



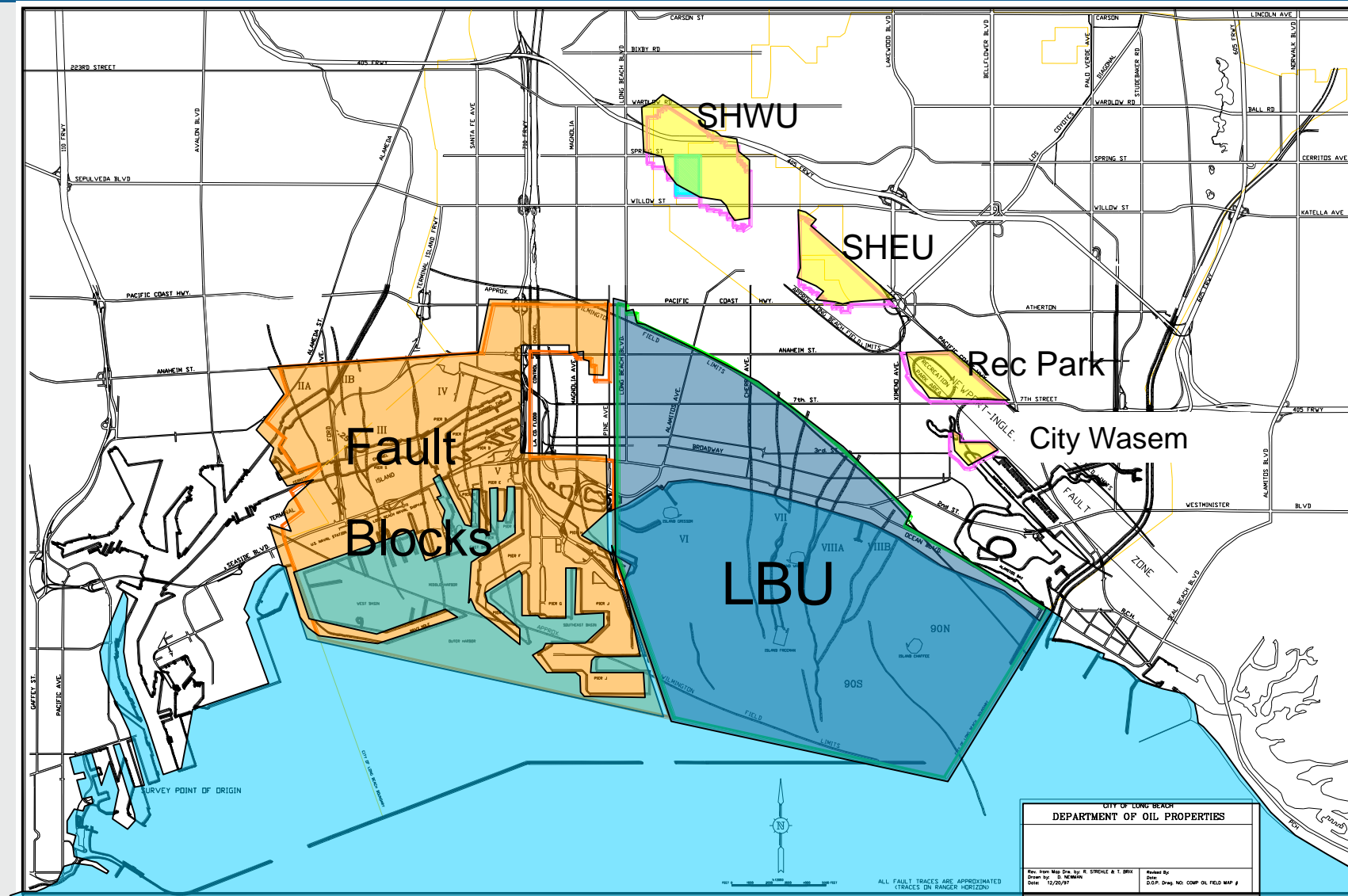
Planning for the Abandonment of the Wilmington Oil Field

Climate Action and Environmental Committee Meeting
March 15, 2022

City's Role In the Wilmington Oil Field Operations

- The City, through its Long Beach Energy Resources Department (LBER), is the Unit Operator of oil and gas assets located within the Wilmington Oil Field.
- Trustee for the State of California's oil assets in the Long Beach Tidelands.
- Review other oil operations where the City has a financial interest.
- Oversee oil production of approximately 10 million barrels of oil per year and management of over 2,400 active and idle production and injection wells.
- Subsidence management and post-production planning.
- Ensure the environment is protected and no adverse conditions are caused by oil operations.

