



# **WASTEWATER MASTER STUDY FOR CITY OF NORTH LAS VEGAS APEX/KAPEX THROUGH SNWA**

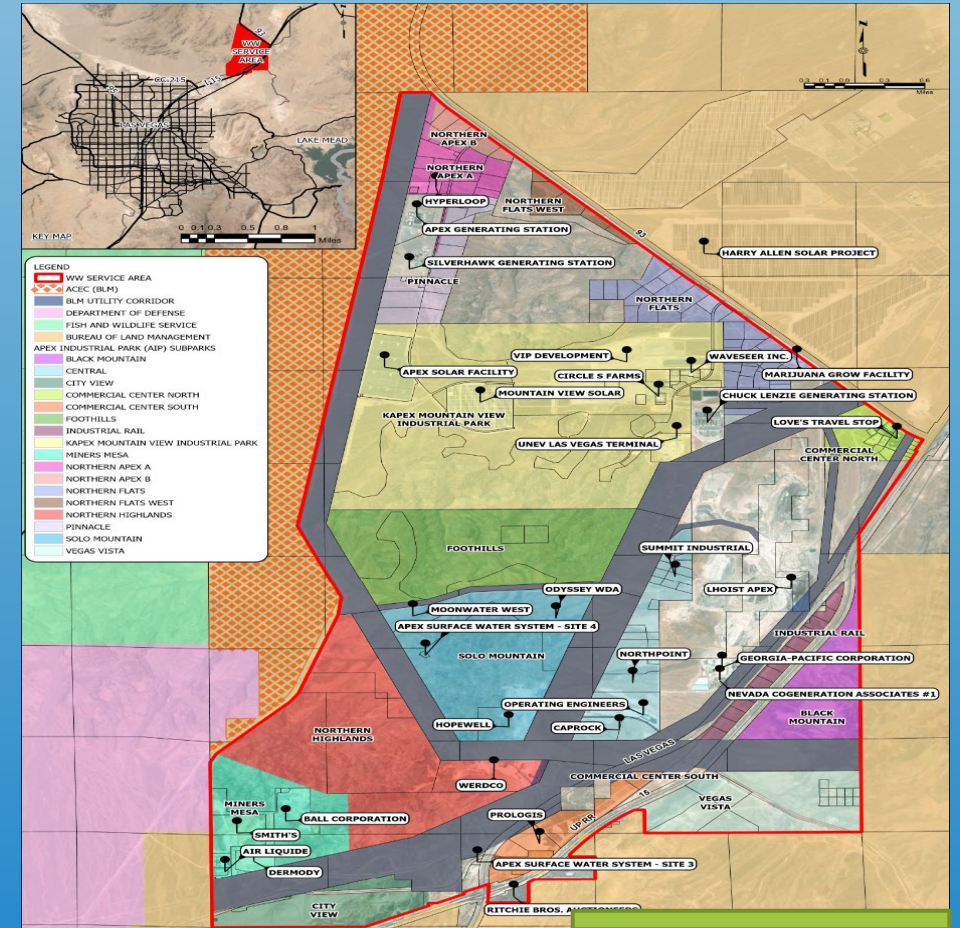
PRESENTED BY:

ERNIE C. BUO, P.E.  
Senior Civil Engineer  
CNLV Public Works  
Development and Flood Control

# MISSION OF GARNET VALLEY WASTEWATER SYSTEM (GVWWS)

Maximize Southern Nevada's water resources by developing the necessary infrastructure to capture wastewater from the Garnet Valley hydrographic basin and convey it to be treated and returned to Lake Mead.

The Apex Industrial Park comprises of over 19,000 acres with approximately 8,100 acres of developable area.

