BAY AREA AIR QUALITY MANAGEMENT DISTRICT

AGENDA: 3A

Brown Act Selected Topics

Board of Directors Special Meeting
May 5, 2021

Brian C. Bunger
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Outcome

Provide Overview of Selected Brown Act Topics

Requested Action

None, Informational Only

Outline

- Brown Act Fundamentals
- Relationship to Parliamentary Procedure
- Legislative Bodies under the Brown Act
- Brown Act Meetings
- Brown Act Meeting Exceptions
- Virtual Meetings
- Voting
- Public Comment

Brown Act Fundamentals

- The Ralph M. Brown Act is codified in California Government Code sections 54950, et seq.
- Purposes of the Brown Act include transparency in decision making and public participation in local government
- All meetings of the legislative body of a local agency shall be open and public, and all persons shall be permitted to attend any meeting of the legislative body of a local agency, unless an exception applies (Govt. Code § 54953)
- Brown Act purpose is broad; exceptions are narrow

Relationship to Parliamentary Procedure

- The Brown Act contains legal requirements for open meetings and public access, including some applicable procedural requirements
- Parliamentary procedure (or “law”) is intended to ensure efficient and fair meeting conduct
  - Some elements of parliamentary procedure can be found in the Air District’s Administrative Code (e.g., quorum for committees is 5 members) and other elements in publications like Robert’s Rules of Order
- If there is a conflict, the legal (Brown Act) requirements govern
  - Example: Voting - Under Robert’s Rules elections of officers are typically by secret ballot; the Brown Act, however, prohibits any vote by secret ballot

Legislative Bodies Under the Brown Act

- The following are considered “legislative bodies” under the Brown Act, among others (Govt. Code § 54952(a) and (b)):
  - The “Governing body of a local agency” or any other local body created by state or federal statute
  - Standing committees of a legislative body
  - Bodies created and/or appointed by formal action of a legislative body
- Newly elected members of the governing body even before they assume office must comply with the Brown Act (Govt. Code § 54952.1)

Brown Act Meetings

- A “meeting” is any gathering of a majority of the members of a legislative body at the same time and location to hear, discuss, deliberate, or take action on any item that is within the subject matter jurisdiction of the legislative body (Govt. Code, § 54952.2)
- Includes meetings by teleconference, or communications by other electronic means (Govt. Code, §§ 54952.2, 54953)
- Be careful not to engage in “serial meetings” and “meetings” which may occur through use of email, communications devices (e.g., texting), and social media

Brown Act Meeting Exceptions

- Individual member contacts or conversations between member and another person
  - Be careful to avoid serial meetings
- Majority of members at open and publicized conferences, meeting of another organization, or another legislative body of another agency
  - Be careful not to discuss agency business.
- Majority of members at a purely social or ceremonial occasion
  - Be careful not to discuss agency business
  - Be wary of public perception of improper discussions

(Govt. Code, § 54952.2)

Virtual Meetings Under the Brown Act

- *In ordinary times,* the Brown Act provides that meetings may be conducted by teleconferencing (any electronic audio or video connection) under the following conditions:
  - Agendas must be posted at teleconference locations at least 72 hours before the meeting specifying all teleconference locations
  - There must be public access to each teleconference location
  - Public opportunity to speak must be provided at each teleconference location
  - All votes during teleconference meetings must be taken by roll call

  (Govt. Code, § 54953 (b))

Voting

- Legislative bodies must publicly report (1) any action taken and (2) the vote or abstention on that action of each member present for the action (Govt. Code, § 54953(c)(2))
- Action by secret ballot is prohibited (Govt. Code § 54953(c)(1))
- If votes are not taken by roll call, the clerk or chair should read aloud the name of each member with his/her vote or abstention in open session

Public Comment

- Agendas must provide opportunity for public comment:
  - (1) on each item on the agenda at or before the time that it is taken up by the body; and
  - (2) on any topic within the agency's subject matter jurisdiction (i.e., on matters not on the agenda for the meeting)

    (Govt. Code § 54954.3(a))
- Responses to public comment on such matters is limited. With narrow and limited exceptions, discussion and action on matters not on the agenda is prohibited. Members may only:
  - Briefly respond to statements/questions from the public
  - Ask a question for clarification
  - Make a brief announcement
  - Make a brief report on his or her activities
  - Provide a reference to staff or other sources for factual information
  - Request staff report back at a later meeting
  - Direct staff to place the matter on a future agenda

    (Govt. Code, § 54954.2(a)(3))

Public Comment (cont.)

- “The legislative body of a local agency may adopt reasonable regulations on public comment, including, but not limited to, regulations limiting the total amount of time allocated for public testimony on particular issues and for each individual speaker.” (Govt. Code § 54954.3(b)(1))
- “The legislative body of a local agency shall not prohibit public criticism of the policies, procedures, programs, or services of the agency, or of the acts or omissions of the legislative body.” However, the Brown Act does not “confer any privilege or protection for expression beyond that otherwise provided by law.” (Govt. Code, § 54954.3(c))

Feedback Requested/Prompt

None. Questions?

AGENDA: 3B

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Public Meeting Best Practices

Board of Directors Special Meeting
May 5, 2021

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Outcome

Review and Discuss Best Practices for Public Meetings

Outline

- Consistency vs. Rigidity
- The Public Comment
- The Board Discussion
- Board Member Conduct

Goals

Listen, Learn, Engage, Employ

Important Notes

- This presentation is in no way intended to correct, reprimand, or call attention to the practices of any Board Member, Staff Member, or member of the public.
- Each public agency has its own rules, procedures, practices, and norms for running a public meeting. These tips are intended to develop norms for stakeholders and participants at Bay Area Air Quality Management District meetings.
- By consistently engaging in these baseline practices, we improve the efficacy and professionalism of the agency.

Consistency vs. Rigidity

- One of the most important ingredients for running an effective public meeting involves understanding the difference between consistency and rigidity.
- Consistency, both within and between committees, allows the public to have a reasonable expectation about the flow of the meeting, the process unfolding in the meeting, and outcomes. This allows for flexibility that is predictable and helpful to the running of the public meeting.
- Rigidity is the extreme version of consistency: it involves allowing no space for variation or accommodation.

Consistency vs. Rigidity (cont.)

- Examples:
  - We typically allow 3 minutes of public comment at our meetings, but the Chair retains the discretion to alter the amount of comment time to ensure there is enough time to hear all public stakeholders and to allow for a robust discussion/debate of the substantive issues.
  - We typically take items in the order they appear on an agenda, but we may take them out of order to get important business done or to accommodate a guest speaker.
  - 🔑 Communication + Transparency – Telling the public, stakeholders, staff and Directors what you are doing, why you are doing it, as early as possible, reduces opportunities for conflict.

Structure of an Agenda Item

- Presentation
  - Provided by Staff, a Board or Community Member, this portion is intended to inform all stakeholders on the action before the Board.
- Clarifying Questions
  - This is an opportunity to elicit additional detail about an item in the presentation through brief, succinct questions.
- The Public Comment
  - The public is welcome to provide their input; this is a one-directional process.
- The Board Discussion
  - After public comment has ended, this is the opportunity for debate.
- The Action
  - Typically, a Motion is made and seconded, and a vote is taken.

The Public Comment

- The Public Comment period is just *one* opportunity for the public to be heard.
- Members of the public are encouraged to communicate their thoughts, views, objections to, support for, or questions about agenda items in writing in advance of the meeting.
- The oral comment period at meetings is designed to respond to things mentioned during the presentation, to highlight aspects of a written public comment, or to suggest questions or actions they would like the Board to consider during discussion.
- The role of Board Members during the public comment is to be attentive, listen, take notes, and identify issues raised by public stakeholders for the subsequent discussion and debate.

The Public Comment (cont.)

- Having a successful exchange with the public comes from creating a culture of mutual respect for all participants.
- Board Members should be cognizant of how they identify and address public speakers.
  - Example: Referring to someone as ”Mister” vs. ”Doctor” or using a gender-designating term like “Ms.” or “Sir” for a person you don’t know.
  - Tip: Public Speakers in the Zoom era can and should adjust their screen name to the designation they prefer.
- Public Speakers should address their comments to the entire Board – not individual staff or Members of the Board.
- 🔑 Patience – We need to learn but also give space to grow.

The Public Comment (cont.)

- Content vs. Time or Manner Restrictions
- Courts have repeatedly held that public speakers have a First Amendment right to express themselves in public forums, such as the public meetings of government agencies. The *content* of a speakers' comments are constitutionally protected, with very few exceptions.
  - Board Members cannot censor lawful free speech, even if distasteful.
- The law allows for limits on the *time* and/or *manner* in which a person's comments are presented.
  - Time and manner limits are legal as long as they are consistent.
  - Visual aids at comment must go through the Chair. The Board should develop a policy/guidelines for that process.

The Board Discussion

- Prior to the public comment, the Chair may, at their discretion, allow directors to ask brief, clarifying questions.
  - A clarifying question is one that seeks to clarify understanding of or elicit a detail from the staff presentation that was not obvious or available.
  - A clarifying question that is preceded or followed by declaratory statements, opinions, positions, or other information that could just as easily be shared during the Board Discussion can be disrespectful to the public and their role in the process.
- When the public comment has ended, the Chair brings the item back for discussion and debate and may do brief follow-up on public comment.

The Board Discussion (cont.)

- With limited exception, the Chair should call on all other Members of the body to give remarks before giving their own.
  - Examples of Limited Exceptions: The agenda item was introduced by the Chair, or the matter involves an issue of significant public importance where the Chair opening with a statement on behalf of the agency is necessary or important.
- The Chair should not call on a Member to speak on an agenda item for a second time until all Members have had a first opportunity to speak.

The Board Discussion / Member Conduct

- Board Members should familiarize themselves with the Rules of Procedure as it relates to participating in Board discussions.
- When the Chair recognizes a Member, *only that Member* may speak unless/until the Chair has recognized someone else, or if there is a properly made and accepted *Point of Order*.
- Interrupting another Member is unprofessional, inappropriate, and disrespectful to both the Chair and the Member who has been recognized by the Chair.
- Board Members should be conscientious of how much space they are taking during discussion and balance accordingly.

Board Member Conduct

- The 🔑🔑 to Healthy Meetings
- 🔑 Treat all other meeting participants with respect
- 🔑 Wait to be recognized when speaking
- 🔑 When speaking, recognize the importance of other voices
- 🔑 Consider how to express your own point of view instead of opposing or demeaning another person's opinion/perspective
- 🔑 When making examples, use personal experience instead of projecting – others may not see their circumstances as you do
- 🔑 Greet, welcome, invite, and thank people

Feedback Requested/Prompt

Questions and Discussion

Transportation Fuels Trends, Jet Fuel Overview, Fuel Market Changes & Potential Refinery Closure Impacts

BAAQMD Board of Directors Special Meeting

Via Zoom

May 5, 2021

Gordon Schremp

Energy Assessments Division

California Energy Commission

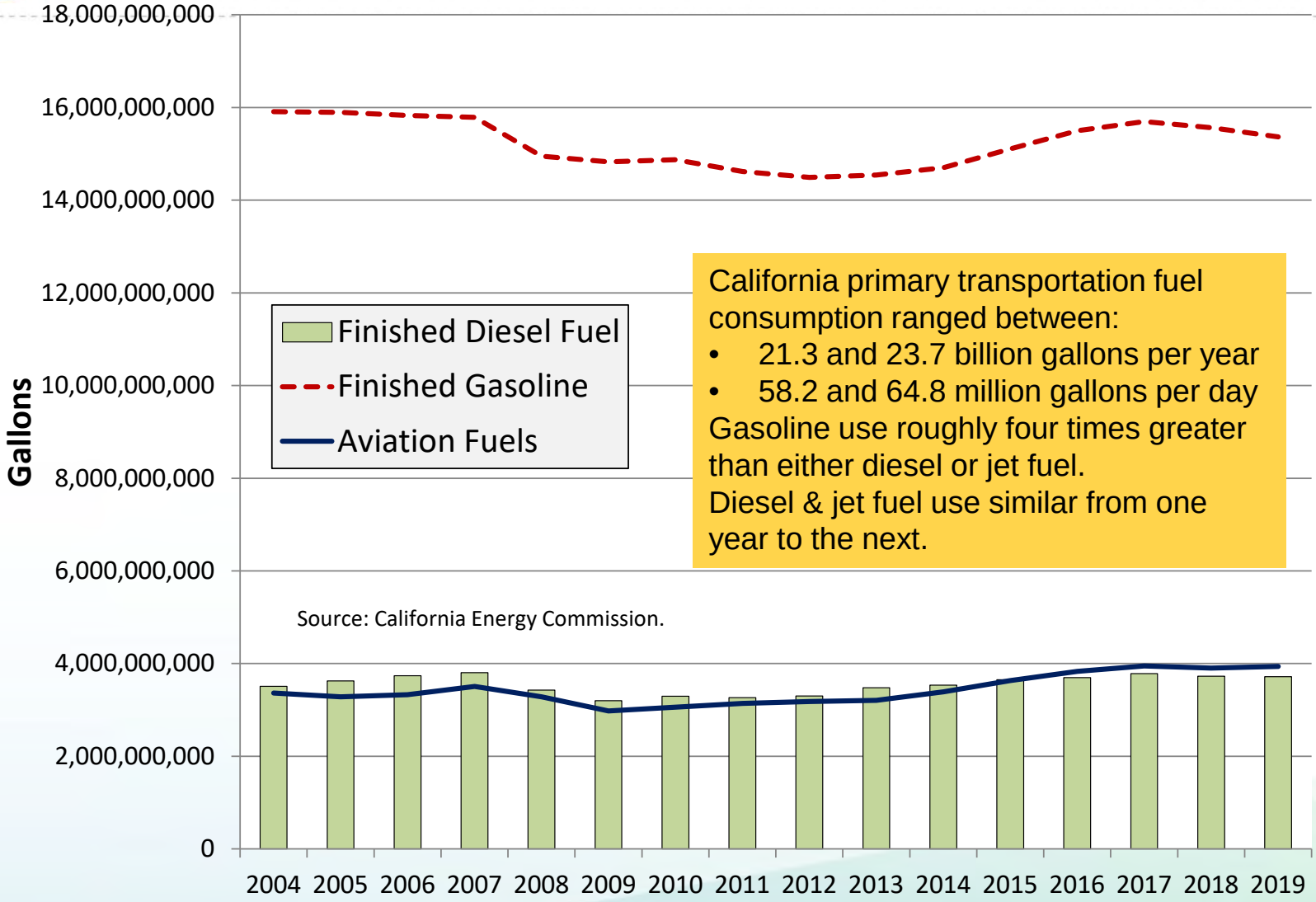
gordon.schremp@energy.ca.gov

Overview

- Transportation Fuel Demand
  - California historical & pandemic demand impacts
  - Forecast trends
- California Jet Fuel Market & Infrastructure
  - SF Bay Area airport supply
- Refinery Closures & Potential Market Impacts
  - Decisions based on changing fuel demand & types
    - Consolidation & conversions
  - Decisions based on facility operational costs
    - Premature refinery closure

Transportation Fuel Demand - California

California Primary Transportation Fuels



California primary transportation fuel consumption ranged between:

- 21.3 and 23.7 billion gallons per year
- 58.2 and 64.8 million gallons per day

Gasoline use roughly four times greater than either diesel or jet fuel.

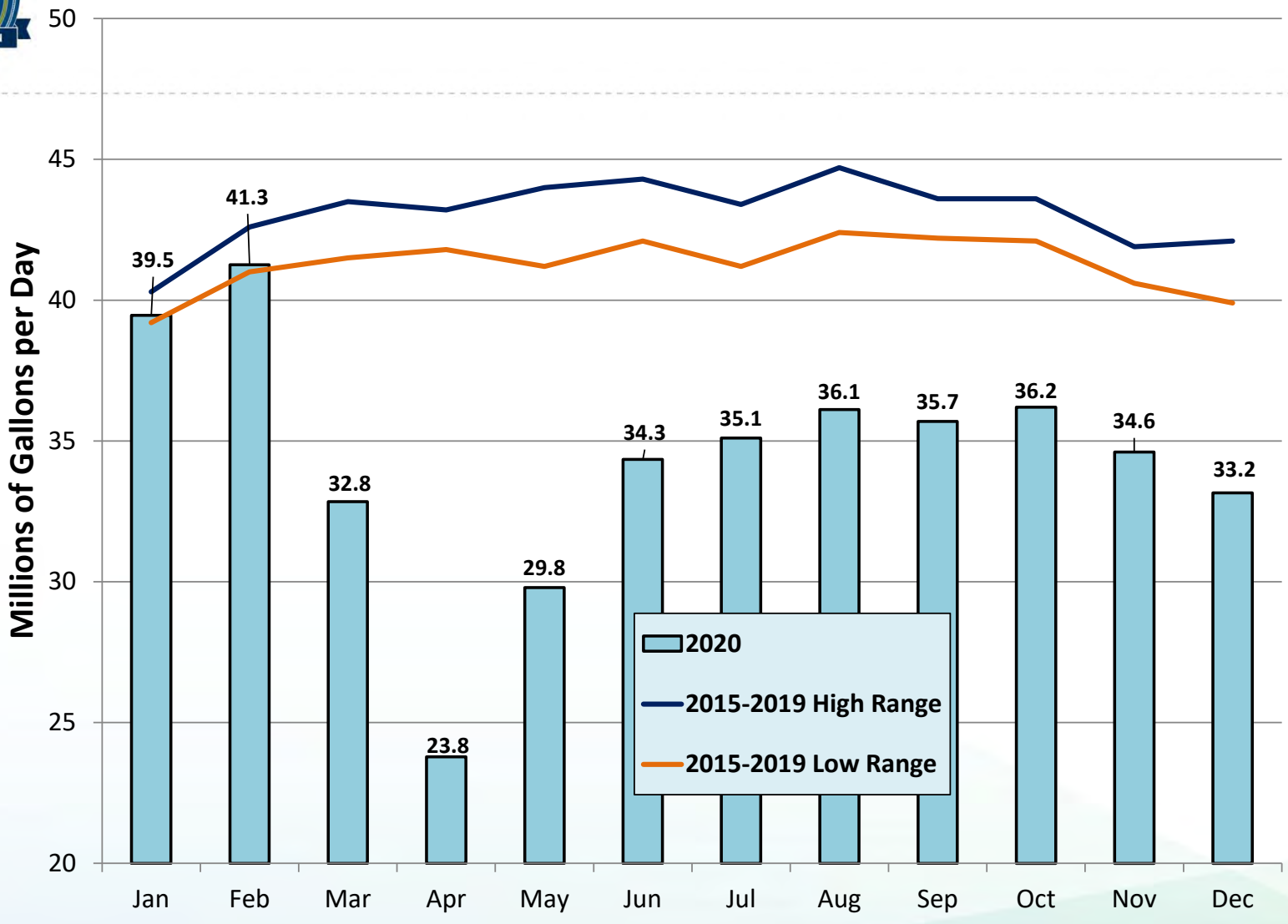
Diesel & jet fuel use similar from one year to the next.

Source: California Energy Commission.

