

# RIPARIAN RESERVES

AUGUST 2022



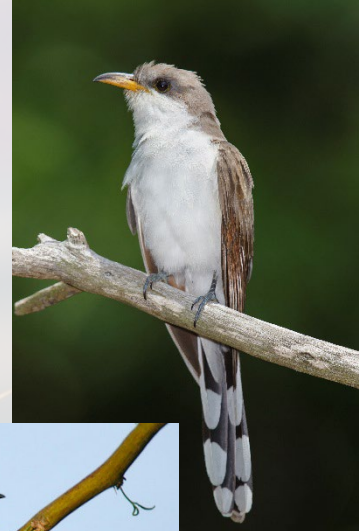
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desert conservation  
PROGRAM

# OVERVIEW

Property Acquisition  
Management  
Restoration



# PROPERTY ACQUISITION



## Condition K of Incidental Take Permit,

Requires DCP acquire private lands in desert riparian habitats along the Muddy and Virgin rivers (and Meadow Valley Wash) to conserve habitat for riparian birds covered by the MSHCP.

Southwestern Willow Flycatcher  
Yellow-billed Cuckoo  
Arizona Bell's Vireo

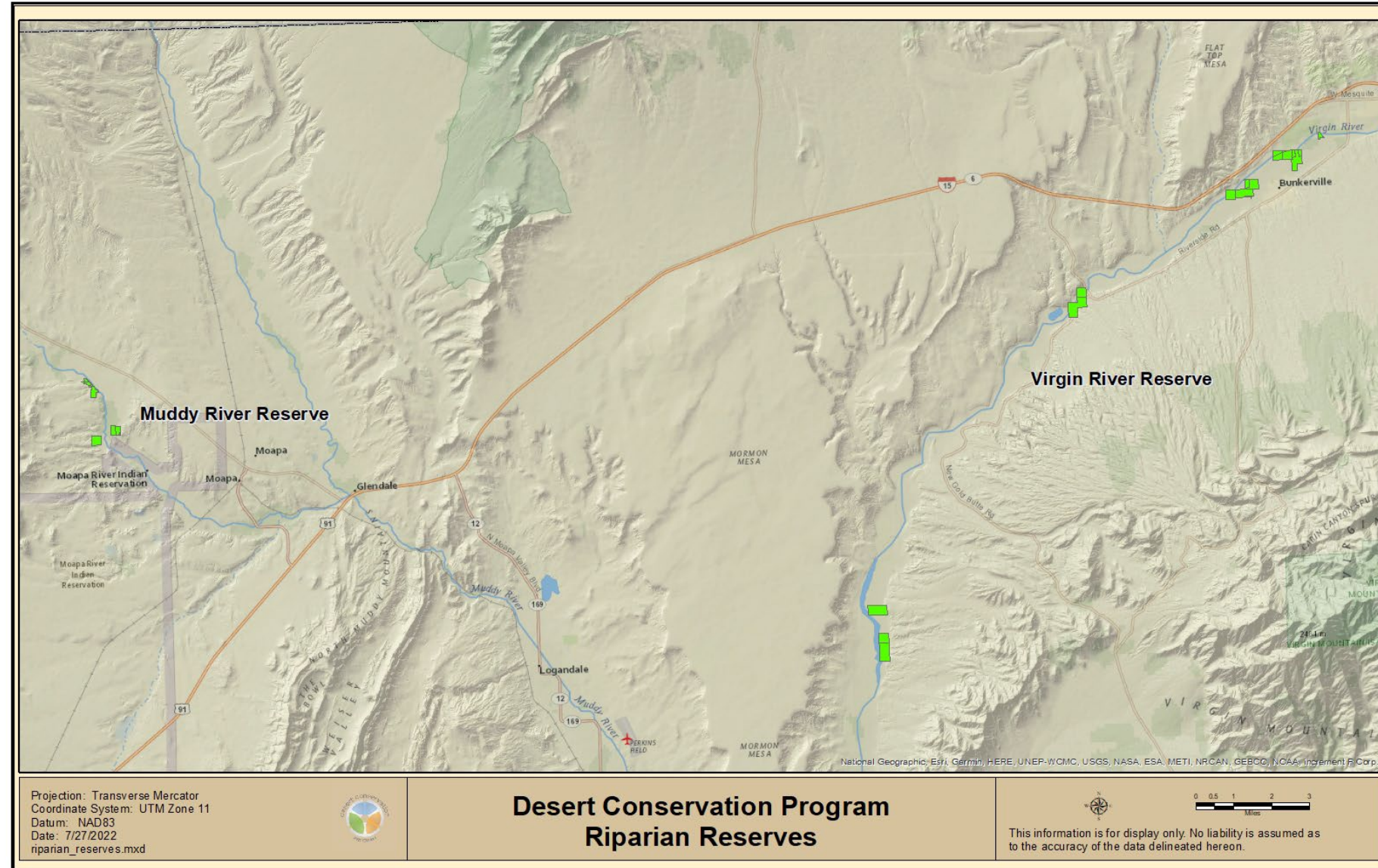
Vermilion Flycatcher  
Summer Tanager  
Blue Grosbeak



