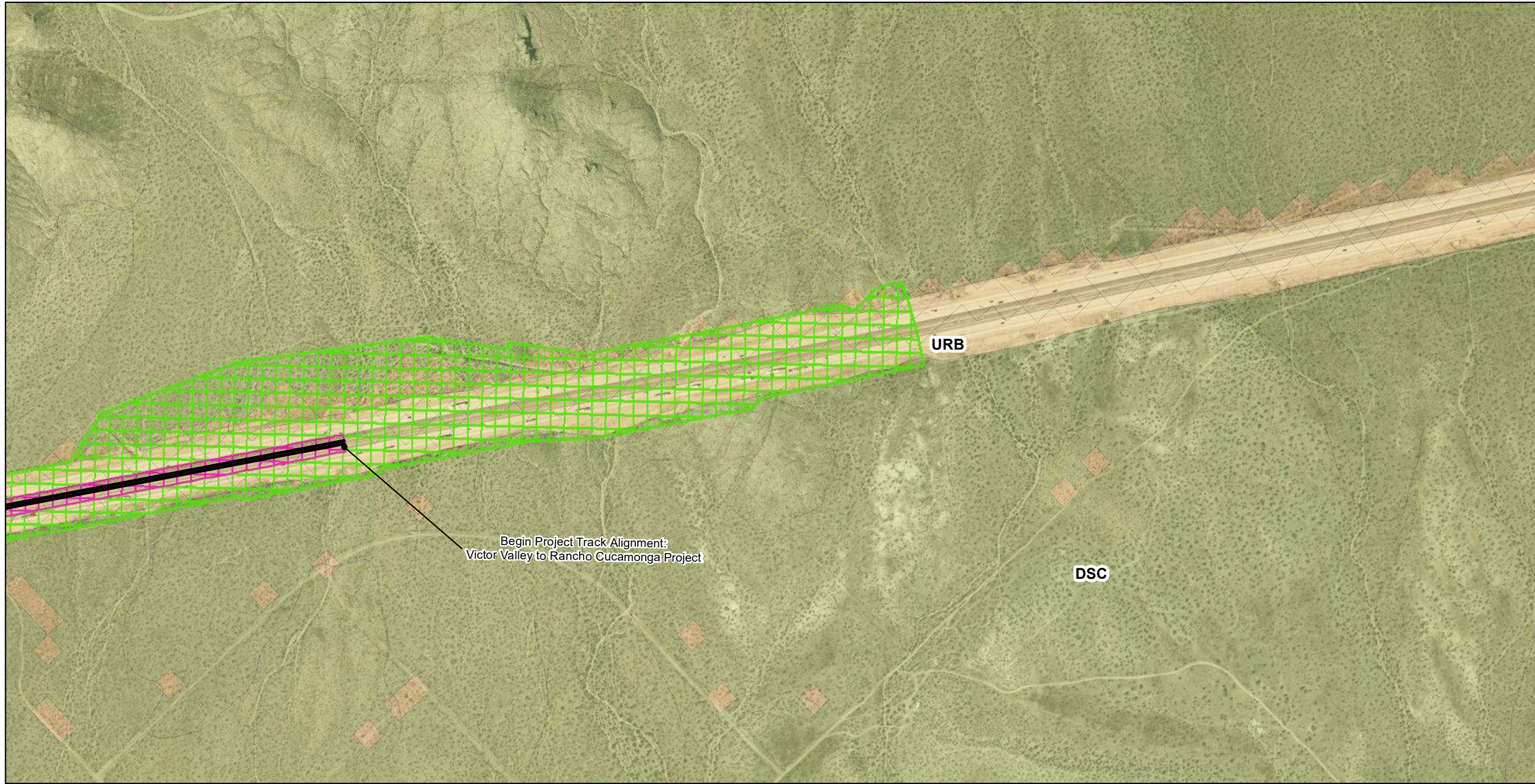


Appendix A

Temporary and Permanent Wildlife Habitat Impacts Maps



Legend

— Track Alignment

Type

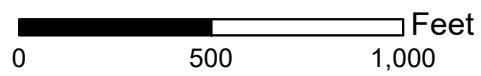
- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

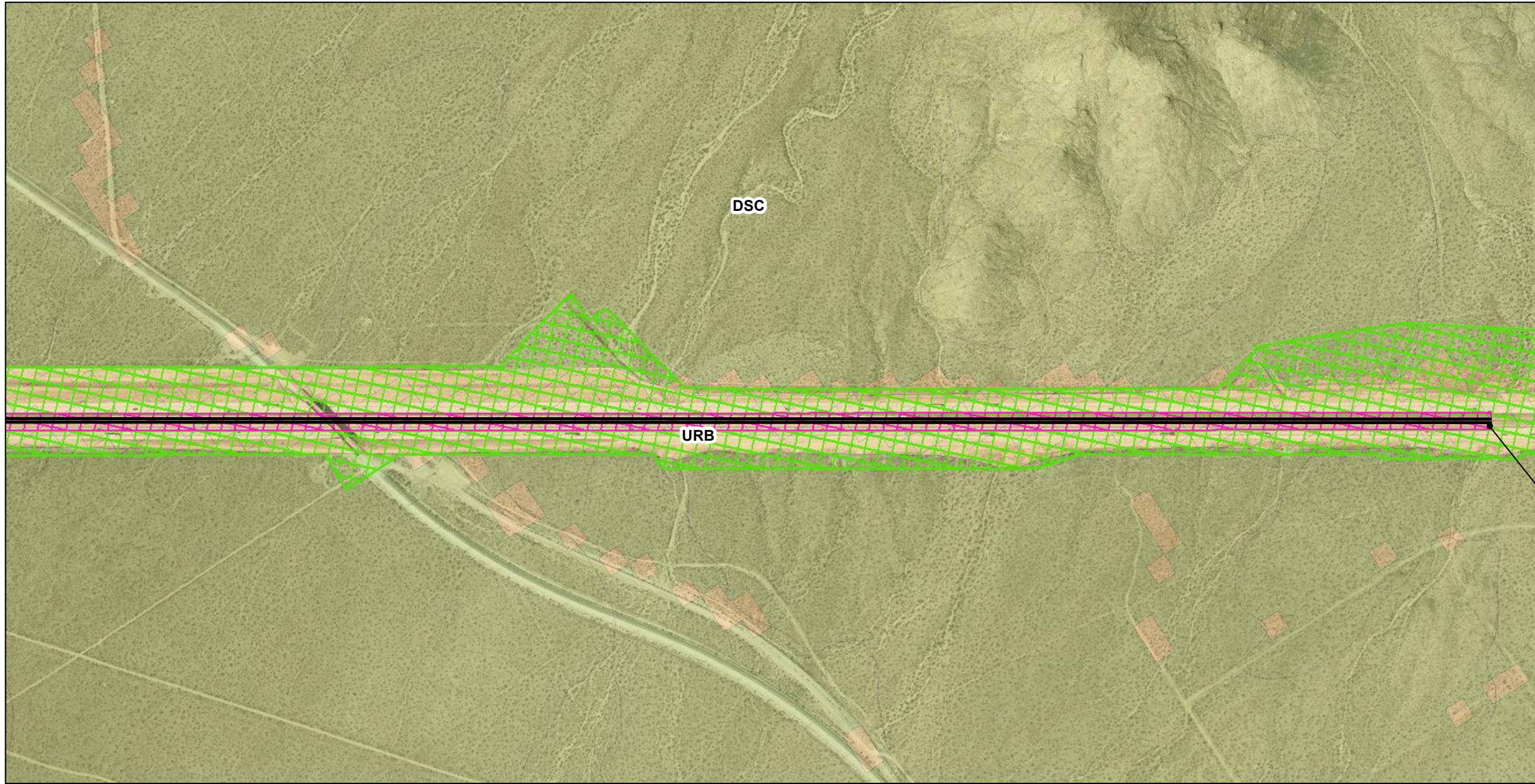
Vegetation Type

- Desert Scrub (DSC)
- Urban (URB)

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
 Document Path: A:\1515151515\ExpressWest\GIS Data\ExpressWest_Extension\GIS\IMXD

Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

- Track Alignment

Type

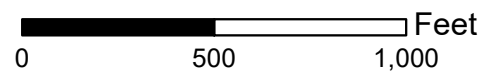
- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

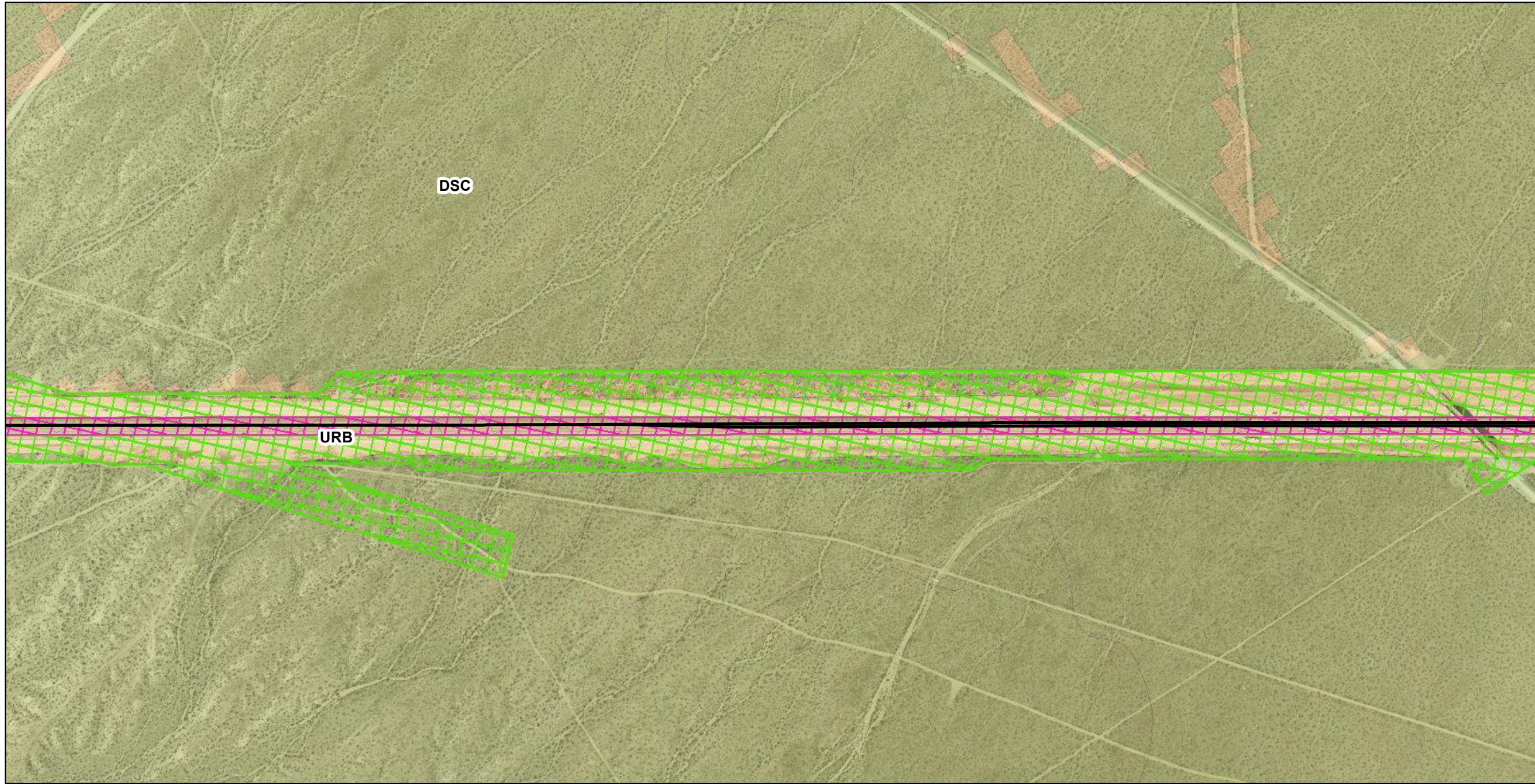
Vegetation Type

- Desert Scrub (DSC)
- Urban (URB)

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
 Document Path: A:\15151612\ExpressWest\WV_Extension08_TechPRD\Env\GIS_Data\ExpressWest_Extension\GIS\MXDs

Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

▨ Limits of Disturbance - Permanent

▨ Limits of Disturbance - Temporary

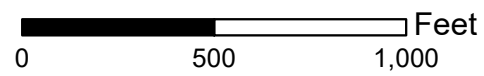
Vegetation Type

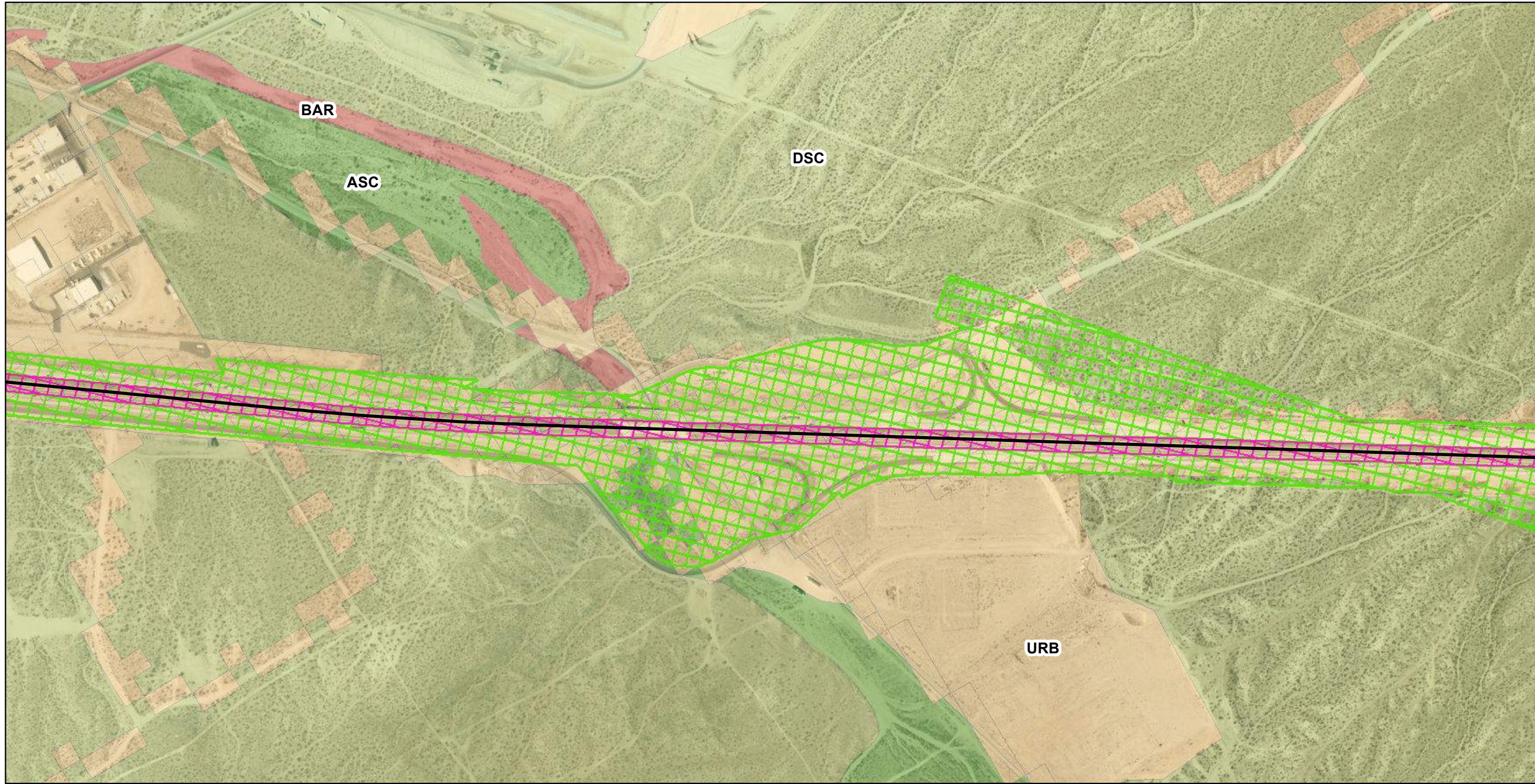
■ Desert Scrub (DSC)