Pandemic Impacts & Outlook - Gasoline

- Gasoline demand declined 18.2 percent in 2020
  - 12.58 billion gallons - lowest level since 1987
- Continues to recover
  - Still not back to pre-pandemic levels
  - Most recent estimate – still down 8.0 percent compared to April 2019
    - 4-week average demand (through week ending April 16)
  - Traffic counts still lag 2019 levels, despite much lower transit ridership
  - Varying degrees of remote work continues for private sector & government
- Forecast to continue declining over the next several years
  - Increasing percentage of ZEV light-duty vehicle sales
  - California gasoline demand peaked in 2017
  - By 2026, drop in demand (statewide) could exceed 1.0 billion gallons per year compared to current levels

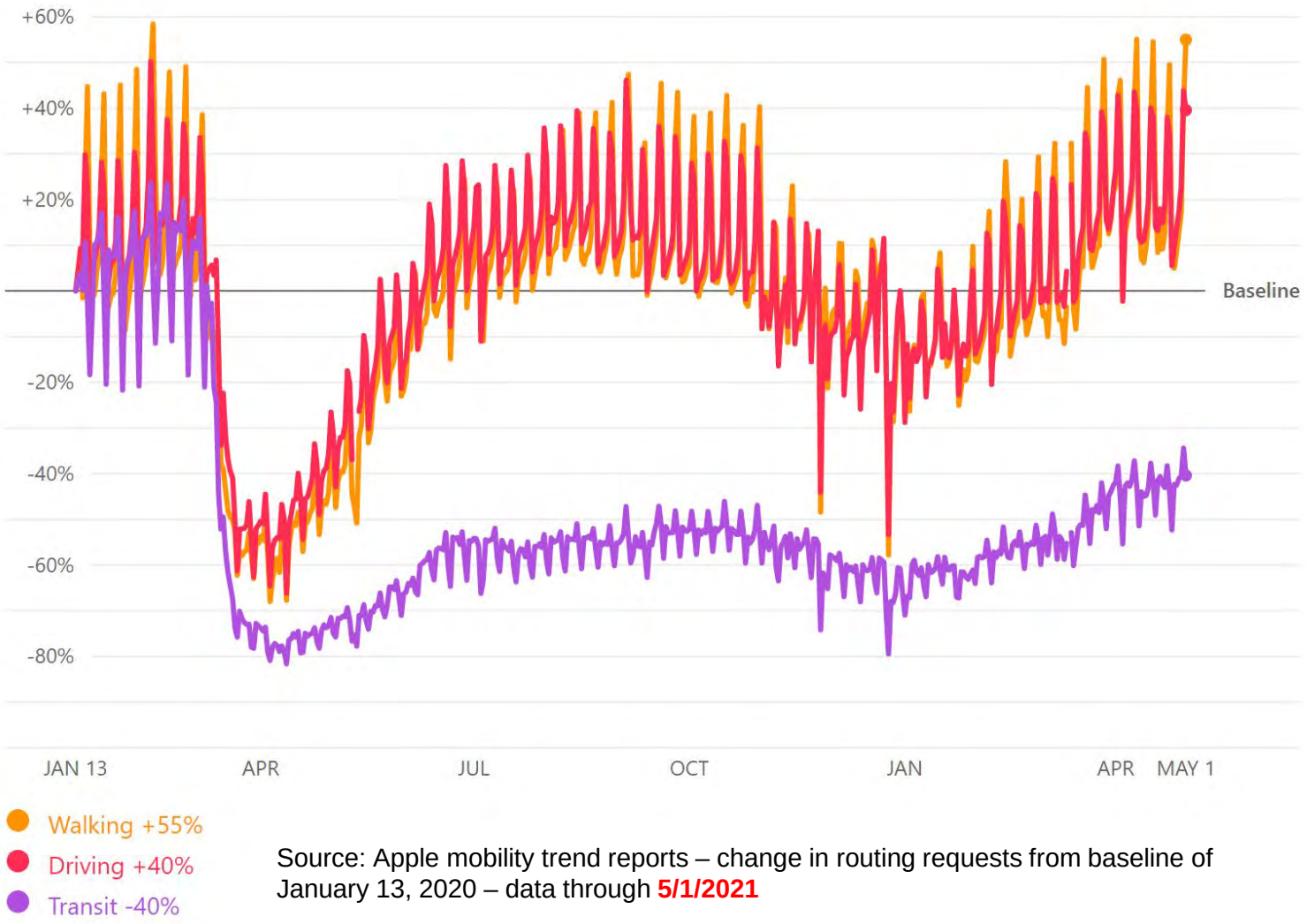
California Gasoline Demand - 2020



Data includes ethanol.

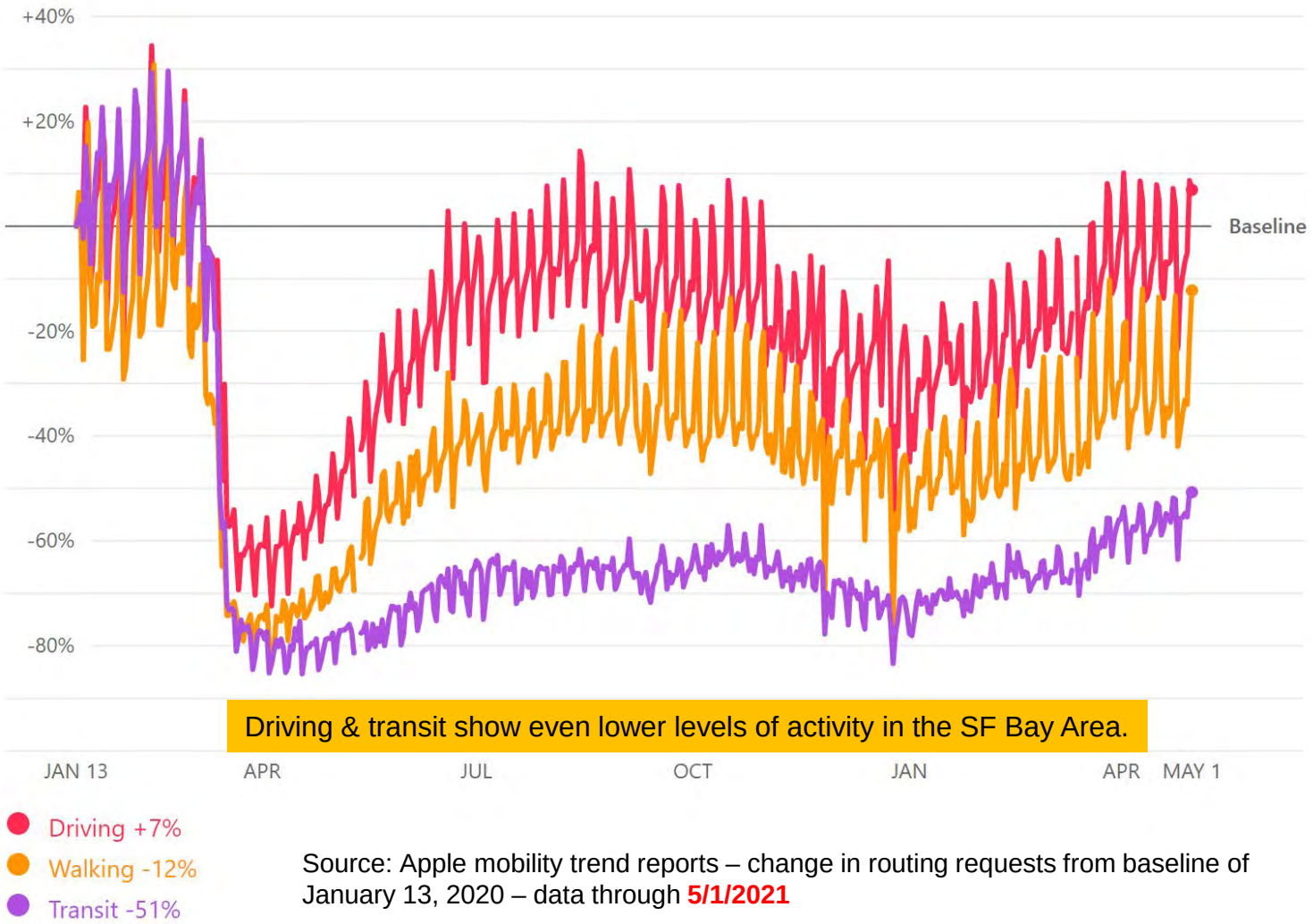
Source: California Energy Commission analysis of CDTFA data through December 2020.

Mobility Trends – California



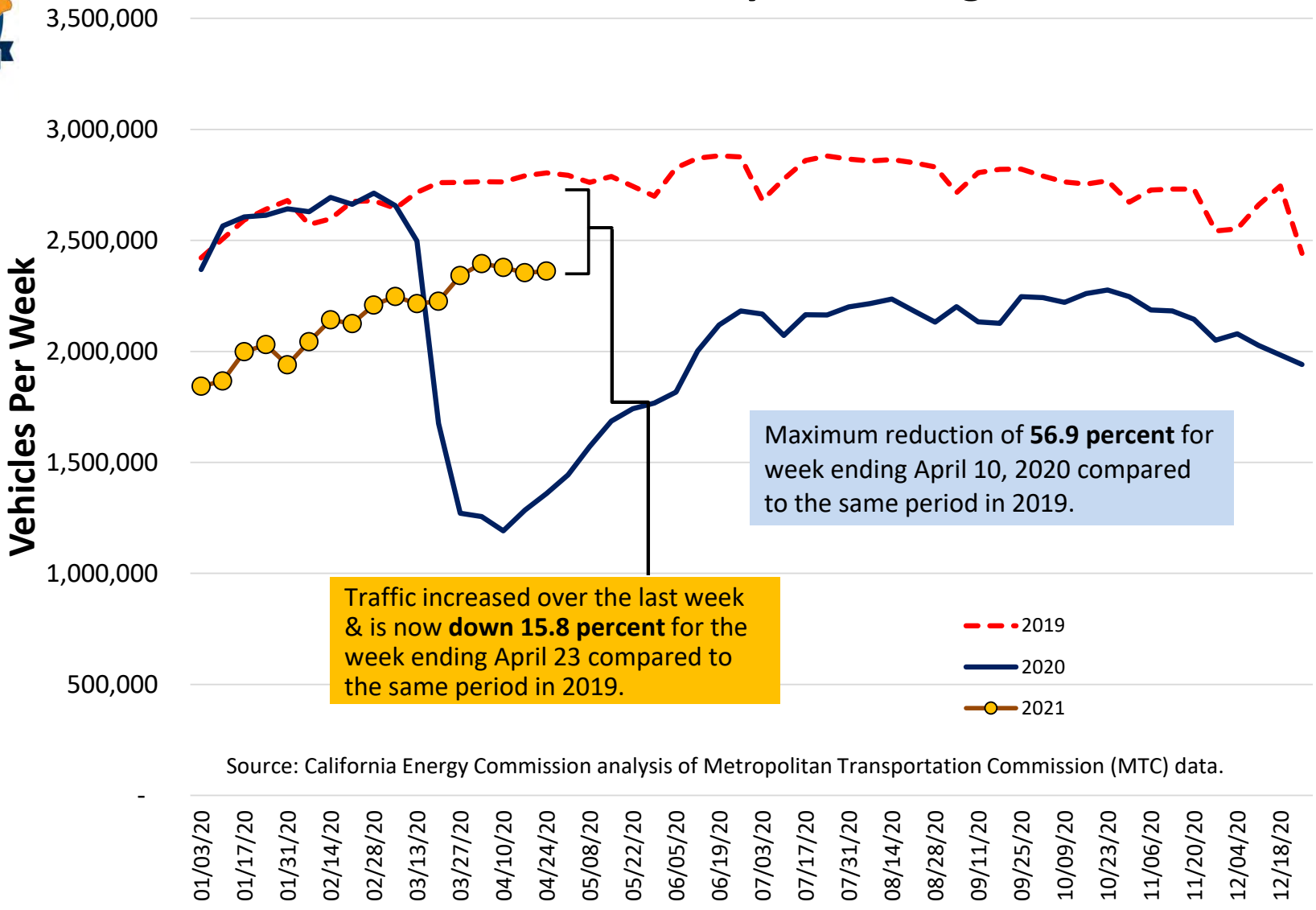
Source: Apple mobility trend reports – change in routing requests from baseline of January 13, 2020 – data through **5/1/2021**

Mobility Trends – SF Bay Area



Source: Apple mobility trend reports – change in routing requests from baseline of January 13, 2020 – data through **5/1/2021**

Vehicle Counts - SF Bay Area Bridges

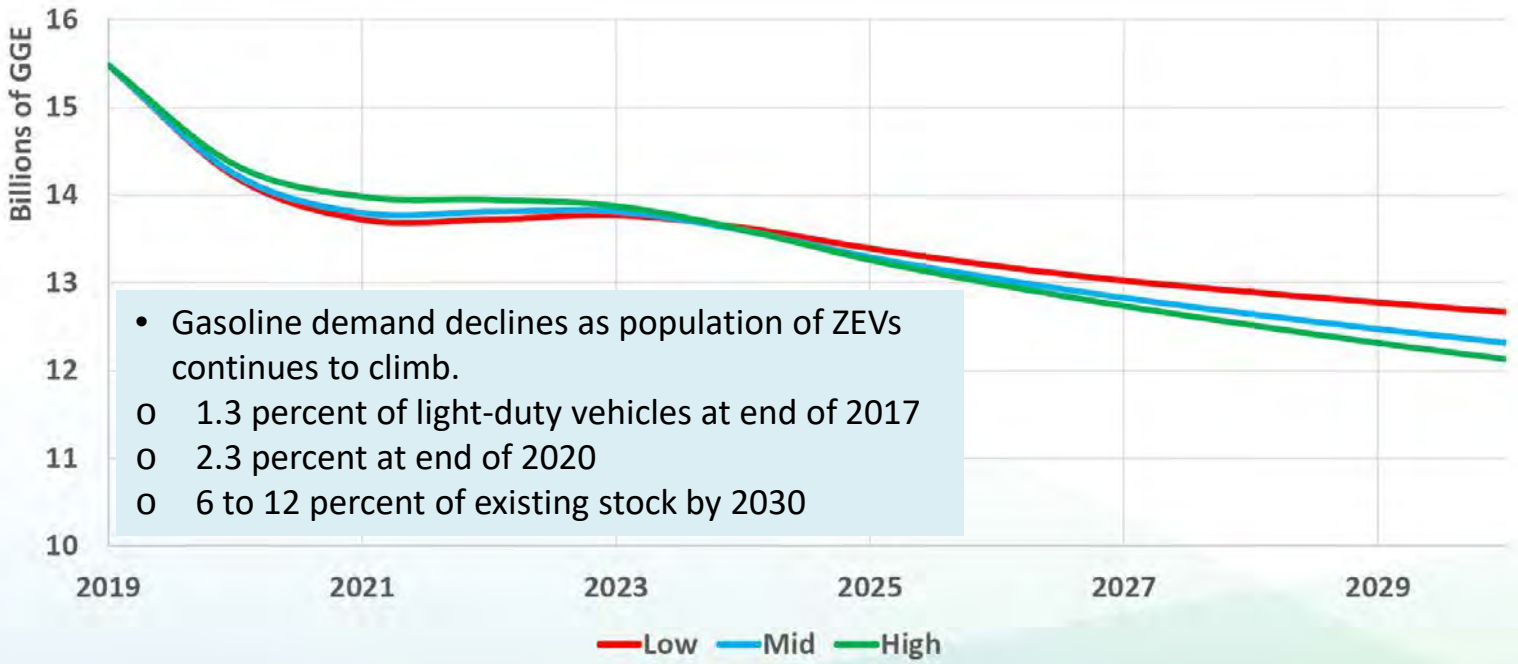


Source: California Energy Commission analysis of Metropolitan Transportation Commission (MTC) data.

Gasoline Demand Forecast

ZEV POPULATION		
Total Light-Duty Vehicles end of 2020		
635,602		
Battery Electric (BEV)	Plug-in Hybrid (PHEV)	Fuel Cell (FCEV)
1.289%	0.904%	0.025%
369,364	259,109	7,129

NON-ZEV POPULATION						
Total Light-Duty Vehicles end of 2020						
28,030,332						
Bio Diesel	Diesel	Flex Fuel	Gasoline	Gasoline Hybrid	Natural Gas	Propane
0.470%	1.973%	3.993%	87.286%	4.031%	0.027%	0.003%
134,834	565,532	1,144,536	25,021,380	1,155,477	7,676	897



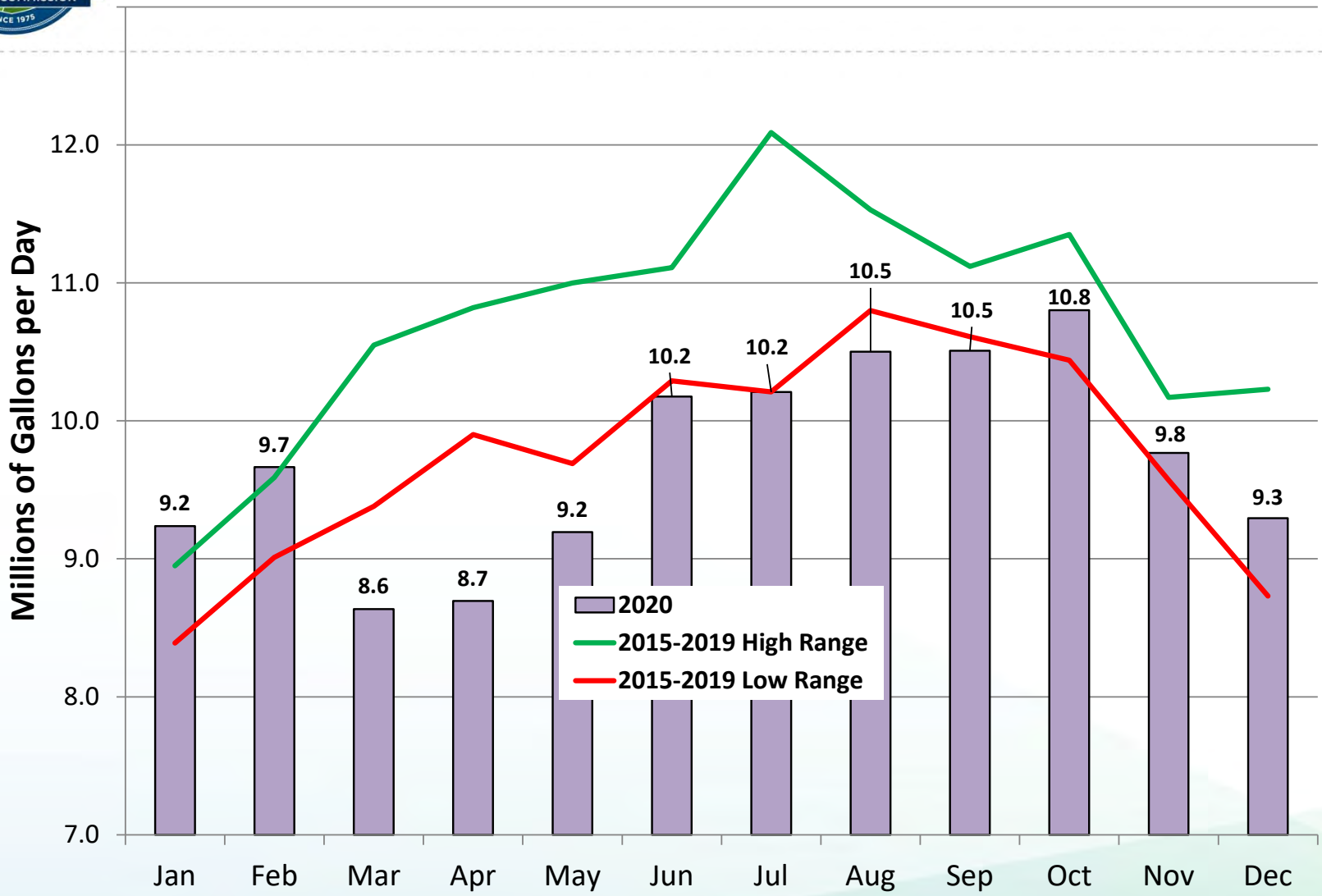
- Gasoline demand declines as population of ZEVs continues to climb.
  - 1.3 percent of light-duty vehicles at end of 2017
  - 2.3 percent at end of 2020
  - 6 to 12 percent of existing stock by 2030

Source: California Energy Commission, 2020 IEPR Workshop, December 3, 2020, Transportation Energy Demand Forecast, slide 14.

Pandemic Impacts & Outlook - Diesel

- Diesel fuel demand declined 4.3 percent in 2020
  - 3.56 billion gallons - lowest level since 2014
- Fully recovered
  - Higher than pre-pandemic levels
  - Most recent estimate – *up 12.6 percent* compared to April 2019
    - 4-week average demand (through week ending April 16)
  - Strong demand for goods movement – container imports & rail
- Forecast to continue rising over the next several years
  - However, recently adopted CARB standards for MD & HD vehicles will begin to erode those projections

California Diesel Demand - 2020



Data includes renewable diesel and biodiesel.