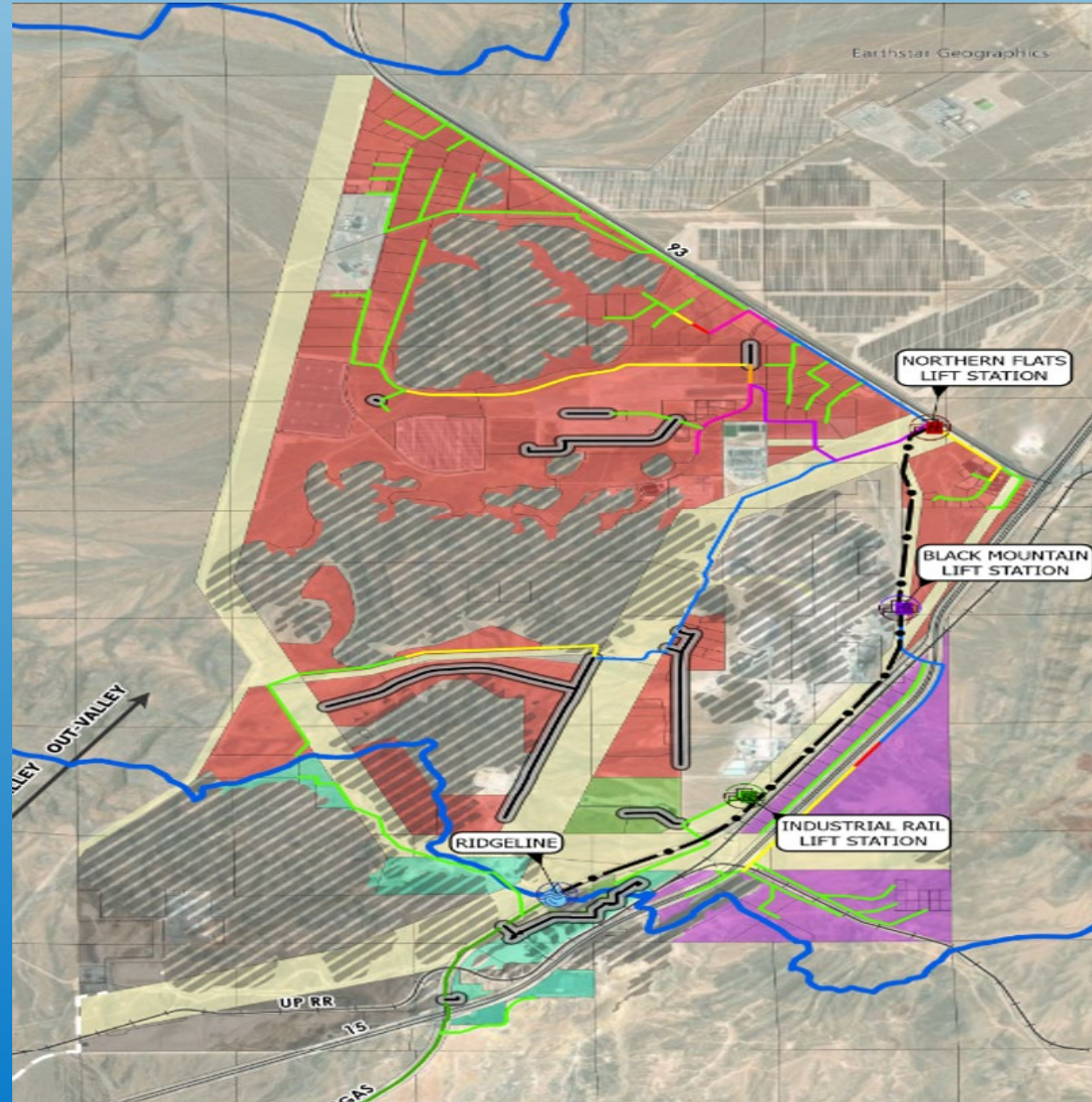
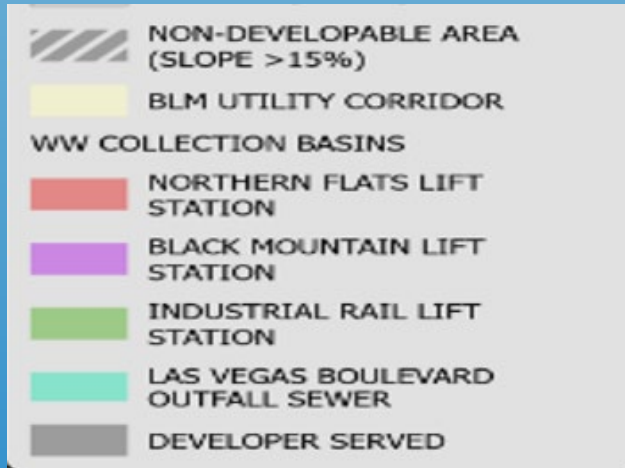


