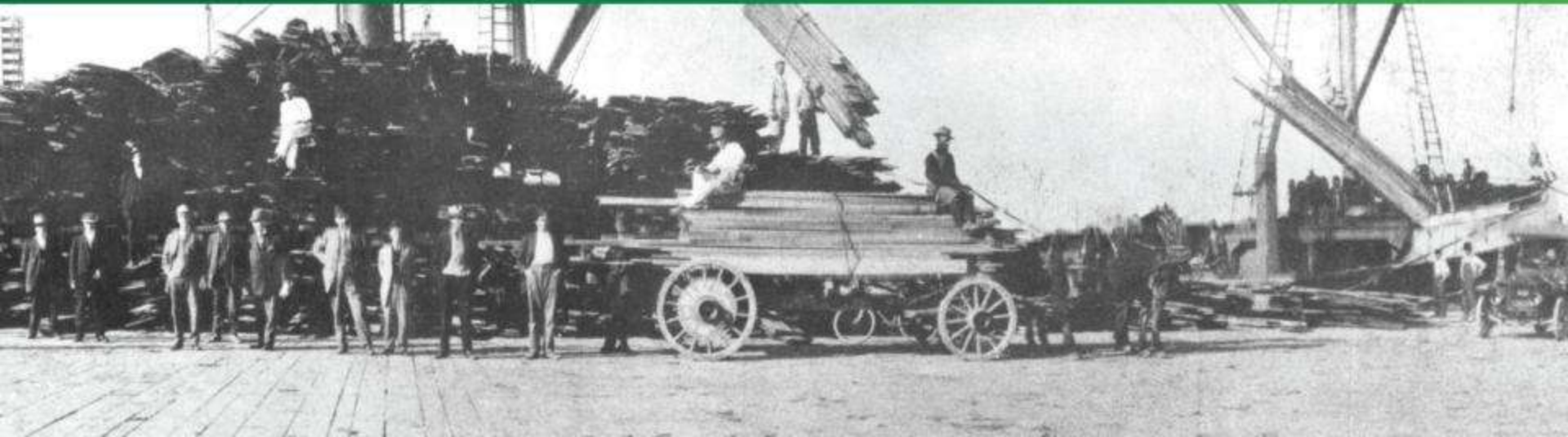




# Environmental Lease Requirements

Gail Wasil

Assistant Director of Real Estate



# Why go “green”?

100  
Centennial  
Celebration



Port can only move ahead with its projects with the support of the operators, community and political leaders



# Green Port Policy

100  
Centennial  
Celebration



- Protect the community from negative Port impacts
- Distinguish Port as environmental leader
- Promote sustainability
- Employ best available technology
- Engage and educate the community about the Port



# Clean Air Action Plan

100  
Centennial  
Celebration



- Groundbreaking plan to significantly reduce air pollution and health risk
- Strategies targeting reductions from all port sources: ships, trucks, trains
- Developed jointly with Port of Los Angeles, in cooperation with EPA, CARB and AQMD



# Implementation

100  
Centennial  
Celebration

Port of  
LONG BEACH  
The Green Port

- Grants
- Tariff changes
- Lease requirements

Environmental covenants have preceded, exceeded, or met state/federal regulatory requirements, serving as “backstop”

# Vessel Speed Reduction

100  
Centennial  
Celebration

Port of  
LONG BEACH  
The Green Port

**12 knots** – Reducing speed on arrival and departure to cut emissions

**25%** - Dockage discount for participation to 40 nm

**97%** - Participation to 20 nm

**82%** - Participation to 40 nm



1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100



# At-Berth Emission Reduction

100  
Centennial  
Celebration



**100%** - goal for shore power facilities at all container terminals, cruise ship terminals and selected crude terminals