# RIPARIAN RESERVES



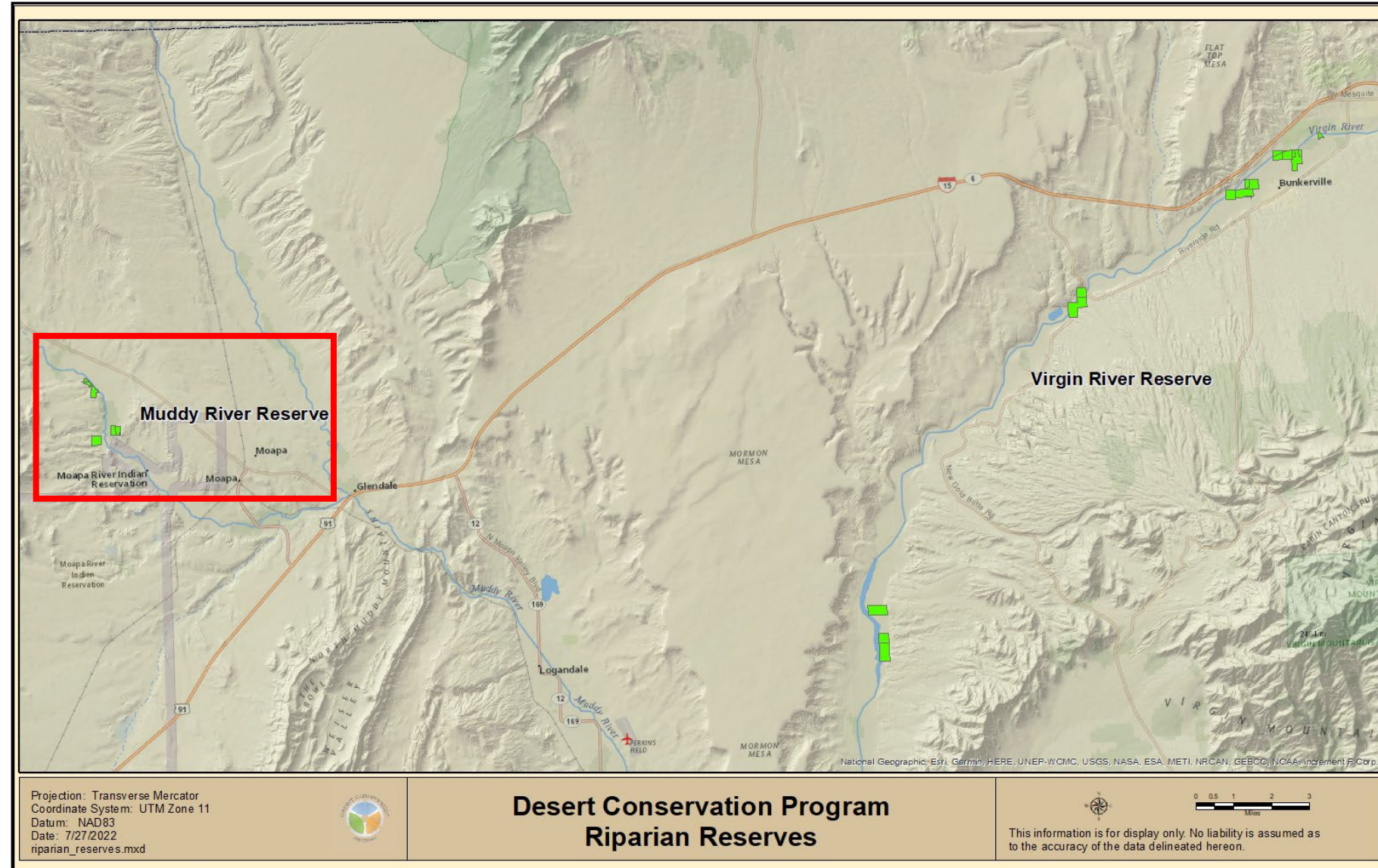
Overview of  
DCP properties  
along the  
Muddy and  
Virgin Rivers



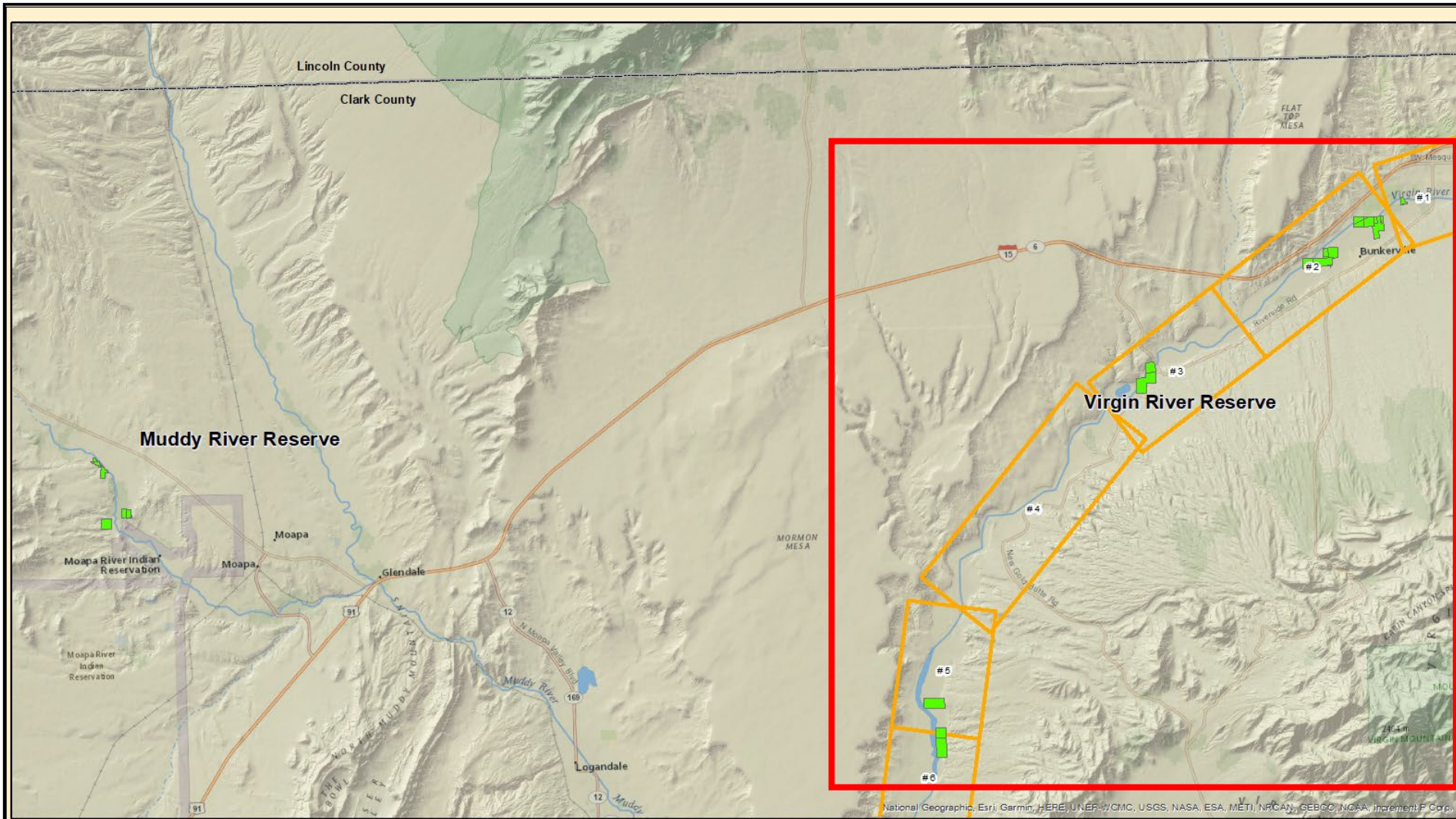
# RIPARIAN RESERVES



Muddy River Reserve - comprised of 9 parcels totaling 116 acres along the Muddy River.