# PROJECT DESCRIPTION

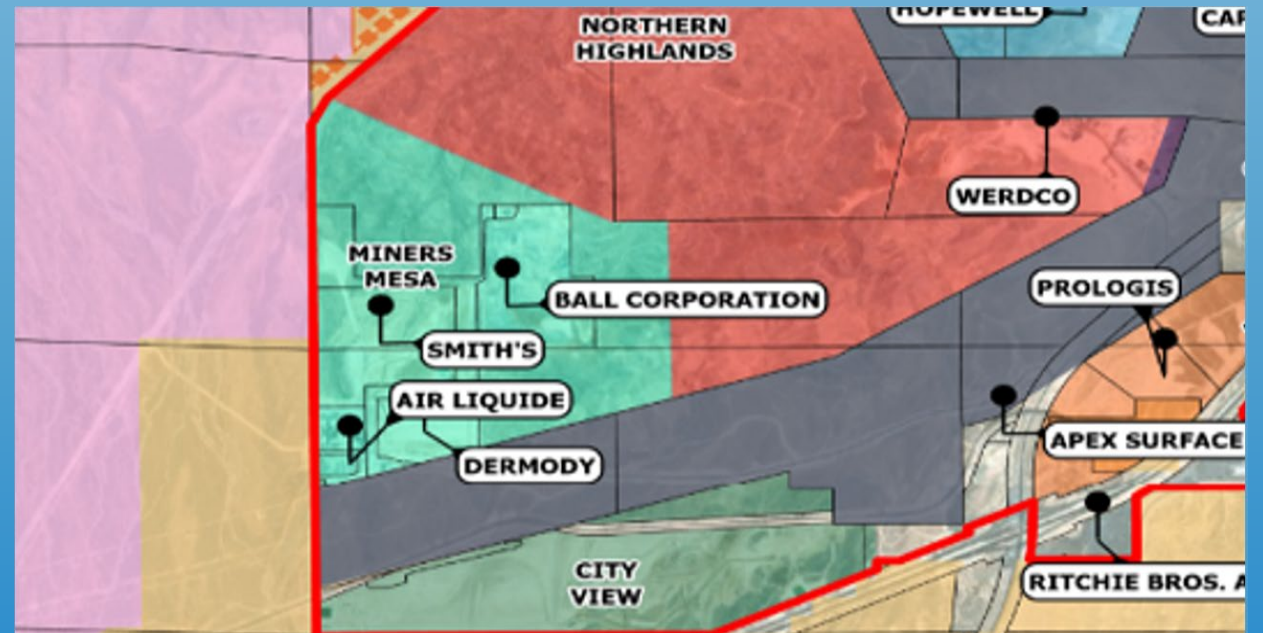
- Construction of wastewater infrastructure to APEX through SNWA.
- Reduce water demand impacts to the Colorado River.
- The Garnet Valley Wastewater System (GVWWS) will convey flows to three in-series lift stations:
  - \* Northern Flats
  - \* Black Mountain
  - \* Industrial Rail