■ Urban (URB)

Date Saved: 6/9/2022 4:24:01 PM
Version: Revised from April 2022 map set
Document Path: A:\15151612\ExpressWest\WV_Extension08_Tech\PROD\Env\GIS_Data\ExpressWest_Extension\GIS\MXDs

Wildlife Habitat Impacts
Cajon Pass High-Speed Rail
Victor Valley to Rancho Cucamonga, San Bernardino County, California











Legend

— Track Alignment

Type

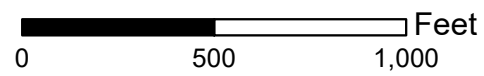
-  Limits of Disturbance - Permanent
-  Limits of Disturbance - Temporary

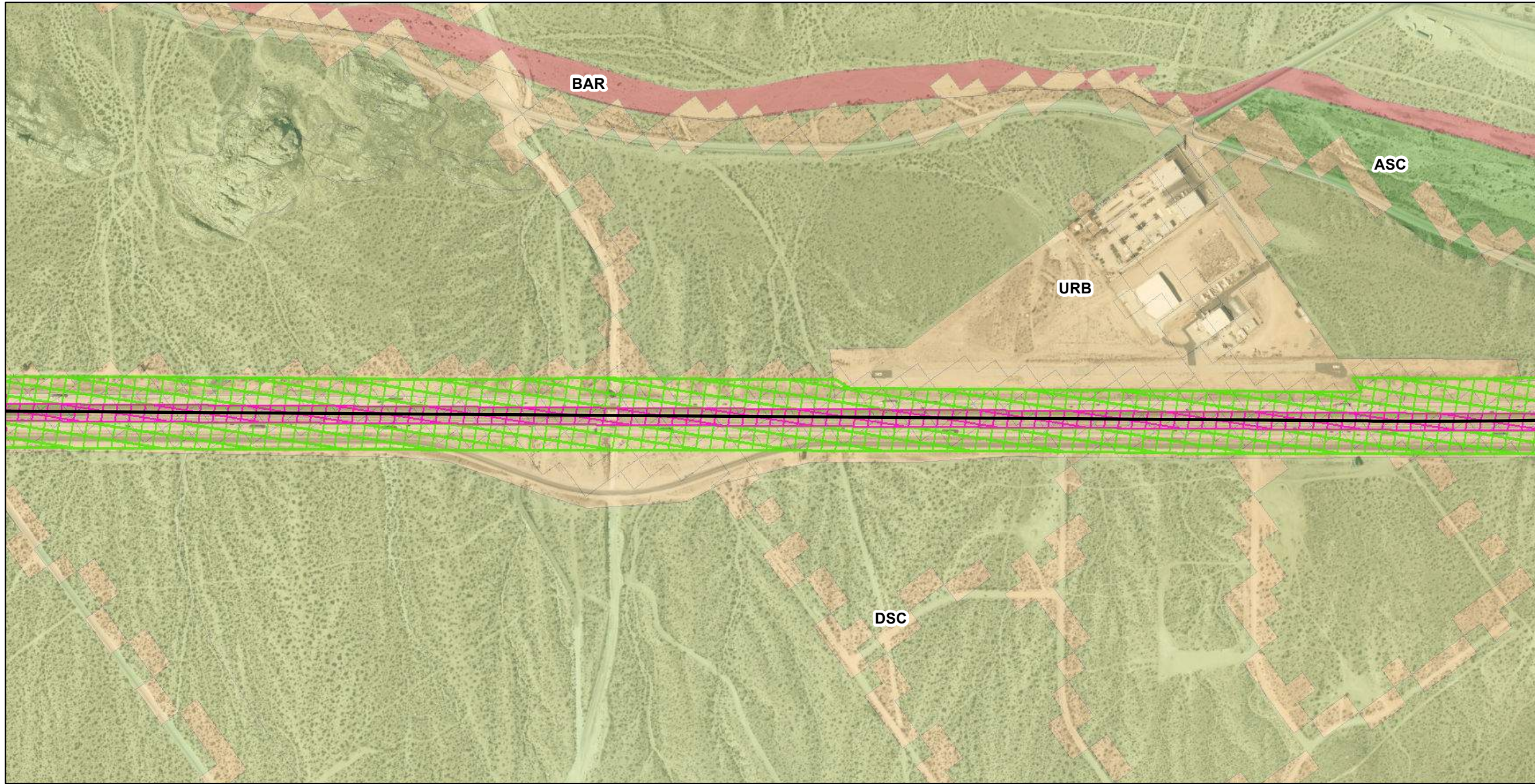
Vegetation Type

-  Alkali Desert Scrub (ACS)
-  Barren (BAR)
-  Desert Scrub (DSC)
-  Urban (URB)

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
 Document Path: A:\15151\1\ExpressWest\WV_Extension08_TechPRD\Env\GIS Data\ExpressWest_Extension\GIS\IMXD

Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

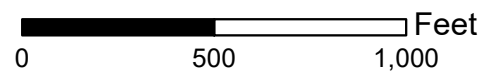
- Permanent (Pink hatched box)
- Temporary (Green hatched box)

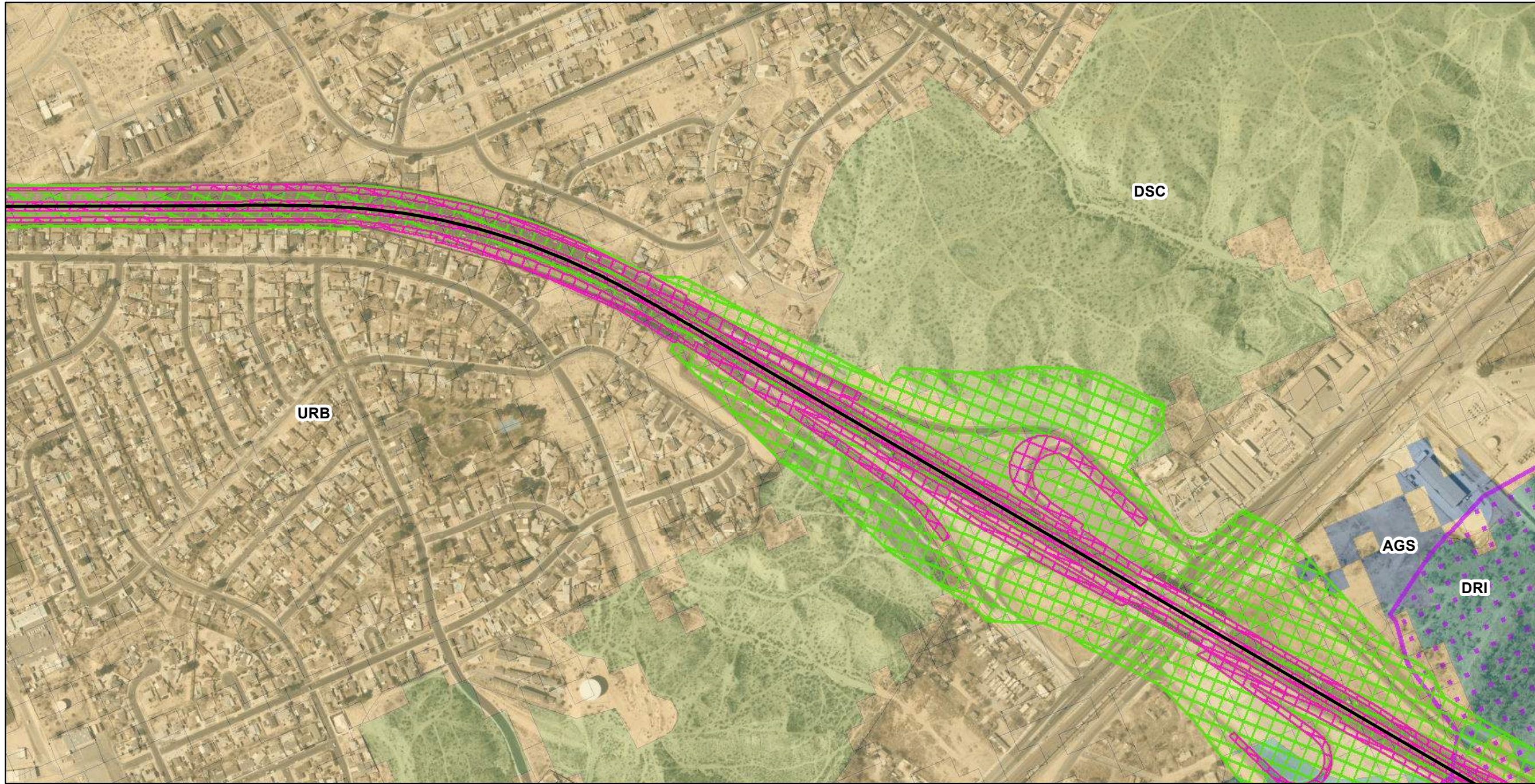
Vegetation Type

- Alkali Desert Scrub (ACS) (Light Green)
- Barren (BAR) (Red)
- Desert Scrub (DSC) (Olive Green)
- Urban (URB) (Tan)

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 Version: Revised from April 2022 map set
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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

Vegetation Type

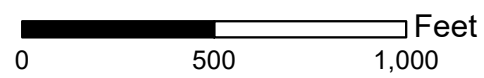
- Annual Grassland (AGS)
- Desert Riparian (DRI)
- Desert Scrub (DSC)
- Urban (URB)

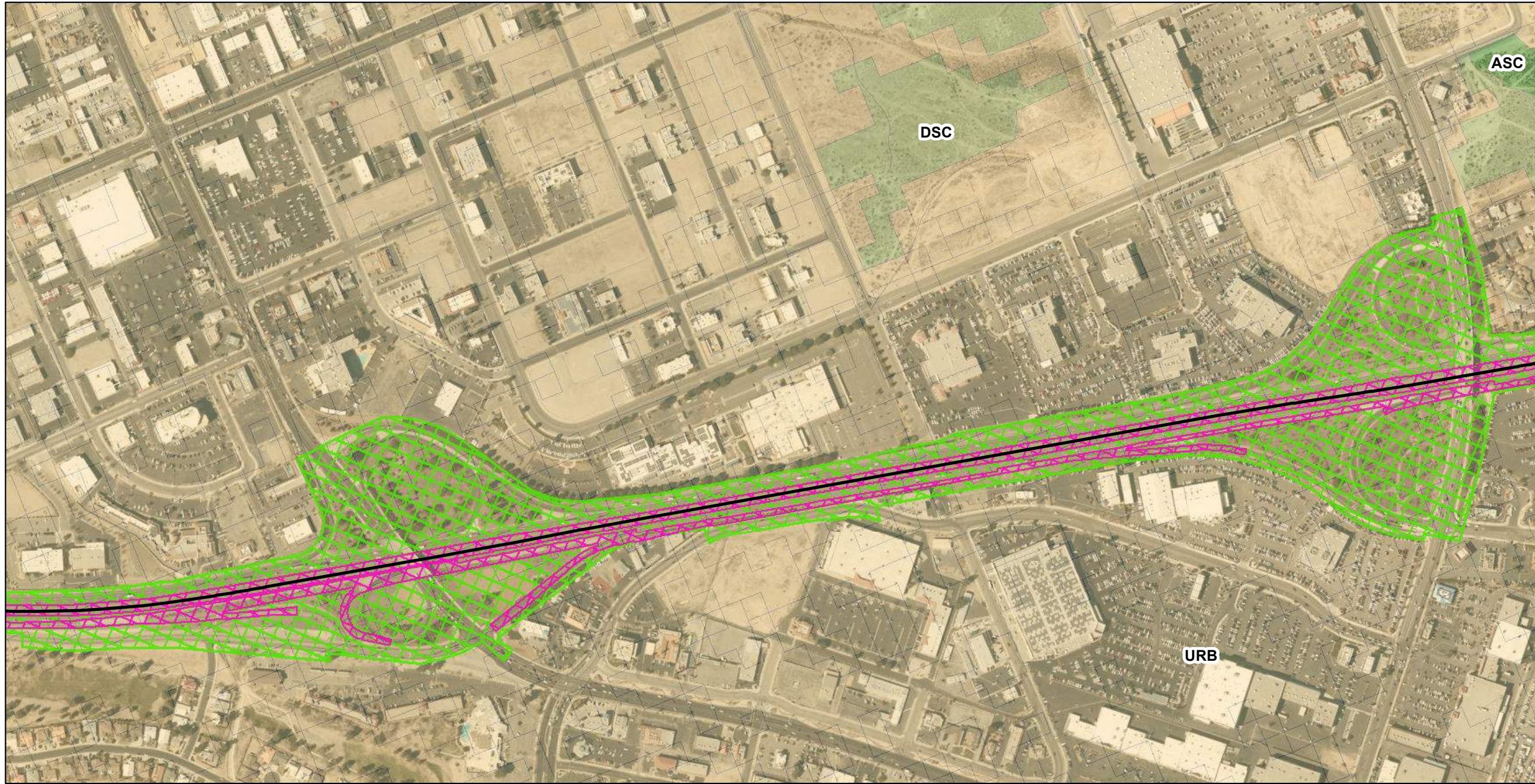
Critical Habitat

- Southwestern Willow Flycatcher

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
 Document Path: A:\1515151515\ExpressWest\WV_Extension08_TechPRD\Env\GIS Data\ExpressWest_Extension\GIS\INXD

Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

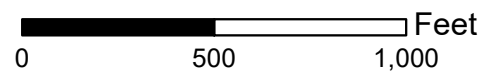
- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