# RIPARIAN RESERVES

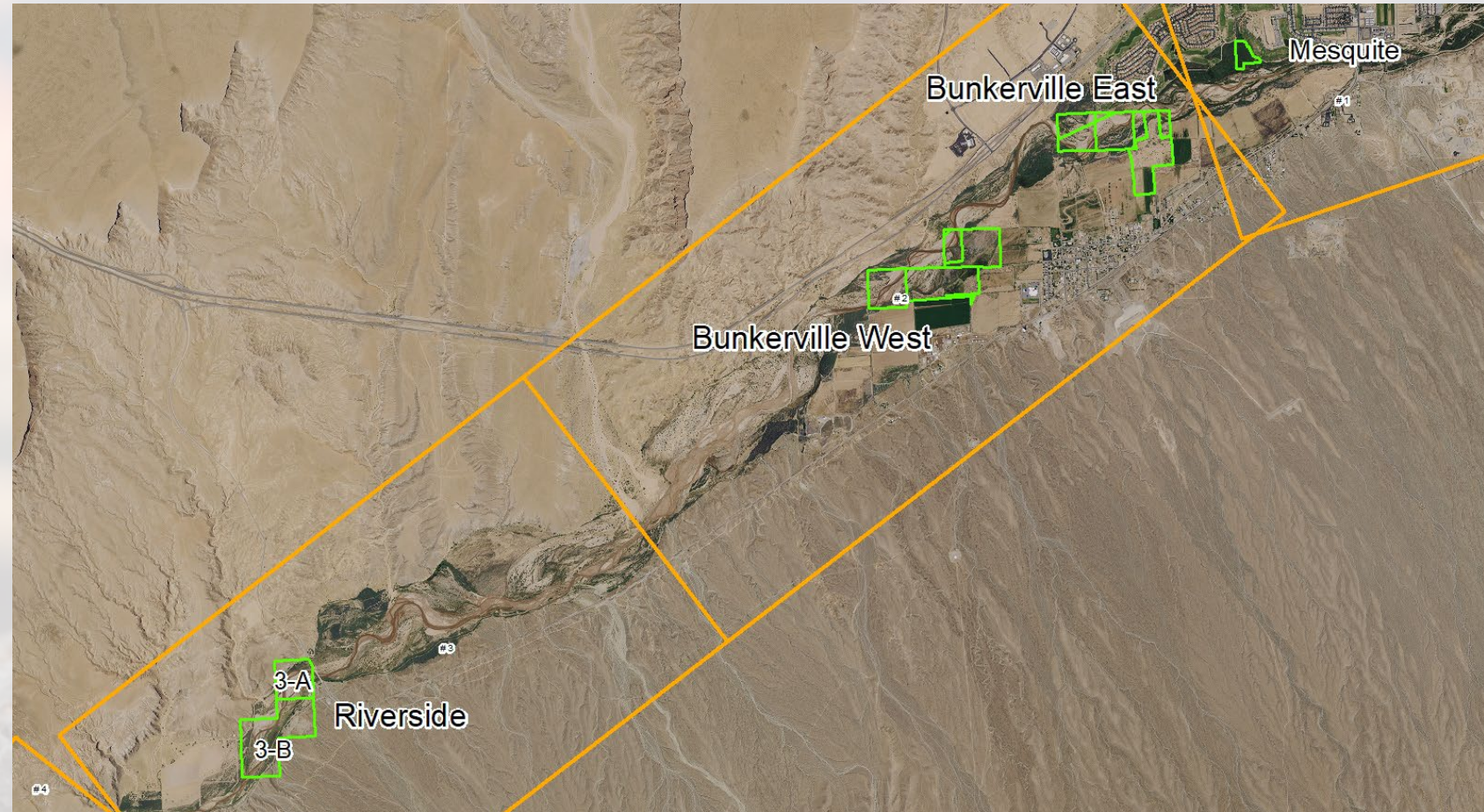
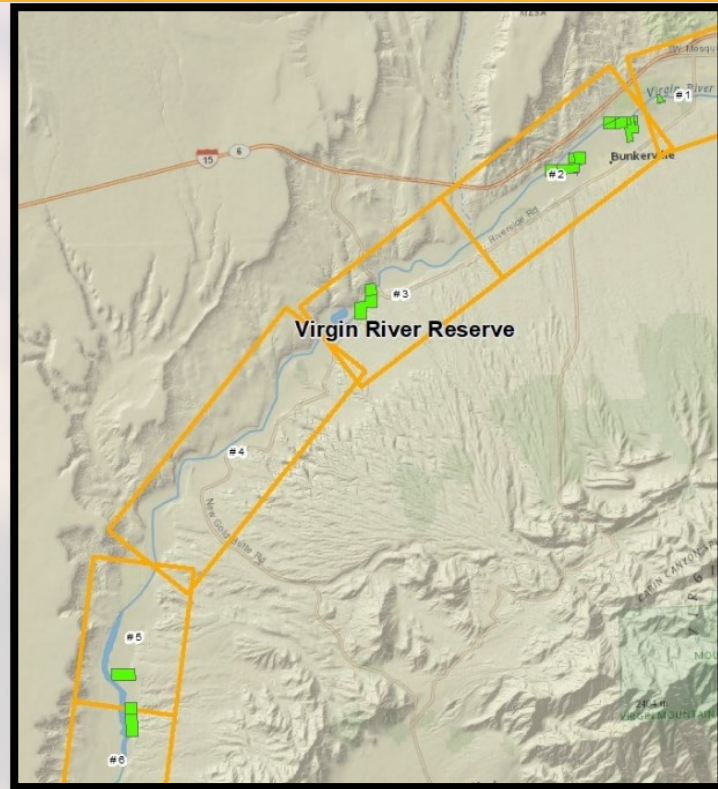


Virgin River Reserve - total of 665 acres.

