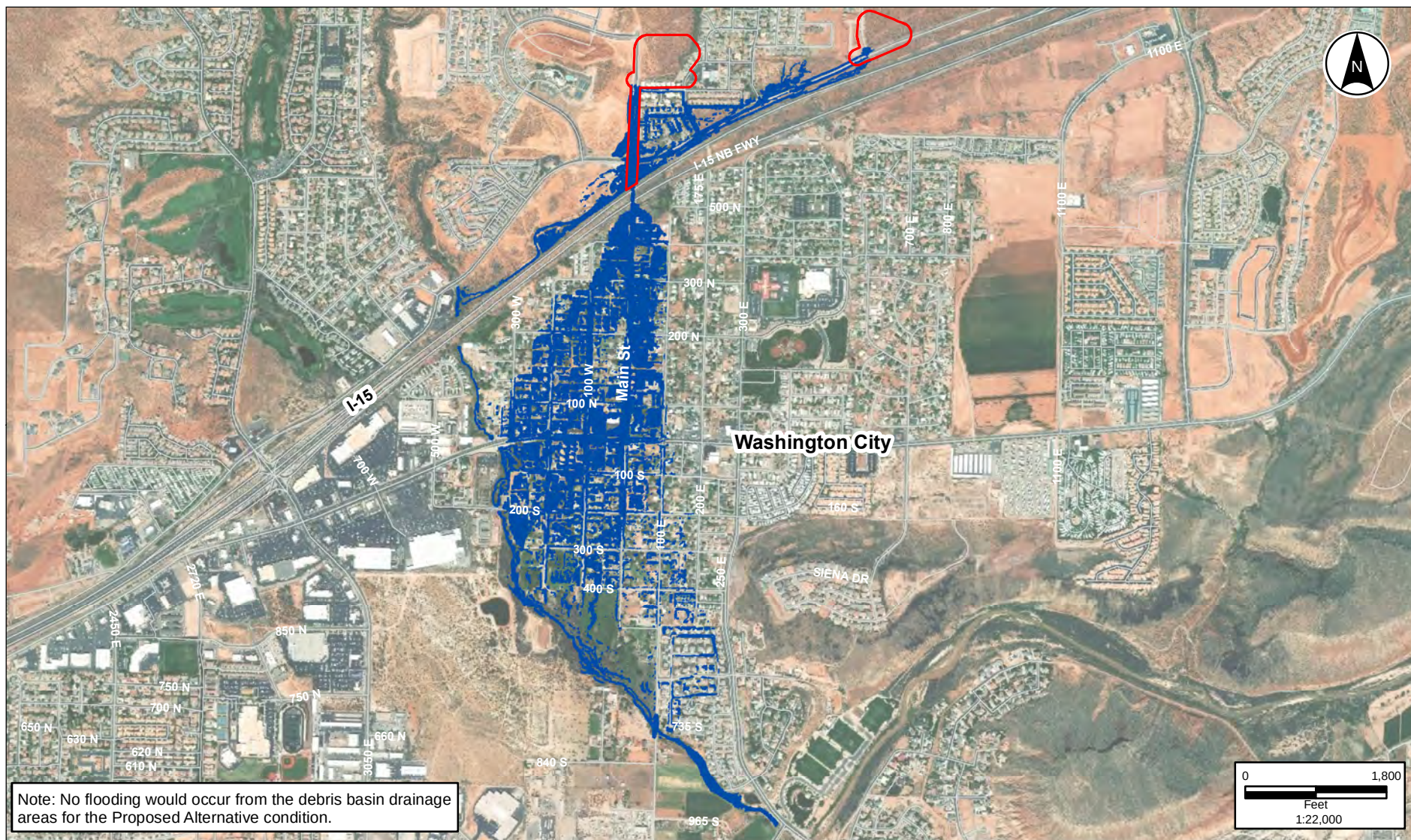


Appendix C

Supporting Maps

Flood Maps
Soil Maps
Waters and Wetland Maps
FEMA Maps
Riparian Area Maps
Critical Habitat Maps
Recreation Maps
Land Use Maps
Land Ownership Maps