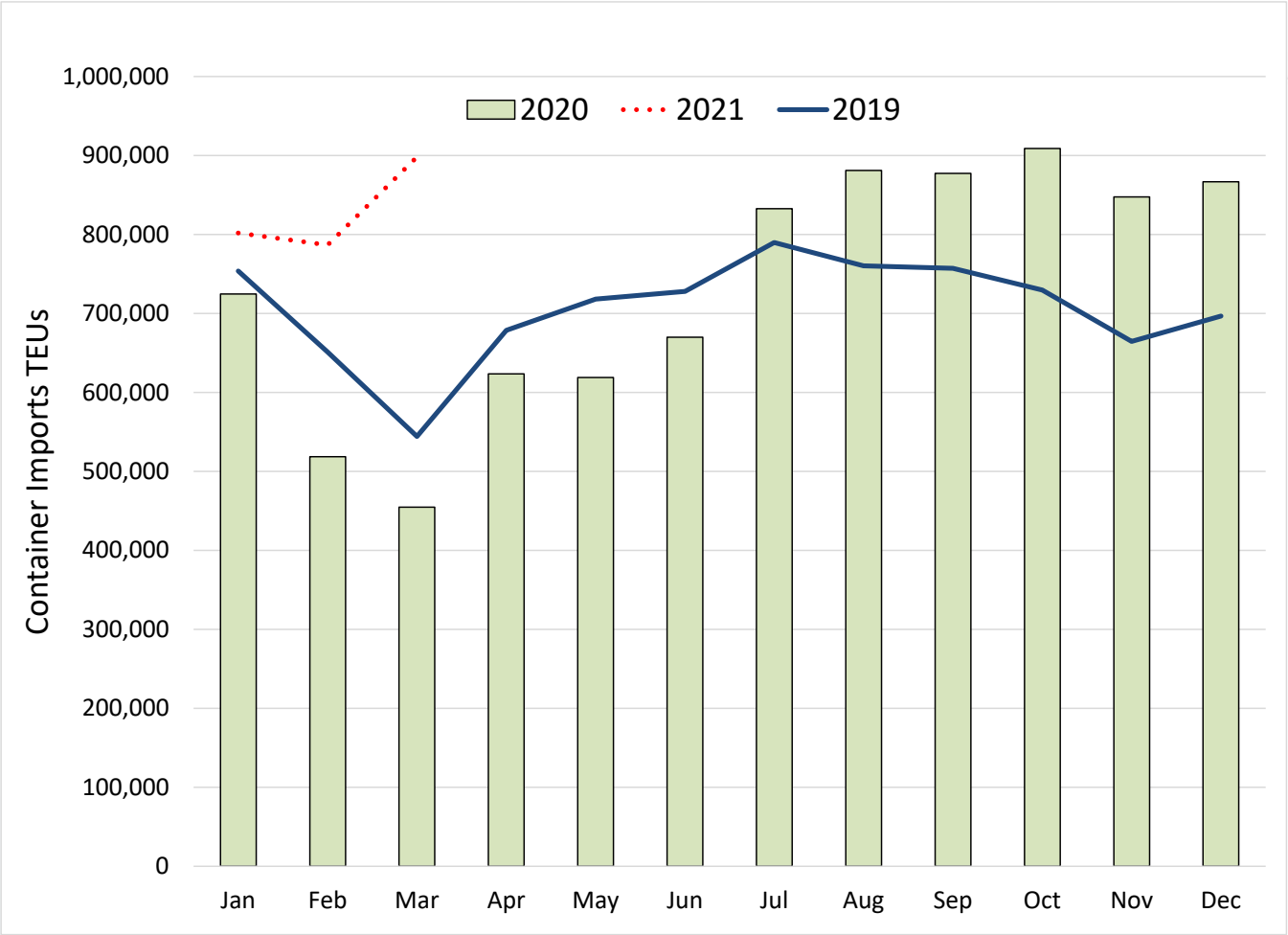
Source: California Energy Commission analysis of CDTFA data through December 2020.

Rail Activity – United States

- Intermodal rail activity is reflective of goods movement and includes railcars transporting shipping containers and truck trailers. According to AAR, more than 90 percent of the rail activity originating in California is intermodal, while nearly 80 percent of the rail activity with California as the destination was intermodal.
- Intermodal rail activity recovered last summer to pre-covid levels and has continued to improve over 2019 volumes.

2021 Y-T-D **up 4.9 percent** for intermodal rail activity versus 2019 Y-T-D.

Ports of LA & LB – Container Imports



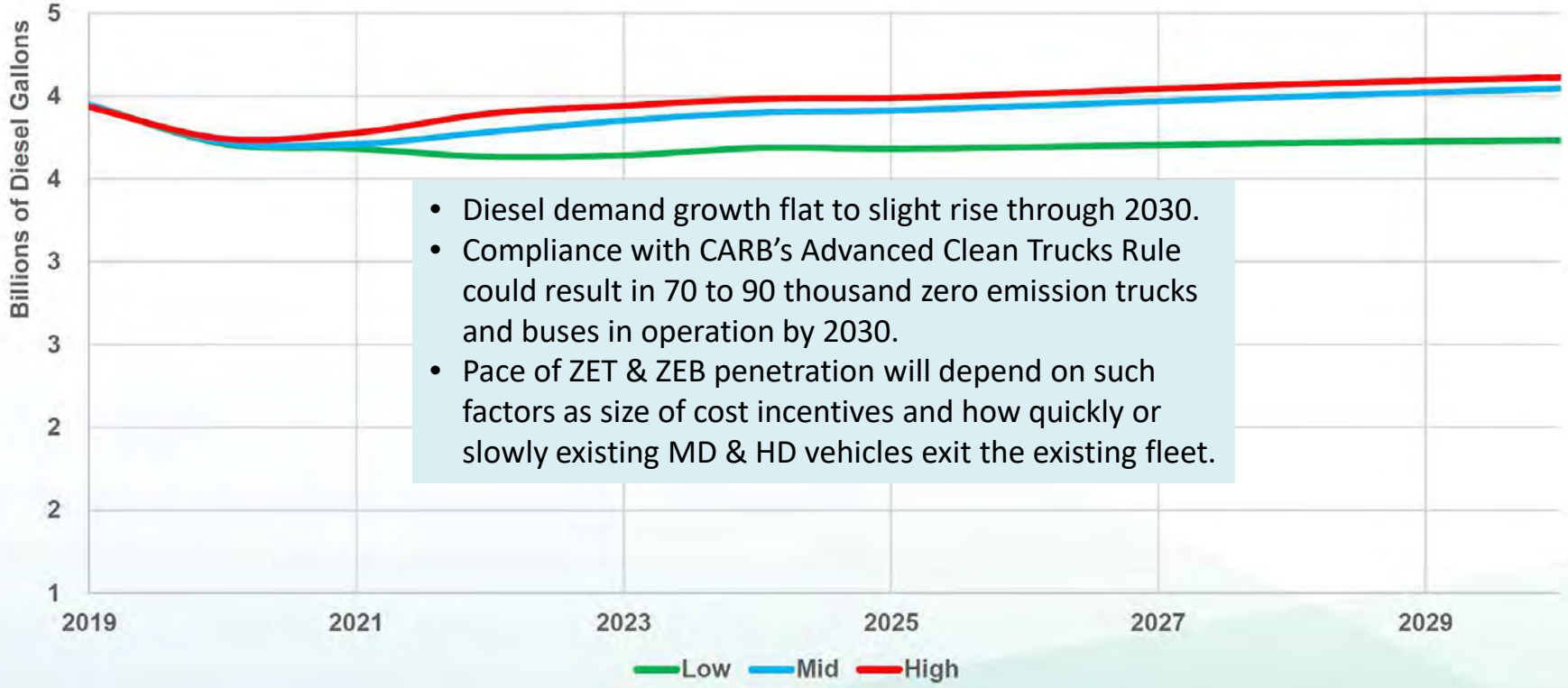
- Container imports recovery similar to rail recovery – summer of 2020
- 2021 Y-T-D through March ***up 27.6 percent*** versus same period in 2019
- 56 percent of all U.S. container imports went through the Ports of LA & LB during March 2021

Diesel Demand Forecast

Regulations designed to replace existing medium duty (MD), heavy-duty (HD), and transit buses with zero emission makes and models (electric & hydrogen) will begin to push down diesel demand during the later portions of the forecast period.

- SCAQMD regulations – refuse and transit vehicles
- CARB Advanced Clean Trucks rule – MD & HD vehicles

Projections do not illustrate the commingled trends of ***decreasing*** fossil diesel demand & ***increasing*** renewable diesel demand



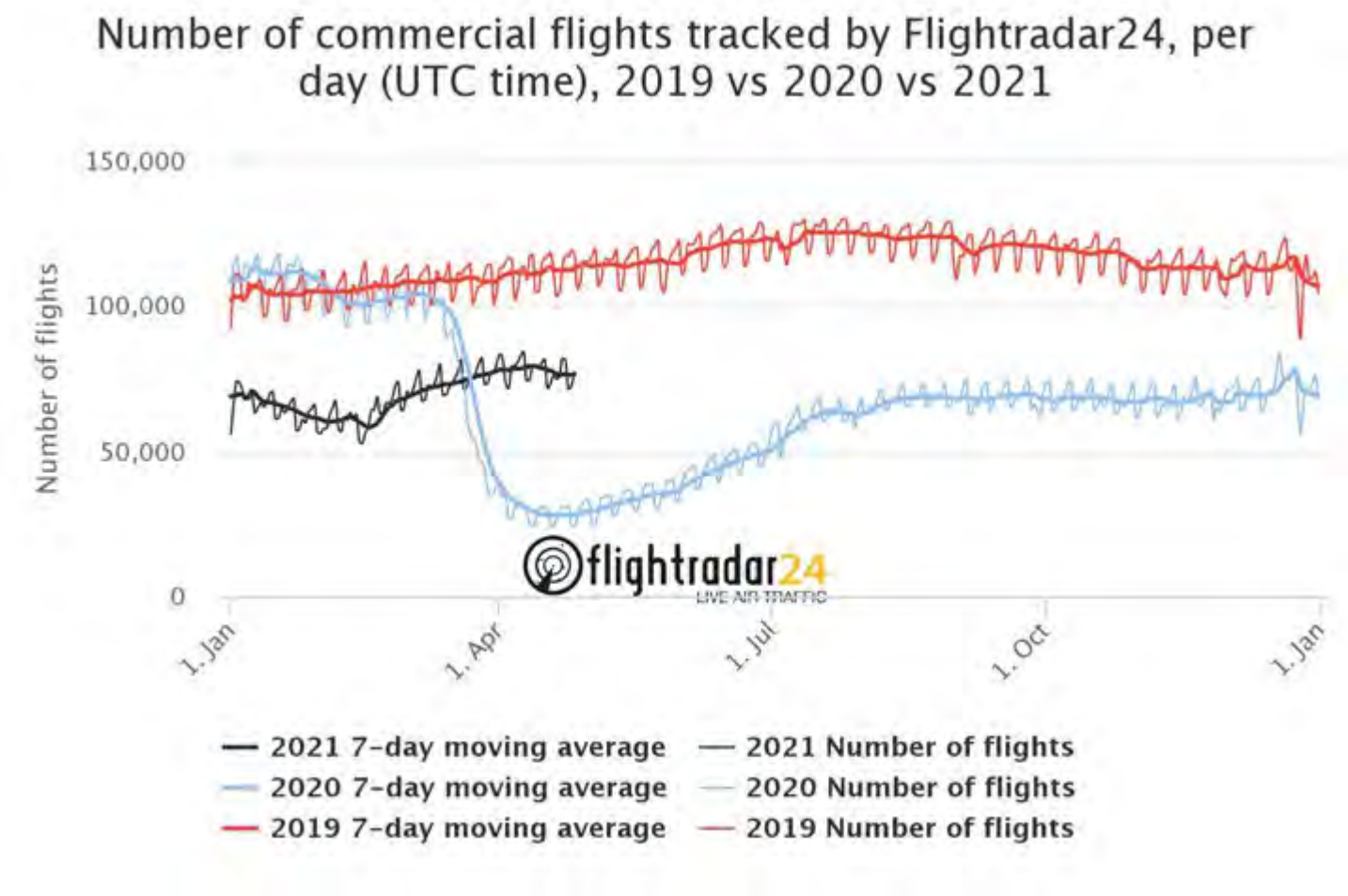
- Diesel demand growth flat to slight rise through 2030.
- Compliance with CARB's Advanced Clean Trucks Rule could result in 70 to 90 thousand zero emission trucks and buses in operation by 2030.
- Pace of ZET & ZEB penetration will depend on such factors as size of cost incentives and how quickly or slowly existing MD & HD vehicles exit the existing fleet.

Source: California Energy Commission, 2020 IEPR Workshop, December 3, 2020, Transportation Energy Demand Forecast, slide 15.

Pandemic Impacts & Outlook – Jet Fuel

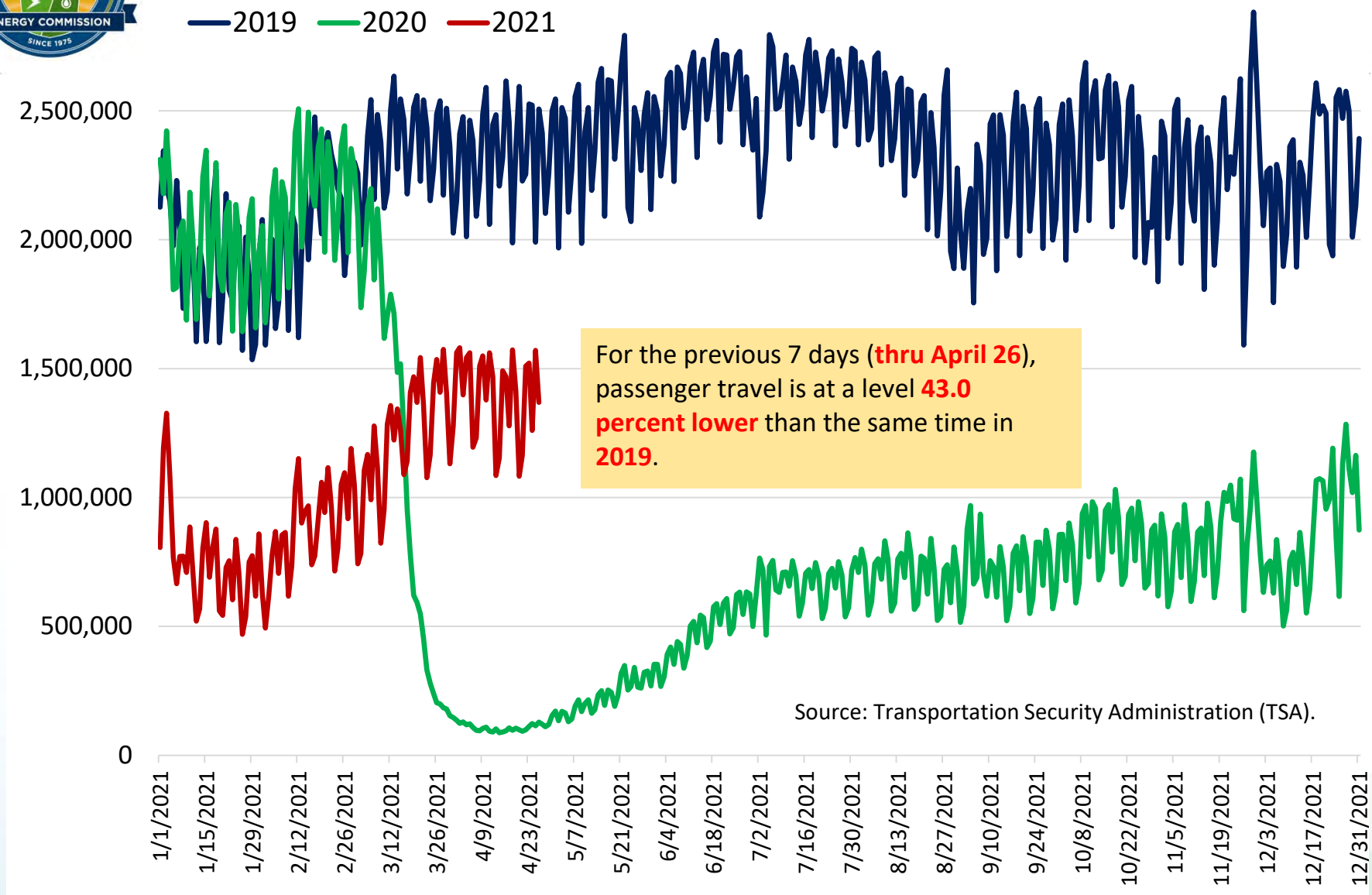
- Jet fuel demand for West Coast declined 36.1 percent in 2020 compared to 2019
  - 348 thousand barrels per day - lowest level since 1989
- Fuel type hardest hit by pandemic
  - Much lower than pre-pandemic levels
  - Most recent California estimate – *down 31.9 percent* compared to April 2019
    - 4-week average demand (through week ending April 16)
  - Decreased international travel & business flying
- Forecast to slowly continue to recover over the next couple of years
  - However, recent Covid variant spikes around the world (Brazil, India, and parts of the European Union) could continue to depress international aviation activity longer than current forecasts

Global Flight Activity Still Down



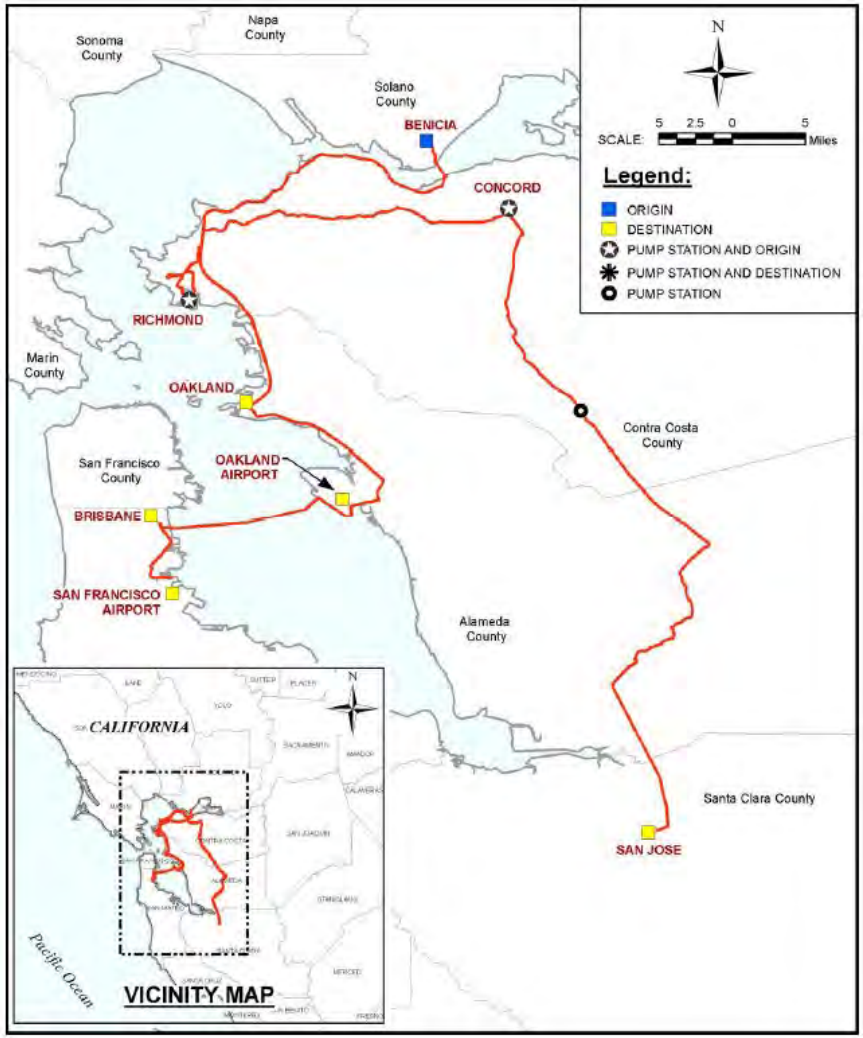
- China & Hong Kong saw earliest impacts from coronavirus
- China showing nearly complete signs of recovery
- U.S. scheduled flights down by 50.2 percent for the week ending September 14