2014 – by this date, half of container ships must use shore power

2020 – by this date, 80% of container ships must use shore power



1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951

1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936

# Cleaner Vessel Fuels

100  
Centennial  
Celebration



**2008** - Port incentive to use low-sulfur fuels ( $\leq 0.2\%$ )

**2009** – State requires  $\leq 0.2\%$  sulfur fuels for all vessel engines within 24 nm

**2012** – State requires  $\leq 0.1\%$  sulfur fuel within 24 nm

**2015** – State requires  $\leq 0.1\%$  sulfur fuel within 200 nm

**80%** - Reduction in vessel particulate matter emissions





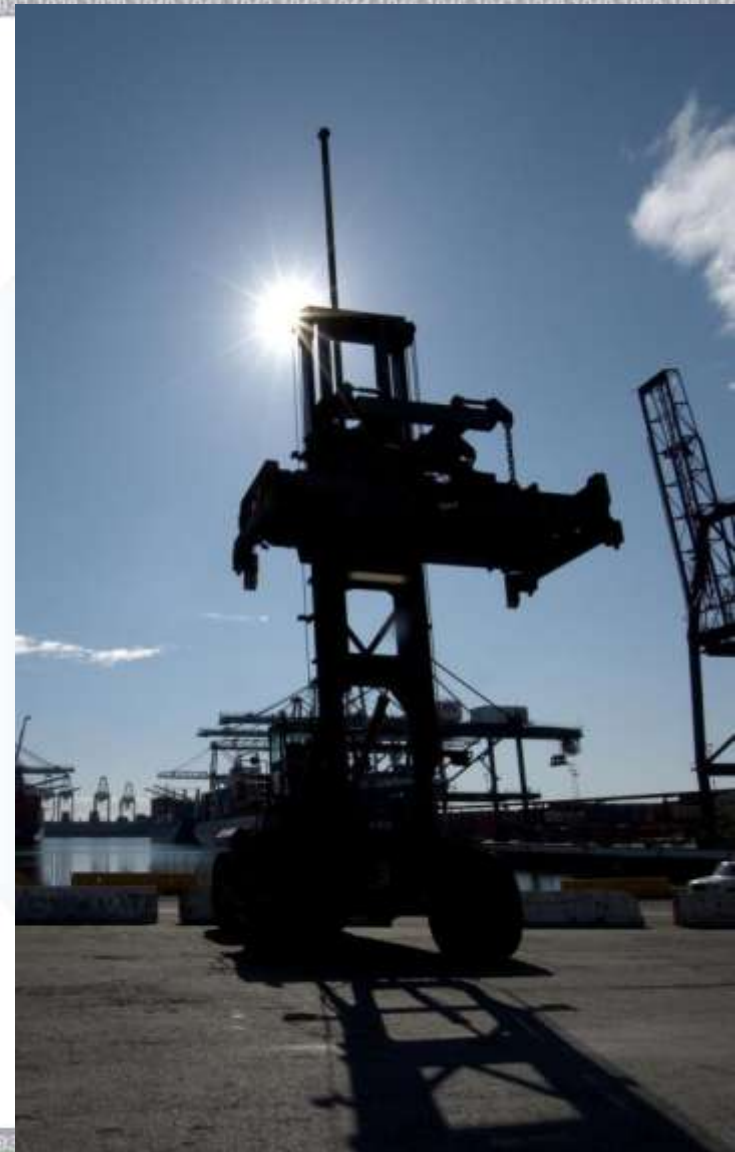
# Cargo-Handling Equipment

100  
Centennial  
Celebration



2007 - New purchases must meet cleaner standards

2010 – 2014 - Replacement requirements for existing equipment

