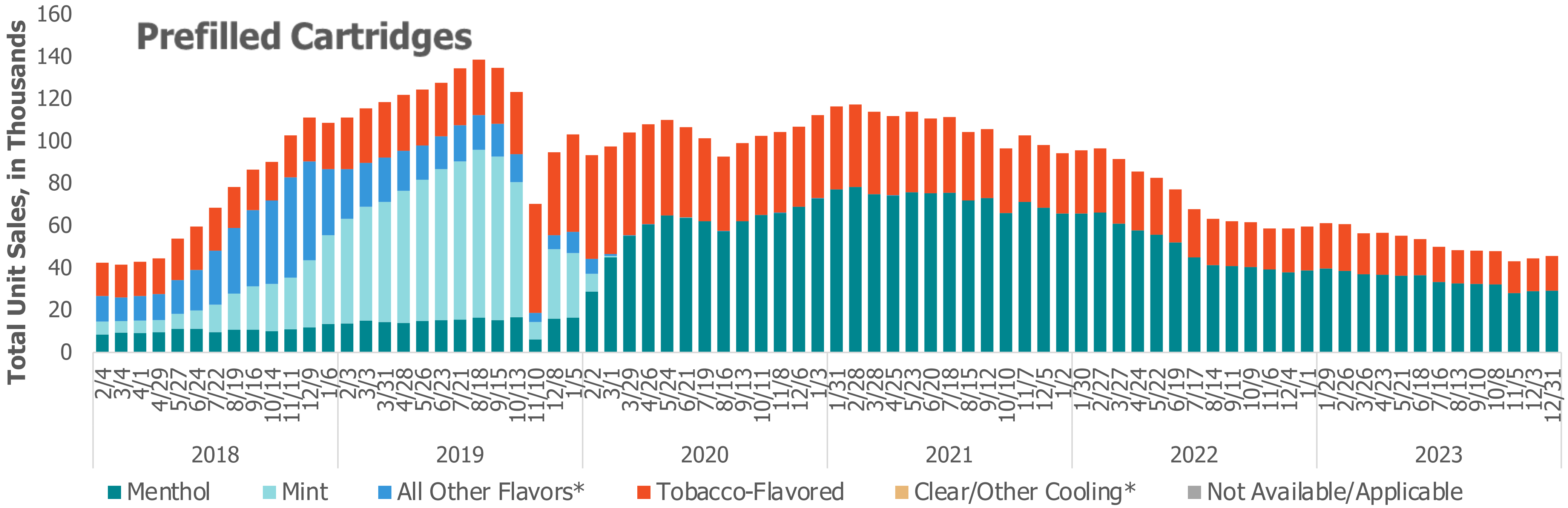
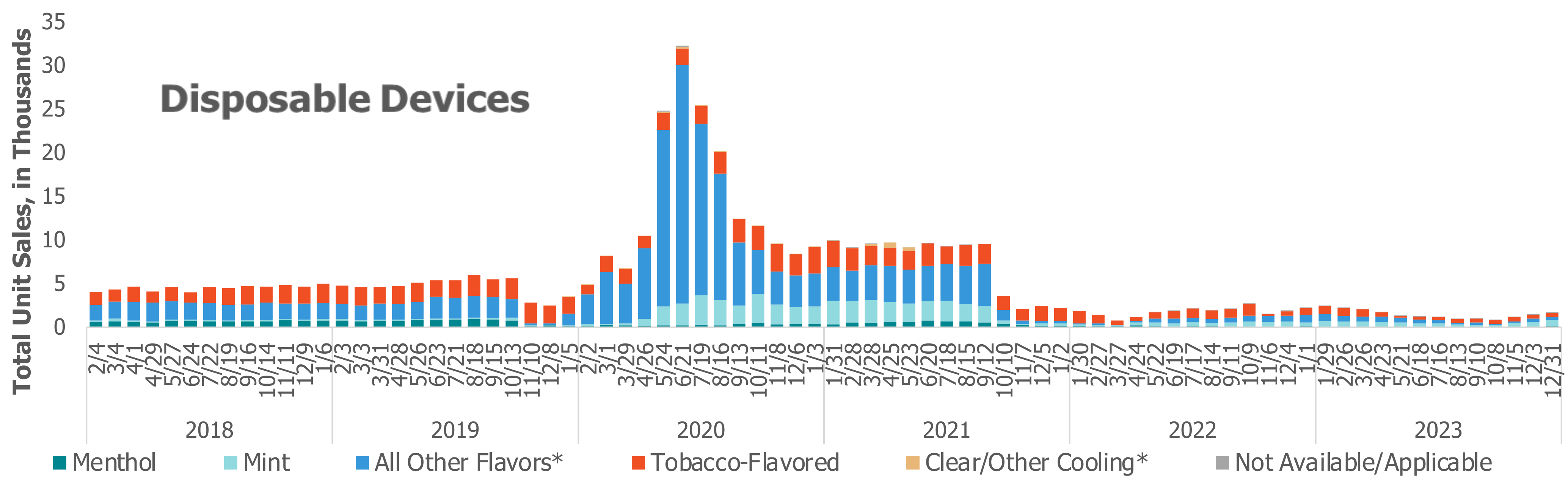
# Figure 45. Utah E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12 /2023



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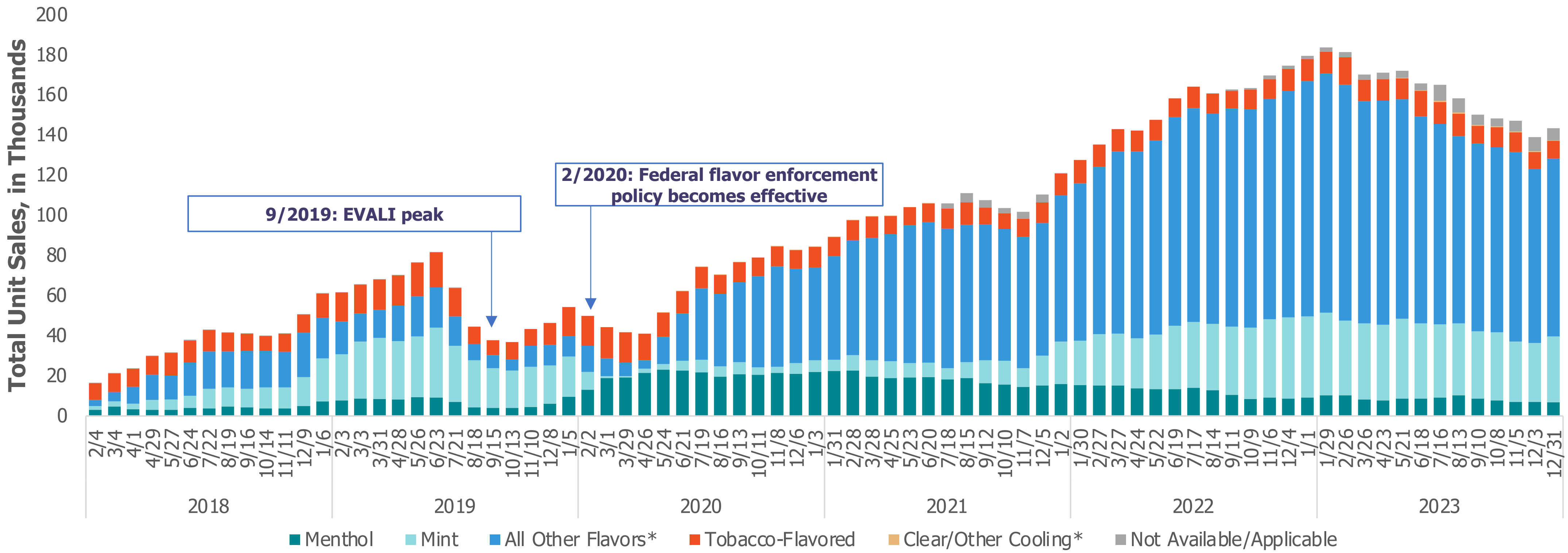
# Figure 46. Vermont E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 187.5% from 49.9 thousand to 143.4 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 40.4% (from 14.8 thousand to 8.8 thousand); unit share decreased from 29.8% to 6.2%.
  - Non-tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 267.0% (from 35.0 thousand to 128.5 thousand); unit share increased from 70.2% to 89.7%.
    - Menthol-flavored e-cigarette sales decreased by 47.2% (from 13.1 thousand to 6.9 thousand); unit share decreased from 26.2% to 4.8%.