United States Airport Passenger Counts 2019 thru 2021



Jet Fuel Overview

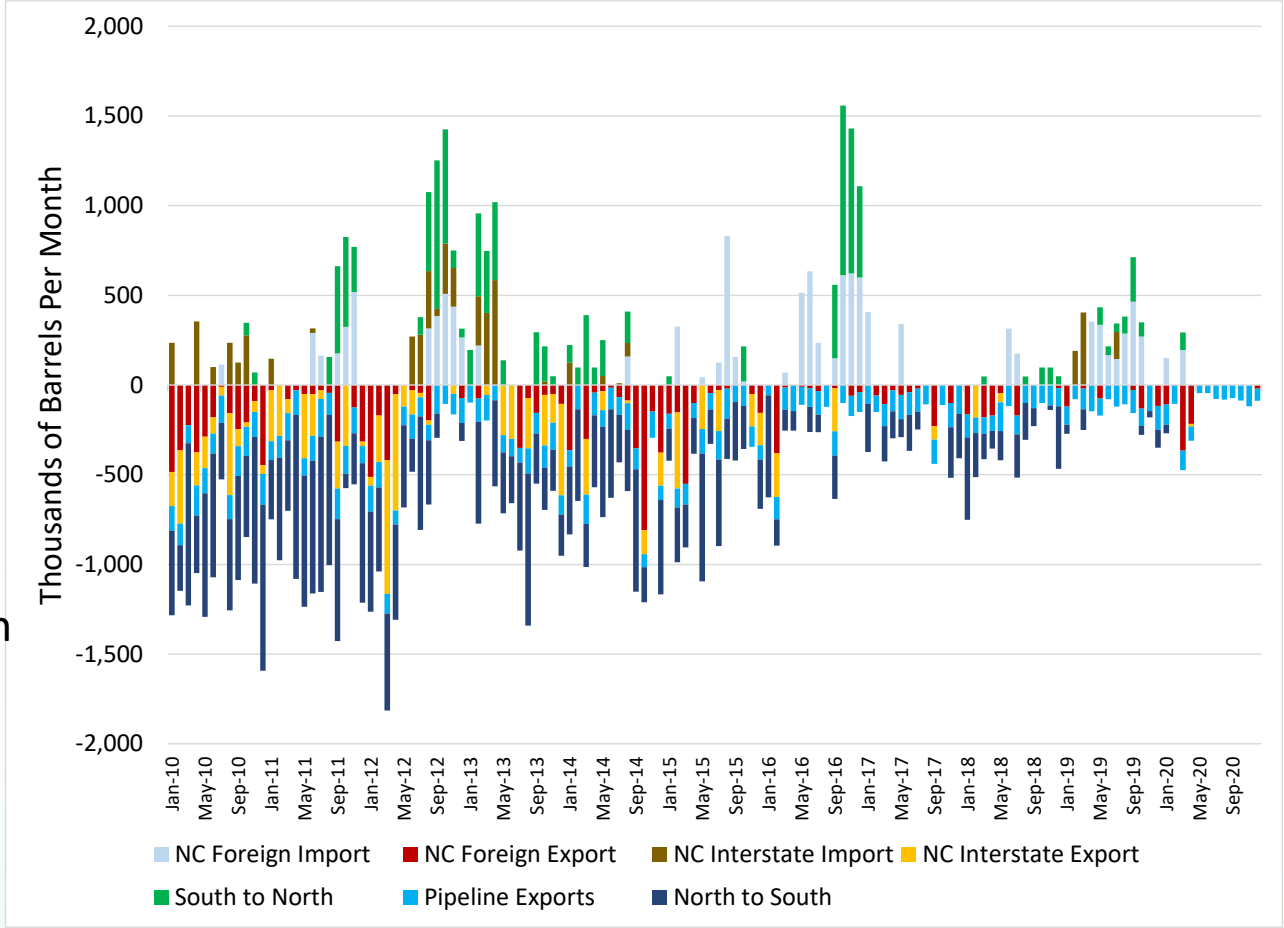
SF Bay Area – Kinder Morgan Lines



- The primary source of fuels for SF Bay Area airports is production from local refineries
  - Including supplies for Sacramento, Travis AFB, Fresno & Reno
- Trans-bay crossing to Brisbane & SFO
- Northern California refinery production periodically augmented with waterborne deliveries
  - Usually related to unplanned refinery outages
- At times, these imports have been as much as a third of average refinery production for a short period of time
- Marine terminals and pipeline connections not configured to transition to sustained marine importer of jet fuel

Jet Flows – Northern California

- Net exporter
- Imports intermittent – refinery outages
- Pipeline exports to Reno
- Domestic exports to PNW declined – replaced by WA refiners
- Exports to S. Calif. Have become a declining portion of their supply – recent volumes fluctuate based on refinery outages

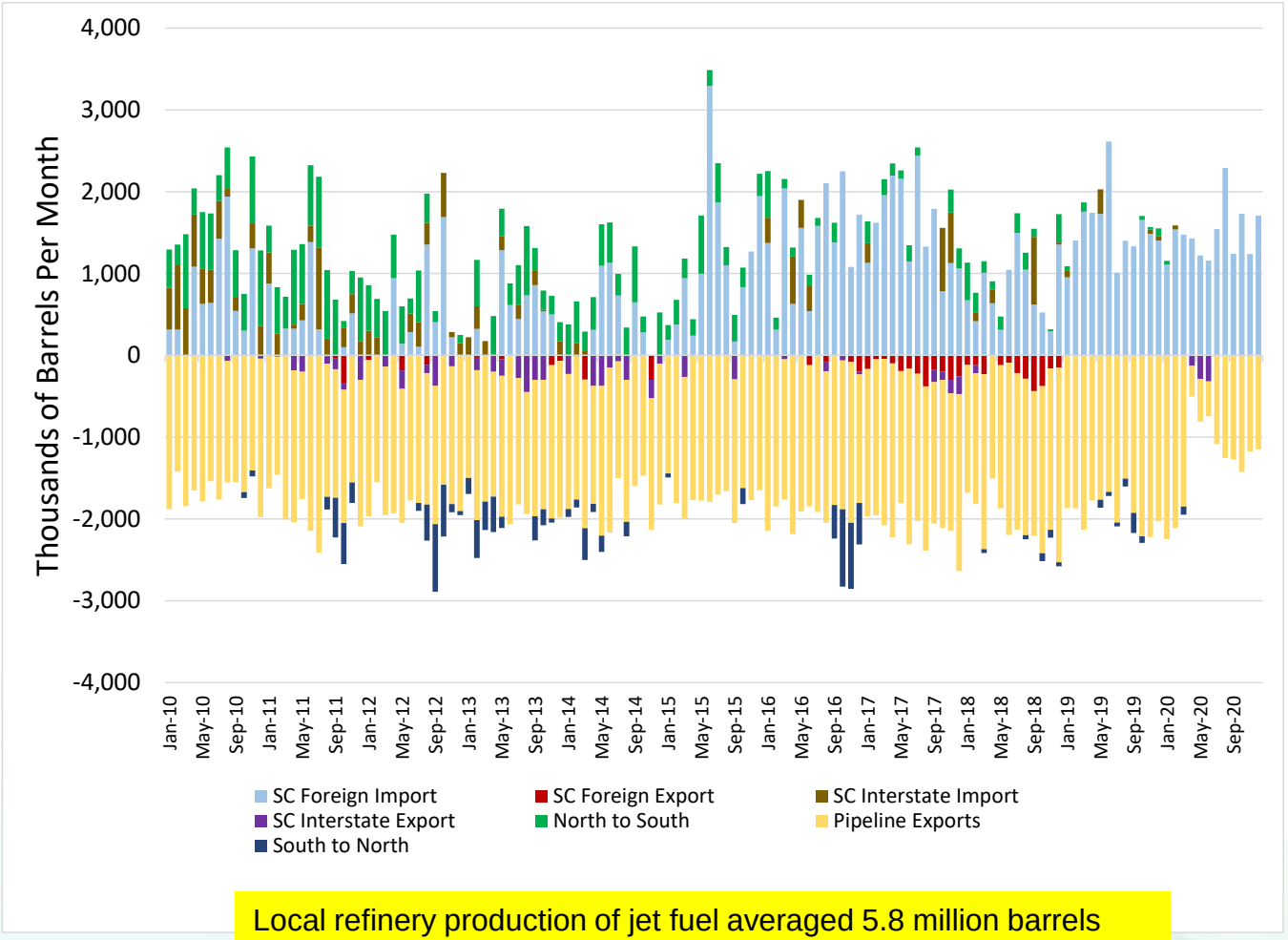


Local refinery production of jet fuel averaged 3.6 million barrels per month from 2017-2019

Source: California Energy Commission.

Jet Flows – Southern California

- Balanced imports & exports
- Foreign imports steady
- Other waterborne imports not needed
- Pipeline exports to AZ & NV
- Waterborne exports intermittent
- Exports to N. Calif. unusual

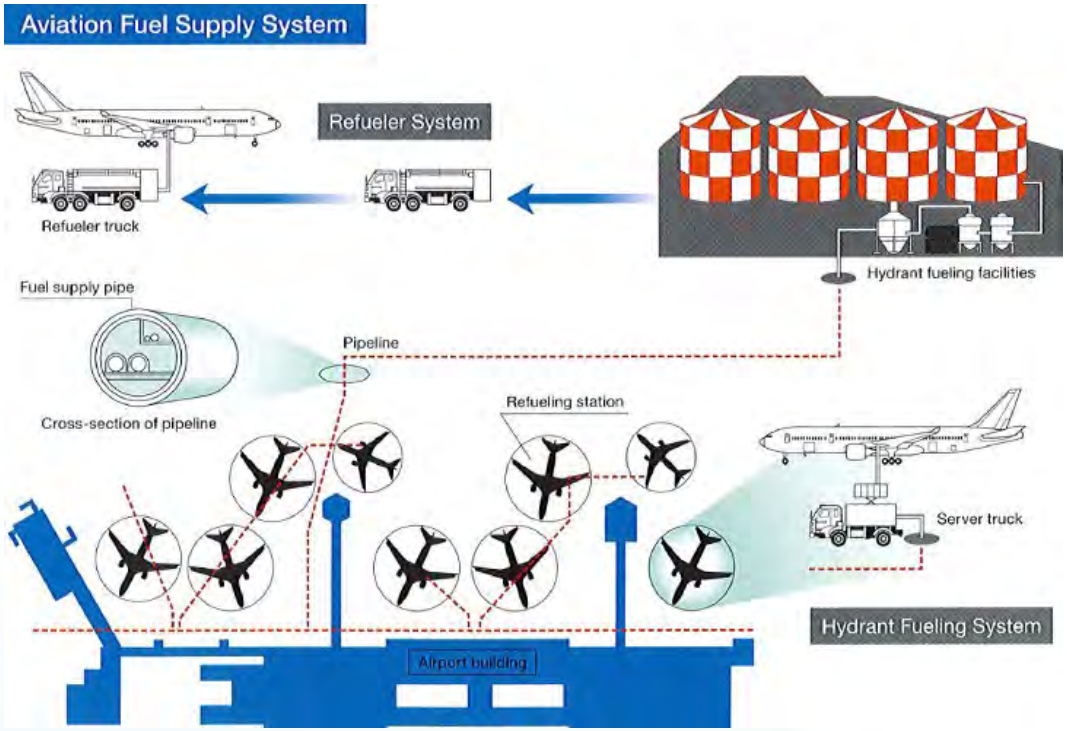


Local refinery production of jet fuel averaged 5.8 million barrels per month from 2017-2019

Source: California Energy Commission.

Jet Fuel - Logistics

- Nearly all commercial airports receive jet fuel via pipeline, not tanker truck
  - Very limited capability to unload tanker trucks
- Jet A dispensed into aircraft from:
  - Mobile refueling trucks sourcing fuel from onsite storage tanks
  - Server trucks sourcing from hydrant system
  - Both types of vehicles are specialized



Refinery Closures & Potential Impacts

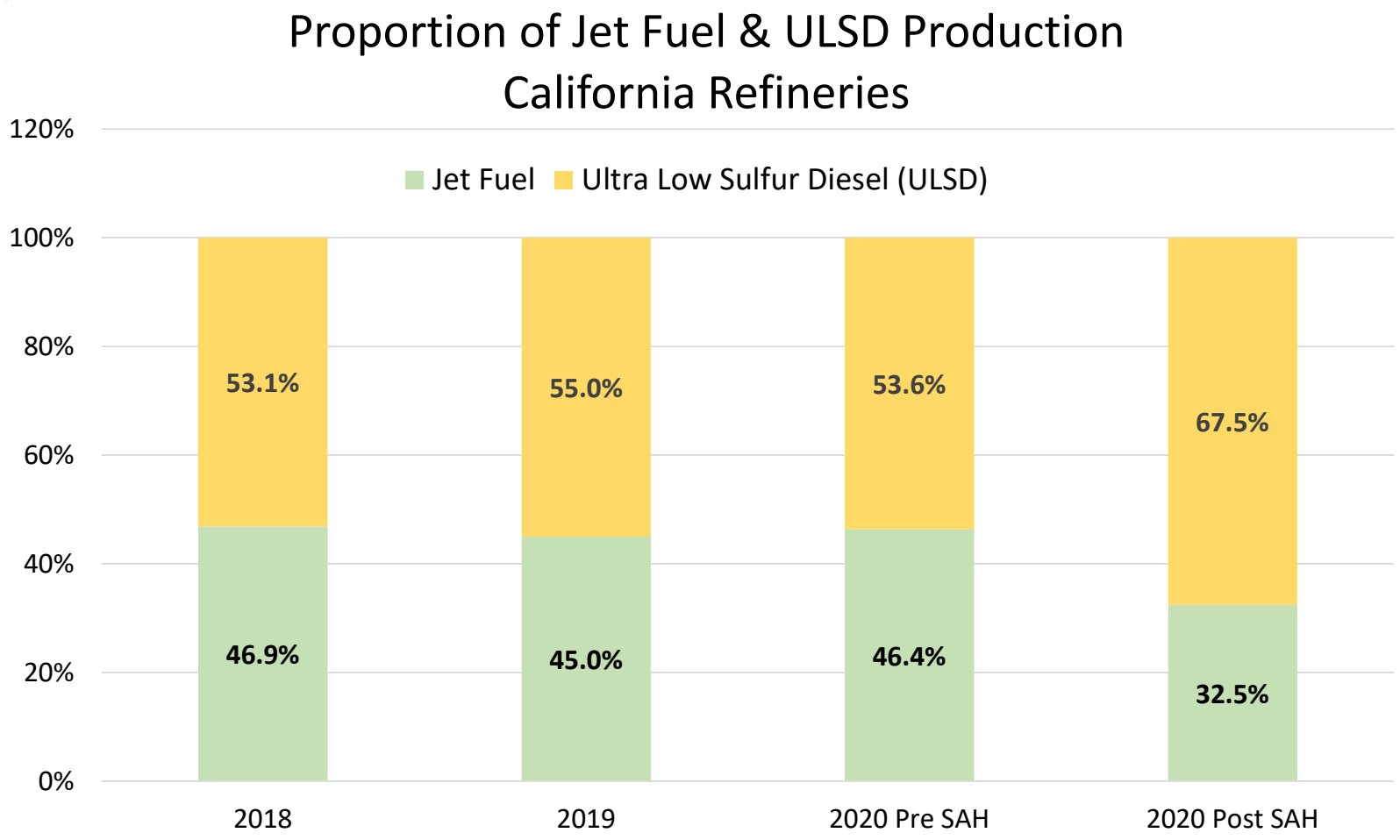
Recent Refinery Closures

- Refinery closures can occur when conditions of oversupply develop in a regional market due to Covid-19 fuel demand destruction
  - Marathon Martinez and Gallup refinery permanent idling – April 2020
  - Royal Dutch Shell Convent, Louisiana refinery – November 2020
- Closures tend to improve market conditions for other refiners in the region, diminishing degree of oversupply
  - Adequate supplies of transportation fuels still available for consumers and businesses
  - Usually a shift in source of supply through existing logistical infrastructure adequate to handle the changes
    - Marine terminals, pipeline connections/capacity & spare storage tank capacities

Recent Refinery Closures (cont.)

- Permanent idling of Marathon's Martinez refinery during late April 2020 did not result in any supply shortfall for transportation fuels due to:
- Decreased gasoline demand related to pandemic
  - Full recovery of gasoline demand to pre-pandemic levels uncertain
  - Influenced by size of workforce that maintains remote working, along with pace of transit ridership recovery
- Refinery operational changes to maximize diesel production at expense of jet fuel production
  - Diesel supplies still adequate since jet fuel demand remains depressed and renewable diesel imports and local production expected to grow over the near-term
- The Martinez refinery closure has decreased spare refinery production capacity in the state
  - As demand continues to recover for gasoline and jet fuel, future significant unplanned refinery outages could result in more severe and prolonged price spikes

Refiners Adjust Ratio of Jet Production

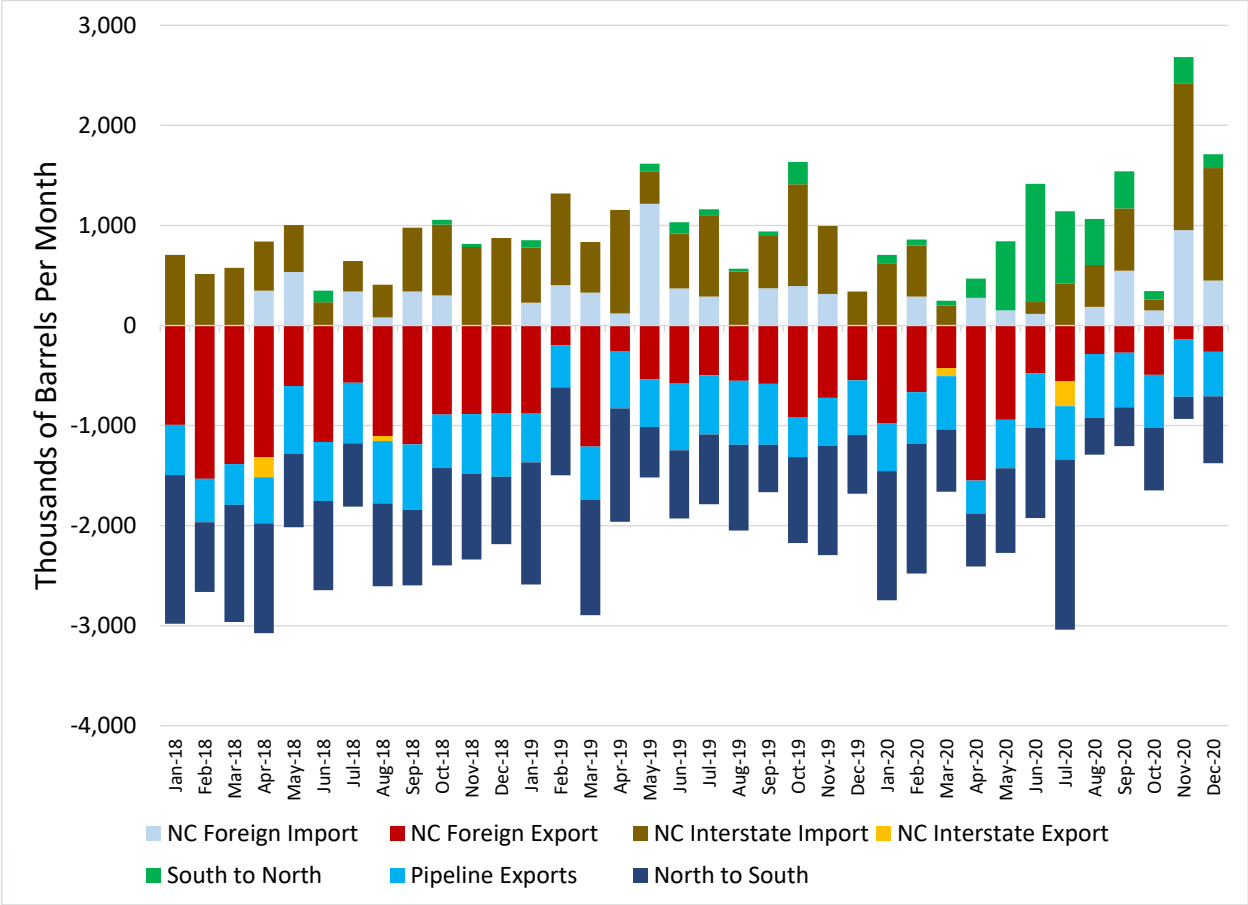


Source: Energy Commission analysis of Petroleum Industry Information Reporting Act data.

Note: 2020 Pre-Stay-at-Home (SAH) is average of data through week ending 3/13/20. Post SAH is average of data from week ending 3/20/2020 through week ending 4/23/2021.

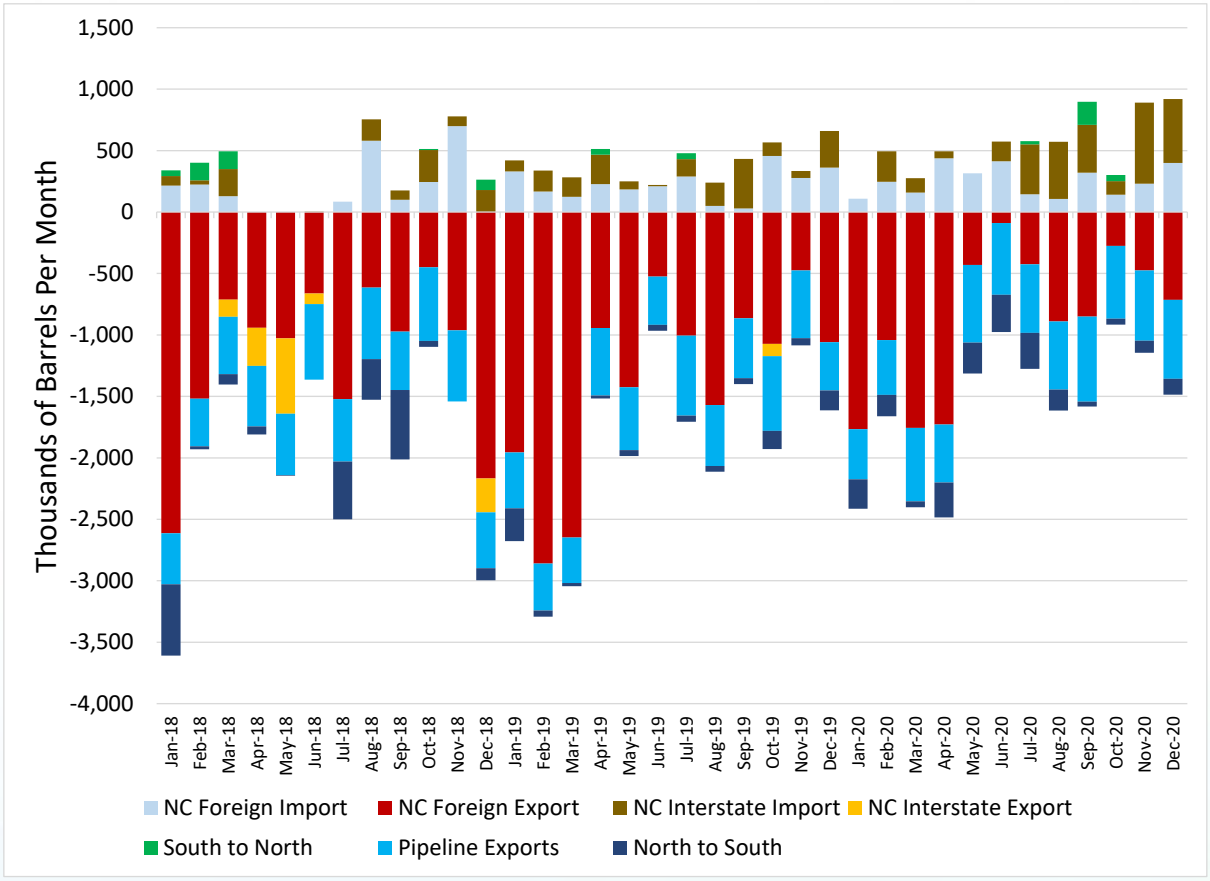
Gasolines Flows – Northern California

- Post closure of Martinez refinery – market rebalanced
- Marine exports declined
- Marine imports increased
- Most pronounced shift was increased reliance on supply from Southern California & the Pacific Northwest
- All of this change was manageable because demand was lower-than-normal due to the pandemic & incremental supply was readily available from nearby sources



Source: California Energy Commission.