Flood Maps



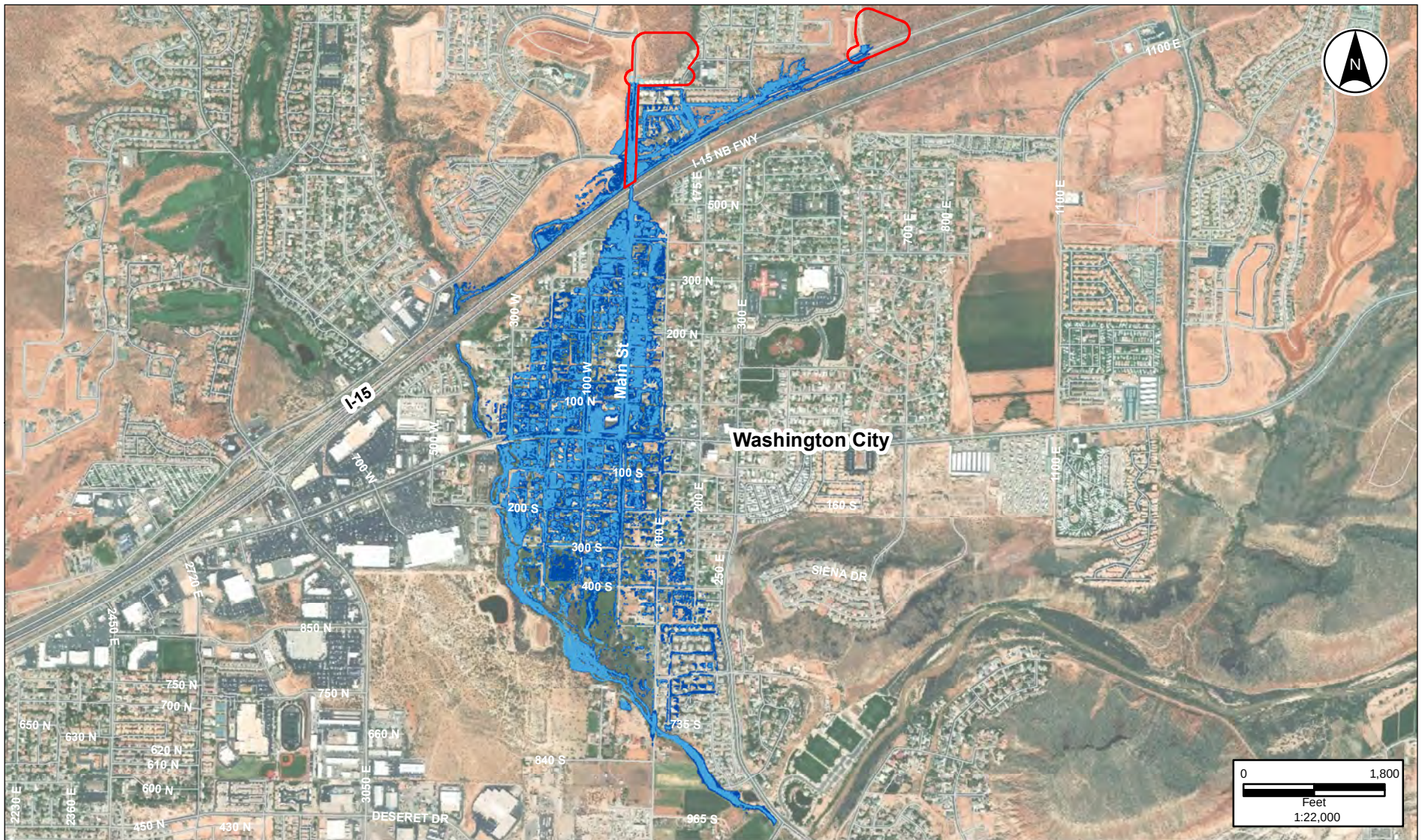
NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Existing Condition 100-year Storm



Map C1.1A
Main Street Debris Basins
100-Year Storm
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Main Street Proposed Condition 500-year Storm
- Main Street Existing Condition 500-year Storm



Map C1.1B
Main Street Debris Basins
500-Year Storm
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