Local Oil Operating Areas



Environmentally Responsible Closeout

- Long Beach knows and supports the position that oil production is not in our long-term future. Our City has been planning for the end of life of the field, which currently is estimated to be no earlier than 2035 and in advance of the Governor's 2045 target date to phase out oil extraction.
- Total Wilmington oil field abandonment liability is approximately \$1.2 billion.
- Each well and facility is unitized, which means the ownership and abandonment liability is shared amongst many owners.
- The agreements that govern the oil field place the abandonment liability on the owners, which is mostly the State and City.
- The City would need to use the General Fund or Tidelands Operating Fund (TOF) if it were unable to reserve the appropriate abandonment liability amount when oil operations cease.
- The City plans to take advantage of higher oil prices by reserving additional funds for the environmentally responsible phase out of the oil operations.

Wilmington Oil Field Abandonment Liability

Estimated Wilmington Oil Field Abandonment Liabilities:

| | |
|--------------|---|
| State | \$967 million |
| City | \$133.3 million |
| Townlot | \$60 million (~6,000 townlot owners @ \$10,000 per owner) |
| CRC | \$56 million |
| Total | \$1,216.3 million |

Existing Reserves for Wilmington Oil Field Abandonment Liability

Current Reserves for the Wilmington Oil Field Abandonment:

| | |
|---------|--|
| State | \$300 million |
| City | \$59 million |
| Townlot | unknown |
| CRC | Per State law, CRC has a bond for their share of the abandonment liability |

Wilmington Oil Field Abandonment Planning

- Currently, uneconomic wells are abandoned annually using operating revenue to decrease the inventory of idle wells.
- When oil operations cease, the City will bid for a new contractor focused exclusively on abandoning wells and closing out the oil field.
- Abandonment progression will occur first in areas that have become uneconomic to operate.
- It is anticipated that abandonment well work will require 3 to 5 years to complete.

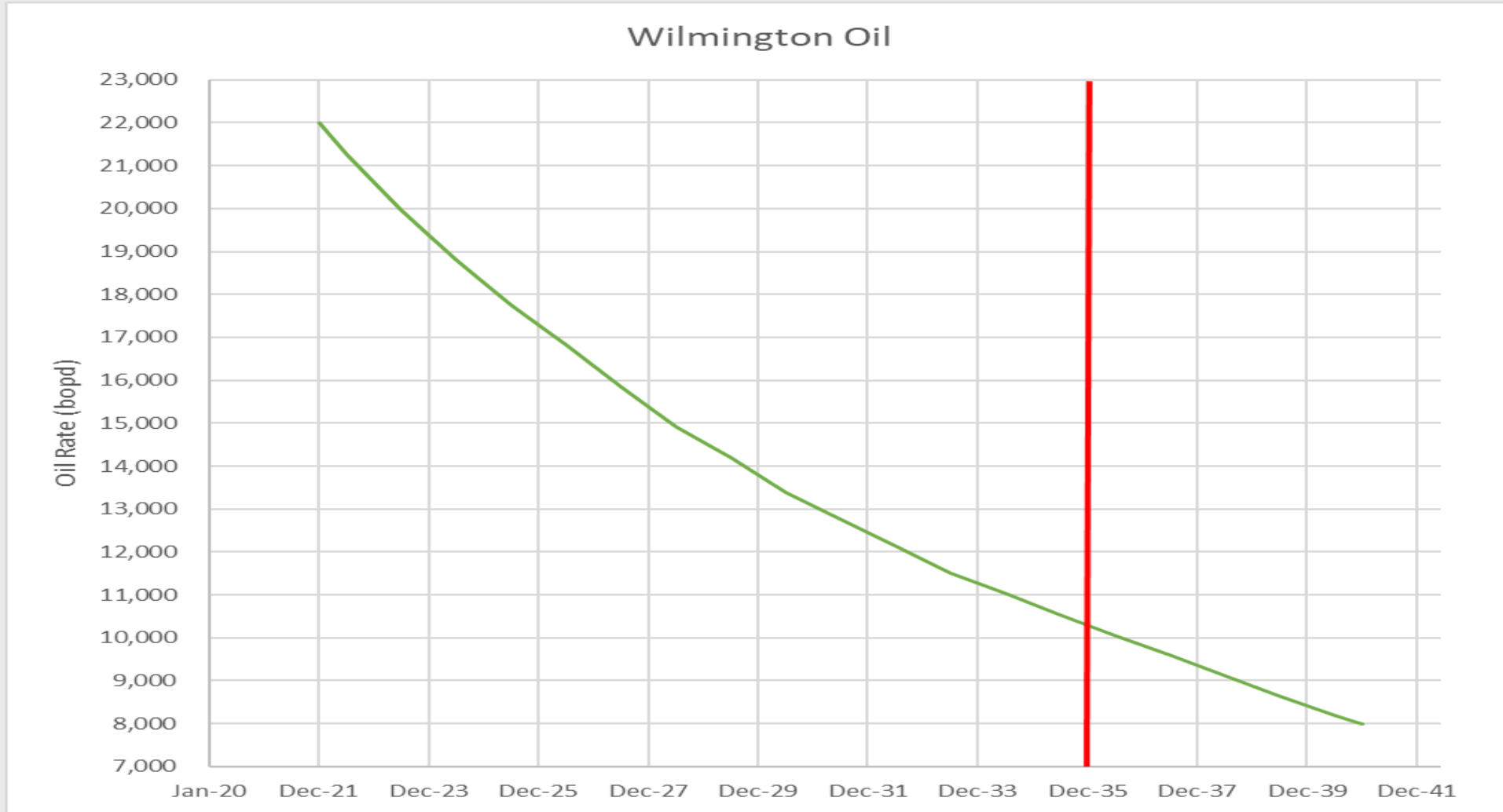
Wilmington Oil Field Abandonment Planning Risks