Diesel Flows – Northern California



Source: California Energy Commission

- Similar change for diesel
- Post closure of Martinez refinery – market rebalanced
- Marine exports declined
- Marine imports increased
- Most pronounced shift was increased reliance on supply from Southern California & the Pacific Northwest
- All of this change was manageable, despite rebounding demand
  - Incremental supply was readily available from nearby sources
  - Higher ratio of diesel output from local refiners due to low jet fuel demand

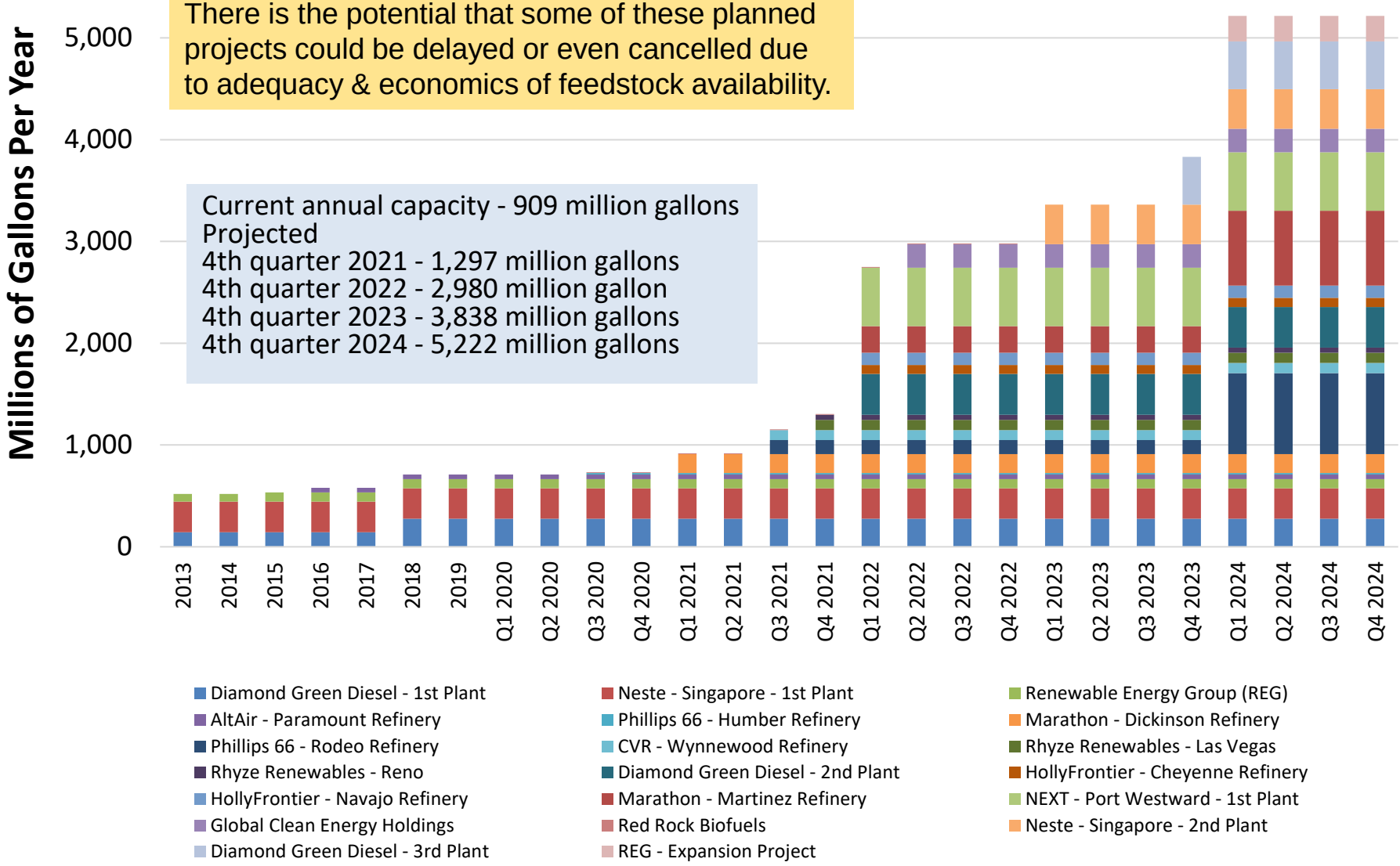
Refinery Conversion Projects

- A refinery closure due to oversupply can also be accompanied by plans to cease traditional refining operations but convert some existing process equipment to produce different types of transportation fuels to meet new trends
  - Marathon – Martinez & Phillips 66 – Rodeo renewable fuel projects reflect such changes in operational plans
- Both companies see strong demand growth for renewable diesel fuel & sustainable aviation fuels
  - California Low Carbon Fuels Standard (LCFS), as well as other West Coast LCFS current (Oregon & British Colombia) and expected (Washington) regulations
  - Increasing demand for renewable diesel & jet fuel will displace additional volumes of fossil diesel and jet fuel over time, placing increased pressure on local refiners that continue producing fossil diesel
  - Decreased fossil diesel production and increased production/imports of renewable diesel help to better align with these growing trends

Increasing Renewable Diesel Availability

There is the potential that some of these planned projects could be delayed or even cancelled due to adequacy & economics of feedstock availability.

Current annual capacity - 909 million gallons
Projected
4th quarter 2021 - 1,297 million gallons
4th quarter 2022 - 2,980 million gallon
4th quarter 2023 - 3,838 million gallons
4th quarter 2024 - 5,222 million gallons

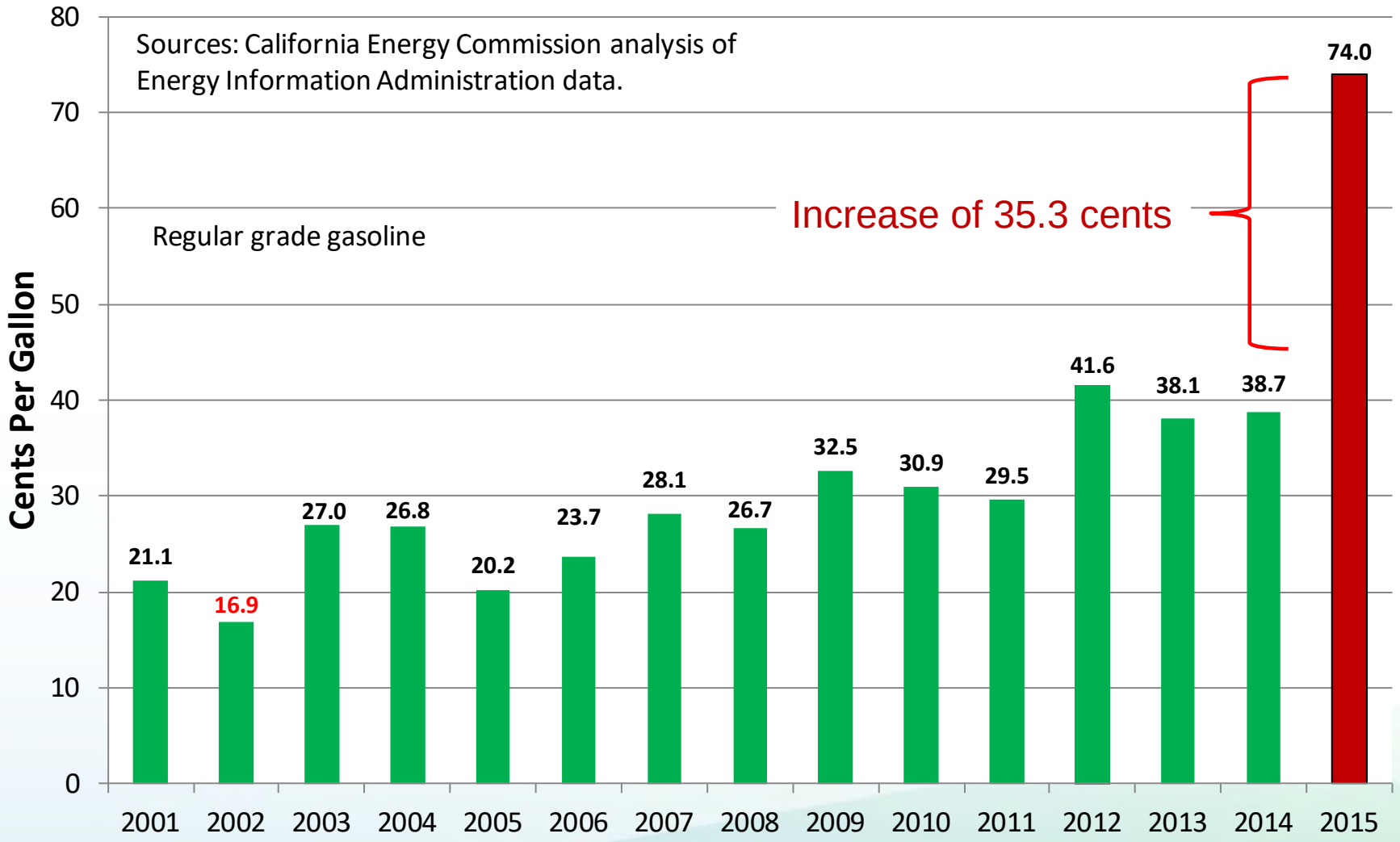


Source: California Energy Commission analysis of multiple reports and announcements.

Potential Impacts of Refinery Closures

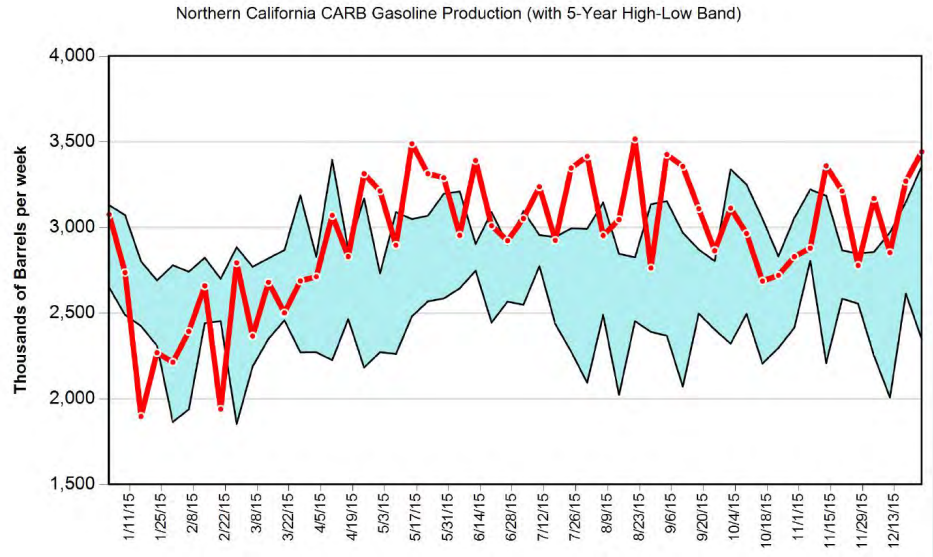
- Refinery closures can also occur when proposed refinery modification requirements exceed a company capital expenditure threshold that compels a premature refinery consolidation unrelated to changing fuel market trends
  - PBF Energy's letter & stated position to close facility if more stringent proposed standard is adopted
- A premature refinery closure could result in temporary fuel supply constraints that increase costs
  - Recent history illustrates the potential for fuel price increases
  - Torrance ESP explosion in 2015 & subsequent idling of gasoline producing equipment for 17 months
  - Statewide gasoline prices increased an average of 35 cents per gallon for drivers and businesses during 2015

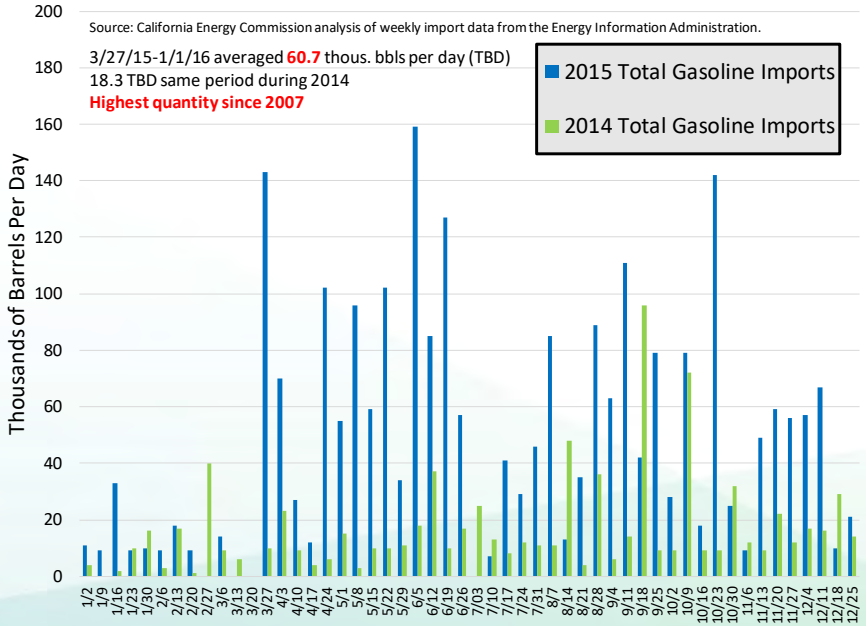
Retail Gasoline Price Differences
California Less U.S. Average



Torrance Refinery Outage – Market Changes

- The loss of gasoline supply from the Torrance refinery resulted in a price spike of sufficient magnitude to incentivize:
  - Other California refiners to consistently over-produce gasoline during the higher demand season
  - Increased imports of more expensive gasoline and blending components at a higher level for a sustained period of time





Potential Impacts of Refinery Closures (cont.)

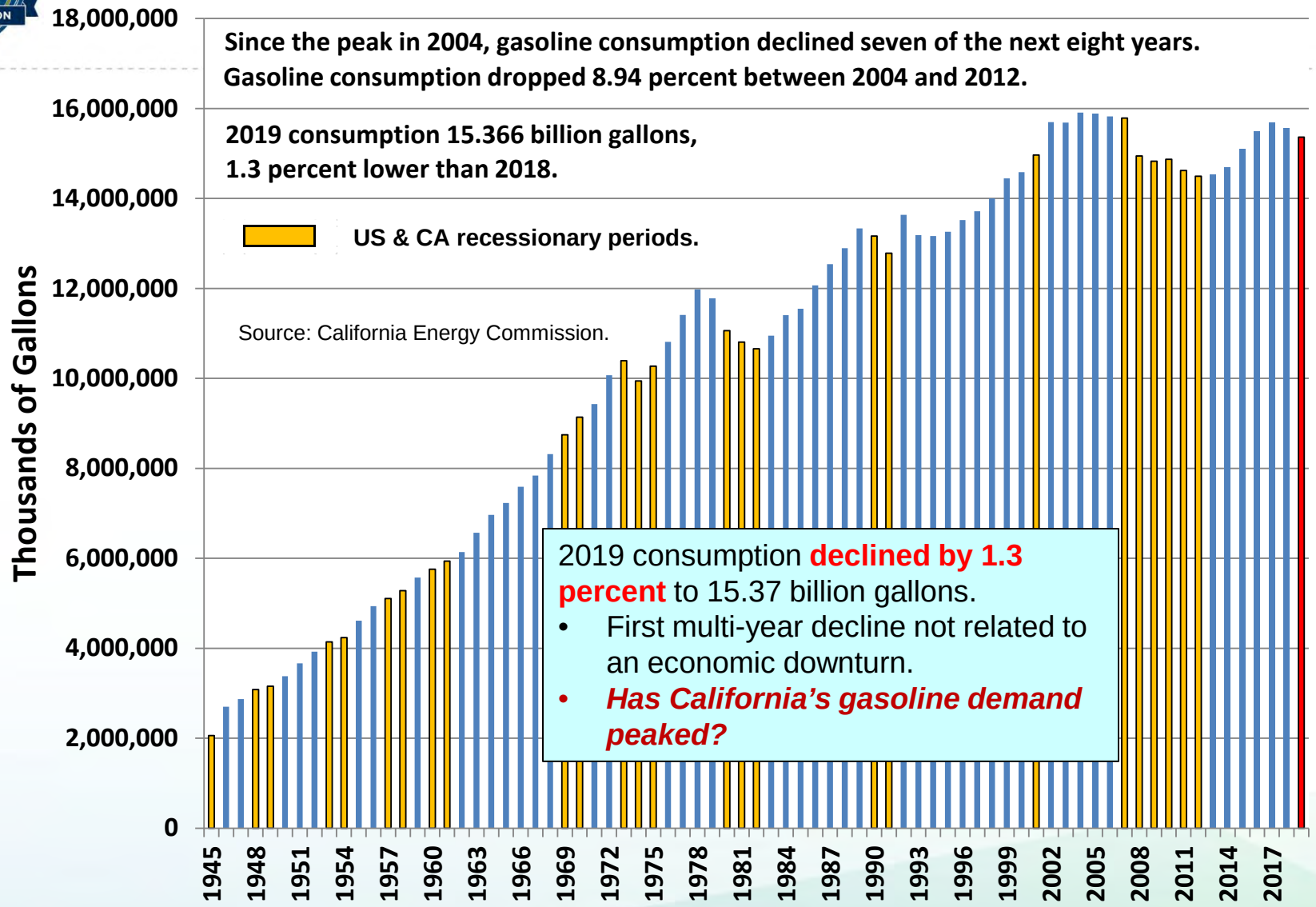
- A premature refinery closure over the near-term could result in even greater market impacts compared to the Torrance refinery outage in 2015-2016:
  - Could be worse due to decreased refinery spare production capacity in the state that has been diminished due to the permanent idling of the Marathon – Martinez refinery
  - Gasoline & diesel fuel supply/demand balances have been tightening with strong diesel fuel demand growth & continued gradual rebound in gasoline consumption
  - A return to higher jet fuel demand levels will remove additional flexibility from the marketplace
- However, over the longer-term, continued demand declines for gasoline & the continued erosion of fossil diesel fuel demand can create conditions of oversupply that could result in additional refinery consolidation due to these trends

Additional Questions

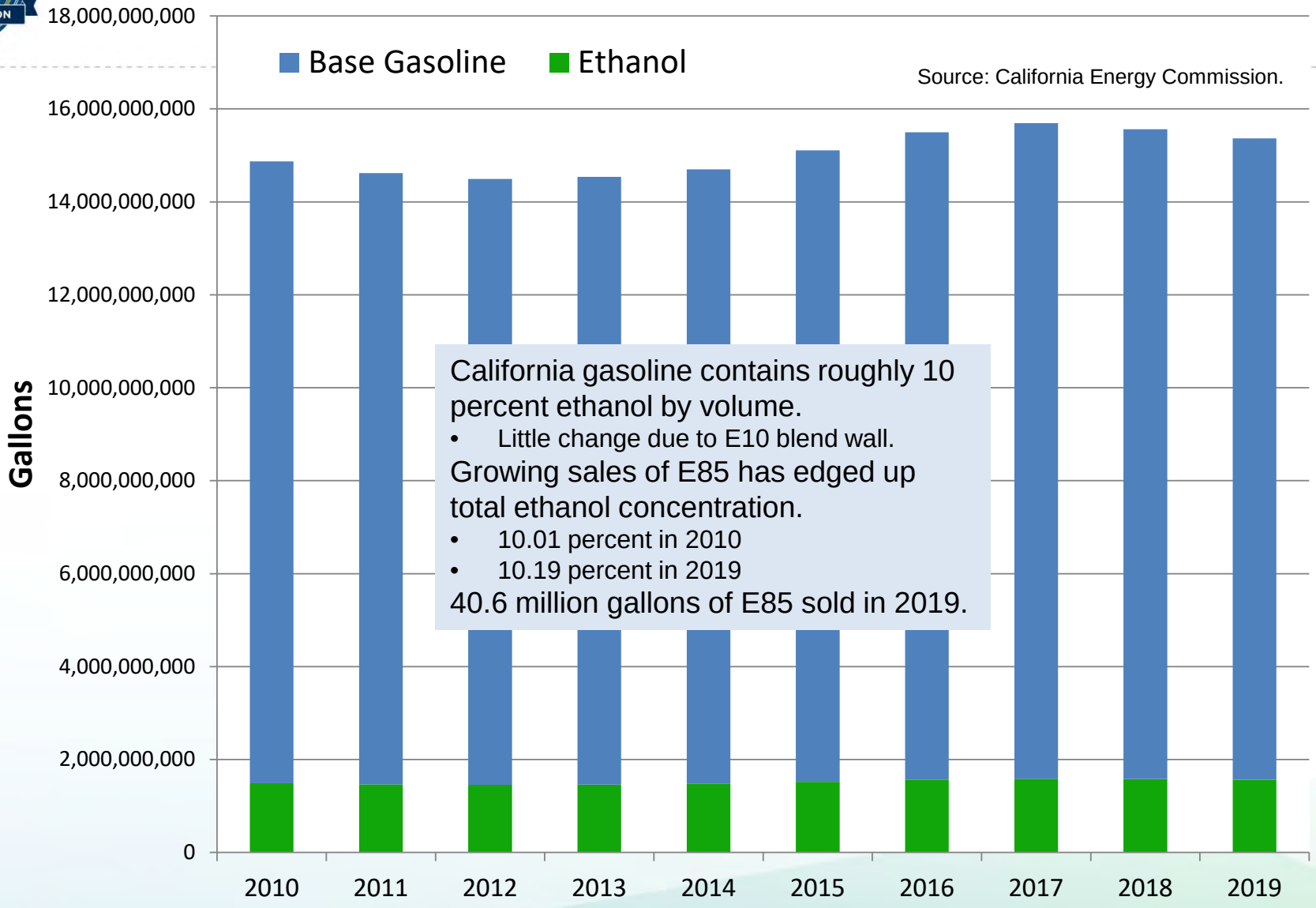
Scott's Oriole (male), Cat Creek, Palm Desert, CA - March 31, 2021.