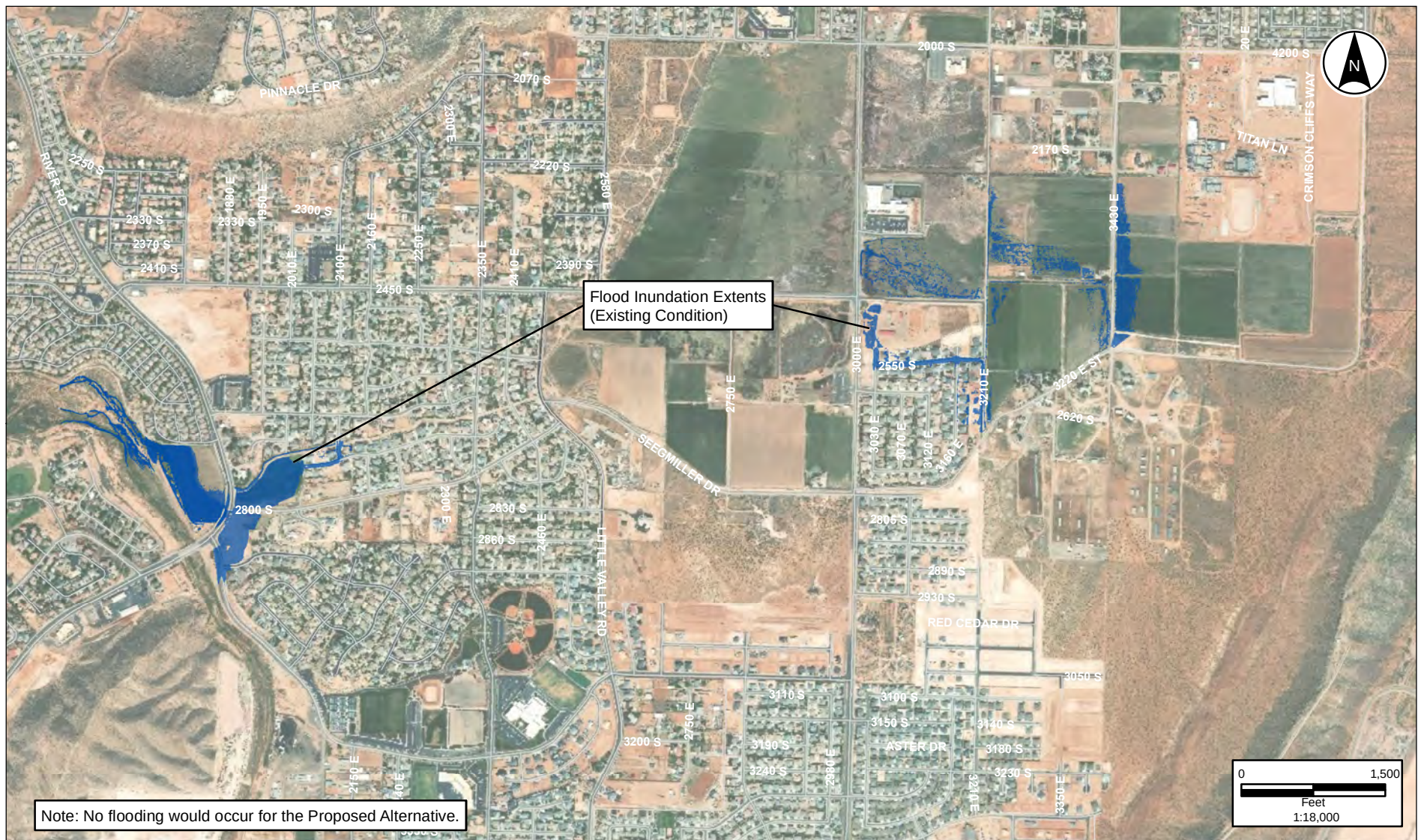
NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Y-Drain Existing
- Condition 100-year Storm



Map C1.2
Y-Drain
100-Year Storm
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