    - Mint-flavored e-cigarette sales increased by 273.5% (from 8.8 thousand to 32.7 thousand); unit share increased from 17.6% to 22.8%.
    - All other-flavored e-cigarette sales increased by 572.4% (from 13.2 thousand to 88.6 thousand); unit share increased from 26.4% to 61.8%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Vermont were approximately zero.



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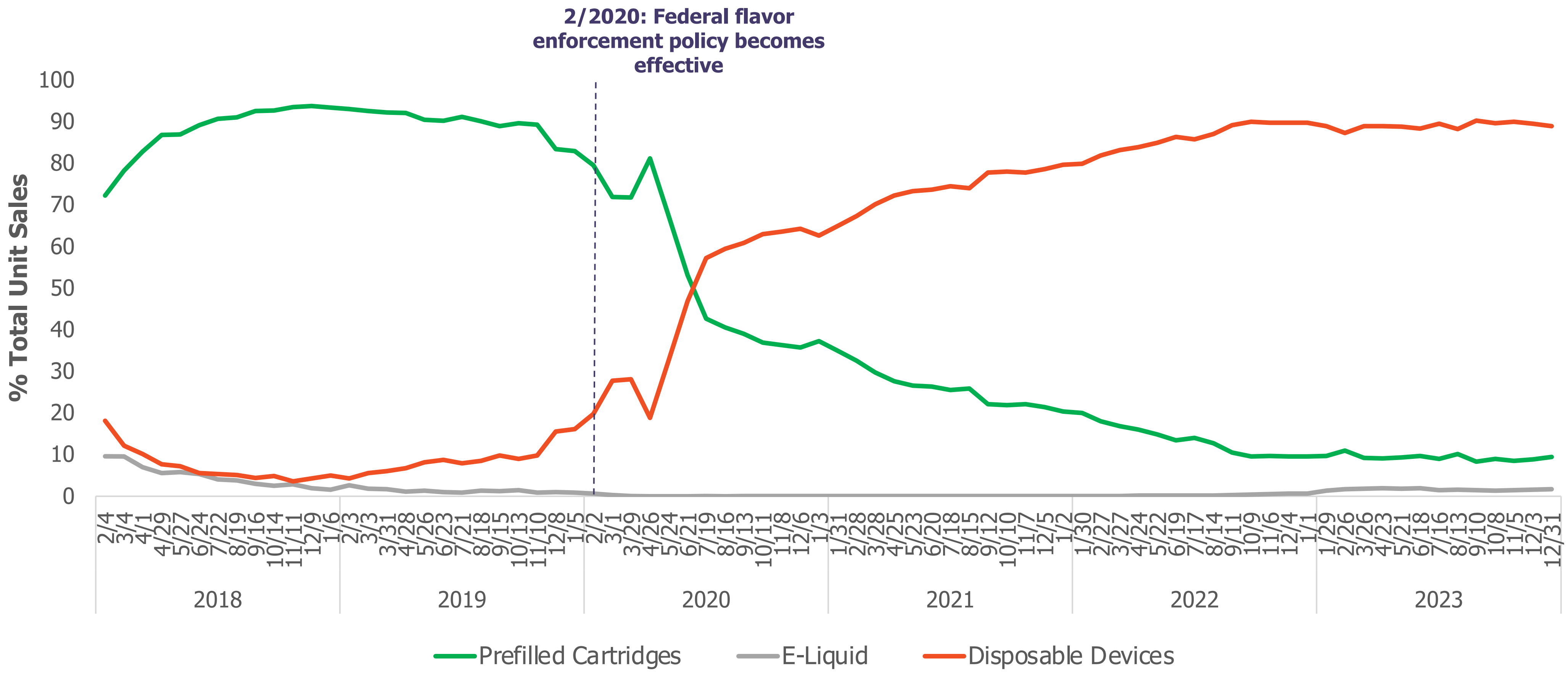
# Figure 47. Vermont E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 12/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following Vermont's flavored e-cigarette restriction, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 1195.6% (from 9.8 thousand to 127.5 thousand); unit share increased from 19.7% to 88.9%.
  - Sales of prefilled cartridges decreased by 66.0% (from 39.7 thousand to 13.5 thousand); unit share decreased from 79.6% to 9.4%.