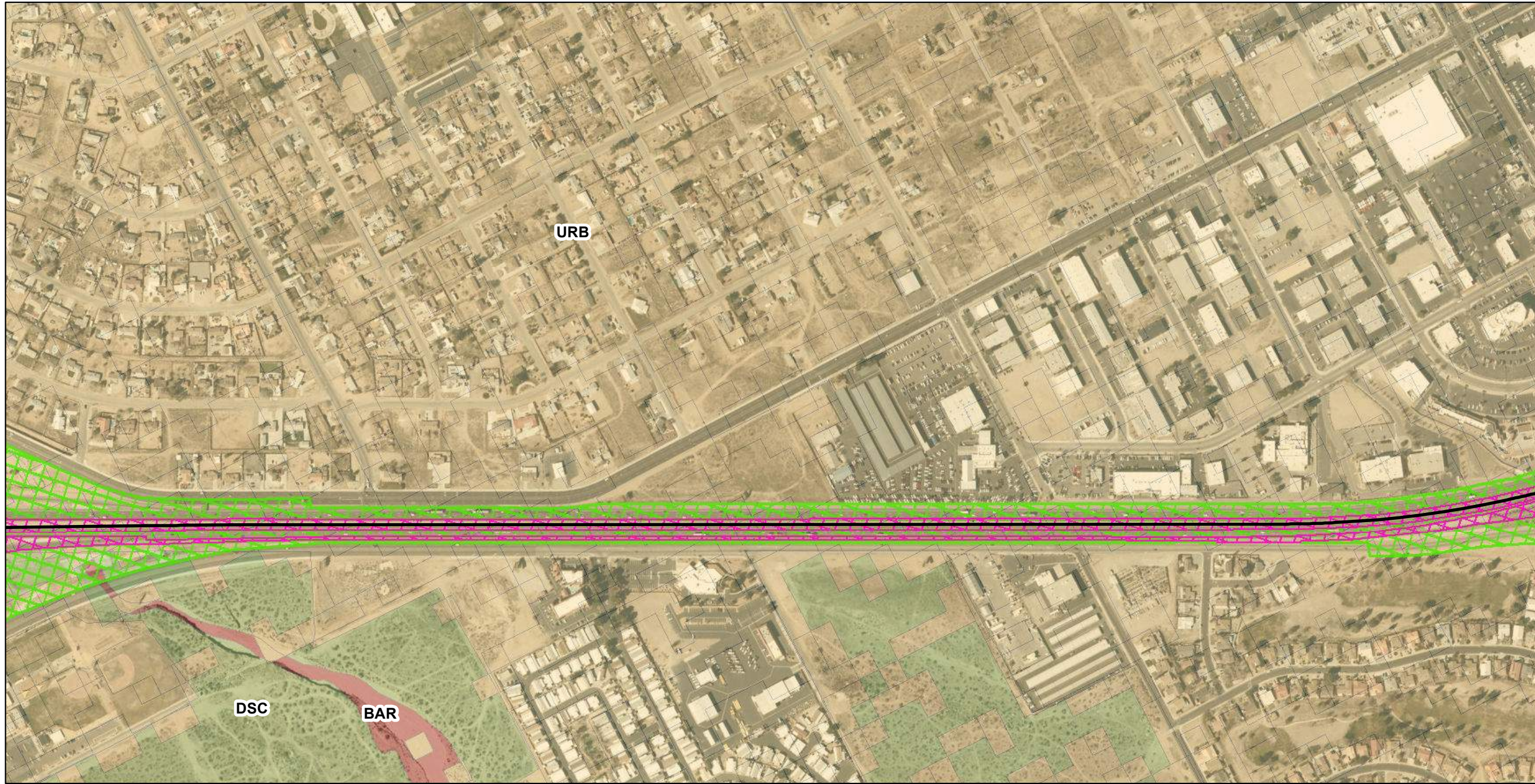
Vegetation Type

- Alkali Desert Scrub (ACS)
- Desert Scrub (DSC)
- Urban (URB)

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
 Document Path: A:\15151\12\ExpressWest\WV_Extension08_TechPRD\Env\GIS_Data\ExpressWest_Extension\GIS\XDS

Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

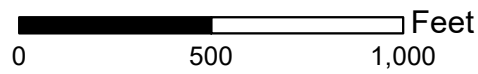
- Permanent (Pink cross-hatch)
- Temporary (Green cross-hatch)

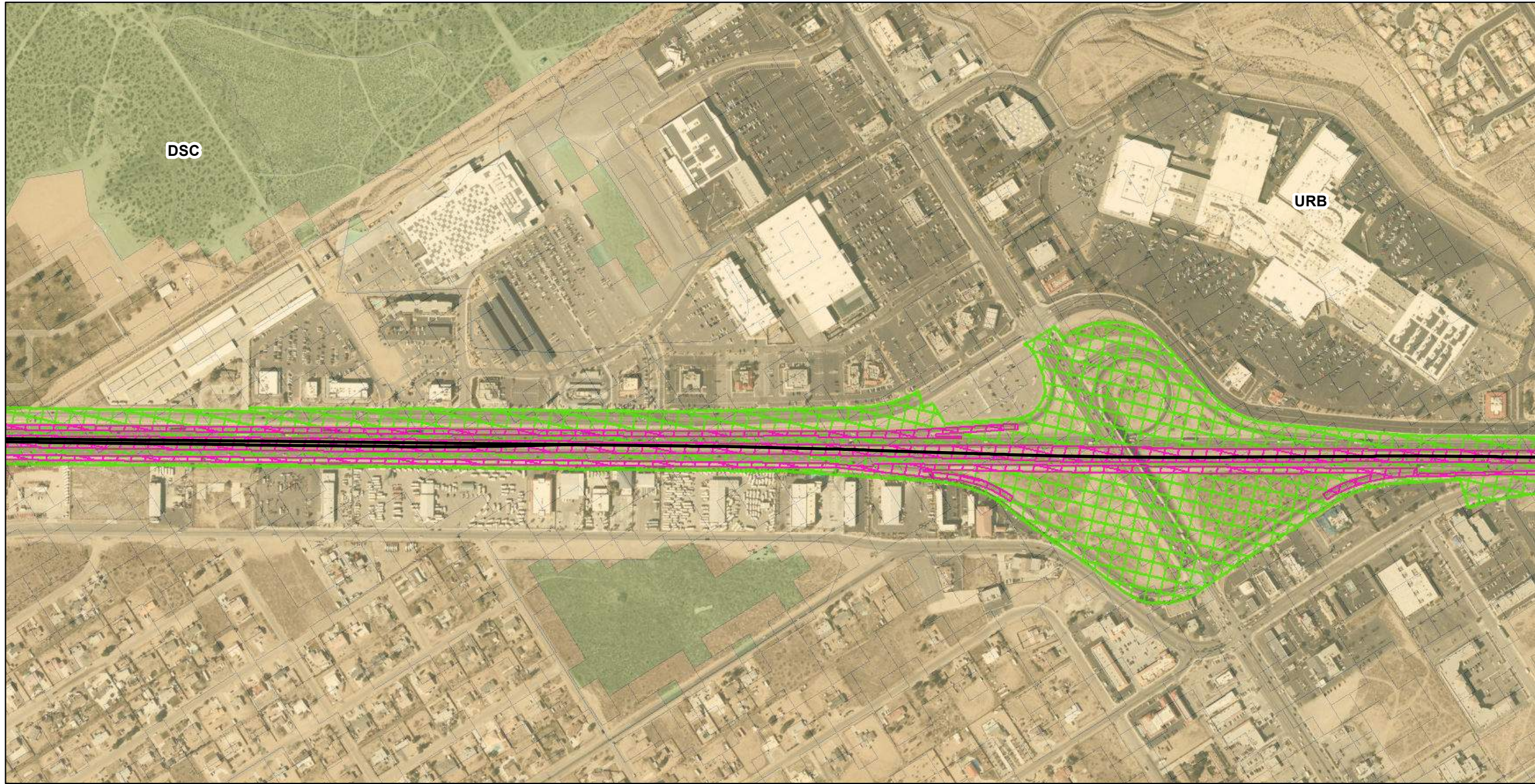
Vegetation Type

- Barren (BAR) (Red)
- Desert Scrub (DSC) (Light Green)
- Urban (URB) (Orange)

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 Version: Revised from April 2022 map set
 Document Path: A:\151515\151515\ExpressWest\GIS\GISMXDs

Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

- Track Alignment

Type

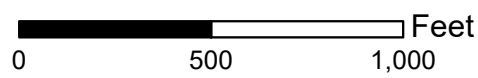
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- Limits of Disturbance - Temporary

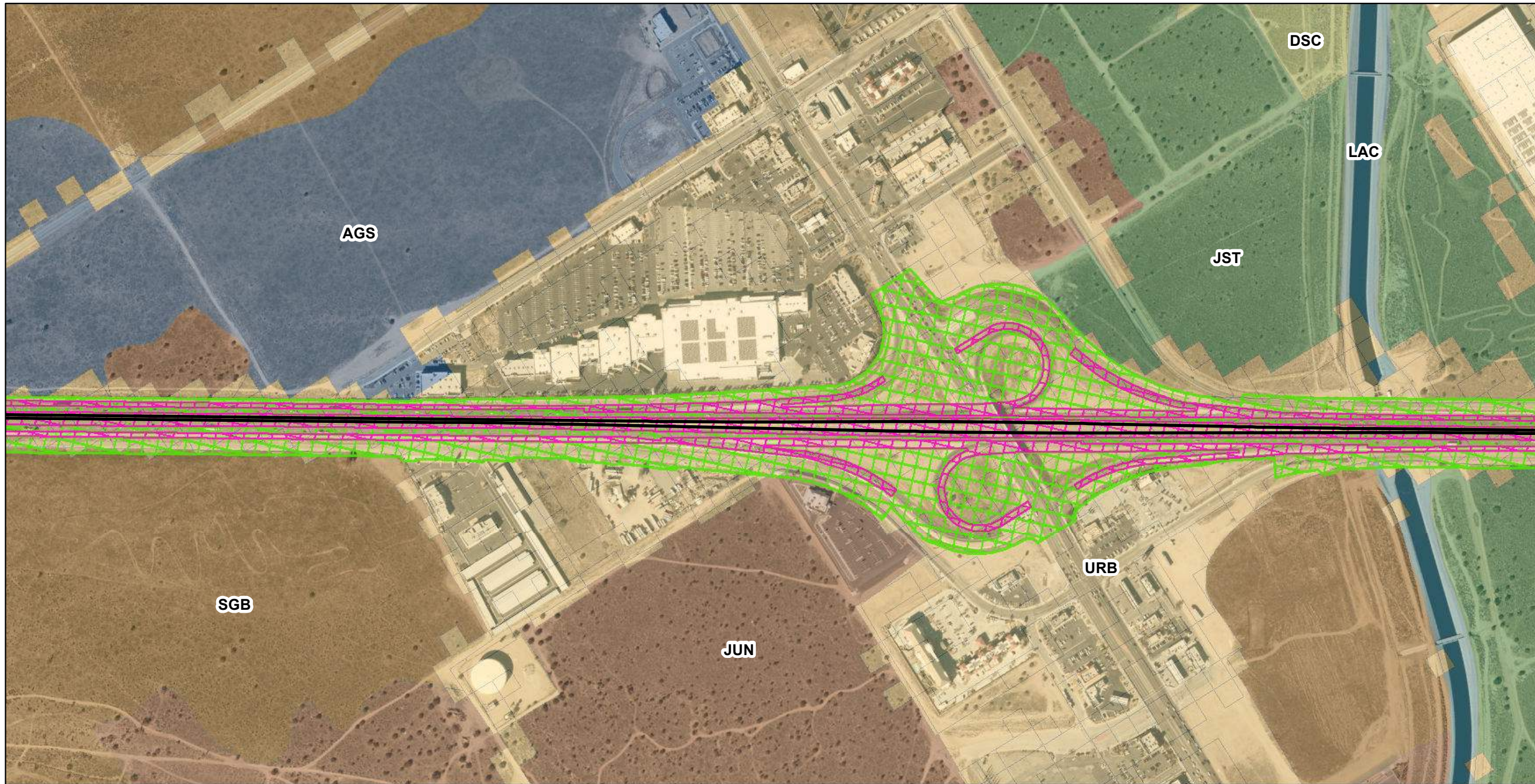
Vegetation Type

- Desert Scrub (DSC)
- Urban (URB)

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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

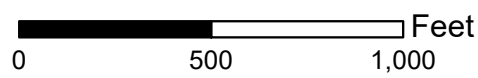
- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

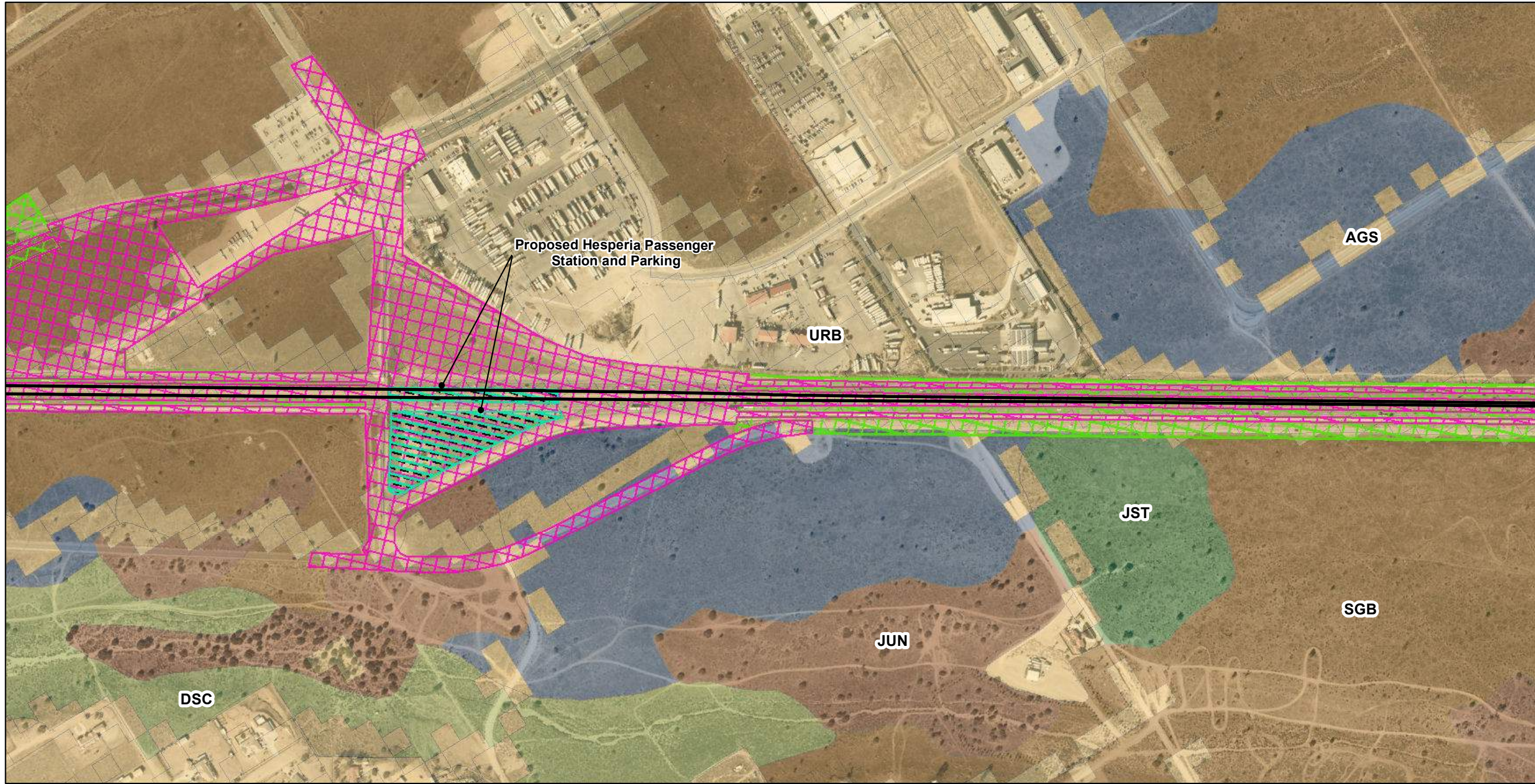
Vegetation Type

- Annual Grassland (AGS)
- Desert Scrub (DSC)
- Joshua Tree (JST)
- Juniper (JUN)
- Lacustrine (LAC)
- Sagebrush (SGB)
- Urban (URB)

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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

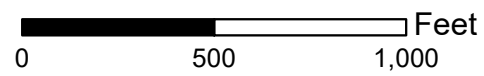
- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary
- Proposed Passenger Station

Vegetation Type

- Annual Grassland (AGS)
- Desert Scrub (DSC)
- Joshua Tree (JST)
- Juniper (JUN)
- Sagebrush (SGB)
- Urban (URB)

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

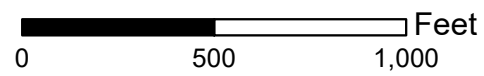
- ✖ Limits of Disturbance - Permanent
- ✖ Limits of Disturbance - Temporary