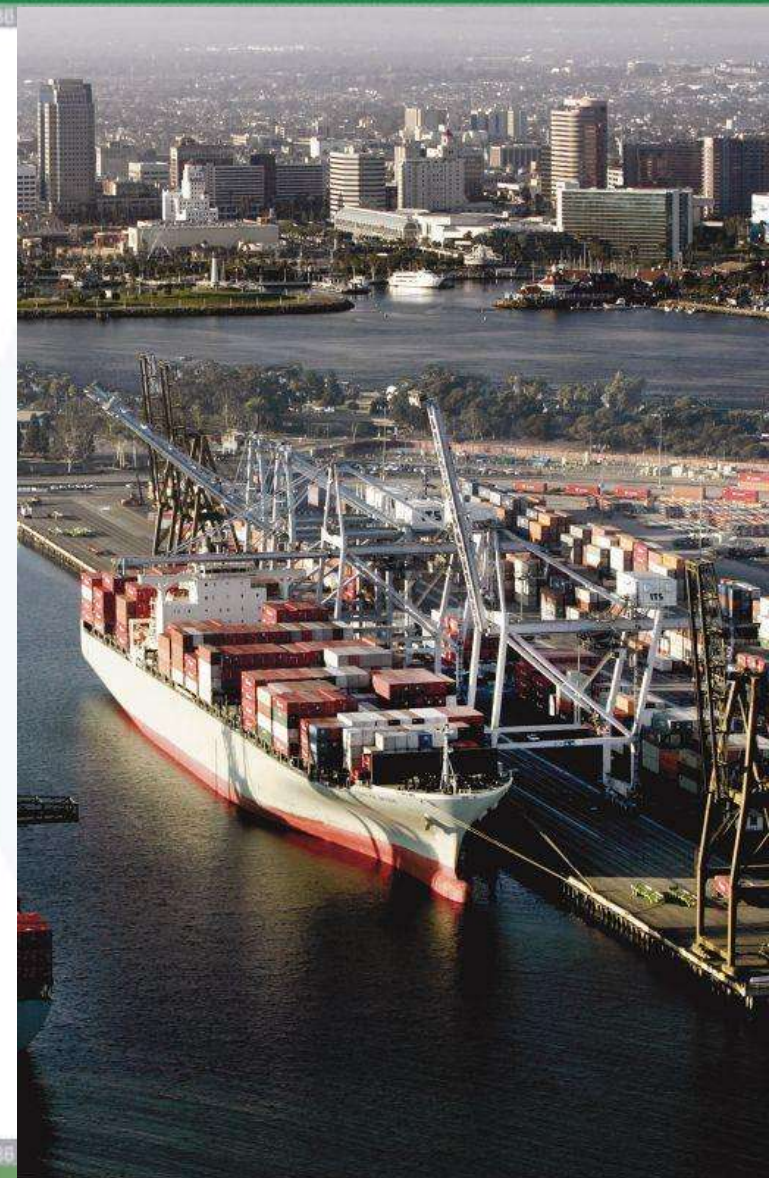


# Other Strategies

100  
Centennial  
Celebration

Port of  
LONG BEACH  
The Green Port

- LEED Buildings
- Encourage deployment of retrofitted ships to our Port
- Five Year Re-Opener
- Participation in Demonstration Projects



1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936



# Lessons Learned

100  
Centennial  
Celebration



## Technical Support is Crucial



1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952



Understand tenant's operations;  
Understand the financial implications of environmental requirements

1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952

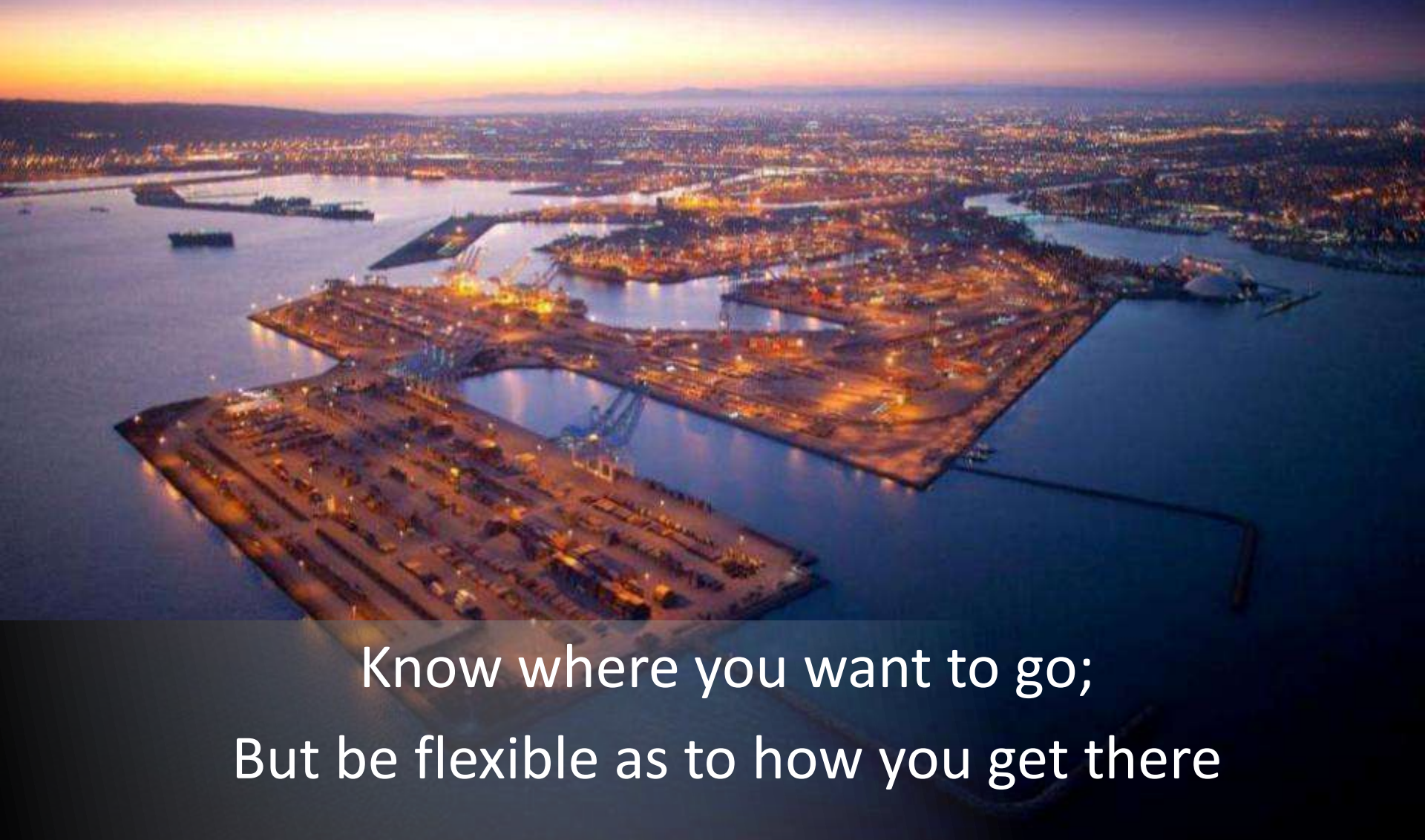


# Lessons Learned

100  
Centennial  
Celebration



1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030



Know where you want to go;  
But be flexible as to how you get there