- Oil price collapse. Oil prices need to support funding the abandonment reserve while also providing net revenue to the City to support services.
- Cost to abandon the oil field increases faster than anticipated. LBER assumes a cost savings when the entire focus of the operation will be on abandoning the oil field.
- Regulation changes that could increase the cost of abandonment or shorten the economic life of the oil field before the fully funded abandonment liability targeted date of 2035.
- A financial situation that requires the City to use the abandonment reserve for another purpose.

Post-Production Subsidence Management

- Unknown what impact surface elevations will have once the oil field is no longer operational.
- Injection support will be required for a period of time after the production wells have been shut-in.
- Injection support may last an additional 5 to 15 years after oil extraction operations have stopped.
- Post-production injection support will require wells, facilities and a source of injection water.
- State legislation established a subsidence fund to pay for the management of surface elevations post-production. The fund has \$180 million available.
- Once the post-production injection support is no longer needed, the remaining wells and surface facilities will be abandoned.

Wilmington Oil Field Production Forecast



Financial Impact of the City's Oil Operations


- Total annual net revenue to the City is estimated at \$45 million for FY 22.
 - \$28 million to the General and Tidelands fund from City oil ownership.
 - An additional \$17 million in tax revenue from Property Tax, Sales Tax and Utilities Users Tax.
 - Measure US implemented in FY 22 to fund initiatives addressing climate change, community health and youth services.
- Over 1,000 local jobs supported by oil operations in the City.
- The oil revenue funds public safety, community services and capital projects within the Tidelands.
- State of California's net revenue in FY 21 from the Wilmington Oil Field was approximately \$70 million.
- Oil operations have generated more than \$5 billion for the City, State and County since 2003
- Thousands of individual mineral interest owners (6,000+) are also stakeholders in the Wilmington Oil Field.

Priority #1 - Safety and the Environment

- LBER is fully committed to continuing to protect the City's environmental landscape and ensuring no adverse conditions arise as a result of its oil operations
- No major spills to the ocean in the history of the City's oil operations. Over the last ten years, a total of 10 gallons of oil have spilled into the ocean.
- Well drilling is limited to areas defined in the City's Municipal Code.
- No fresh water is used in the oil operations.
- No hydraulic fracture well stimulation treatments conducted since 2013.
- City staff conduct quarterly safety inspections and assist with inspections by State regulators.
- Working on a project to provide 1 megawatt of solar power for the oil operations.
- Decrease in oil production represents 11% of the City's 2030 CAAP goal for CO₂ reduction.

Summary

- Long Beach knows and supports the position that oil production is not in our long-term future.
- Subsidence management will continue beyond the life of the oil field and funding is already secured.
- The City will continue to reserve funds for its abandonment obligations and support the State's efforts to properly save for their share of the abandonment liability.
- Continue to work with the local, State and Federal agencies that regulate the oil operations.
- Maintain the best-in-class safety and environmental record at THUMS.
- Explore ideas to offset the carbon footprint of the oil operations through efforts like solar power and carbon sequestration.
- Continue to generate oil revenue for the City while ensuring the environment is protected and no adverse conditions are caused by oil operations.

A nighttime photograph of the Long Beach skyline. The city lights, including several tall buildings and palm trees, are reflected in the calm water in the foreground. A semi-transparent white rectangular box is overlaid on the left side of the image, containing the text "Thank you Questions?".