Properties are identified by the river reach they are located in, numbered 1-5, upstream to downstream, based on HUC designation

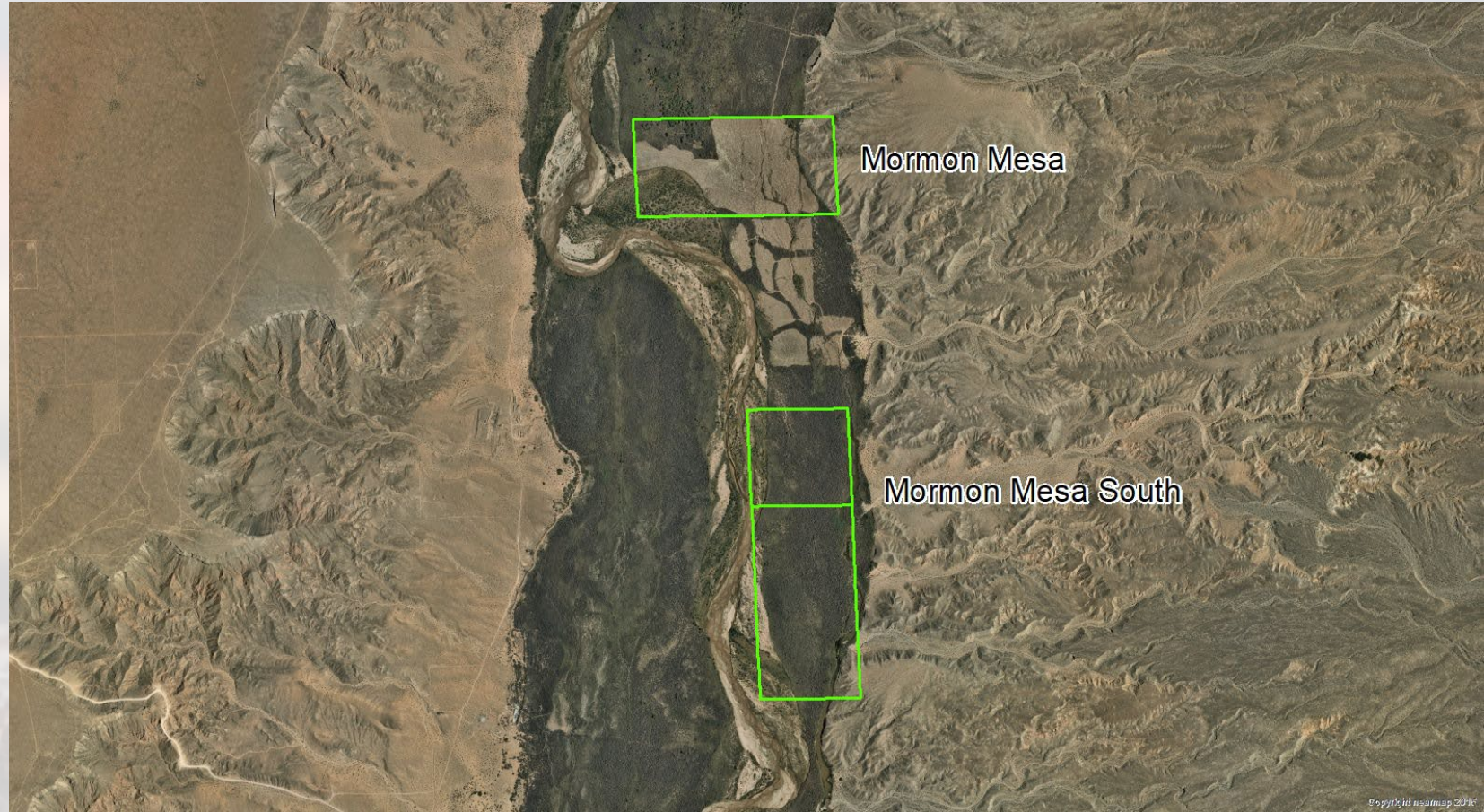
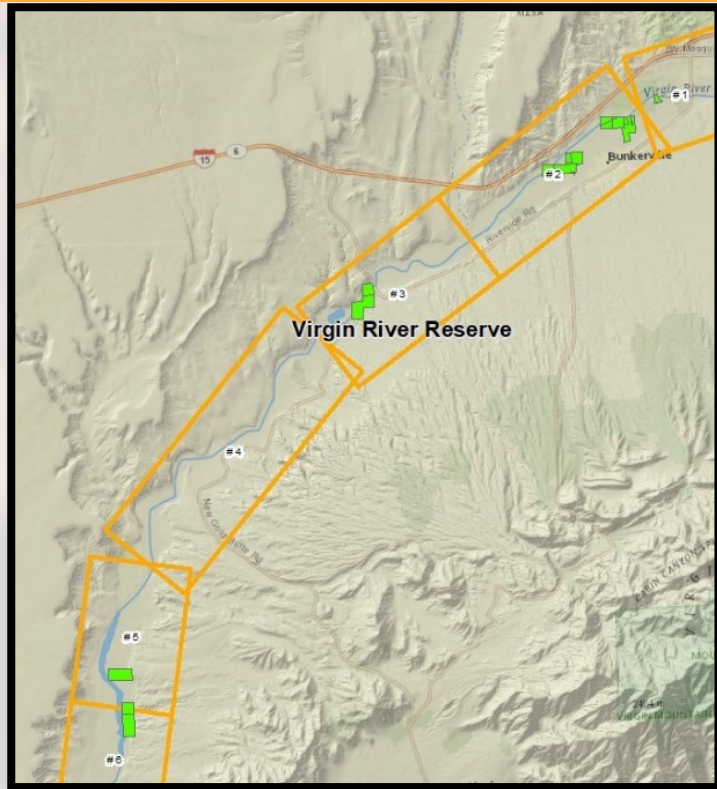


# RIPARIAN RESERVES



Adjacent parcels are aggregated for management actions:  
Bunkerville East, Bunkerville West, Riverside  
We have added 59 acres to BW since 2019

# RIPARIAN RESERVES



We have added 120 acres to Mormon Mesa since 2019.



# OVERVIEW - MANAGEMENT

DCP is responsible for planning and implementing management actions for the long-term maintenance of the reserves for the benefit of species covered by the MSHCP.

- Oversee contactors who implement management activities, such as, weed control, fuel management, and site maintenance.



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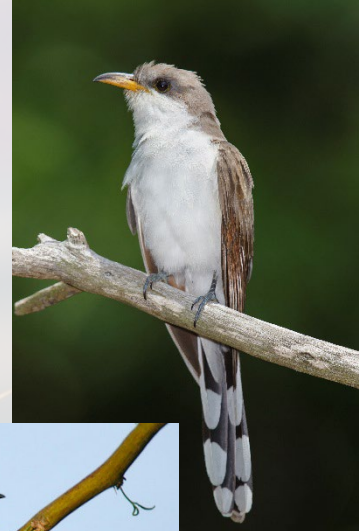
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# OVERVIEW - MANAGEMENT



- Coordination/collaboration with neighboring landowners (public and private).
- Coordination/collaboration with federal, state, and/or local agencies.