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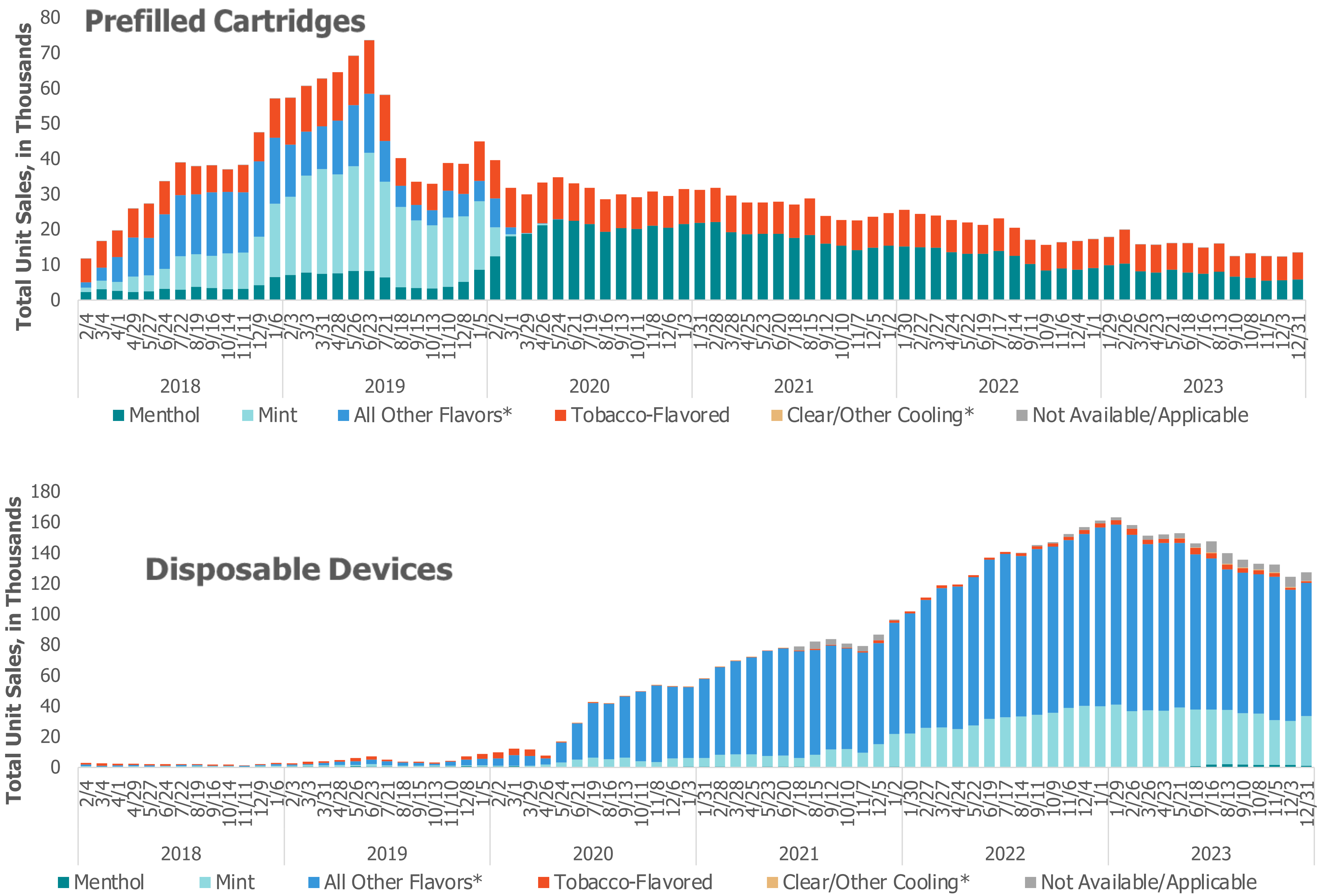
# Figure 48. Vermont E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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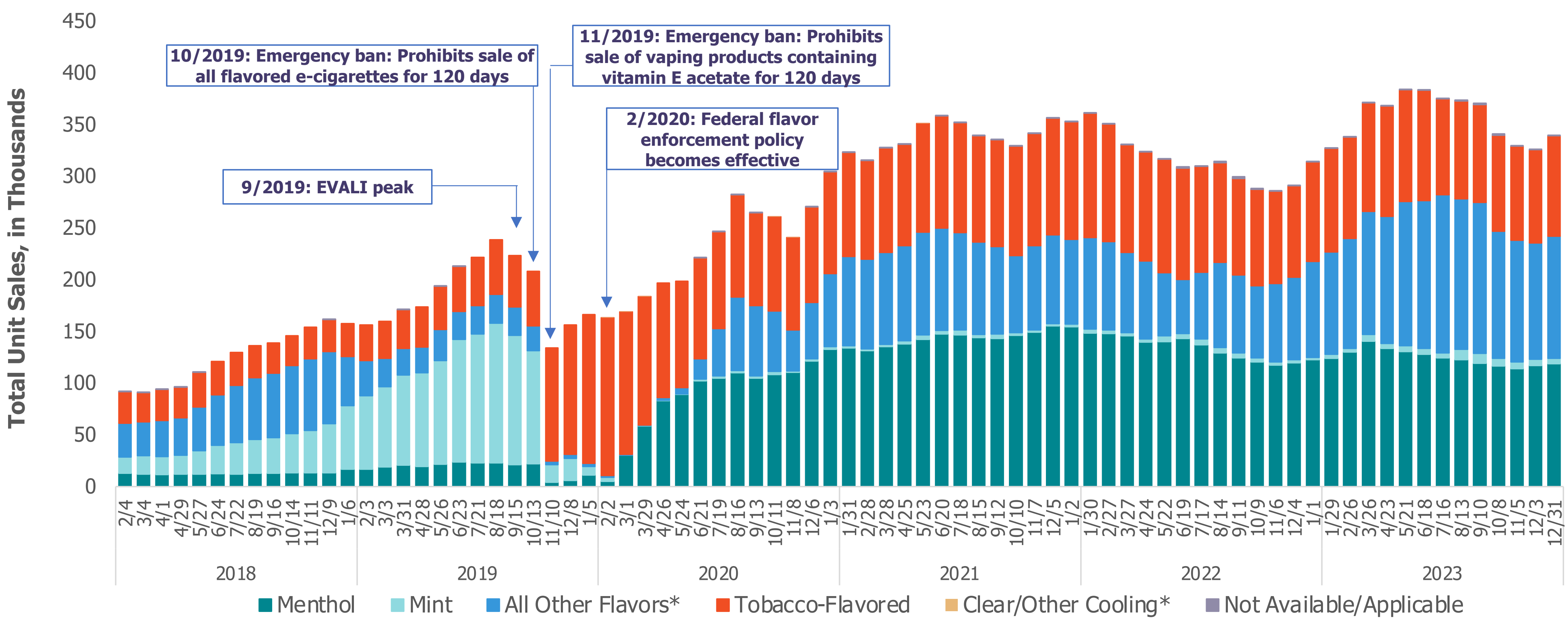
# Figure 49. Washington E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/2018 – 9/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; Clear/Other Cooling include products with flavor names such as clear, clear ice, or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Flum Pebble Clear, EB Design BC5000 Clear); e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Flavor (10/13/19 - 2/2/20)

- Following Washington's temporary flavored e-cigarette restriction, monthly e-cigarette total unit sales decreased by 21.5% from October 13, 2019, to February 2, 2020 (from 208.3 thousand to 163.5 thousand).

## Trends of Unit Sales by Flavor Following FDA's Flavor Enforcement Policy

- From February 2, 2020 to December 31, 2023, monthly e-cigarette unit sales increased by 107.8% from 163.5 thousand to 339.7 thousand units.
- From February 2, 2020 to December 31, 2023:
  - Tobacco-flavored e-cigarette sales decreased by 36.5% (from 152.8 thousand to 97.0 thousand); unit share decreased from 93.5% to 28.6%.
  - Non-Tobacco-flavored e-cigarette (mint, menthol, clear/other cooling, other flavors) sales increased by 2167.3% (from 10.7 thousand to 242.5 thousand); unit share increased from 6.5% to 71.4%.
    - Menthol-flavored e-cigarette sales increased by 2264.3% (from 5.0 thousand to 118.8 thousand); unit share increased from 3.1% to 35.0%.