# COLLECTION BASINS

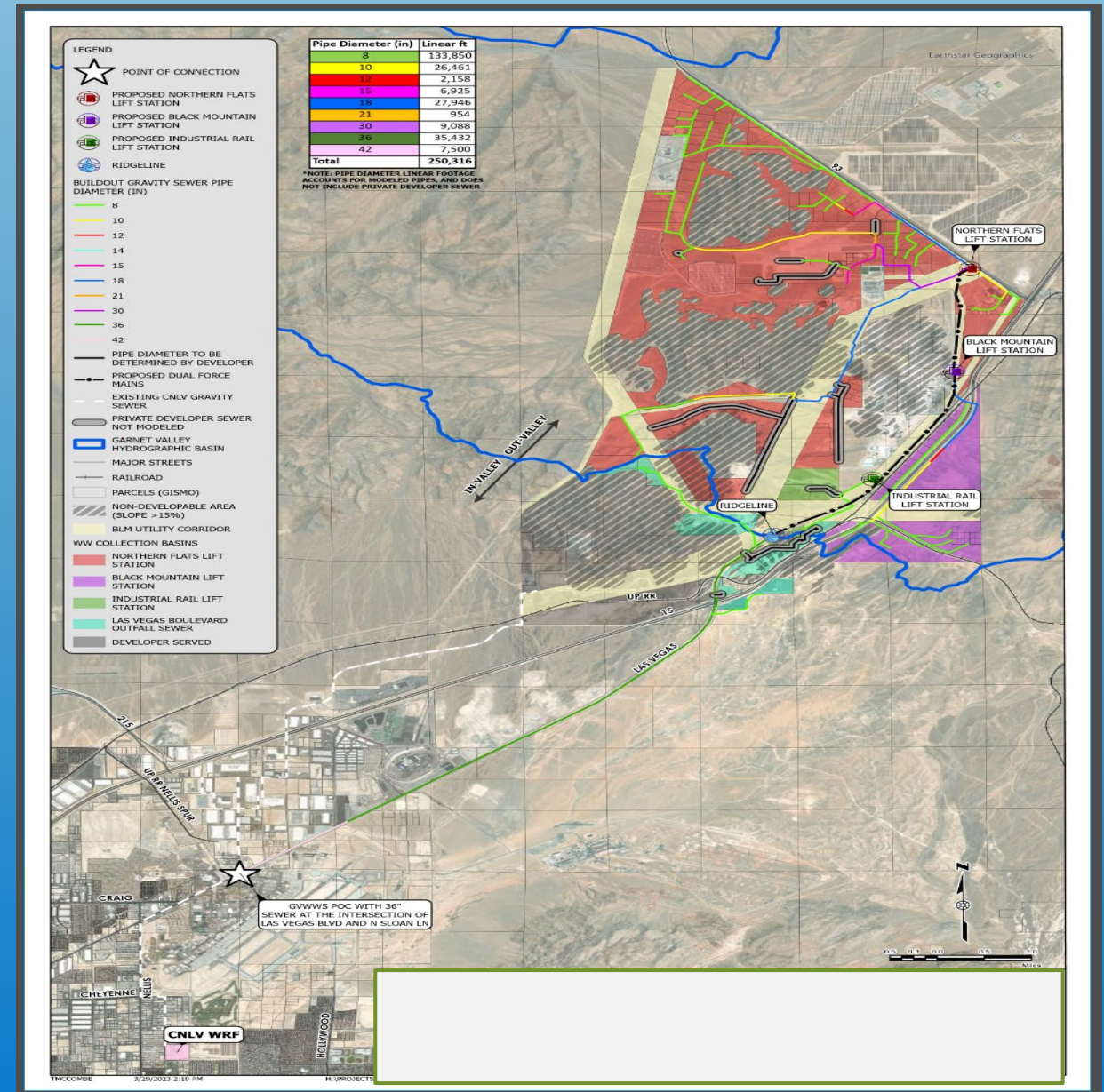


# DEVELOPER SERVED BASINS

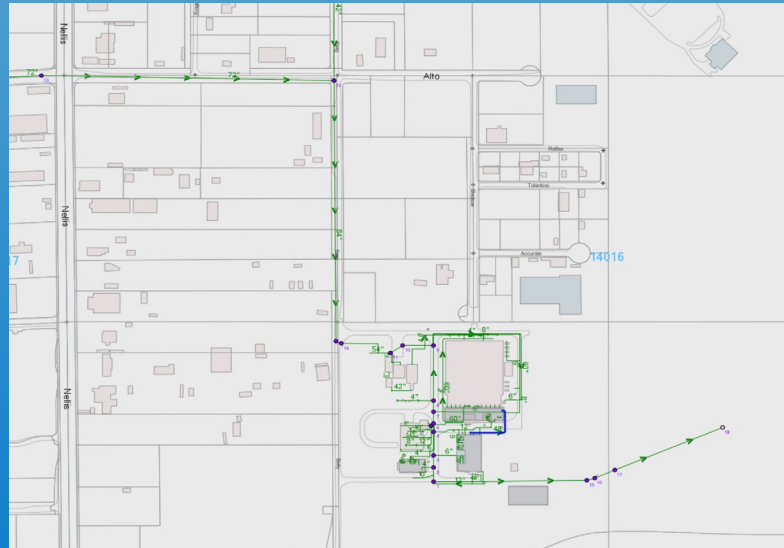


# POINT OF CONNECTION

- A. In-Valley Wastewater Conveyance  
- POC on the CNLV Northeast Interceptor  
via an outfall gravity pipeline.
- B. Out-Valley Wastewater Conveyance  
- Combination of lift stations, gravity  
sewers, and force mains to convey Out-  
Valley wastewater to the Garnet  
Valley/Las Vegas Hydrographic Basin  
ridgeline.



The map displays a grid of lot numbers ranging from 12405 to 14136. A blue circle highlights the area around the CNLV Water Reclamation Facility, which is labeled with a blue box and an arrow. The facility is located near the intersection of the 14000s and 14100s lot numbers. The map also shows various neighborhood names and landmarks, including the Strip, the Strip, and the Strip.



# PROPOSED SEWER LINES

Table 3 – Sanitary Sewer Pipe Schedule

| Pipe Diameter | Total Length (lf) |
|---------------|-------------------|
| 8             | 133,850           |
| 10            | 26,461            |
| 12            | 2,158             |
| 15            | 6,925             |
| 18            | 27,946            |
| 21            | 954               |
| 30            | 9,088             |
| 36            | 35,432            |
| 42            | 7,500             |
| <b>Total</b>  | <b>250,316</b>    |

|                |           |
|----------------|-----------|
| 30" Force Main | 28,330 LF |
| 20" Force Main | 19,357 LF |
| 16" Force Main | 8,974 LF  |

# TYPES OF DEVELOPMENT

| TYPE OF DEVELOPMENT                    | NO. OF BUSINESSES |
|--|-------------------|
| Retail/Commercial                      | 16                |
| Convenient Store/Restaurant/Truck Stop | 1                 |
| Light Manufacturing                    | 34                |
| Heavy Manufacturing                    | 34                |
| Warehouse/Office/Storage               | 113               |
| Public Use                             | 18                |
| General Industrial Factor              | 18                |
| Marijuana Grow                         | 12                |

# BENEFITS OF INSTALLING SEWER INFRASTRUCTURE AT APEX/KAPEX AREA:

**A. With full buildout of proposed wastewater system, all indoor water used at the industrial complex will be recycled and returned to Lake Mead.**

|                      |                |                       |                       |
|----------------------|----------------|-----------------------|-----------------------|
|                      |                |                       |                       |
| Total Flows          |                |                       |                       |
| Total Avg Flow (gpd) | Peaking Factor | Total Peak Flow (gpd) | Total Peak Flow (MGD) |
| 14,734,881           | 1.60           | 23,575,810            | 23.58                 |
|                      |                |                       |                       |
|                      |                |                       |                       |