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# MANAGEMENT - VEGETATION



- DCP maintains an agreement with the National Park Service Invasive Plant Management Team
- Conduct regular surveys and treatments on DCP properties:
- Priorities are Tamarisk resprout treatments, Camelthorn, and tall whitetop



# MANAGEMENT - MISC

- DCP maintains a contract with a local company for miscellaneous maintenance items, access road clearing, fence/gate repair
- Demolished a shed that was becoming a location for people to dump trash
- First Choice Tree – palm tree removal on Muddy River



# MANAGEMENT- MISC



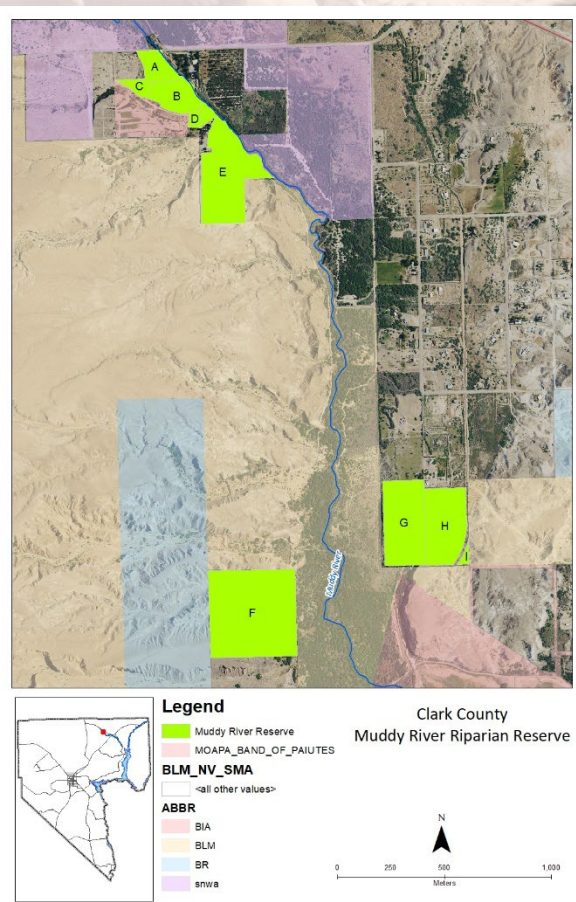
- In 2019, some individuals dumped several vehicles on our Riverside property.
- A total of 16 vehicles were removed.

# OVERVIEW-RESTORATION

**Restoration** - design, management, implementation, and monitoring of restoration projects to create and/or enhance riparian habitat for the covered bird species.

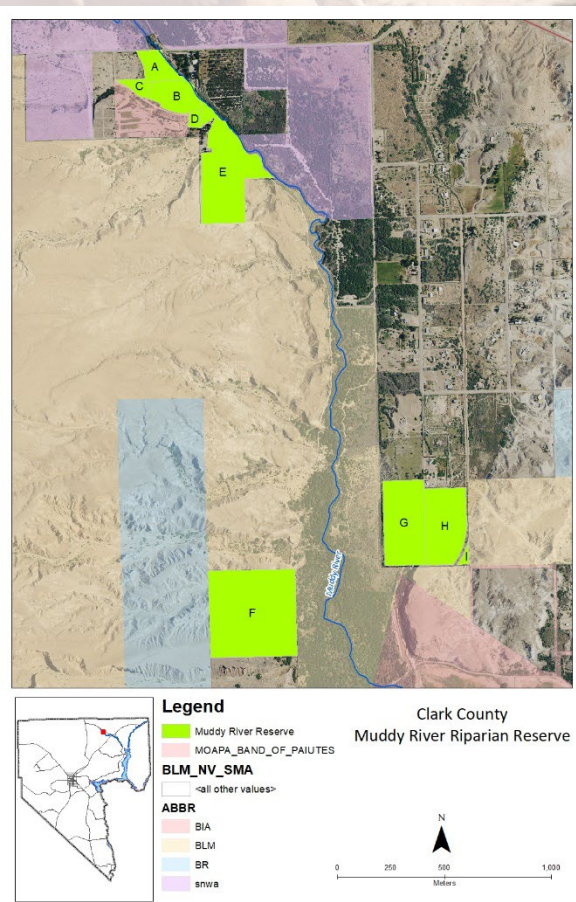


# RESTORATION – MUDDY RIVER



In 2019 – the DCP awarded a contract to Natural Channel Design for the restoration design of 40-acres on Muddy River Reserve.

# RESTORATION – MUDDY RIVER



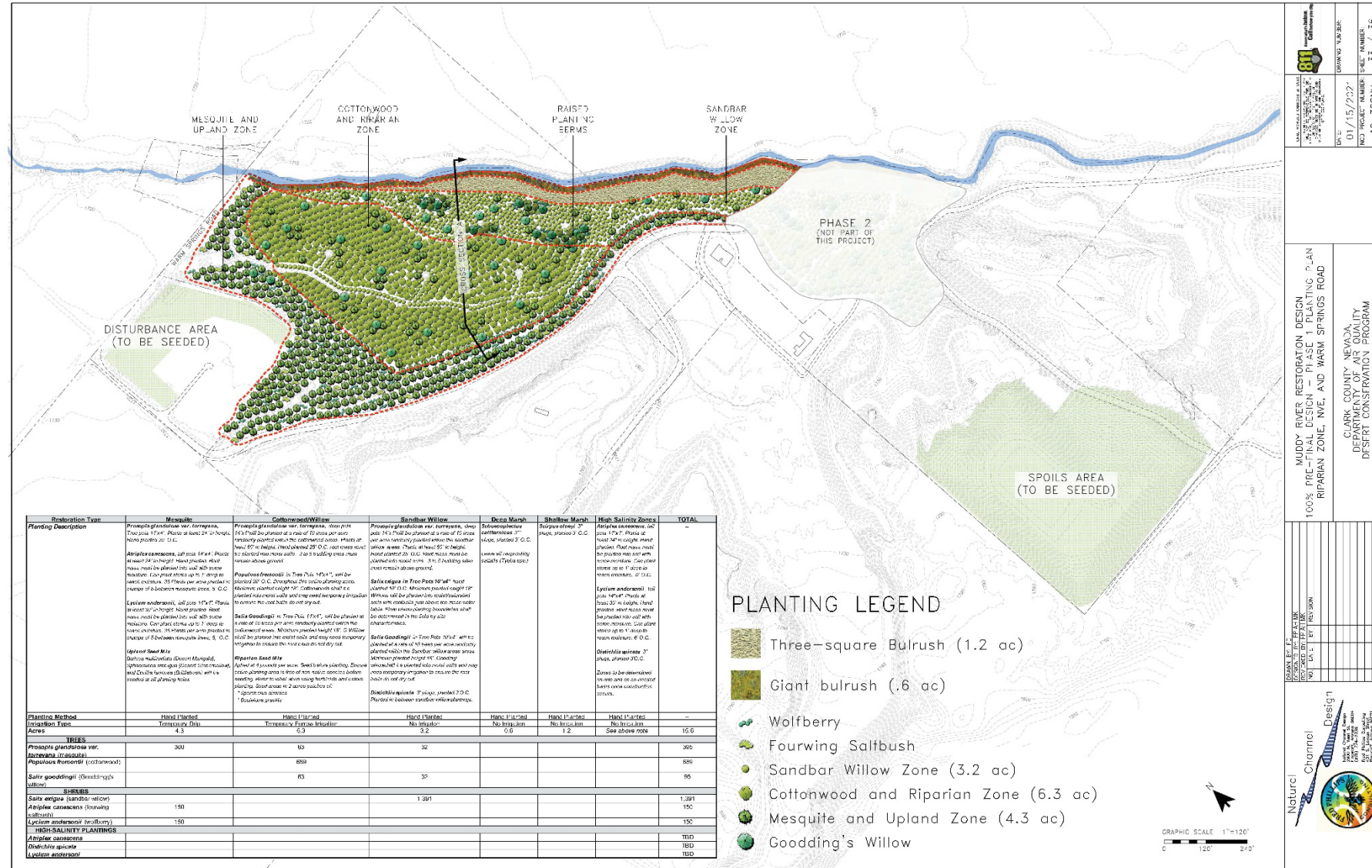
Our goal is to restore the river by reconnecting the channel to the floodplain which will better mimic flood regimes and create habitat for native vegetation and bird species.