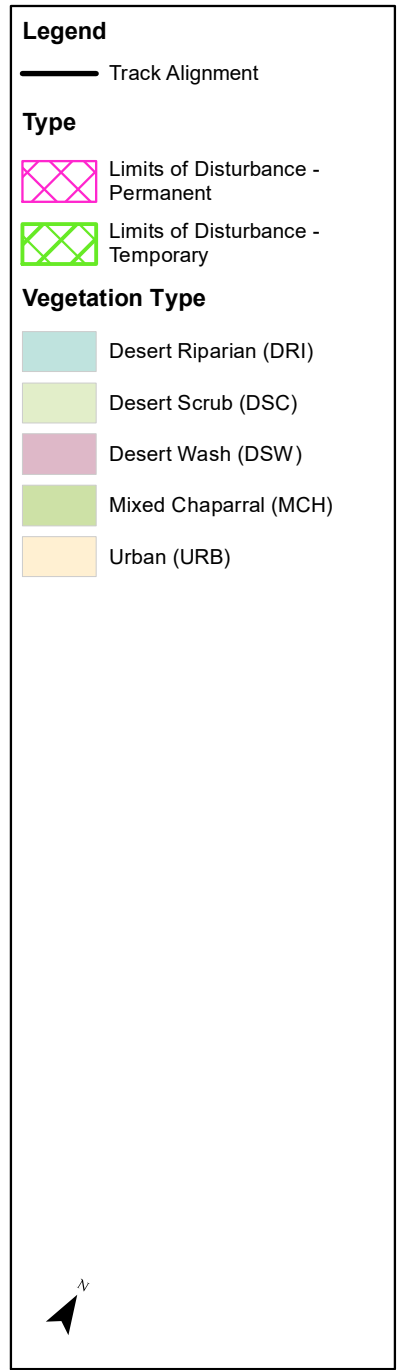
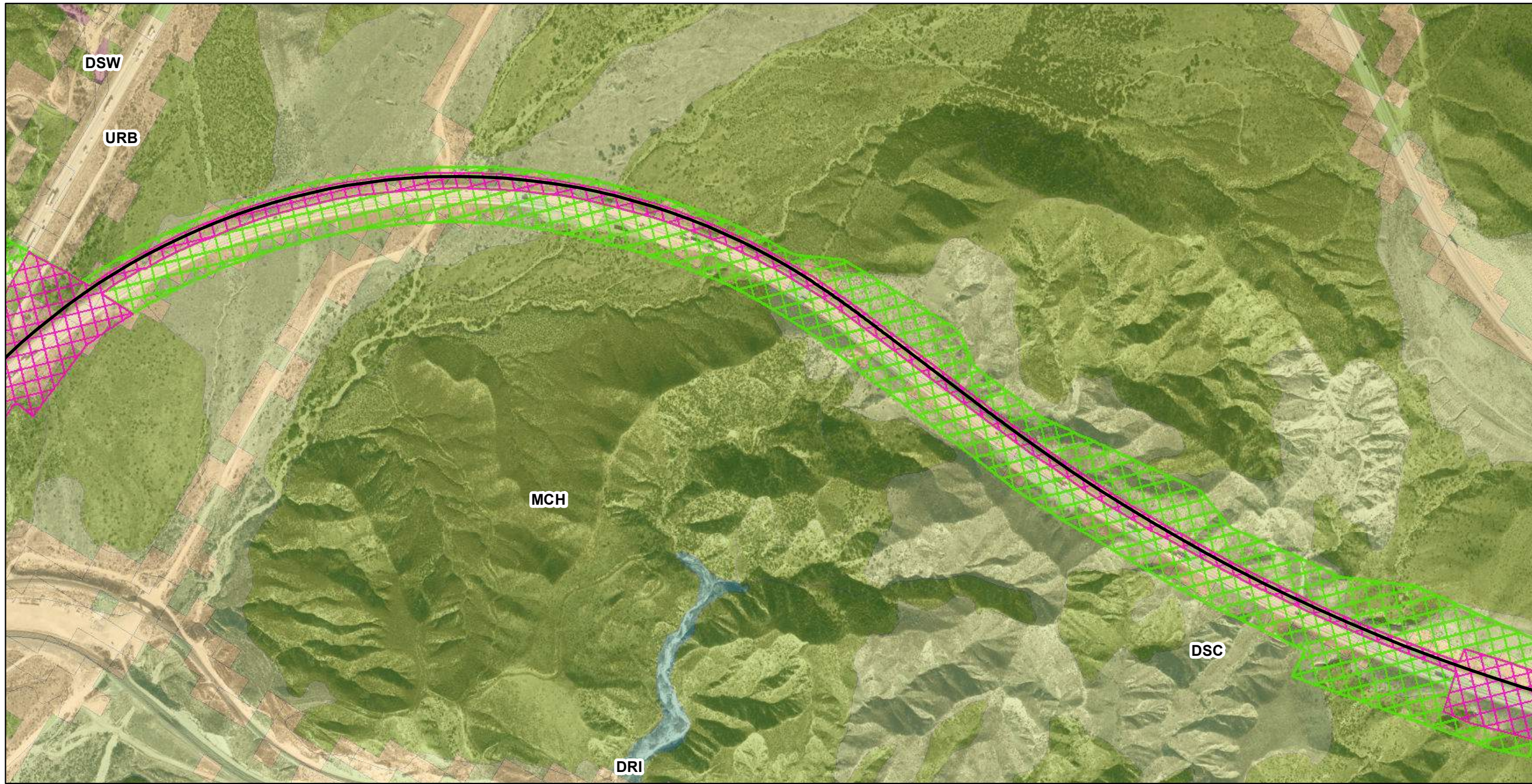
Vegetation Type

- Desert Scrub (DSC)
- Mixed Chaparral (MCH)
- Sagebrush (SGB)
- Urban (URB)

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
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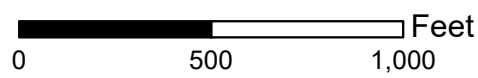
Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California

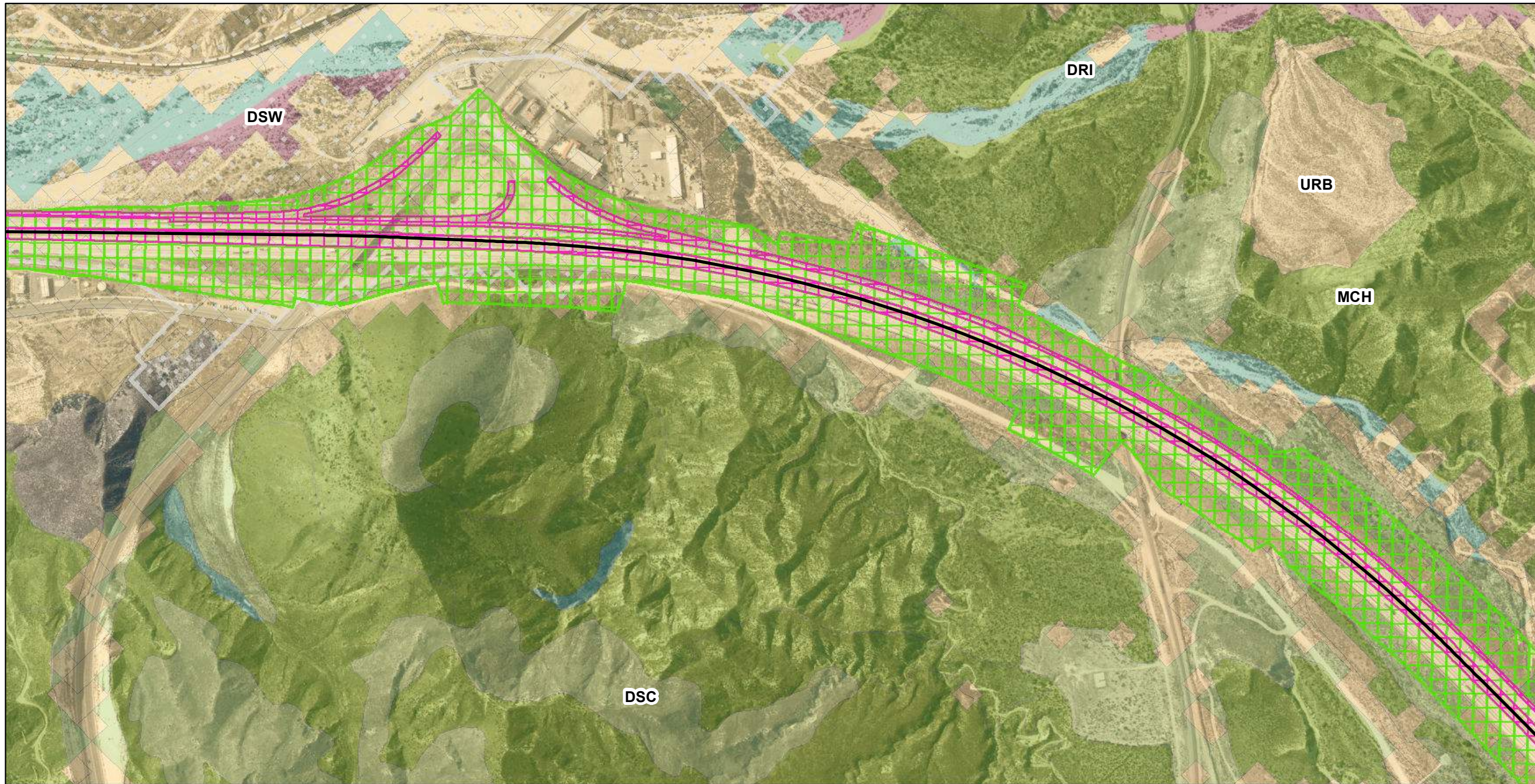




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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

- ▨ Limits of Disturbance - Permanent
- ▨ Limits of Disturbance - Temporary

Vegetation Type

- Desert Riparian (DRI)
- Desert Scrub (DSC)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Urban (URB)

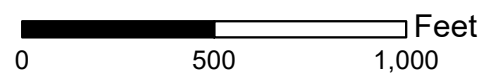
Critical Habitat

- Arroyo Toad

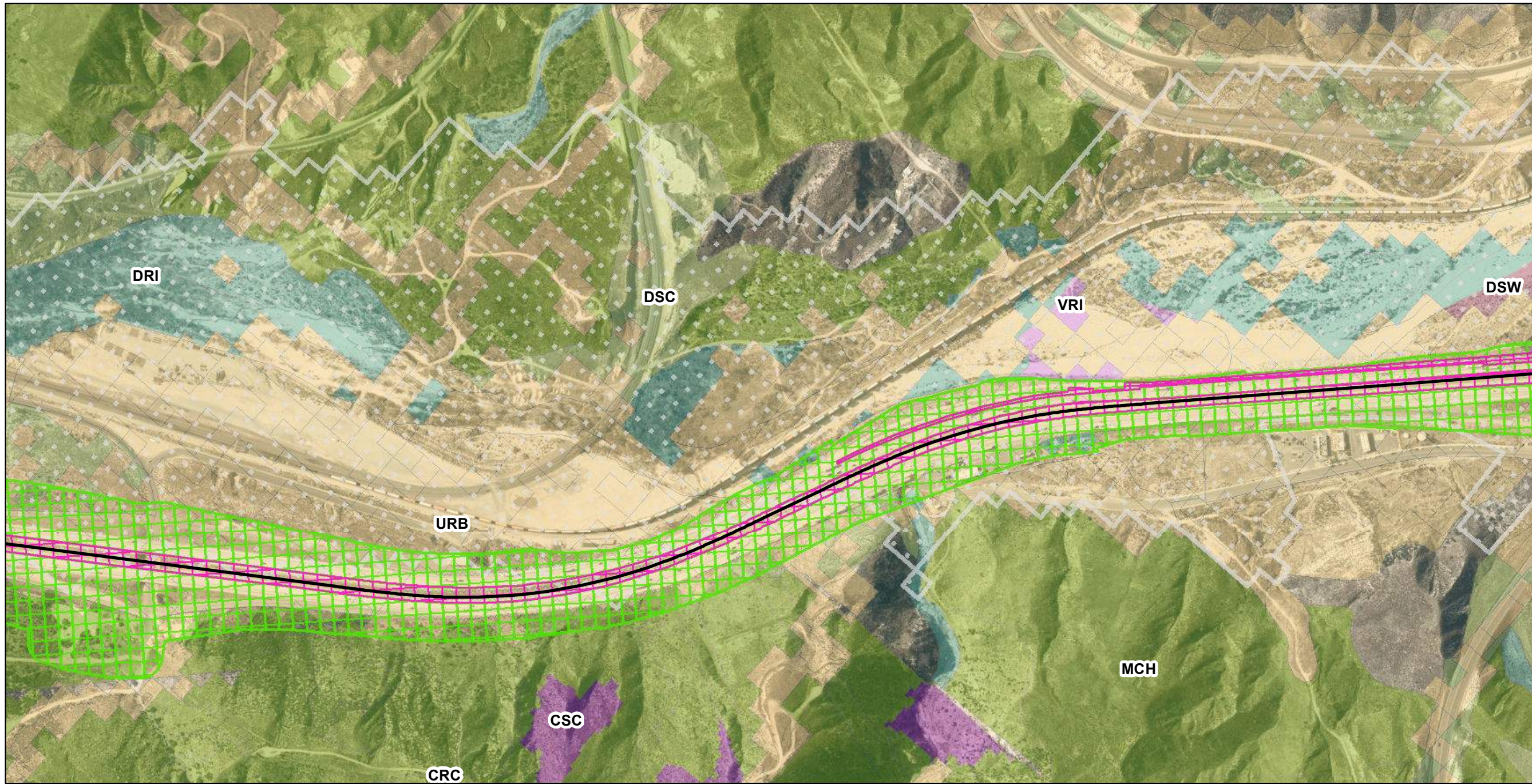
Wildlife Habitat Impacts

Cajon Pass High-Speed Rail

Victor Valley to Rancho Cucamonga, San Bernardino County, California



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Legend

— Track Alignment

Type

- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

Vegetation Type

- Chamise-Redshank Chaparral (CRC)
- Coastal Scrub (CSC)
- Desert Riparian (DRI)
- Desert Scrub (DSC)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Urban (URB)
- Valley Foothill Riparian (VRI)