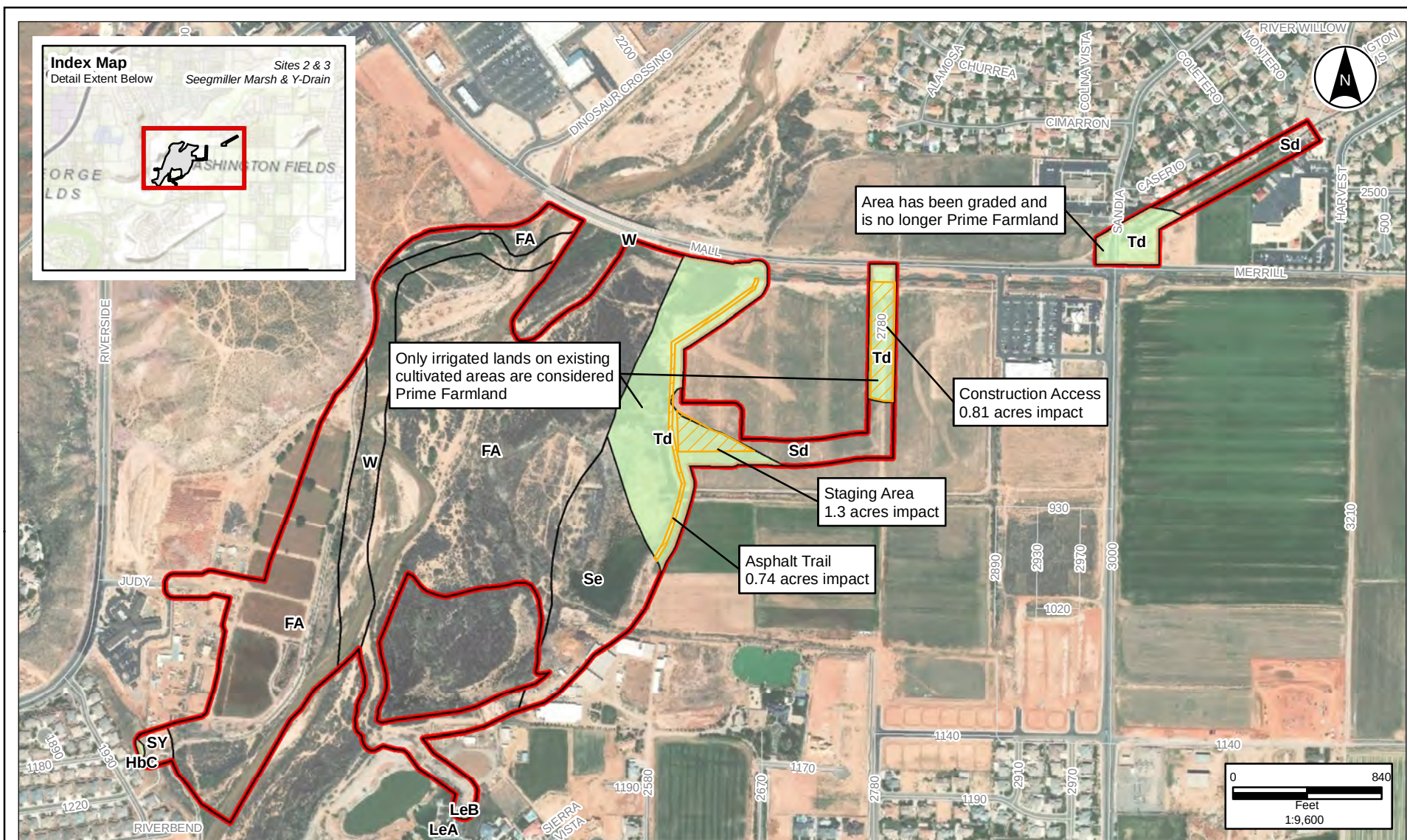
Legend

- Warner Valley Disposal System Existing Condition 100-year Storm



Map C1.3
Warner Valley Disposal System
100-Year Storm
Warner Draw Watershed & Flood Prevention Operations Project Plan-EA

Soils Maps



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Prime farmland if irrigated
- Impact