# RESTORATION – MUDDY RIVER



- Planting Plan from Natural Channel Design engineering set
- Currently the design is in last round of approvals
- Anticipate beginning construction this winter.



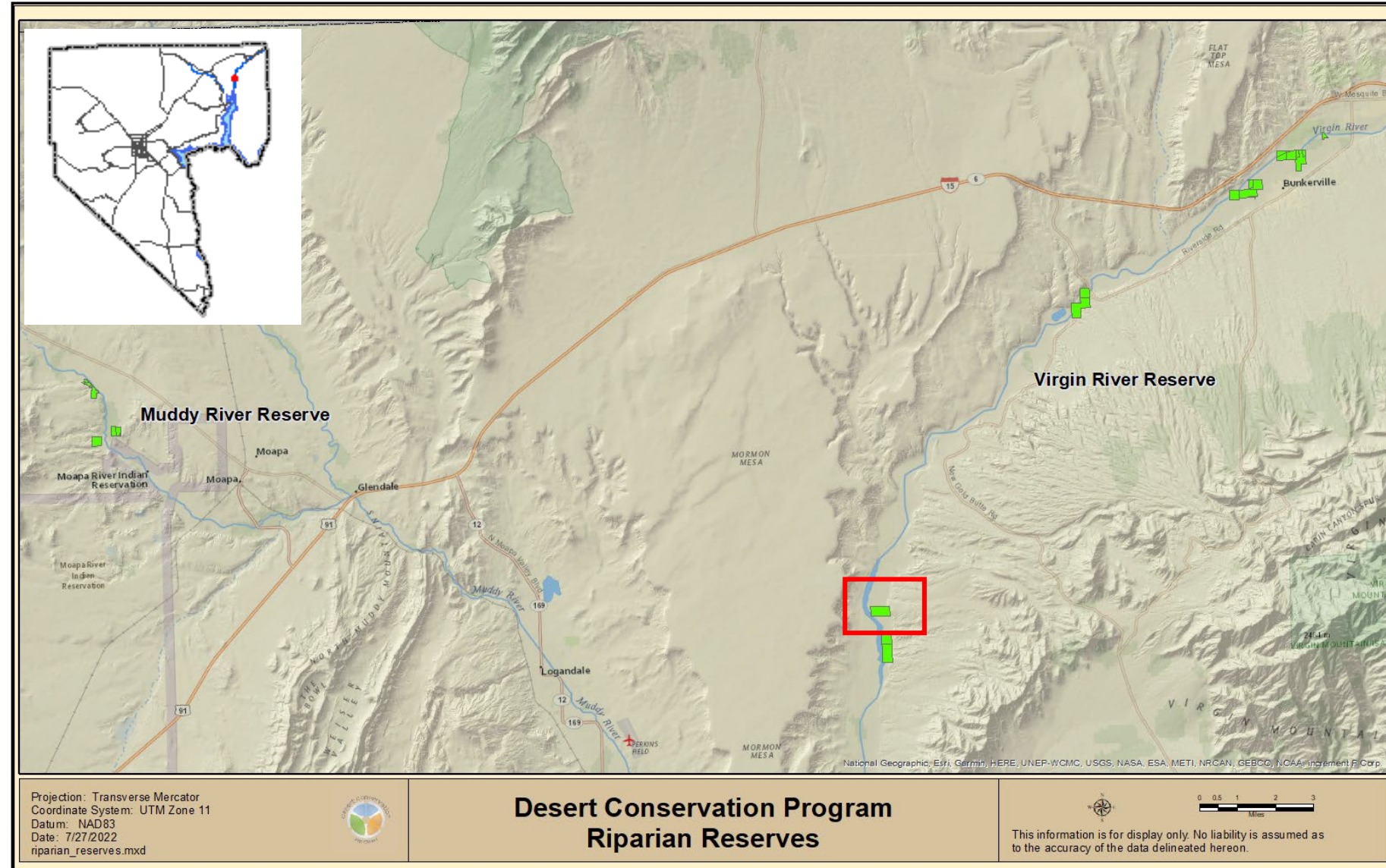
# RESTORATION – VIRGIN RIVER



80-acre parcel east of the Mormon Mesa.

The site has many opportunities for restoration:

shallow water table,  
surface water throughout the site,  
and the borders SWFL occupied habitat.