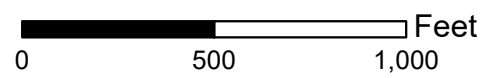
Critical Habitat

- Arroyo Toad

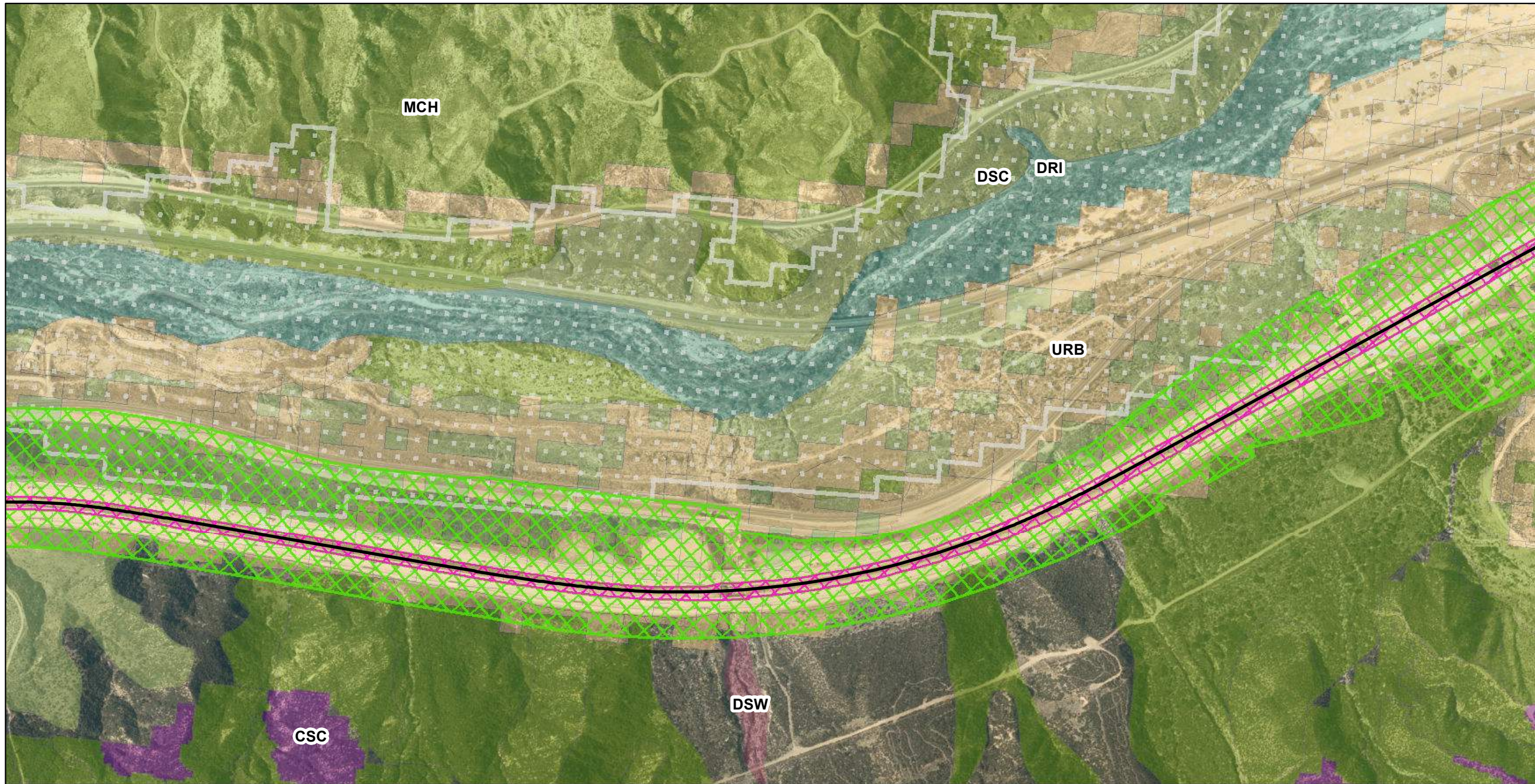
Wildlife Habitat Impacts

Cajon Pass High-Speed Rail

Victor Valley to Rancho Cucamonga, San Bernardino County, California



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Legend

- Track Alignment

Type

- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

Vegetation Type

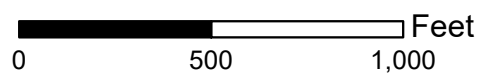
- Coastal Scrub (CSC)
- Desert Riparian (DRI)
- Desert Scrub (DSC)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Urban (URB)

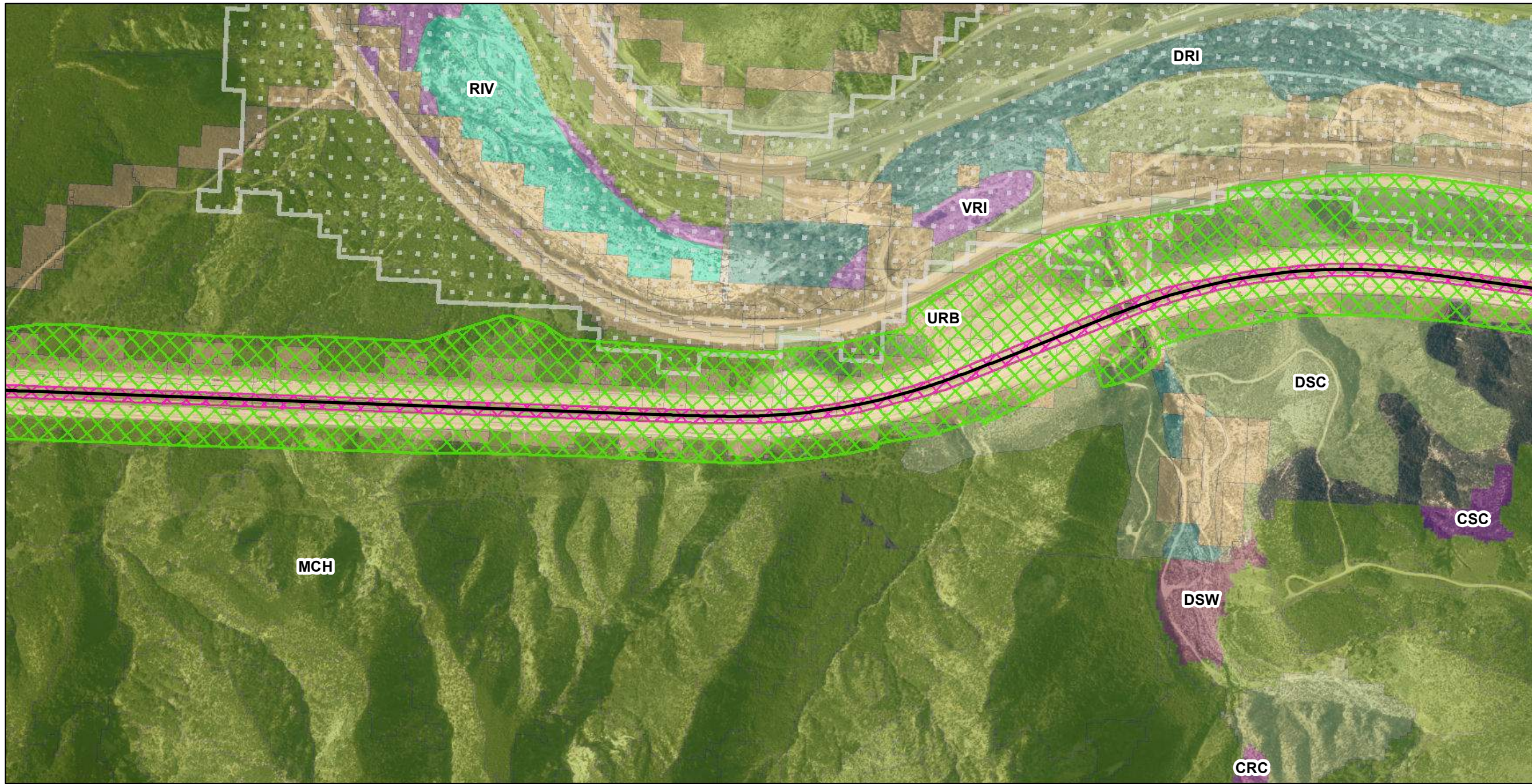
Critical Habitat

- Arroyo Toad

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

- Permanent (Pink cross-hatched)
- Temporary (Green cross-hatched)

Vegetation Type

- Chamise-Redshank Chaparral (CRC)
- Coastal Scrub (CSC)
- Desert Riparian (DRI)
- Desert Scrub (DSC)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Riverine (RIV)
- Urban (URB)
- Valley Foothill Riparian (VRI)

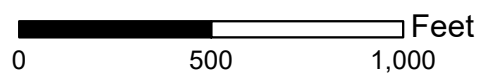
Critical Habitat

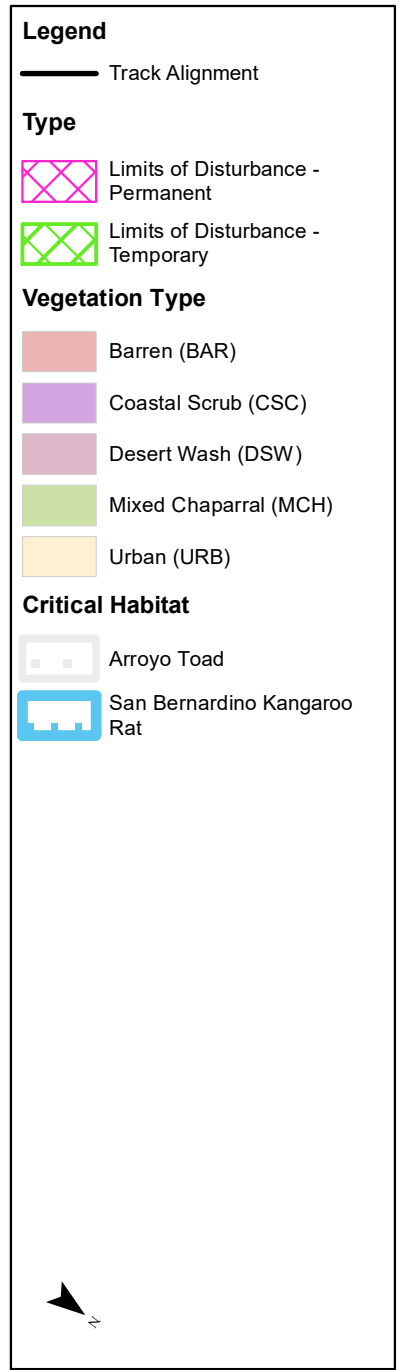
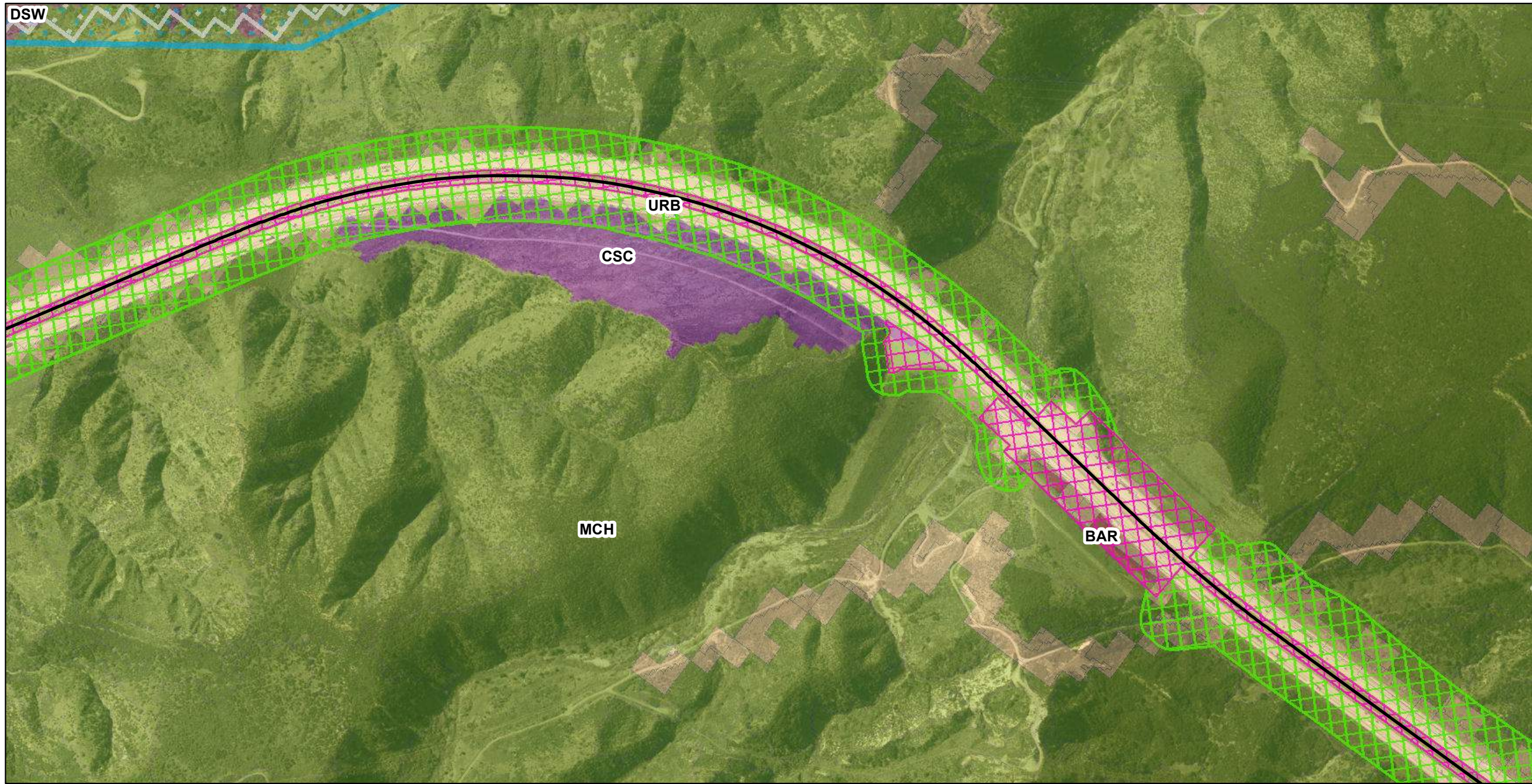
- Arroyo Toad (Dotted pattern)

North arrow pointing up.

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
 Document Path: A:\15151612\ExpressWest\WV_Extension08_Tech\PROJ\Env\GIS Data\ExpressWest_Extension\GIS\MXDs

Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California

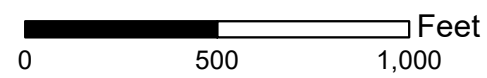




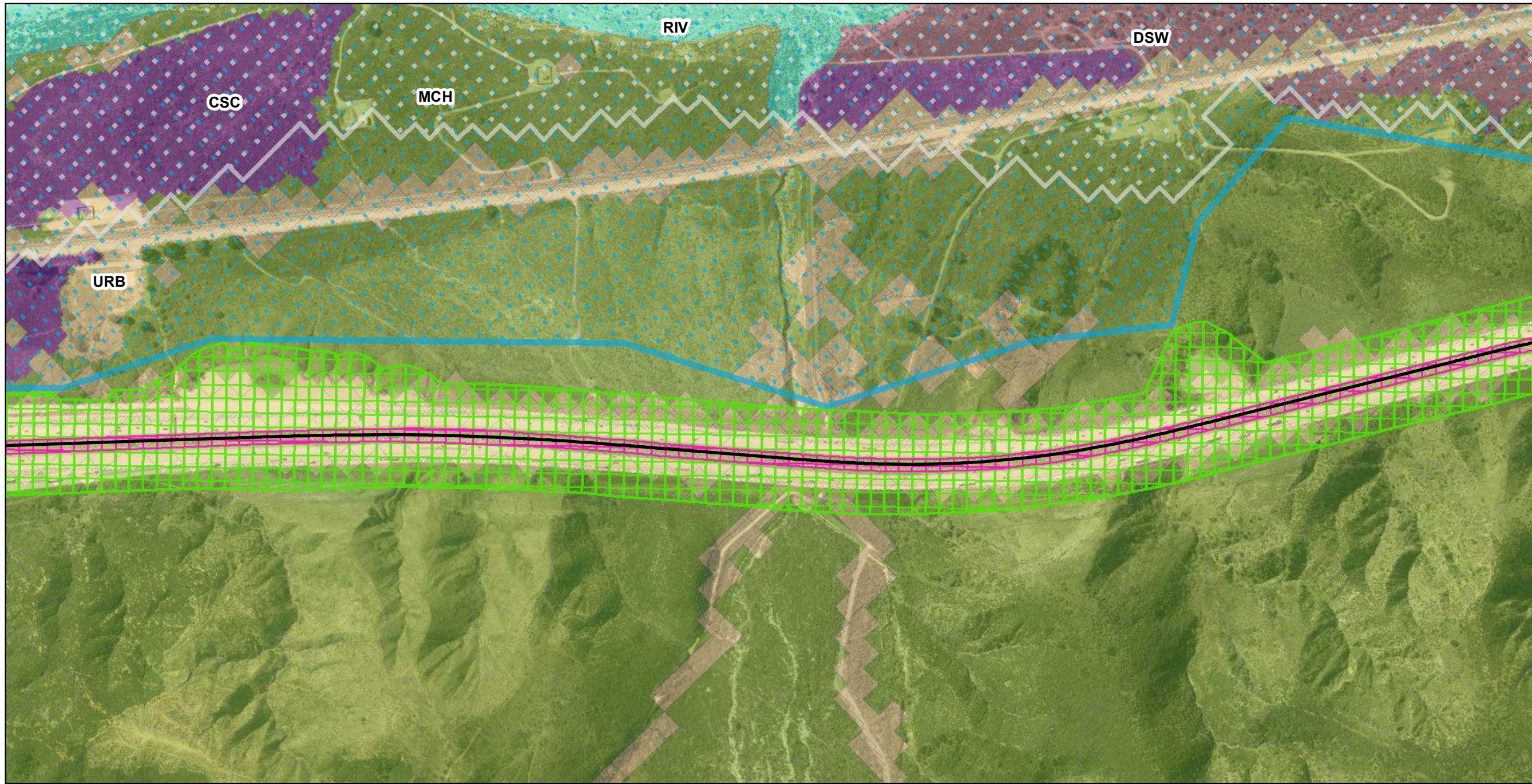
Wildlife Habitat Impacts

Cajon Pass High-Speed Rail

Victor Valley to Rancho Cucamonga, San Bernardino County, California



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Legend

— Track Alignment

Type

- ▨ Limits of Disturbance - Permanent
- ▨ Limits of Disturbance - Temporary

Vegetation Type

- Coastal Scrub (CSC)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Riverine (RIV)
- Urban (URB)