Additional Information

California Gasoline Use 1945-2019



Gasoline & Ethanol



California gasoline contains roughly 10 percent ethanol by volume.

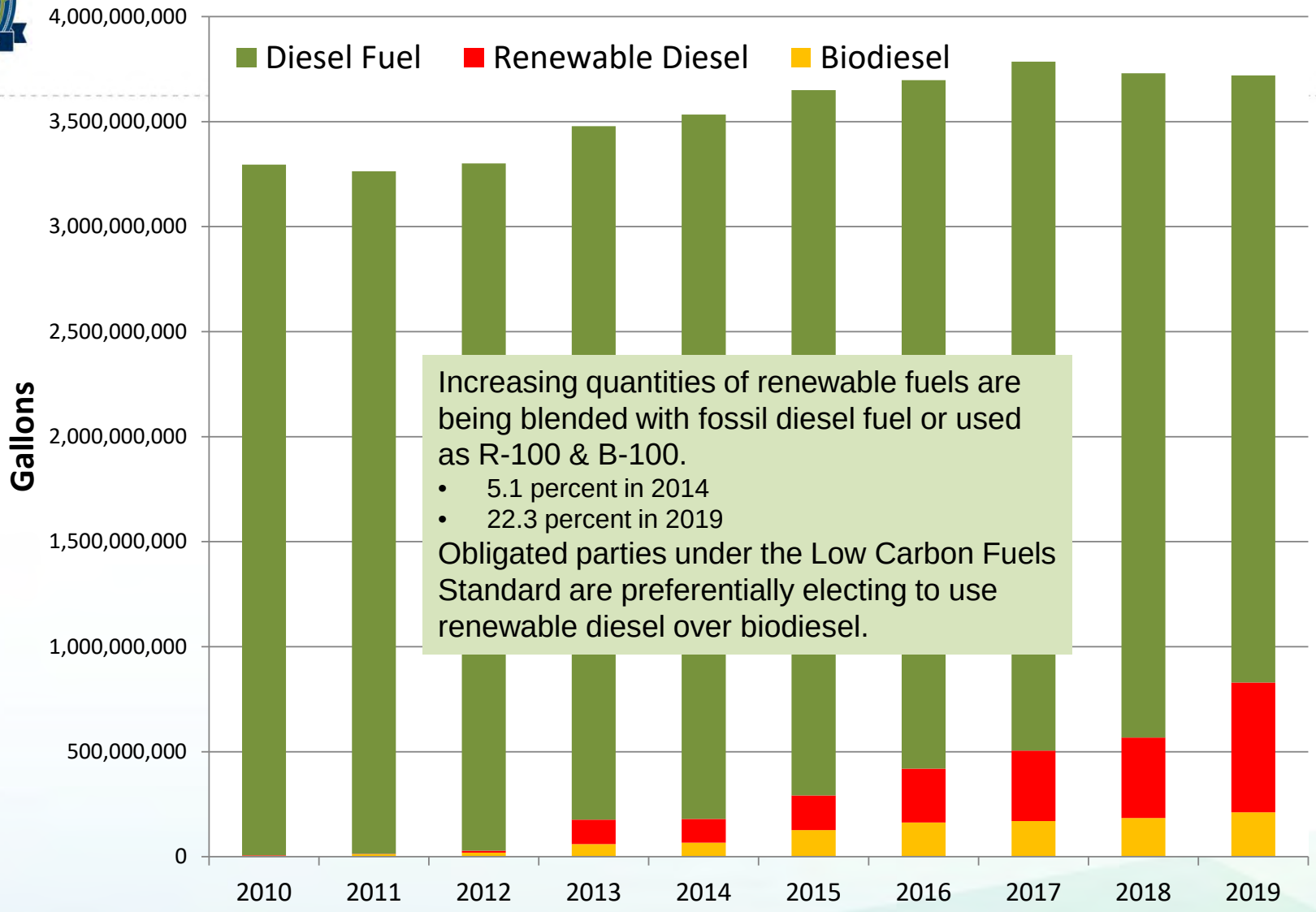
- Little change due to E10 blend wall.

Growing sales of E85 has edged up total ethanol concentration.

- 10.01 percent in 2010
- 10.19 percent in 2019

40.6 million gallons of E85 sold in 2019.

Diesel & Renewables



Increasing quantities of renewable fuels are being blended with fossil diesel fuel or used as R-100 & B-100.

- 5.1 percent in 2014
- 22.3 percent in 2019

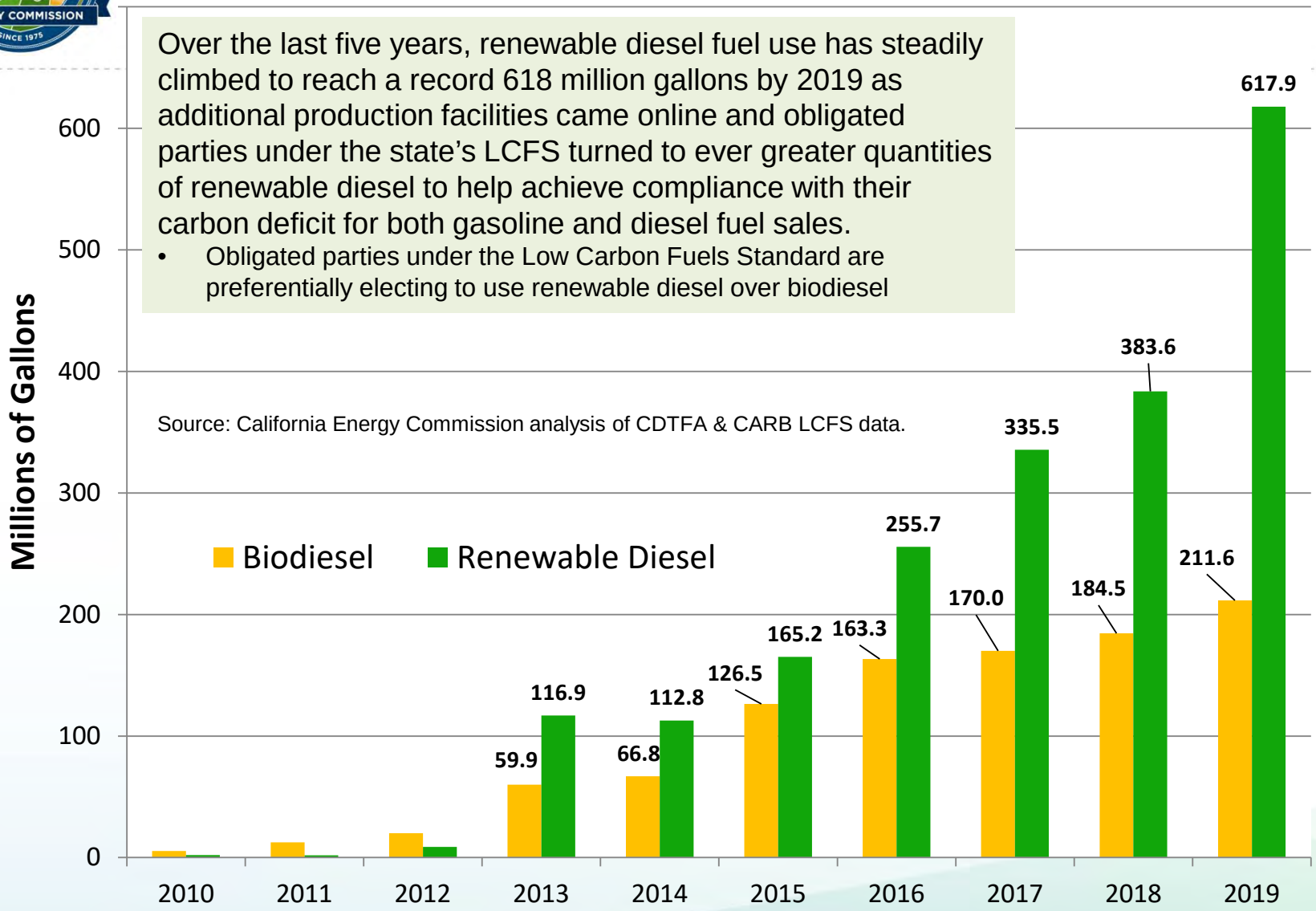
Obligated parties under the Low Carbon Fuels Standard are preferentially electing to use renewable diesel over biodiesel.

Source: California Energy Commission analysis of CDTFA & CARB LCFS data.

California Bio & Renewable Diesel Use

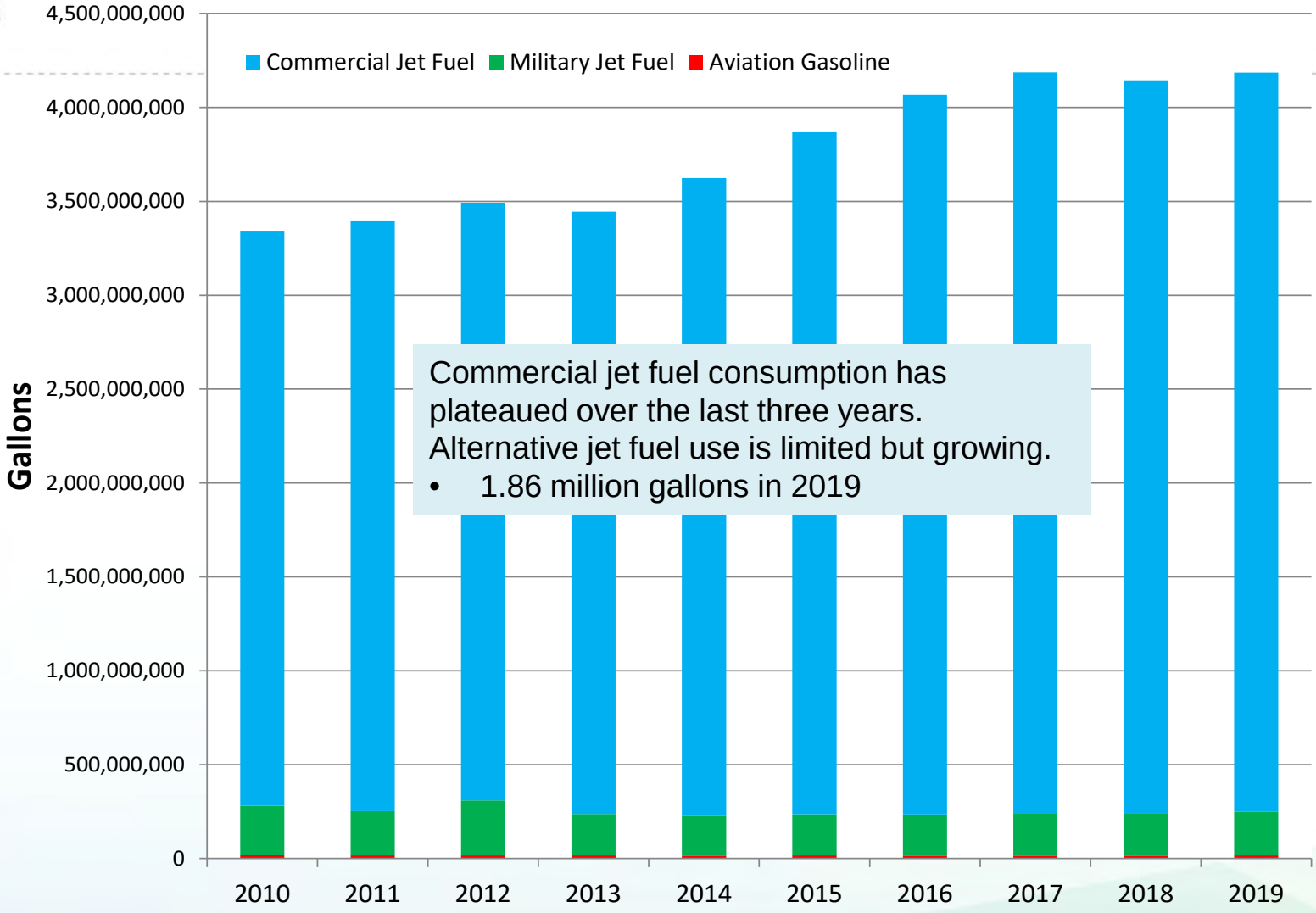
Over the last five years, renewable diesel fuel use has steadily climbed to reach a record 618 million gallons by 2019 as additional production facilities came online and obligated parties under the state's LCFS turned to ever greater quantities of renewable diesel to help achieve compliance with their carbon deficit for both gasoline and diesel fuel sales.

- Obligated parties under the Low Carbon Fuels Standard are preferentially electing to use renewable diesel over biodiesel



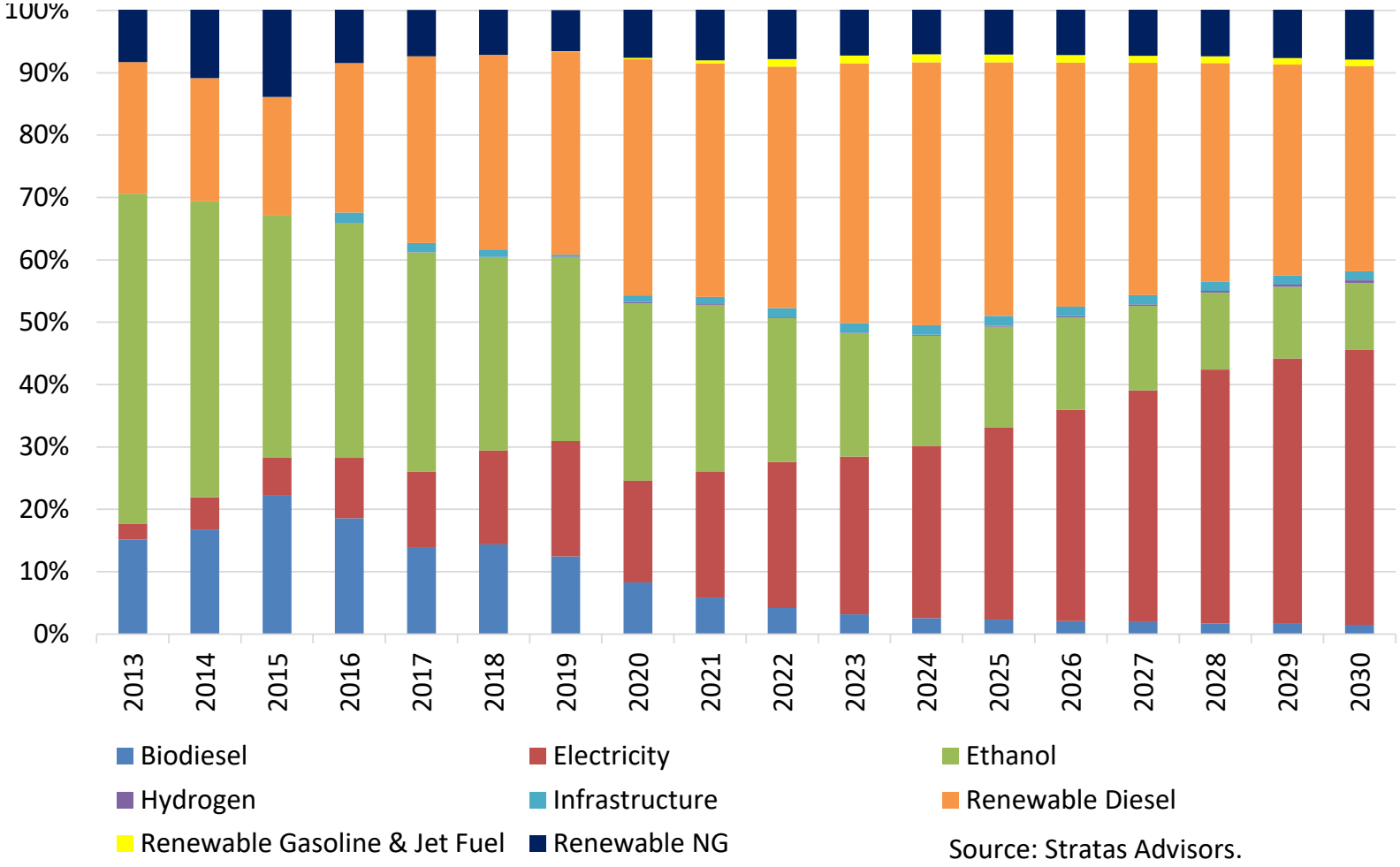
Source: California Energy Commission analysis of CDTFA & CARB LCFS data.