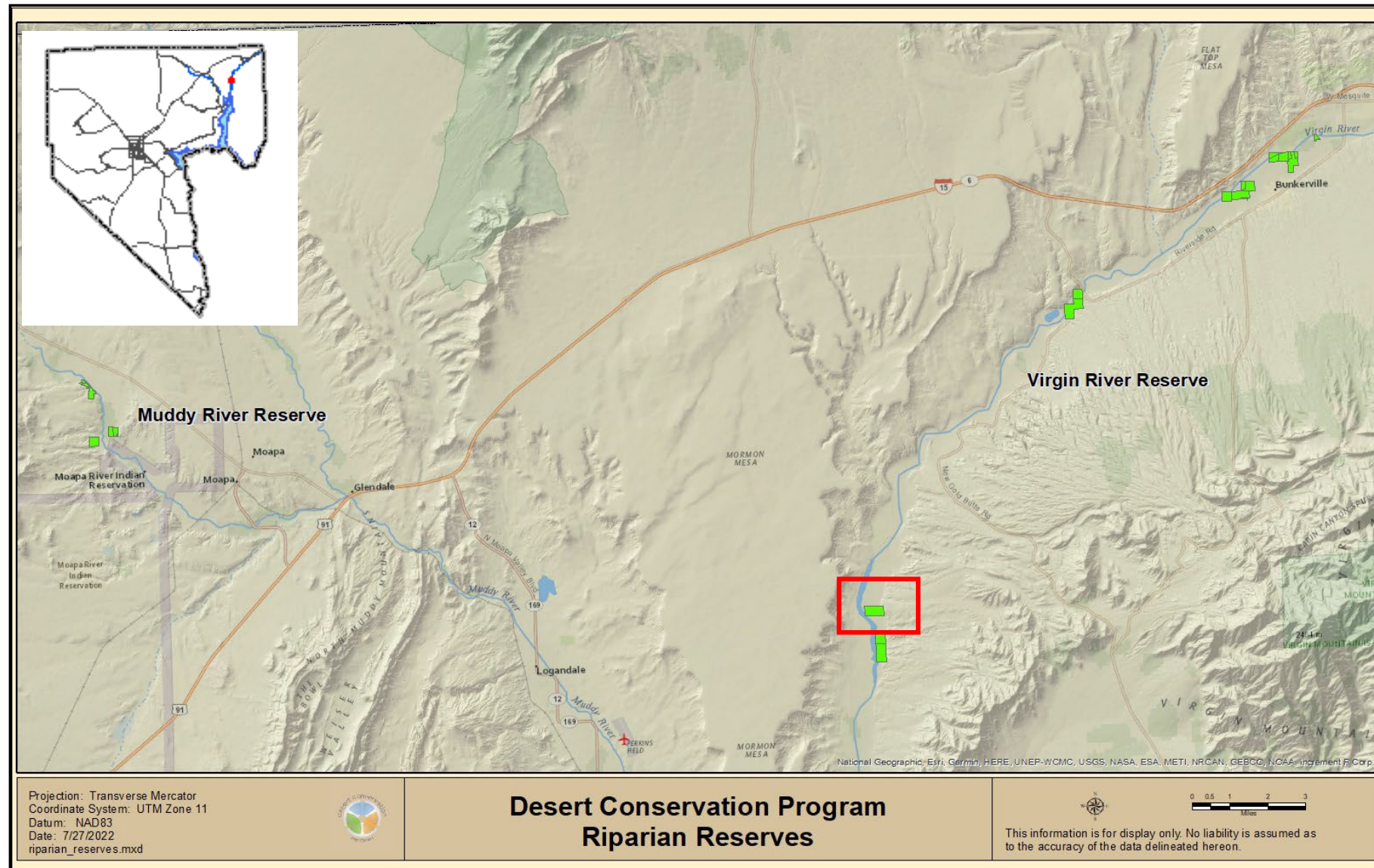
# RESTORATION – VIRGIN RIVER



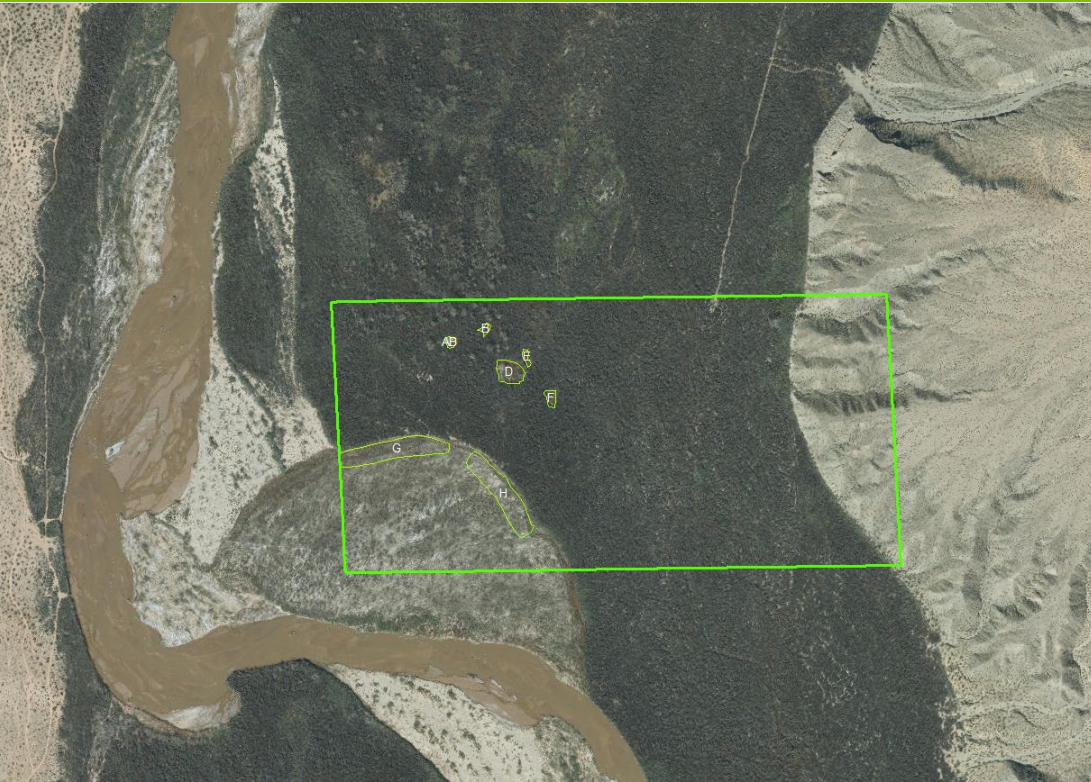
Access is a major constraint:

West - cross the mesa, then river, (obviously a challenge with equipment)

East - 12 mile stretch of Gold Butte Scenic Route (a “paved” road), then another 6 miles off-road.