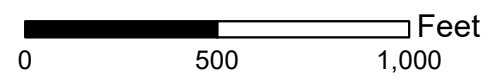
Critical Habitat

- Arroyo Toad
- San Bernardino Kangaroo Rat

Wildlife Habitat Impacts

Cajon Pass High-Speed Rail

Victor Valley to Rancho Cucamonga, San Bernardino County, California



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Legend

— Track Alignment

Type

- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

Vegetation Type

- Coastal Scrub (CSC)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Montane Hardwood (MHW)
- Riverine (RIV)
- Urban (URB)

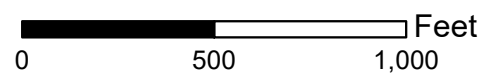
Critical Habitat

- Arroyo Toad
- San Bernardino Kangaroo Rat

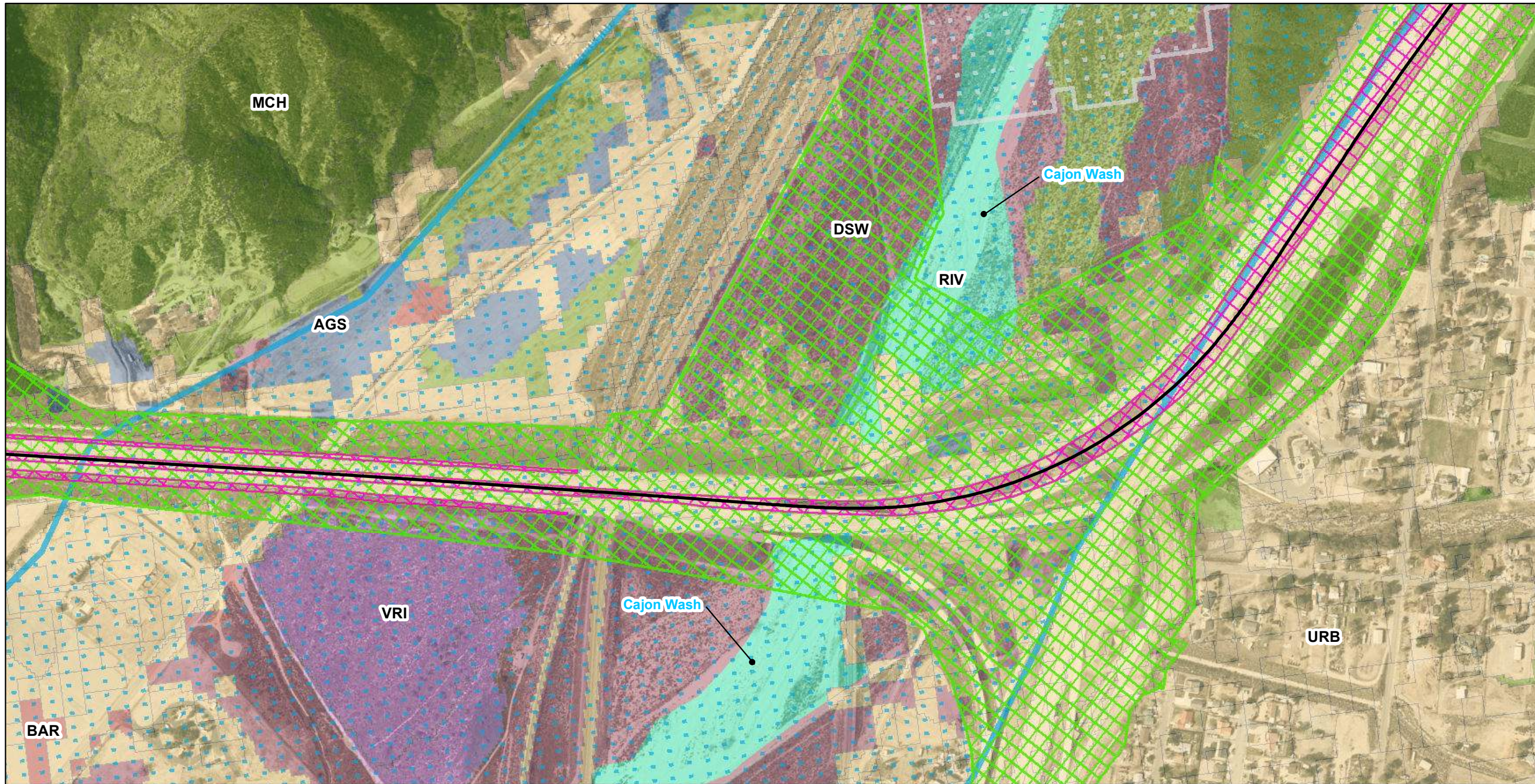
Wildlife Habitat Impacts

Cajon Pass High-Speed Rail

Victor Valley to Rancho Cucamonga, San Bernardino County, California



Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
 Document Path: A:\1515151\2\press\West\WV_Extension08_Tech\PRODI\Env\GIS Data\XpressWest\Extension08\GIS\MXDs



Legend

— Track Alignment

Type

- Permanent Disturbance (Pink cross-hatch)
- Temporary Disturbance (Green cross-hatch)

Vegetation Type

- Annual Grassland (AGS) - Blue
- Barren (BAR) - Red
- Desert Wash (DSW) - Purple
- Mixed Chaparral (MCH) - Green
- Riverine (RIV) - Cyan
- Urban (URB) - Orange
- Valley Foothill Riparian (VRI) - Light Purple

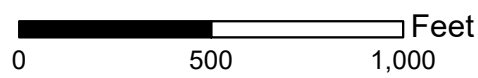
Critical Habitat

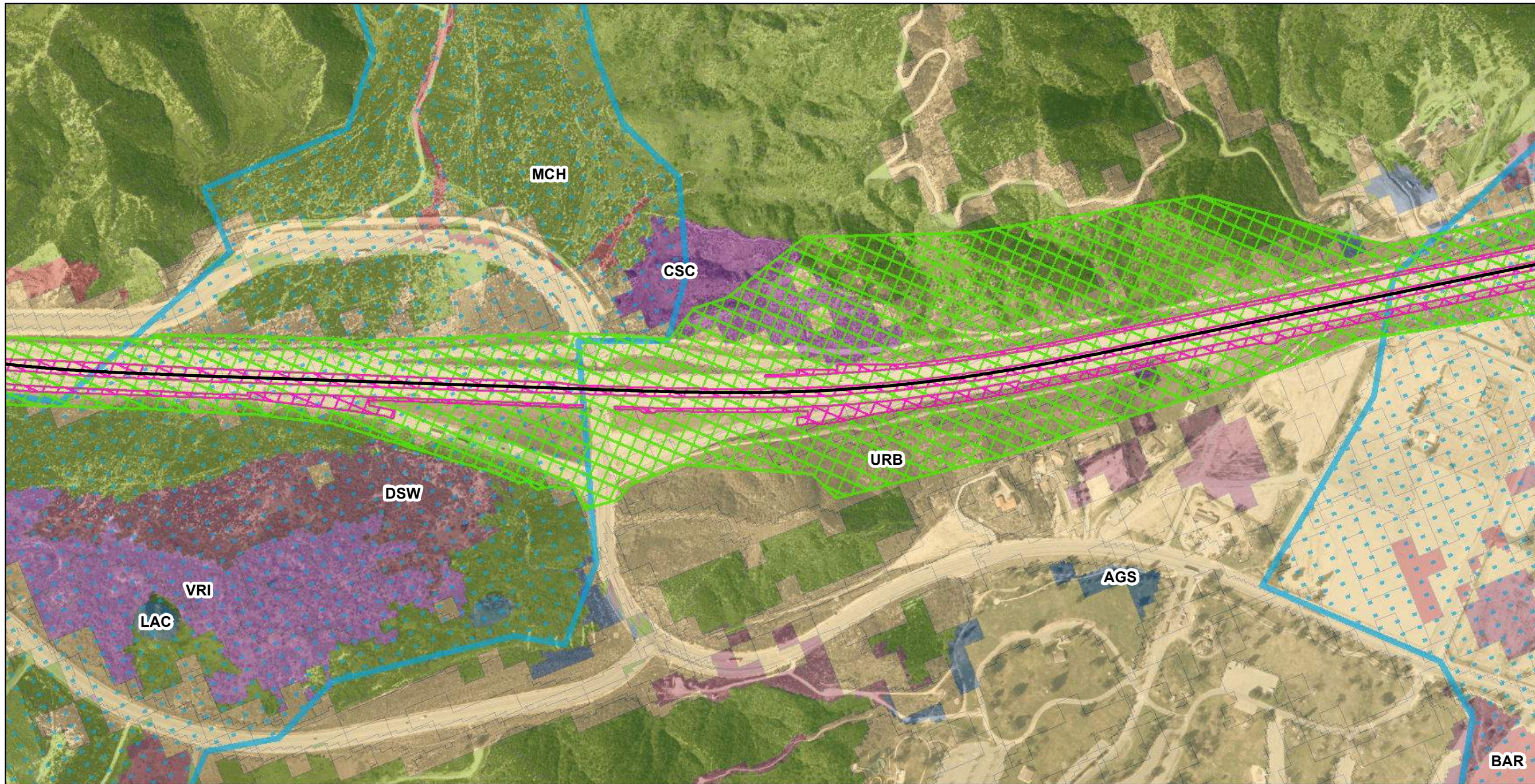
- Arroyo Toad (White dashed outline)
- San Bernardino Kangaroo Rat (Blue dashed outline)

North arrow pointing up.

Date Saved: 6/9/2022 4:24:01 PM
 Version: Revised from April 2022 map set
 Document Path: A:\15151\12\press\West\WV_Extension08_TechPRD\Env\GIS Data\XpressWest_Extension\GIS\XIDs

Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

Vegetation Type

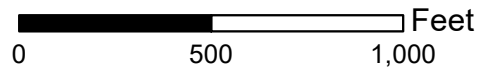
- Annual Grassland (AGS)
- Barren (BAR)
- Coastal Scrub (CSC)
- Desert Wash (DSW)
- Lacustrine (LAC)
- Mixed Chaparral (MCH)
- Urban (URB)
- Valley Foothill Riparian (VRI)

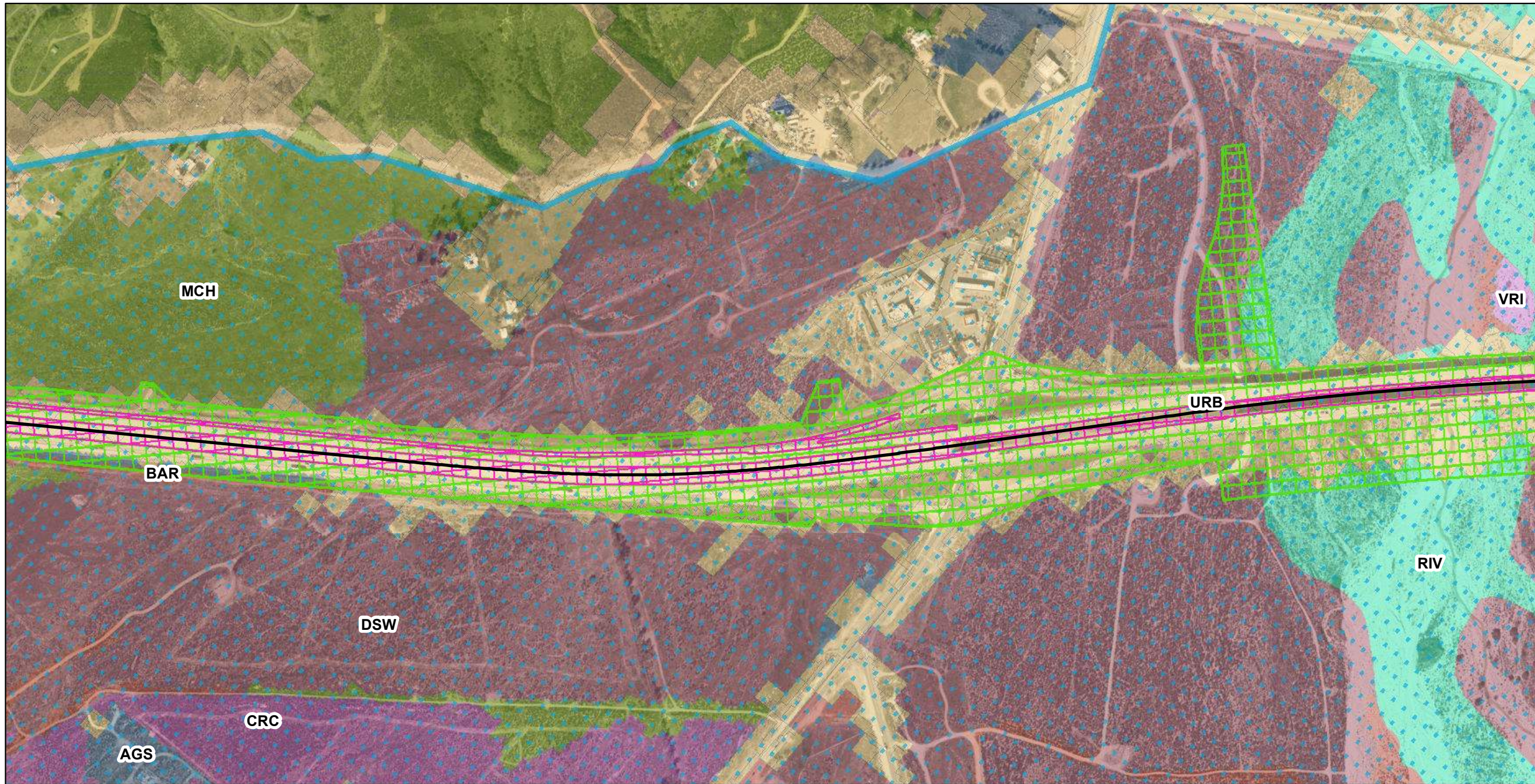
Critical Habitat

- San Bernardino Kangaroo Rat

Date Saved: 6/9/2022 4:24:01 PM
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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