Aviation Fuels



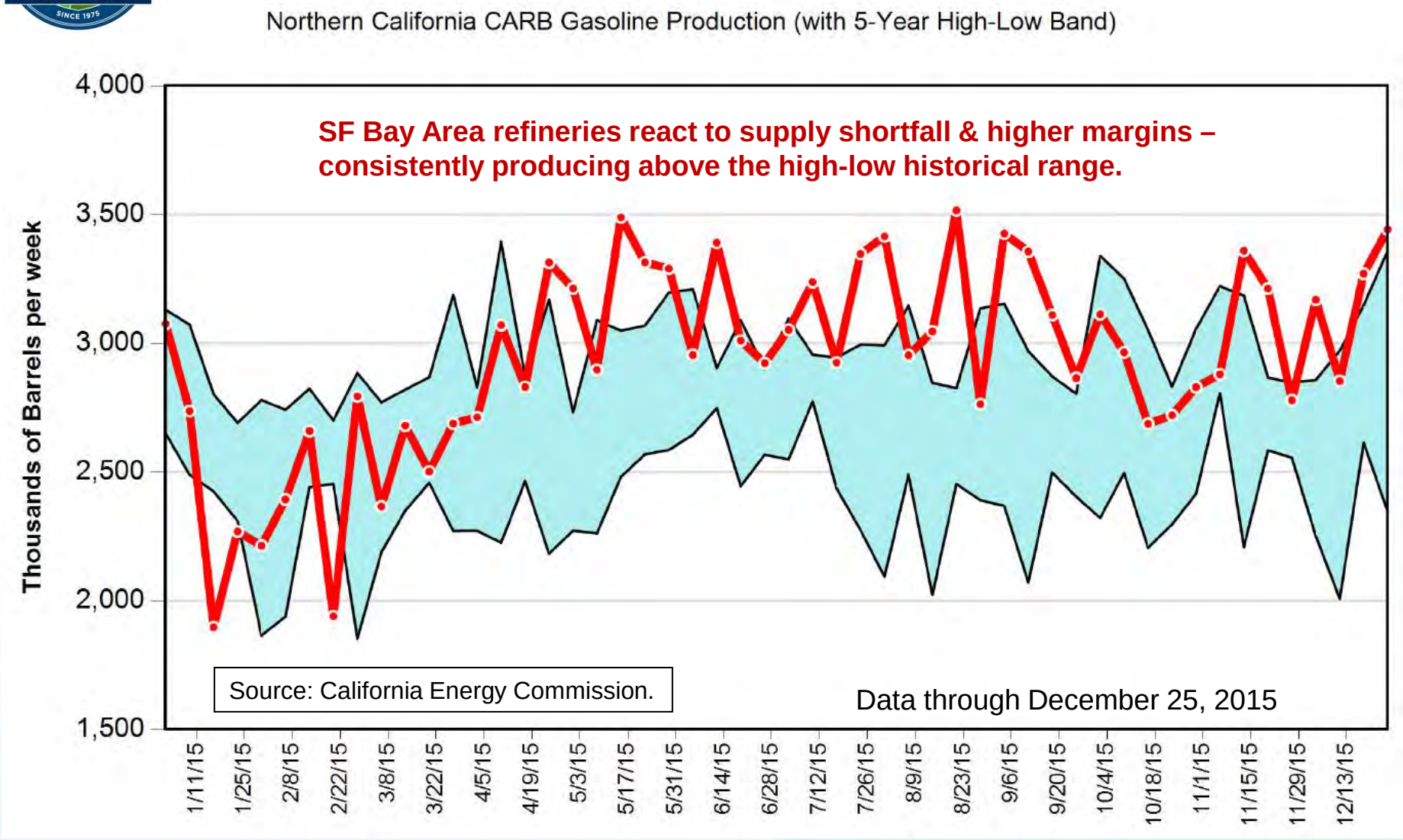
Sources: California Energy Commission analysis of Petroleum Industry Information Reporting Act (PIIRA) & Energy Information Administration (EIA) data.

Low Carbon Fuels Standard
Historical & Projected Credit Useage



Importance of renewable diesel for LCFS compliance forecast to grow and remain strong through 2030.

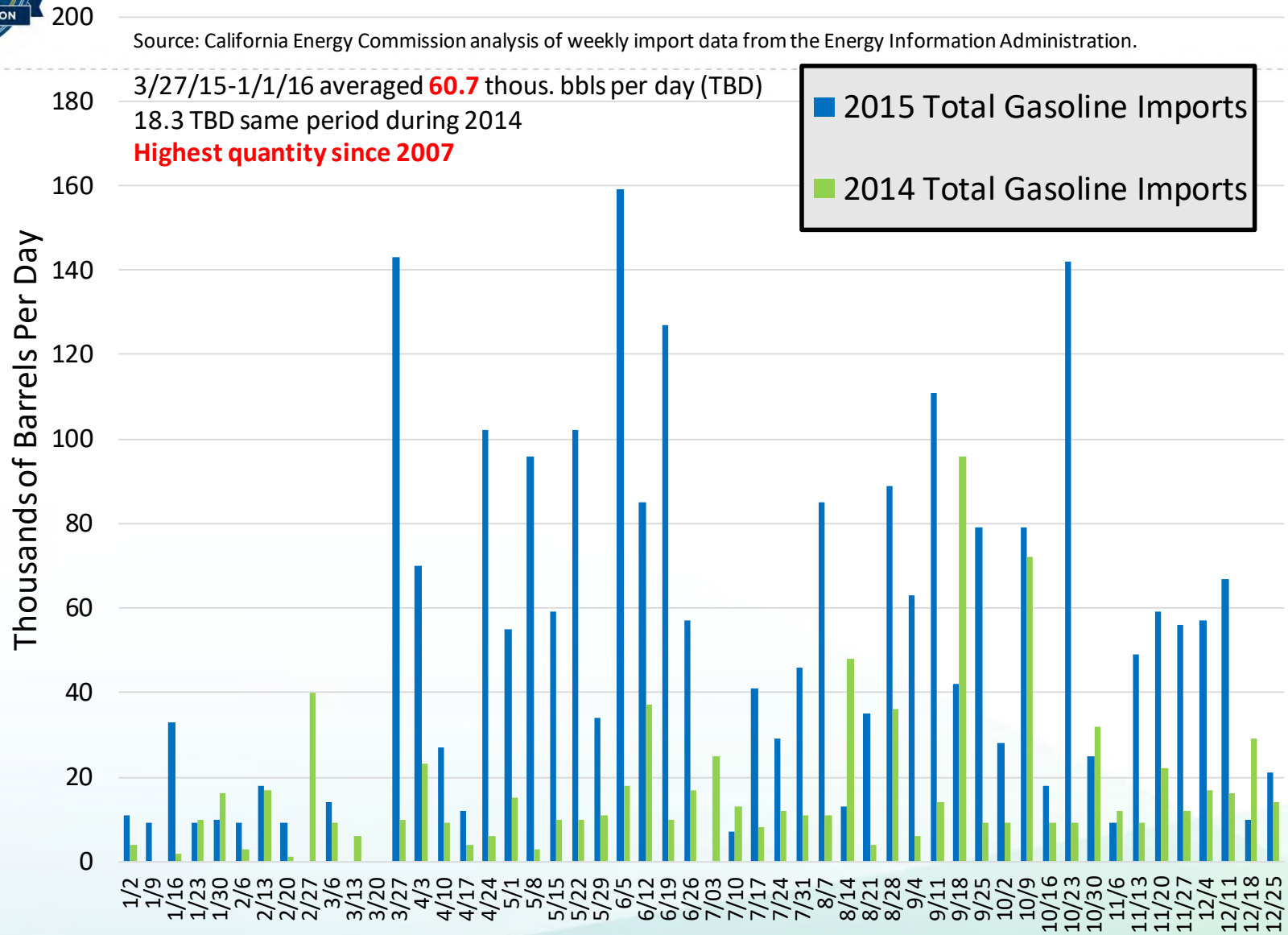
Gasoline Production - North



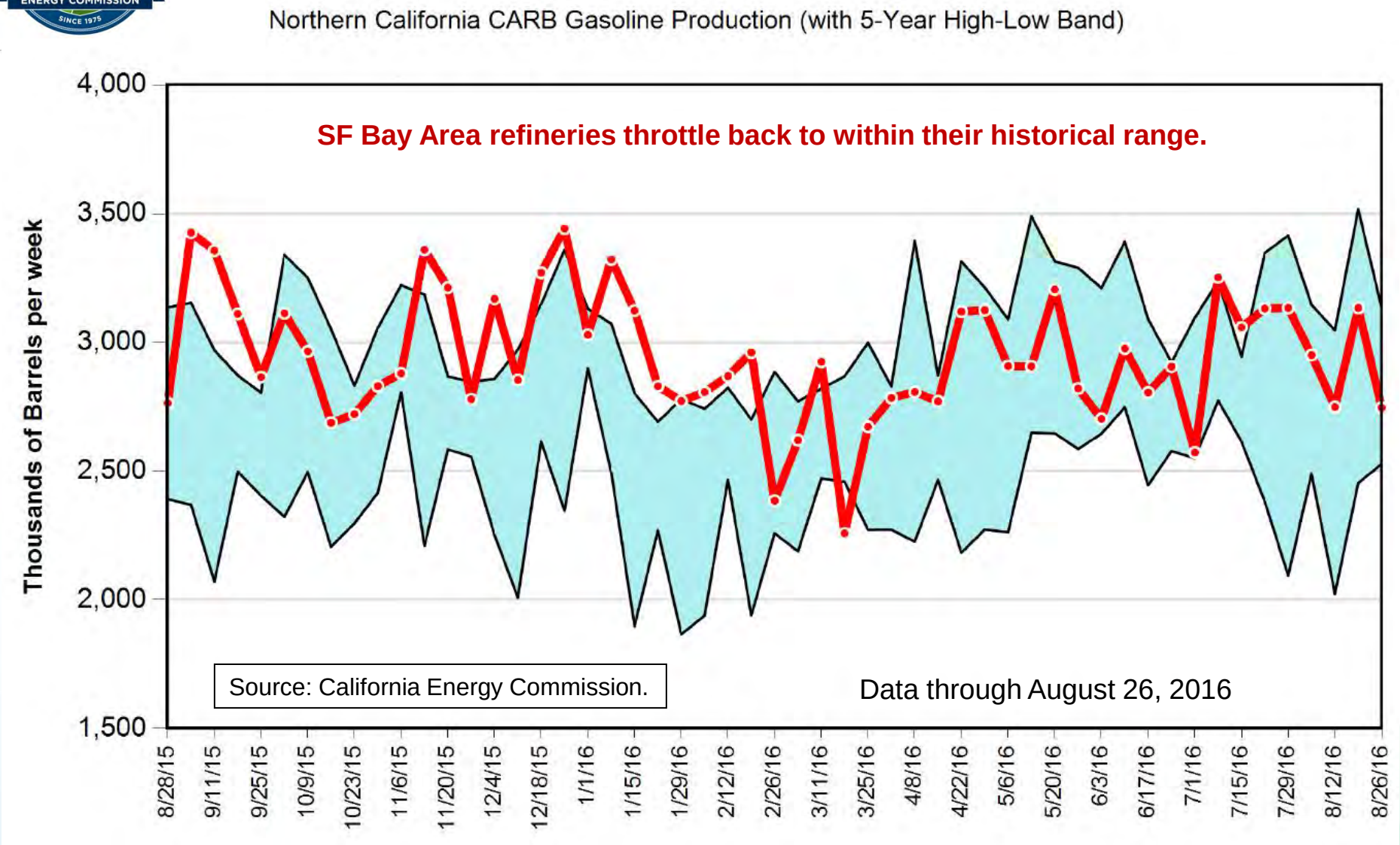
West Coast Foreign Gasoline Imports

Source: California Energy Commission analysis of weekly import data from the Energy Information Administration.

3/27/15-1/1/16 averaged **60.7** thous. bbls per day (TBD)
18.3 TBD same period during 2014
Highest quantity since 2007



Gasoline Production - North



West Coast Foreign Gasoline Imports

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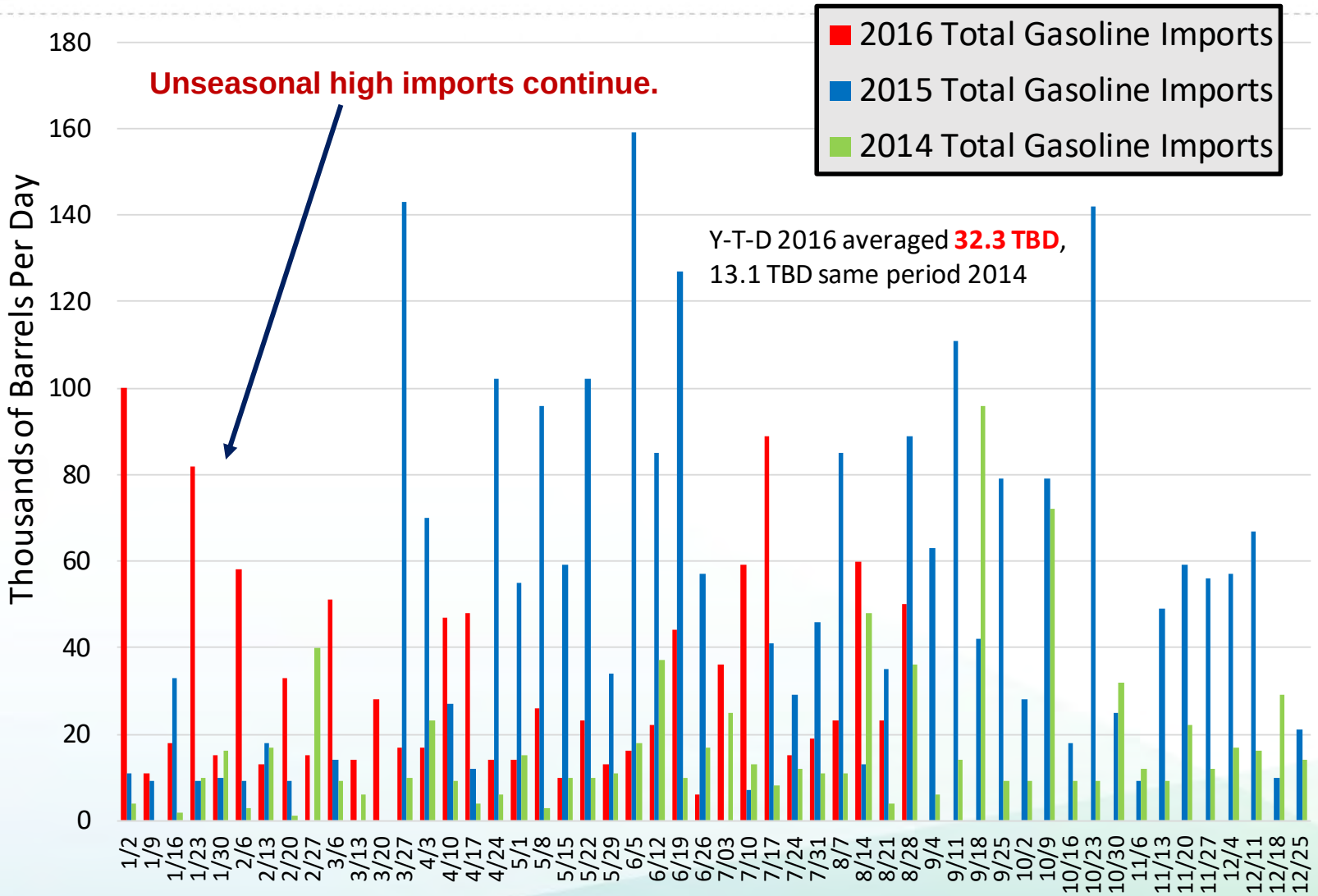
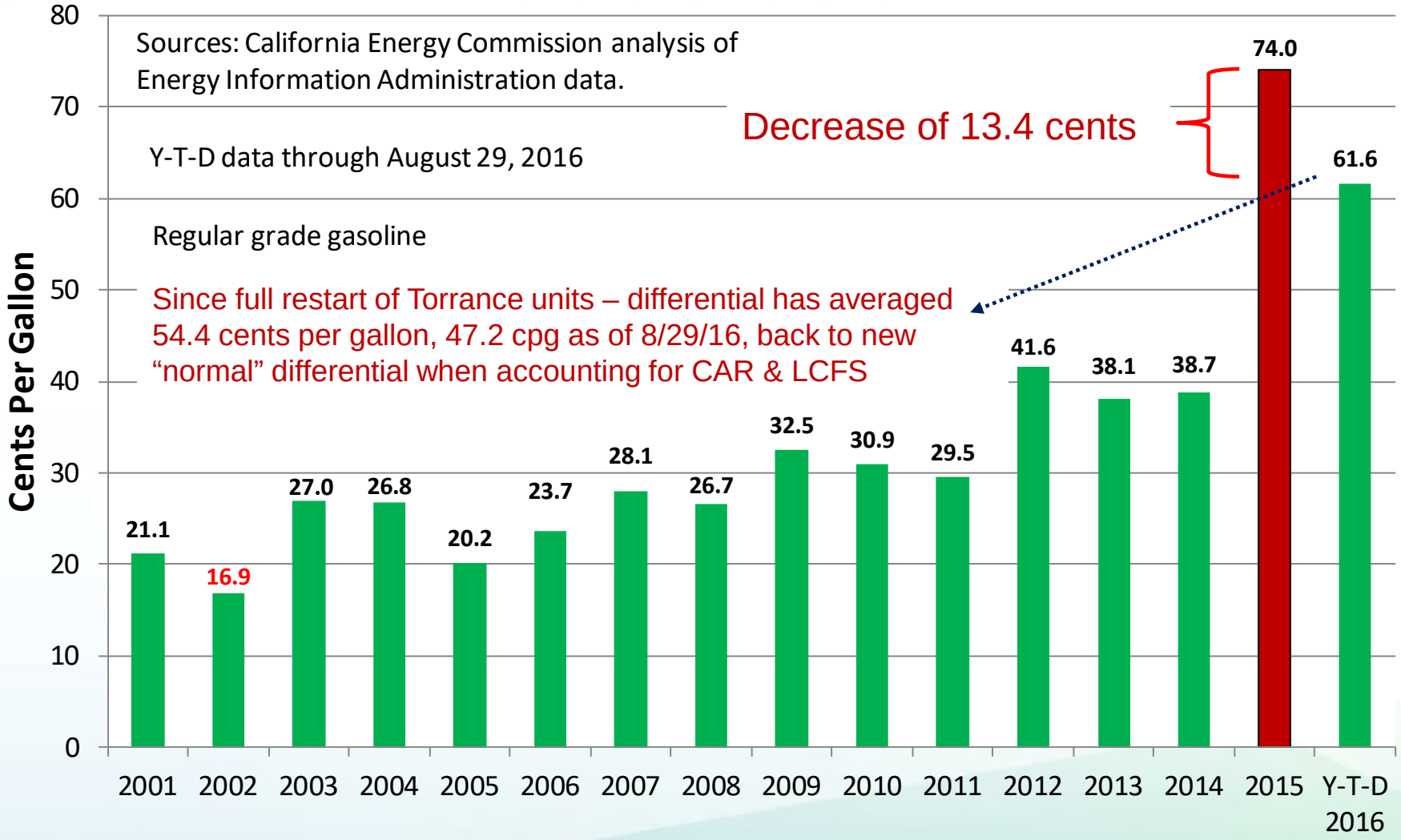


Retail Gasoline Price Differences California Less U.S. Average



AGENDA: 18

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Wildfire Season Preview

Board of Directors Special Meeting
May 5, 2021

Ranyee Chiang, Ph.D.
Director of Meteorology and Measurement
rchiang@baaqmd.gov

Presentation Outcome

- Preview the 2021 wildfire season
- Understand Air District role during wildfire events
- Overview of resources to inform the public before and during wildfire events

Presentation Outline

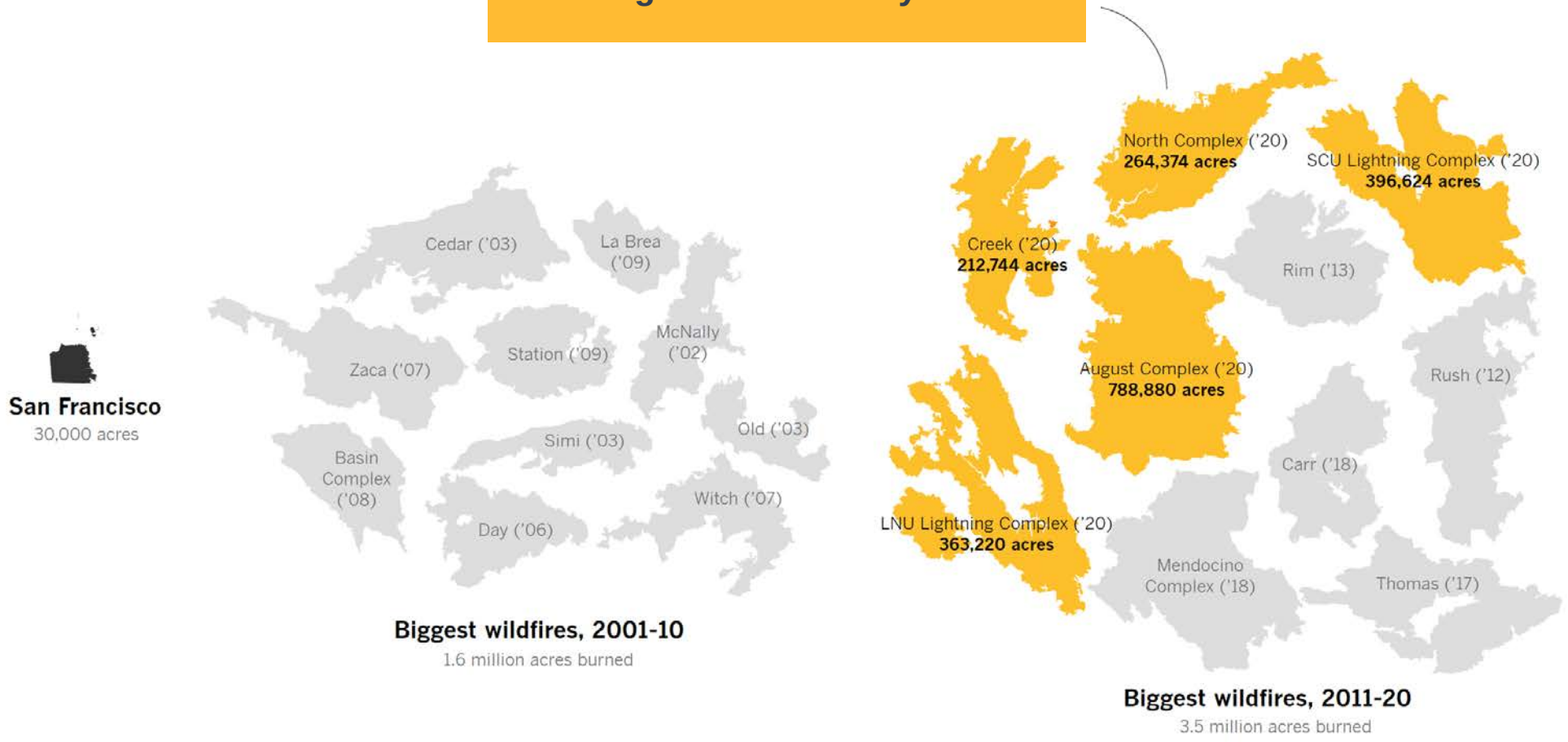
- 2021 Fire Season Outlook
- Air District role during wildfires
  - Monitoring
  - Forecasting
  - Communications
- Air quality resources
- Wildfire Air Quality Response Program
  - Reducing wildfire risk
  - Protecting indoor air quality

Presentation Requested Action

- None – informational presentation.