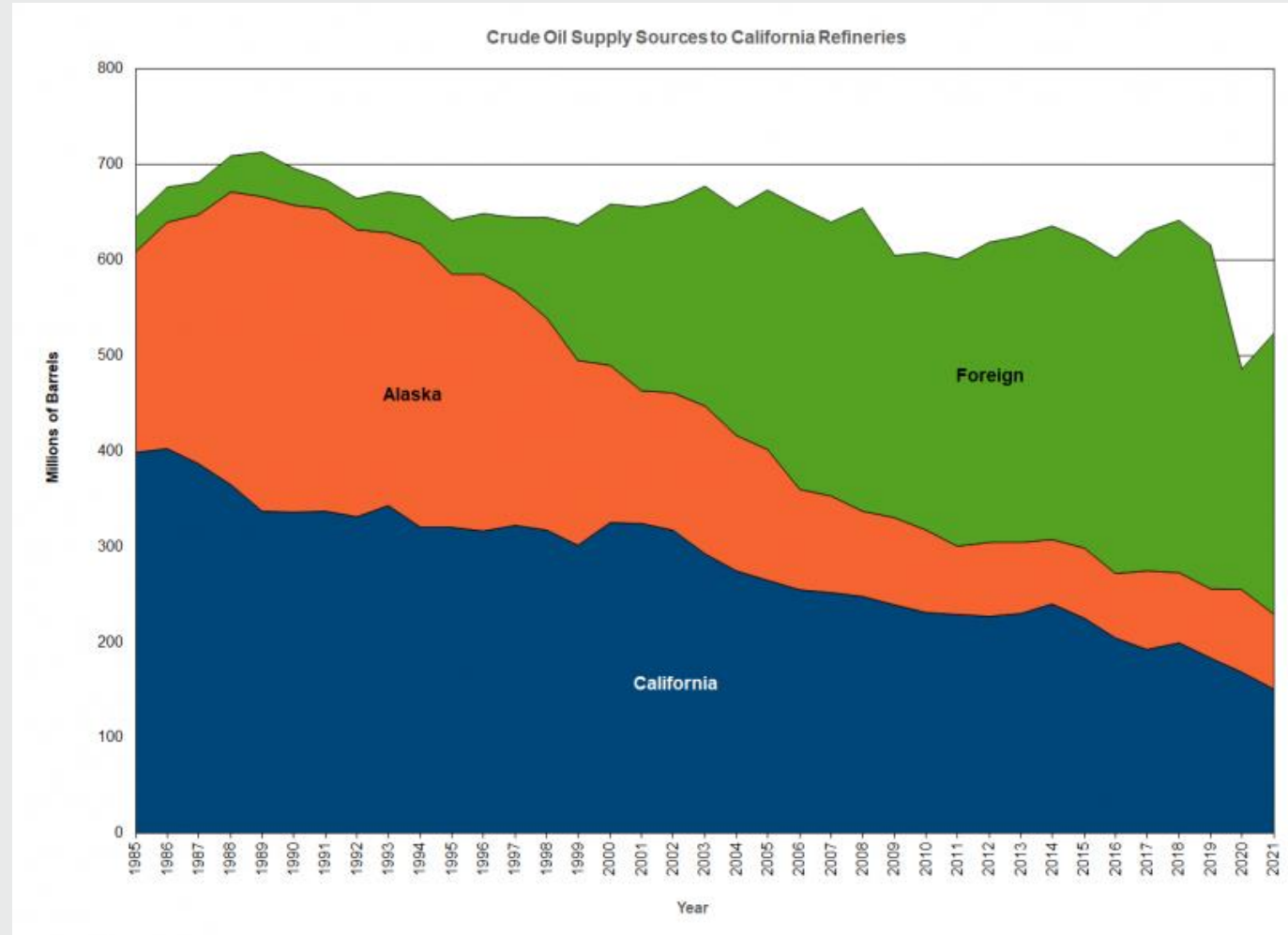
**Thank you
Questions?**

Back-Up Slides

California Oil Demand

- In 2021, California consumed 524 million barrels of oil (1.44 million barrels per day).
- 2nd highest oil consumption by State. CA consumes more oil than the entire country of Mexico.
- California In-State production provides 28.9% of the current demand. No oil pipelines into CA.
- Imported oil via tankers. 169 million barrels of oil imported through the Port of Long Beach in 2019.
- Alaska provides 14.9% and 56.2% comes from foreign sources.

Source: CA Energy Commission



California Oil Demand

- Largest importer of crude oil is Ecuador.

Source: CA Energy Commission