    - Mint-flavored e-cigarette sales increased by 28.8% (from 4.2 thousand to 5.4 thousand); unit share decreased from 2.6% to 1.6%.
    - All other-flavored e-cigarette sales increased by 7955.3% (from 1.5 thousand to 117.9 thousand); unit share increased from 0.9% to 34.7%.
- Following California's prohibition of flavored tobacco product sales in December 2022 and the increased popularity of novel clear & cooling flavored e-cigarettes, sales of clear/other cooling e-cigarettes in Washington were approximately zero.



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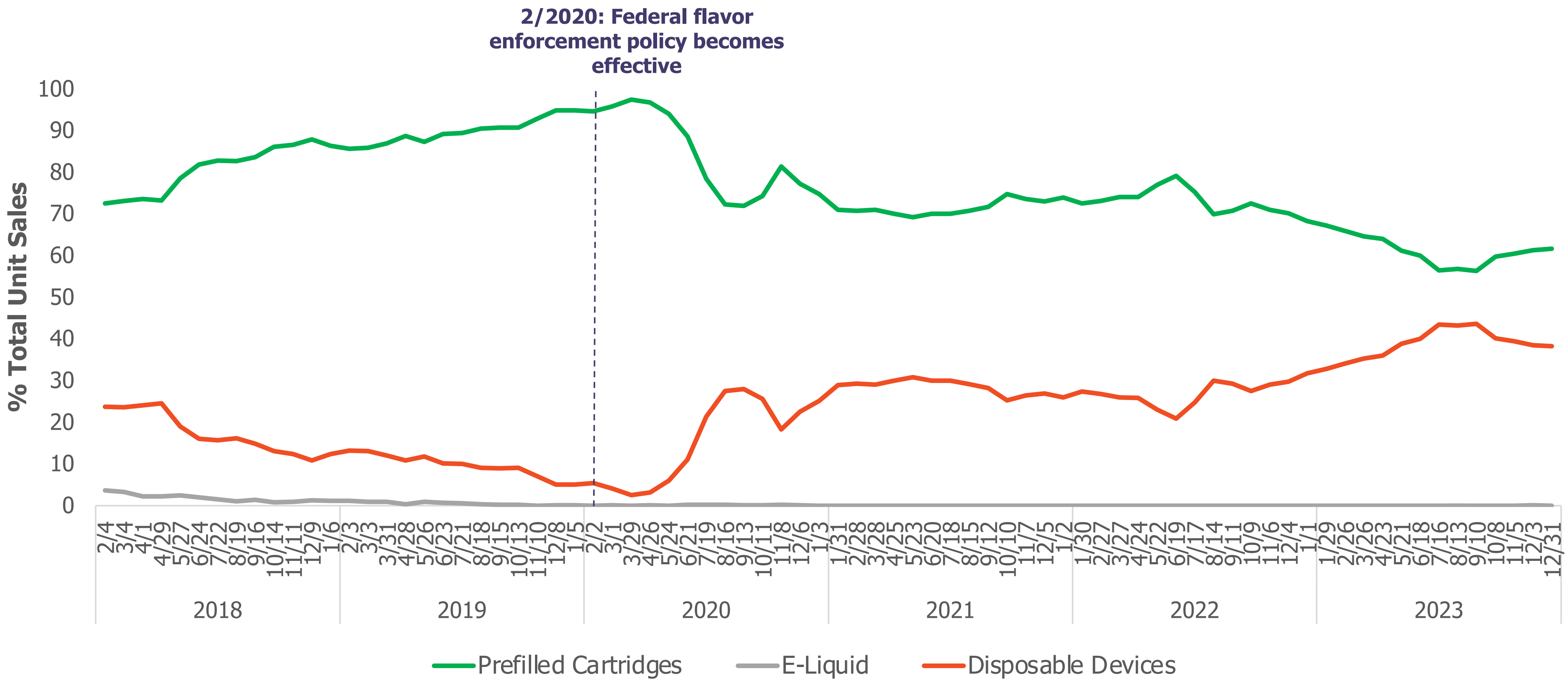
# Figure 50. Washington E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/2018 – 9/2023*




*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

## Trends of Unit Sales by Product Following FDA's Flavor Enforcement Policy

- Following FDA's flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020 and December 31, 2023:
  - Sales of disposable devices increased by 1378.7% (from 8.8 thousand to 130.2 thousand); unit share increased from 5.4% to 38.3%.