**B. These developments are expected to attract diverse industries to Apex, potentially creating approximately 73, 000 jobs and generating \$7 billion in investments over the next two decades.**

# CHALLENGES OF INSTALLING SEWER INFRASTRUCTURE AT APEX/KAPEX AREA:

## A. Lack of existing infrastructure.

- The Apex Industrial Park, encompassing over 19,000 acres with approximately 8,100 acres of developable area, lacks essential utilities, including water and sewer.

## B. Funding and Investment.

- Significant financial investment required for such large-scale infrastructure projects.
- Collaborative efforts between CNLV, SNWA, and private developers have secured nearly \$40 million for sewer and water infrastructure.



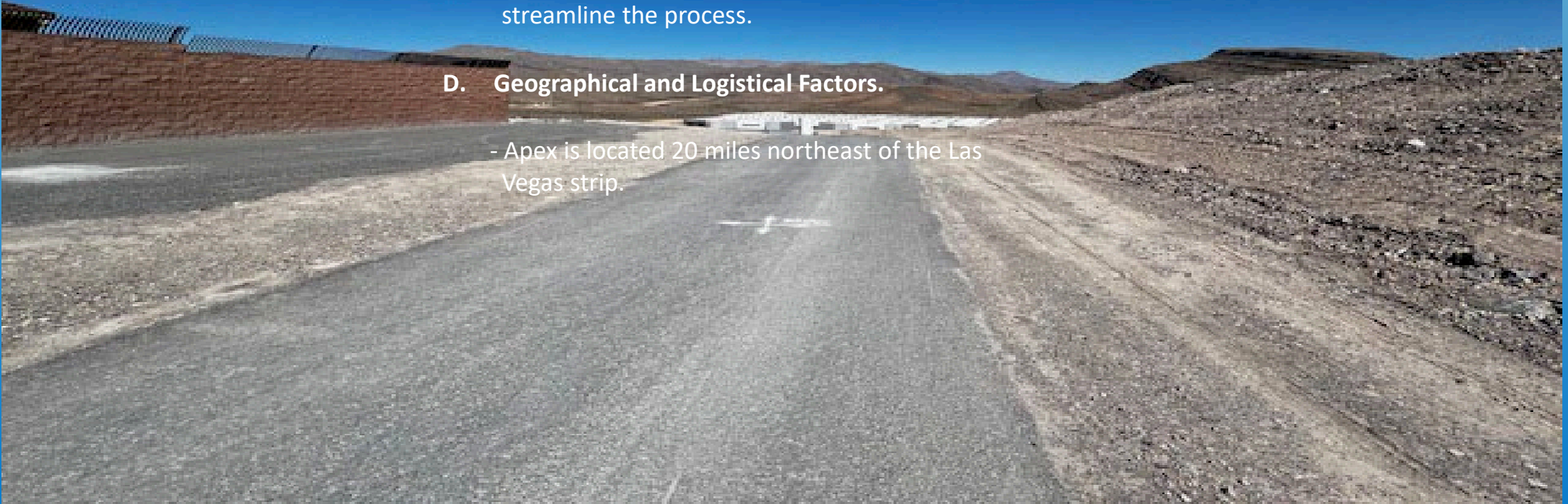
# CHALLENGES OF INSTALLING SEWER INFRASTRUCTURE AT APEX/KAPEX AREA:

## C. Permitting and Regulatory Hurdles.

- Presence of utility corridors managed by the Bureau of Land Management (BLM).
- Legislative efforts, such as the Apex Area Technical Corrections Act, aim to streamline the process.

## D. Geographical and Logistical Factors.

- Apex is located 20 miles northeast of the Las Vegas strip.





**QUESTIONS?**