— Track Alignment

Type

- ▨ Limits of Disturbance - Permanent
- ▨ Limits of Disturbance - Temporary

Vegetation Type

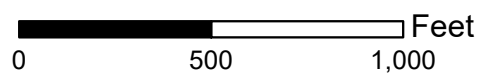
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- Barren (BAR)
- Chamise-Redshank Chaparral (CRC)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Riverine (RIV)
- Urban (URB)
- Valley Foothill Riparian (VRI)

Critical Habitat

- San Bernardino Kangaroo Rat

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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California





Legend

- Track Alignment

Type

- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary

Vegetation Type

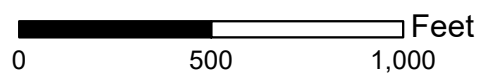
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- Coastal Scrub (CSC)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Urban (URB)

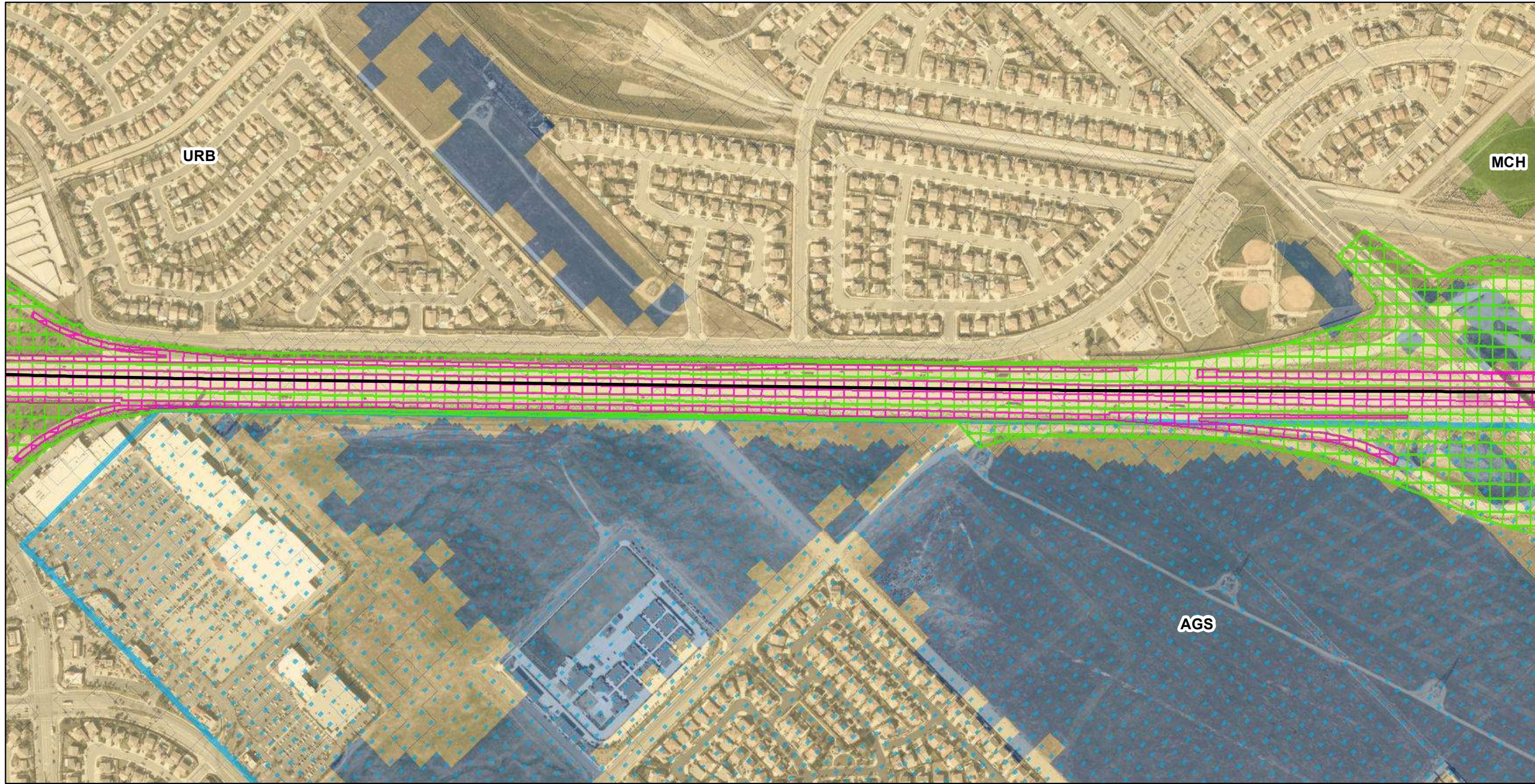
Critical Habitat

- San Bernardino Kangaroo Rat

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Vegetation Type

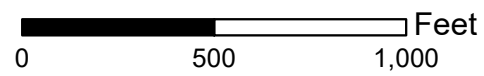
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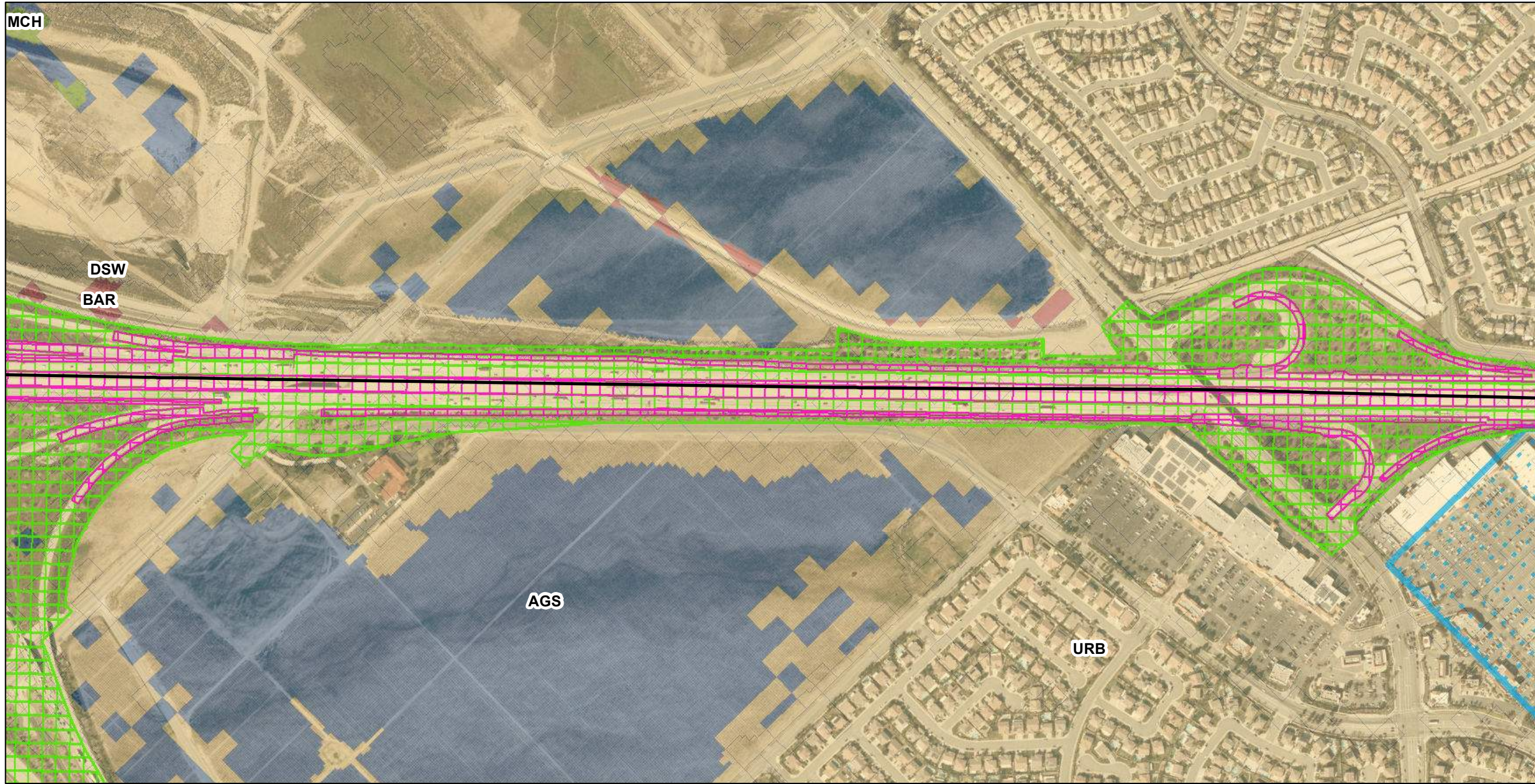
Critical Habitat

- San Bernardino Kangaroo Rat

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 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California