  - Sales of prefilled cartridges increased by 35.4% (from 154.7 thousand to 209.4 thousand); unit share decreased from 94.6% to 61.7%.



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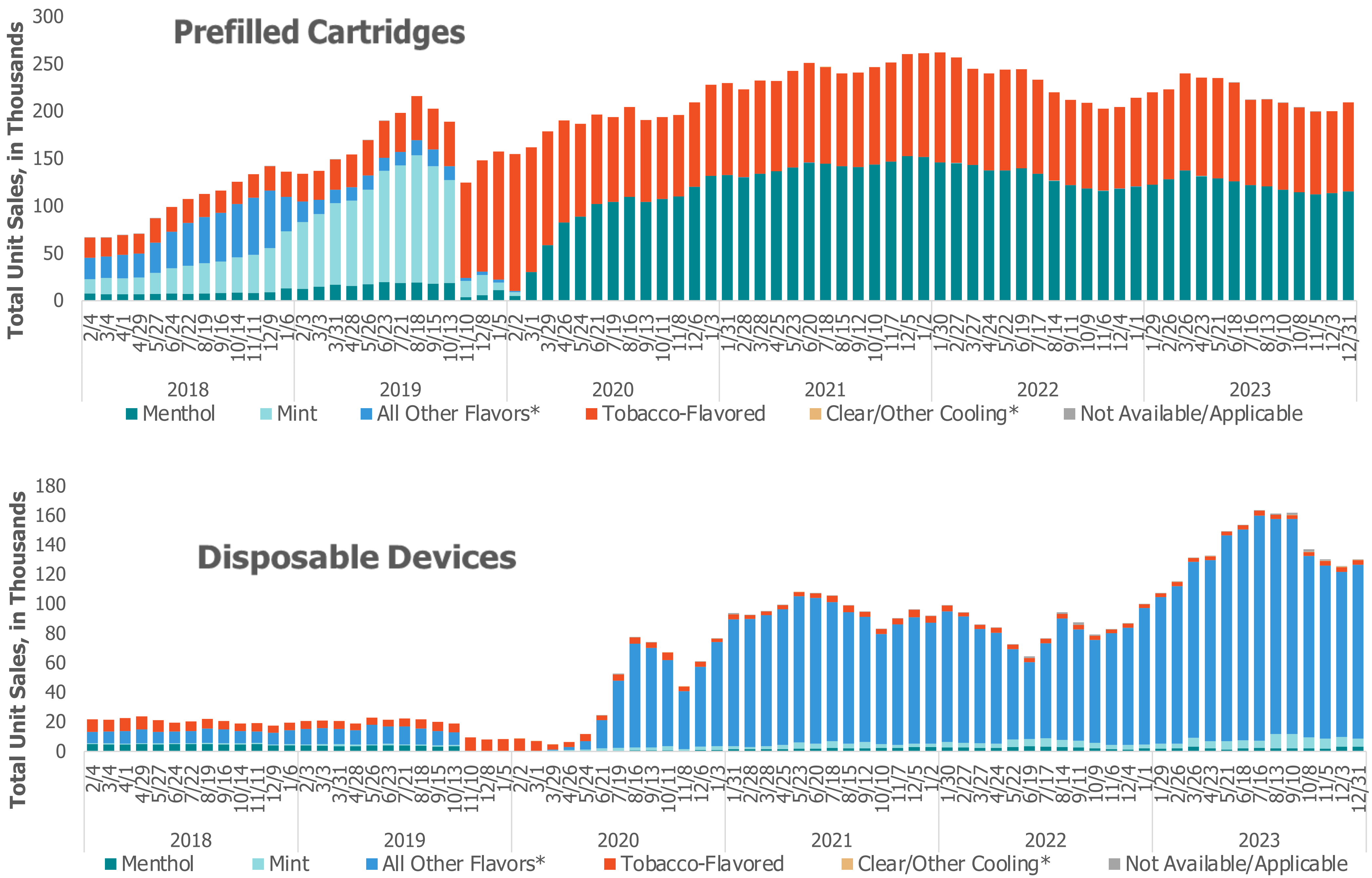
# Figure 51. Washington E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/2018 – 12/2023



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