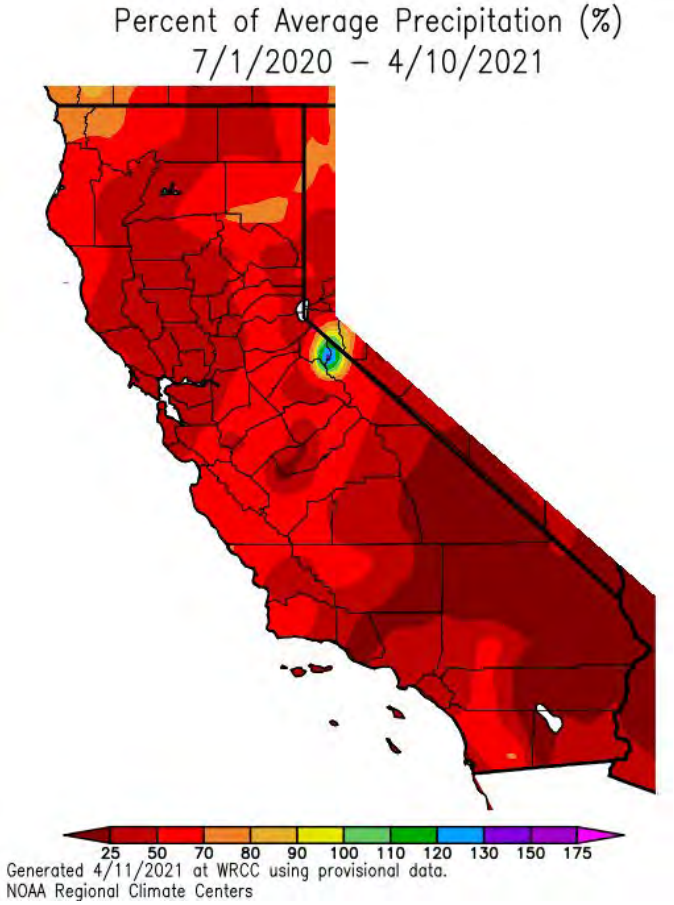
Wildfires in California Have Intensified

Five of these fires were
burning simultaneously in 2020



Source: https://www.latimes.com/projects/california-fires-damage-climate-change-analysis/

2021 Fire Season Outlook

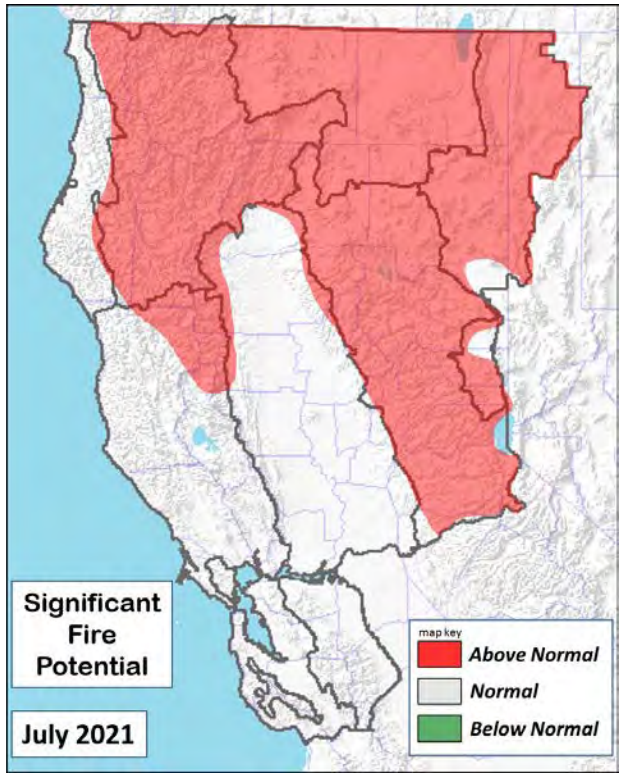


Low rainfall in the Bay Area

- 2020-2021 season (as of April 10, 2021): only ~35% of typical rainfall
- 2019-2020 season: 49% of typical rainfall

Potential fuels for fire will be dry earlier in the year

2021 Fire Season Likely to Start Earlier



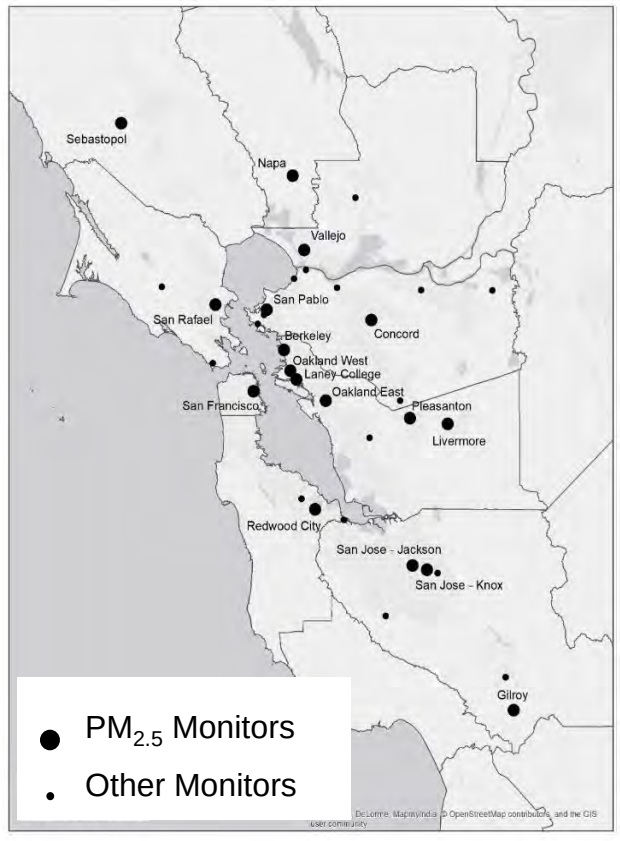
By July:
Higher risk of wildfire in mid/upper elevations

Sep – Nov:
Depends on severity of offshore wind events and when the next rainy season starts

Northern California Geographic Coordination Center

Air Monitoring

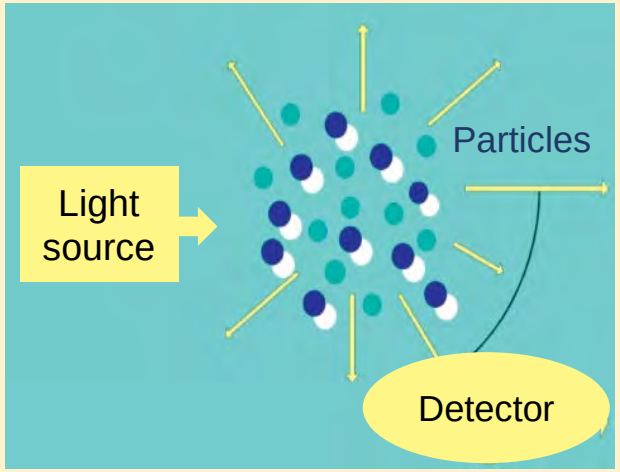
Air District Monitoring Network



Filter preparation; particles accumulate on filter for 24-hour period

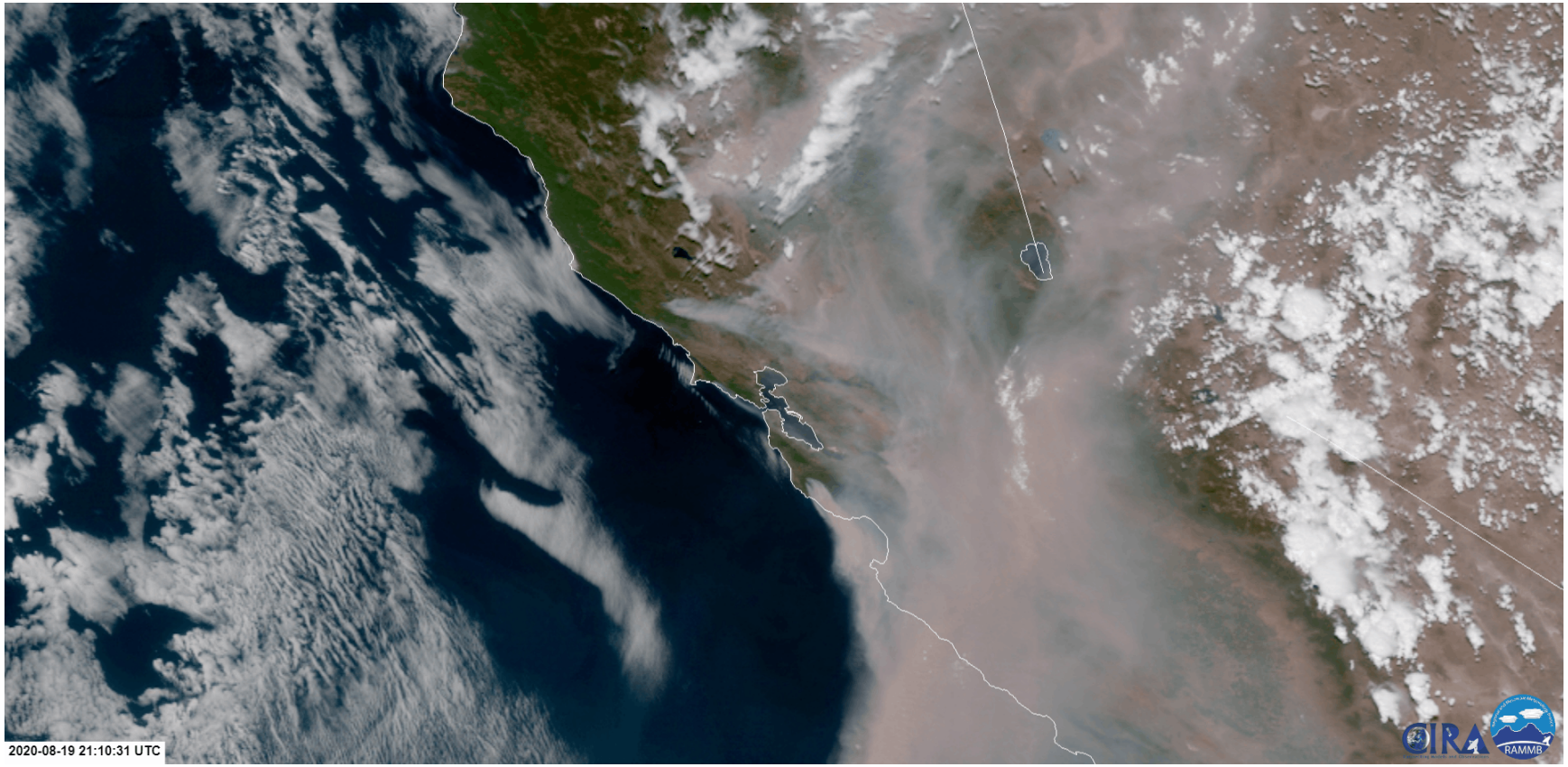
Filter tape after passing through a detector for hourly data

Low-cost Sensors



Lasers estimate the number of particles as they move through sensors

Air Quality Can Change Rapidly and Varies from One Location to Another



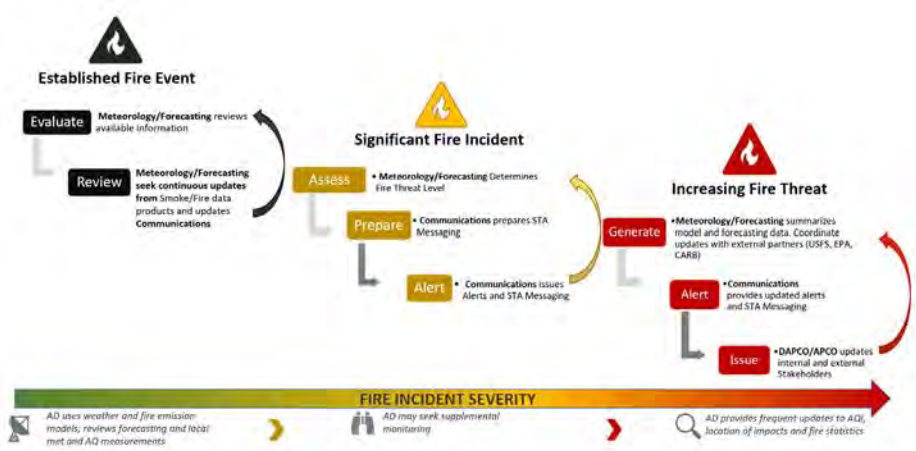
August 19, 2020

Forecasting During Wildfire Incidents

How is a smoke forecast produced?

- Air quality data
- Weather and smoke models
- Satellite imagery and cameras
- Local geography and wind flow
- Marine layer depth

Protocol for Fire Incidents

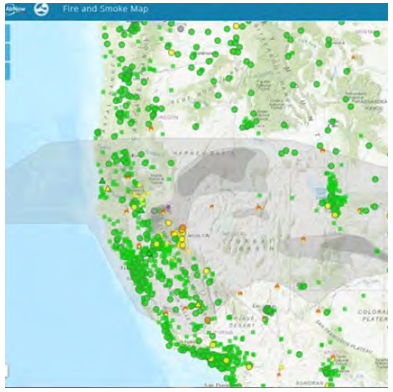


Communications

- Clear & Consistent Wildfire Messaging
  - Bay Area Public Health Officers & Public Information Officers
  - Daily Air Quality Updates & Talking Points
- Wildfire Materials, Videos, Web Page and Daily Air Quality Forecast Videos
- Extensive Public Air Quality Alert Notifications

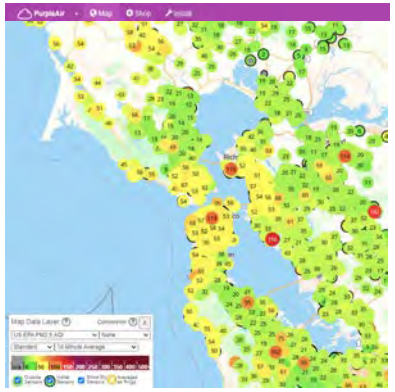
Where Can the Public Get Air Quality Data?

?



EPA Fire and Smoke Map

Clarity OpenMap



PurpleAir Map

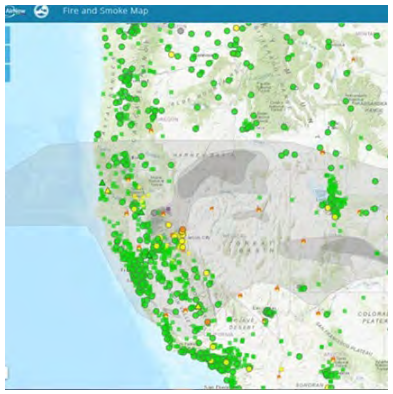
Air District Website

AirNow

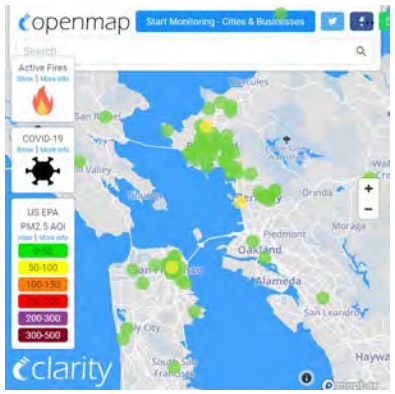
Additional details available: https://www.baaqmd.gov/~/media/files/ab617-community-health/richmond/quarterly-report-documents/guide-to-air-quality-data-websites-pdf.pdf?la=en

Where Can the Public Get Air Quality Data? (cont.)

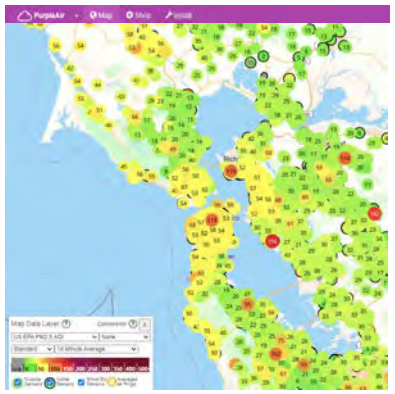
How bad is the air quality near where I am?



EPA Fire and Smoke Map



Clarity OpenMap



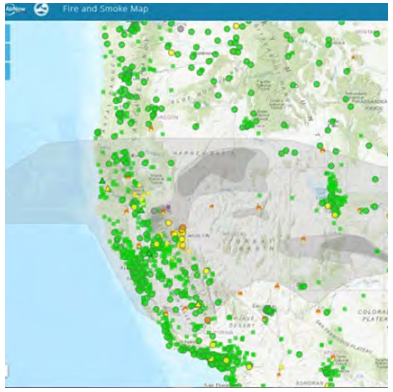
PurpleAir Map

Air District Website

AirNow

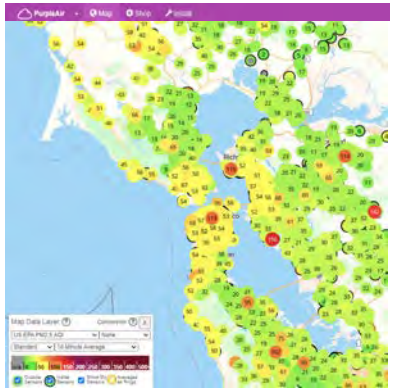
Where Can the Public Get Air Quality Data? (cont.)

Is air quality getting better or worse?



EPA Fire and Smoke Map

Clarity OpenMap



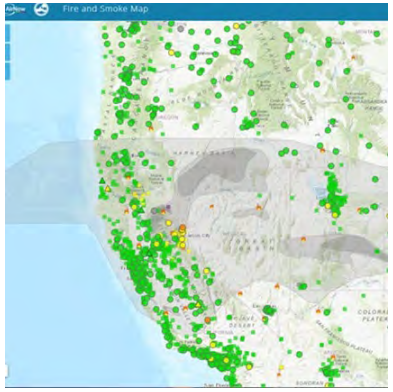
PurpleAir Map

Air District Website

AirNow

Where Can the Public Get Air Quality Data? (cont.)

How do air quality levels compare to health-based standards?



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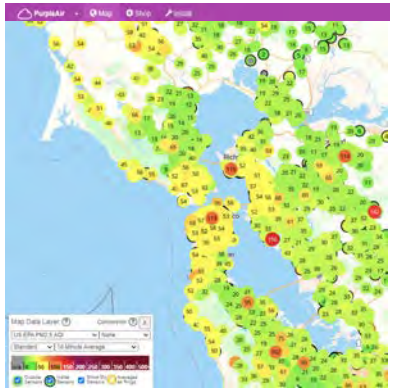

PurpleAir Map

Air District Website

AirNow

How to Prepare for Wildfire Smoke

HVAC system set to RECIRCULATE; upgrade to system that allows for both cooling and heating

Non-ozone producing air purifier (HEPA) or MERV 13 or greater filter for HVAC system

Identify locations that have cleaner filtered air spaces and make a plan

Weatherize the home

Individuals with health conditions should talk to their physicians

Additional details: https://www.baaqmd.gov/~/media/files/communications-and-outreach/wildfire-materials/wildfire-preparedness-tips-pdf.pdf?la=en

Reducing Wildfire Risk

Open Burn Program

- Approve Smoke Management Plans
- Amendment (Regulation 5) passed in 2019 exempts public agencies from fees when conducting prescribed burns for wildfire prevention
- Adopting web-based system to coordinate prescribed burns

Wildfire Prevention Chipping Pilot Program

- Properties can apply for free chipping services to dispose of material that would otherwise be burned to help reduce fuel loads and wildfire risks

Protecting Indoor Air Quality

Providing portable air filtration systems at wildfire evacuation centers

Wildfire Smoke Clean Air Center Incentive Program for Vulnerable Populations (AB 836)

Home Air Filtration Program for vulnerable populations suffering from poorly controlled asthma

Questions