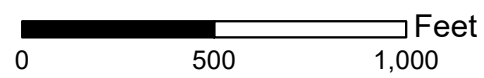




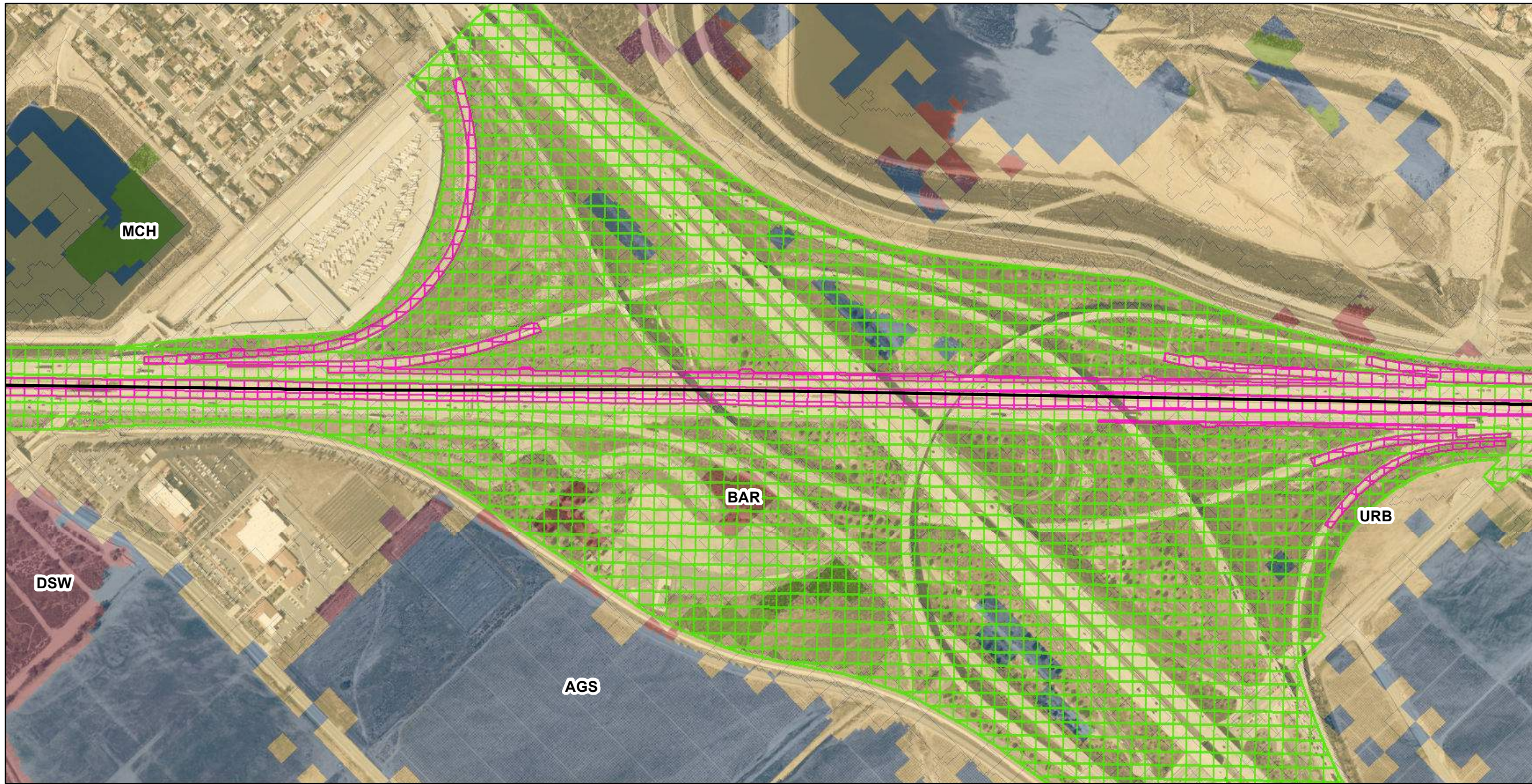
Wildlife Habitat Impacts

Cajon Pass High-Speed Rail

Victor Valley to Rancho Cucamonga, San Bernardino County, California



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Legend

— Track Alignment

Type

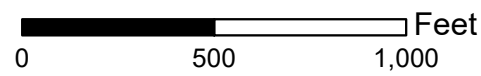
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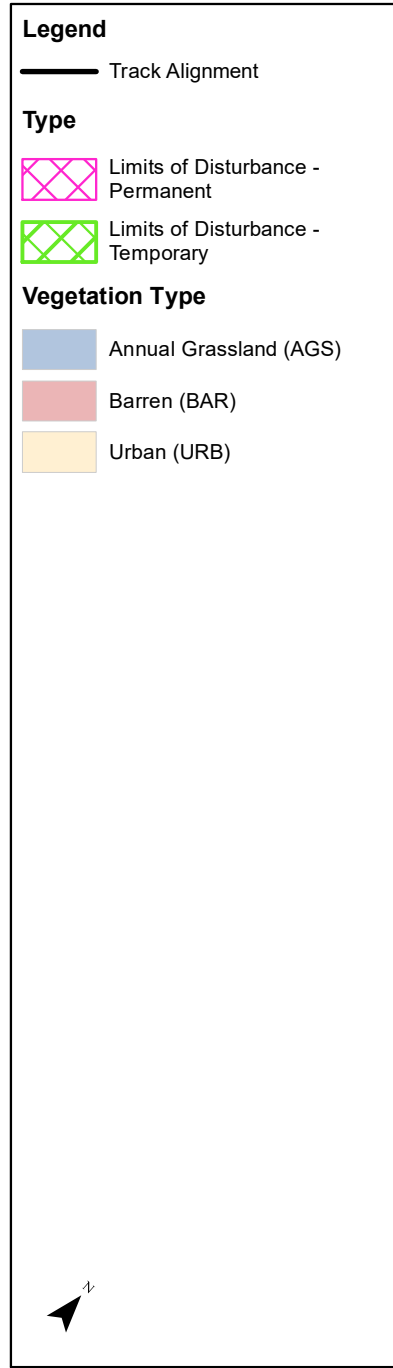
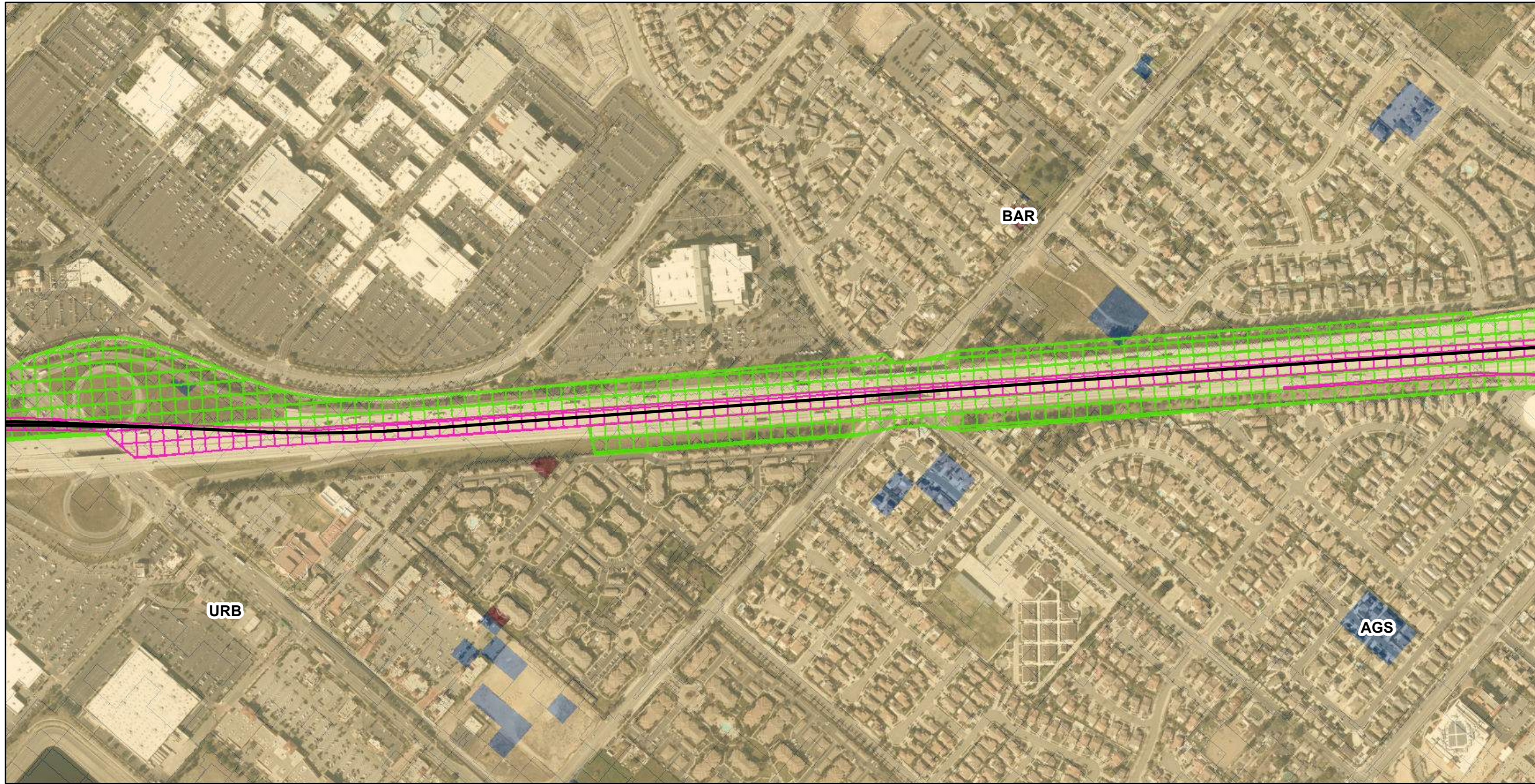
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- Barren (BAR)
- Desert Wash (DSW)
- Mixed Chaparral (MCH)
- Urban (URB)

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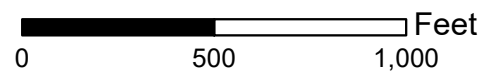
Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
 Victor Valley to Rancho Cucamonga, San Bernardino County, California

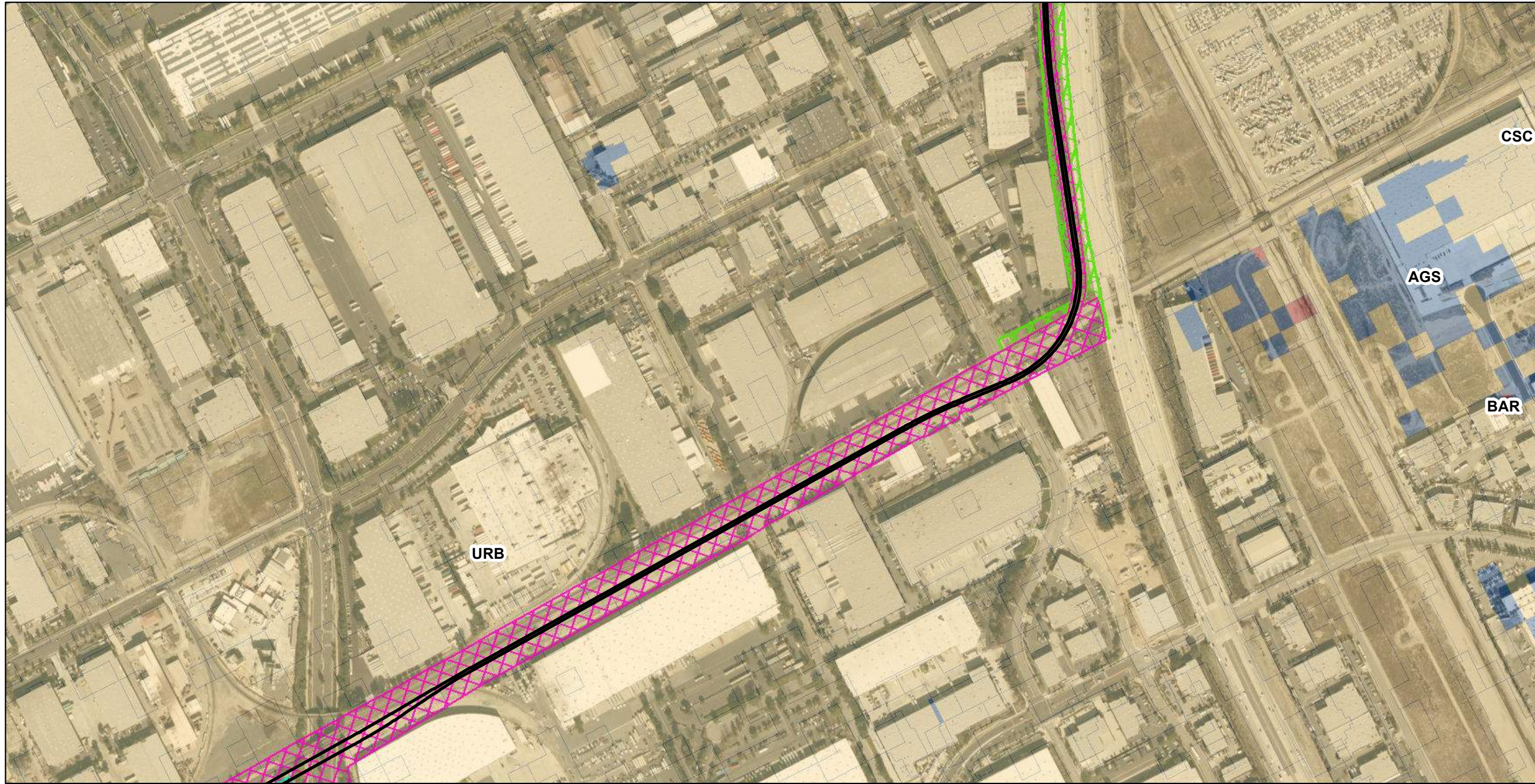




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Wildlife Habitat Impacts
 Cajon Pass High-Speed Rail
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— Track Alignment

Type

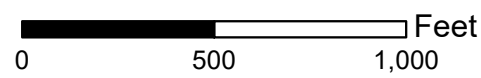
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- Limits of Disturbance - Temporary
- Proposed Passenger Station

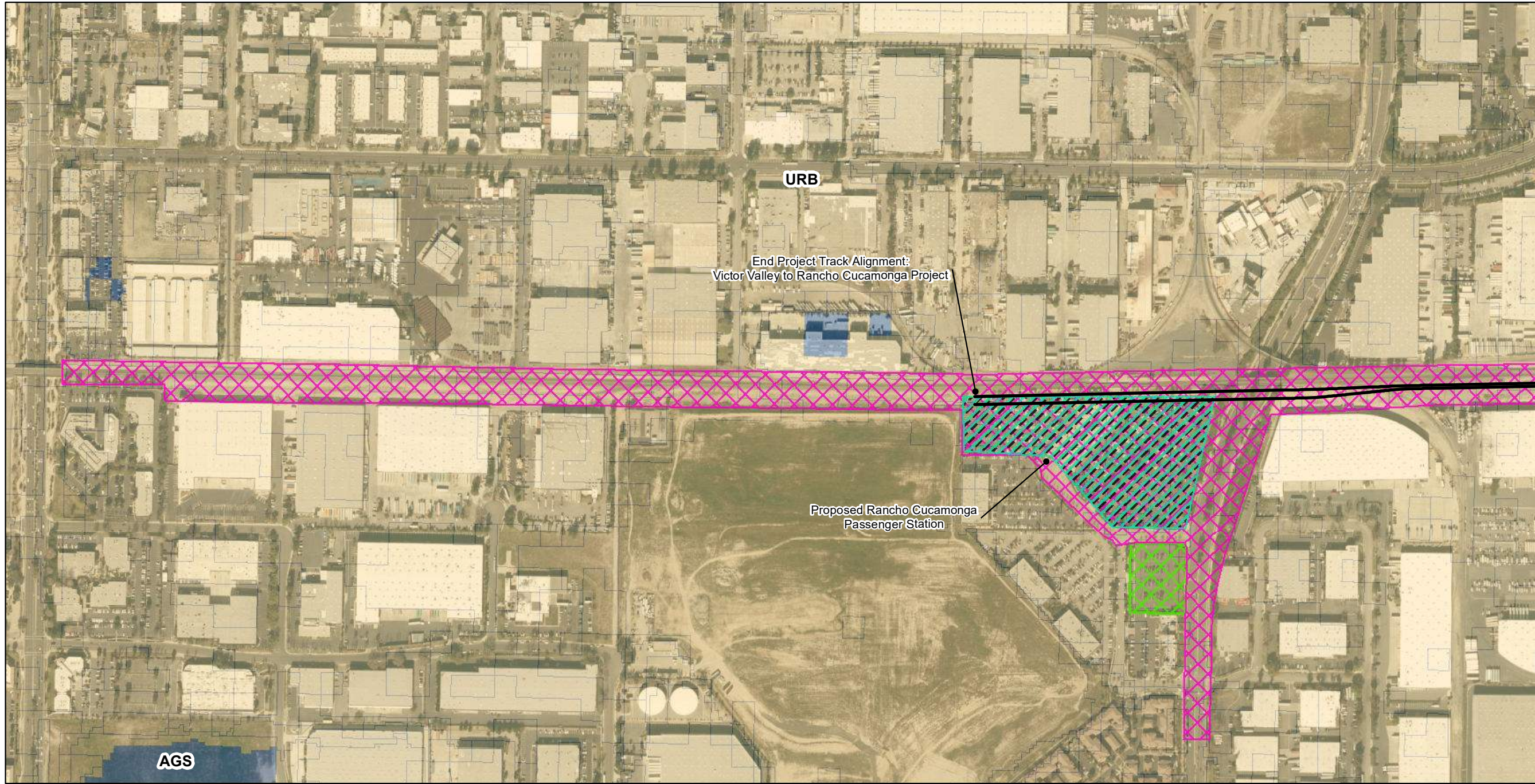
Vegetation Type

- Annual Grassland (AGS)
- Barren (BAR)
- Coastal Scrub (CSC)
- Urban (URB)

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Wildlife Habitat Impacts
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— Track Alignment

Type

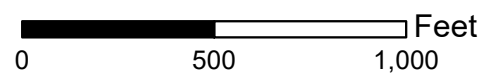
- Limits of Disturbance - Permanent
- Limits of Disturbance - Temporary
- Proposed Passenger Station

Vegetation Type

- Annual Grassland (AGS)
- Urban (URB)

N

Wildlife Habitat Impacts
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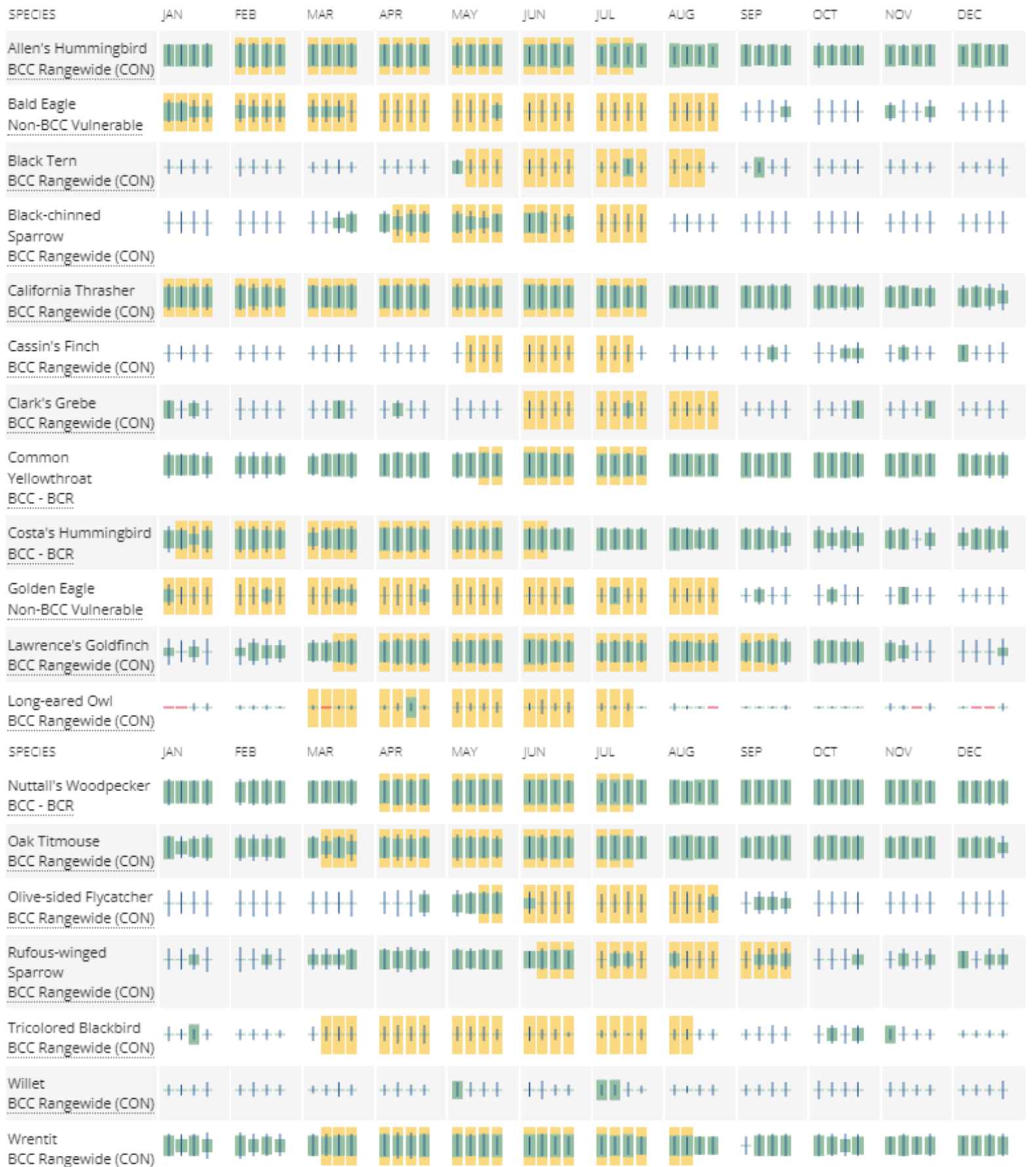


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Appendix B

Migratory Bird Species and their Phenology

■ probability of presence ■ breeding season | survey effort - no data



Migratory Bird Probability of Presence for Brightline West Cajon Pass Project From Information for Planning and Consultation (IPaC), USFWS

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.