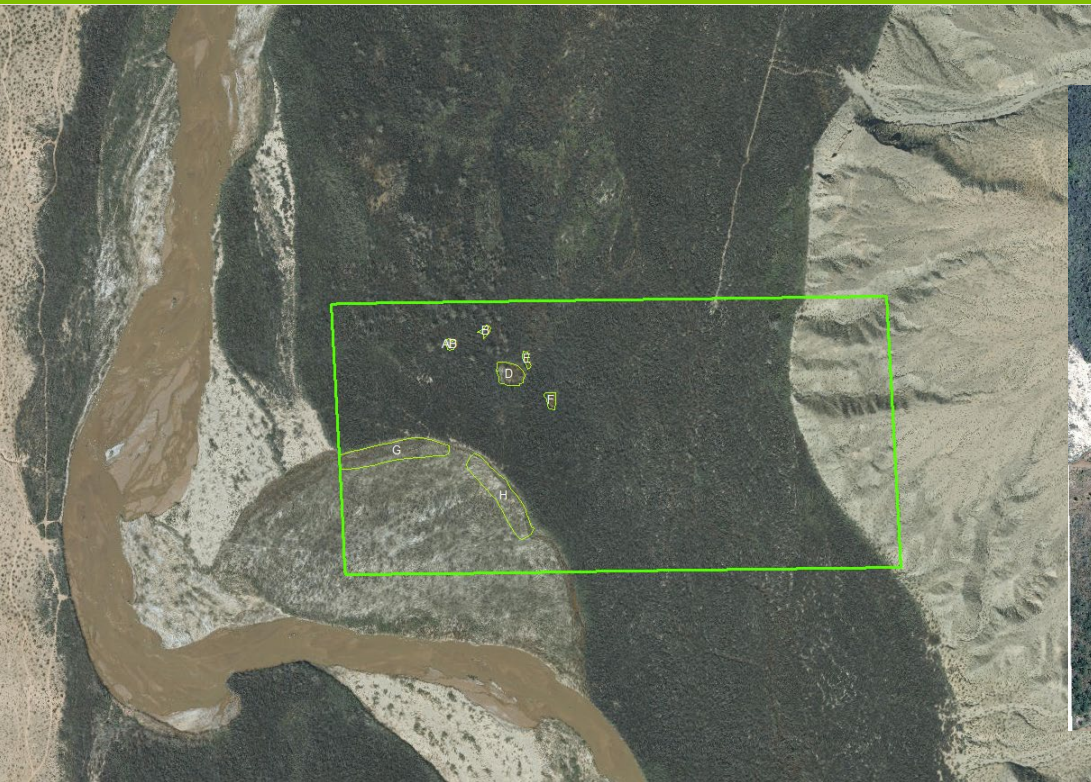
# RESTORATION – VIRGIN RIVER



First step - Tamarisk treatment by mastication.  
Completed in multiple phases.

Nevada Division of Forestry – 1<sup>st</sup> attempt

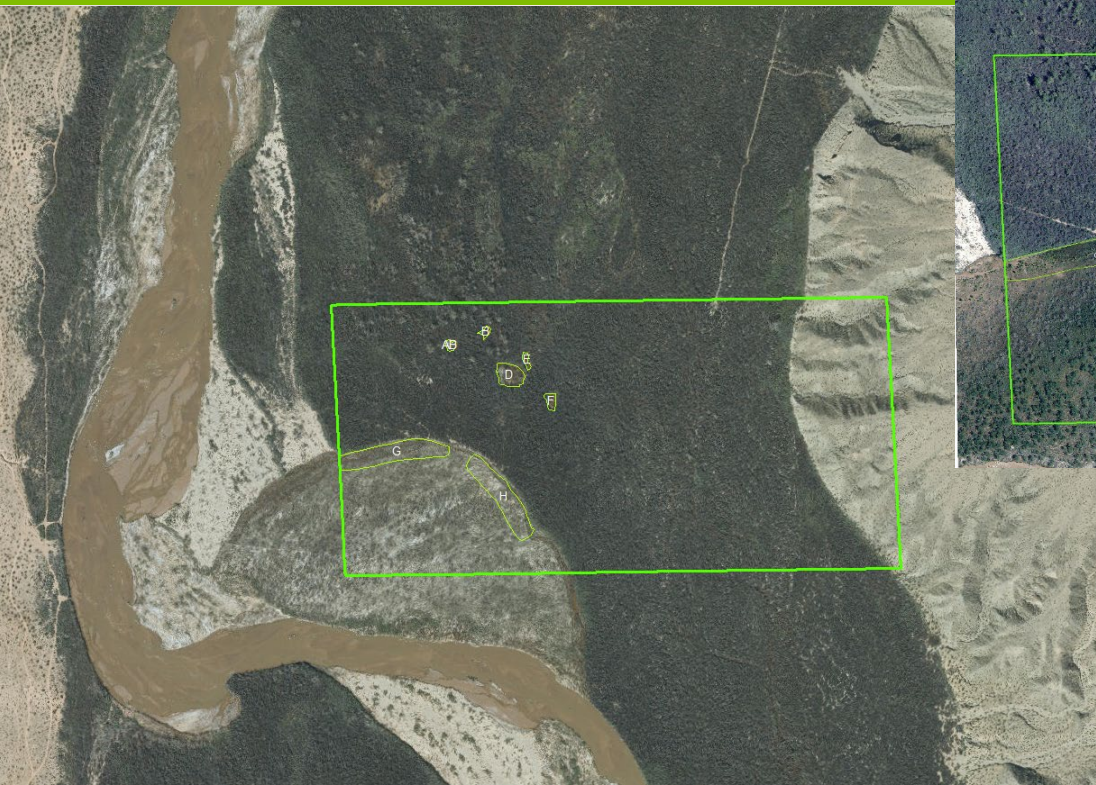
# RESTORATION – VIRGIN RIVER



Tamarisk treatment completed in multiple phases.

Nevada Division of Forestry – removed the following year and masticated 4 acres. But unable to complete remaining 36 acres.

# RESTORATION – VIRGIN RIVER



Collaborated with BLM – recommended a vendor who was able to complete the 40 acres.

# RESTORATION – VIRGIN RIVER



- Plant species were propagated at NPS Song Dog Nursery
- Species included: cottonwood (*Populus fremontii*), velvet ash (*Fraxinus velutina*), Goodings' willow (*Salix gooddingii*), coyote willow (*Salix exigua*), baccharis (*Baccharis salicifolia*), spikerush (*Eleocharis* sp), Cooper rush (*Juncus cooperi*), and yerba mansa (*Anemopsis californica*).

# RESTORATION – VIRGIN RIVER

- Crews planted approximately 3,173 containers (from Song Dog Nursery) and 1,096 pole cuttings. Concentrated in areas with low depth to groundwater.



- Crews installed fencing to exclude cattle.



# RESTORATION – VIRGIN RIVER



Monitoring site – pre-restoration 2017



Monitoring site – post-restoration





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# Thank you to the Permittees