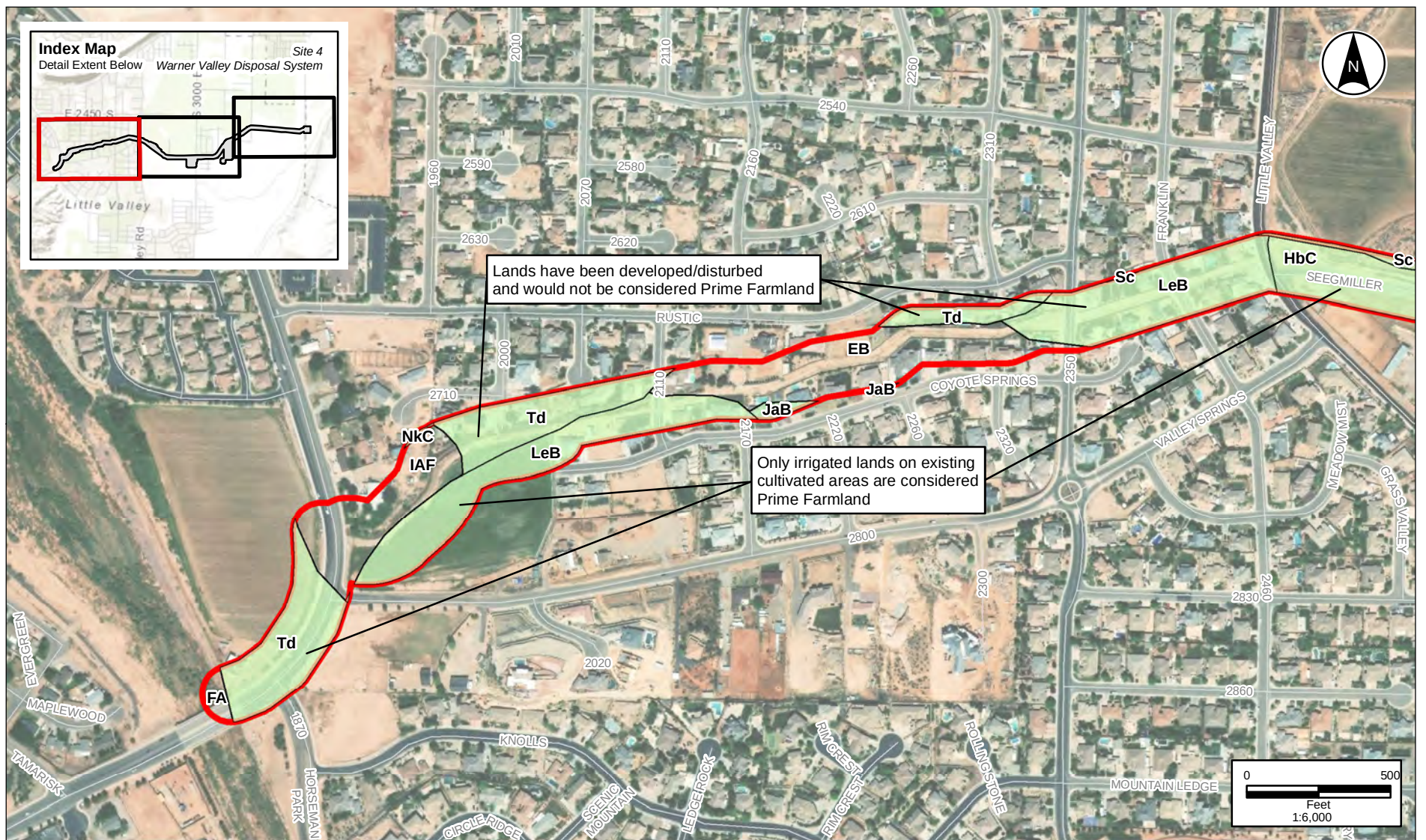
Soil Map Units:

- | | | |
|---|---|----------|
| FA: Fluvaquents and torrifluents, sandy | SY: Stony colluvial land | W: Water |
| HbC: Harrisburg fine sandy loam | Sd: St. George silty clay loam, moderately saline | |
| LeA: Leeds silty clay loam | Se: St. George silty clay loam, shallow water table | |
| LeB: Leeds silty clay loam | Td: Tobler silty clay loam | |



Map C2.2 Seegmiller Marsh and Y-Drain Soils

Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

Project Area

Prime farmland if irrigated

Soil Map Units:

EB: Eroded land-Shalet complex,
warm

FA: Fluvaquents and torrifluents,
sandy

HbC: Harrisburg fine sandy loam

IAF: Isom cobbly sandy loam

JaB: Junction fine sandy loam

LeB: Leeds silty clay loam

NkC: Nikey sandy loam

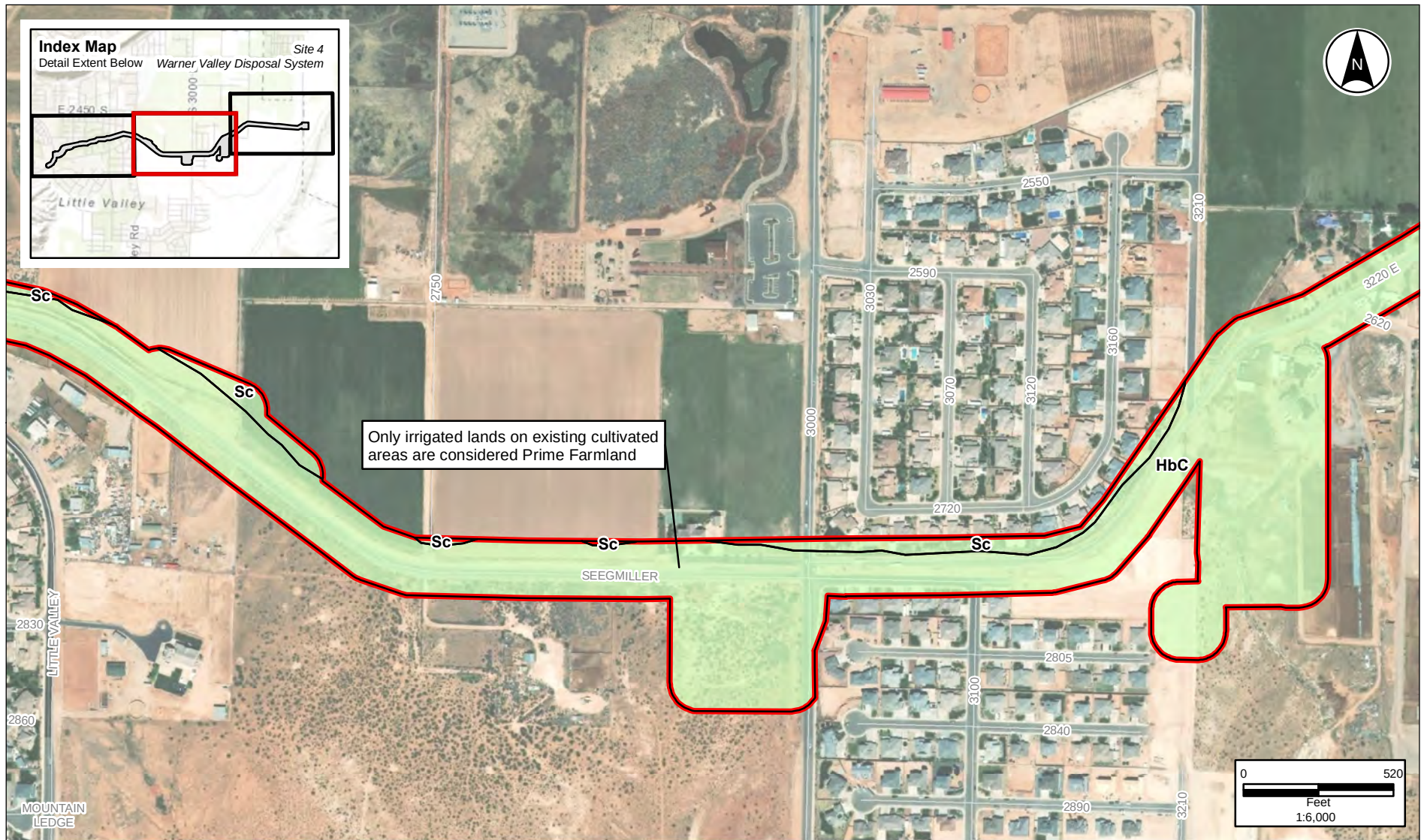
Sc: St. George silty clay loam

Td: Tobler silty clay loam



Map C2.3A Warner Valley Disposal System Soils

Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

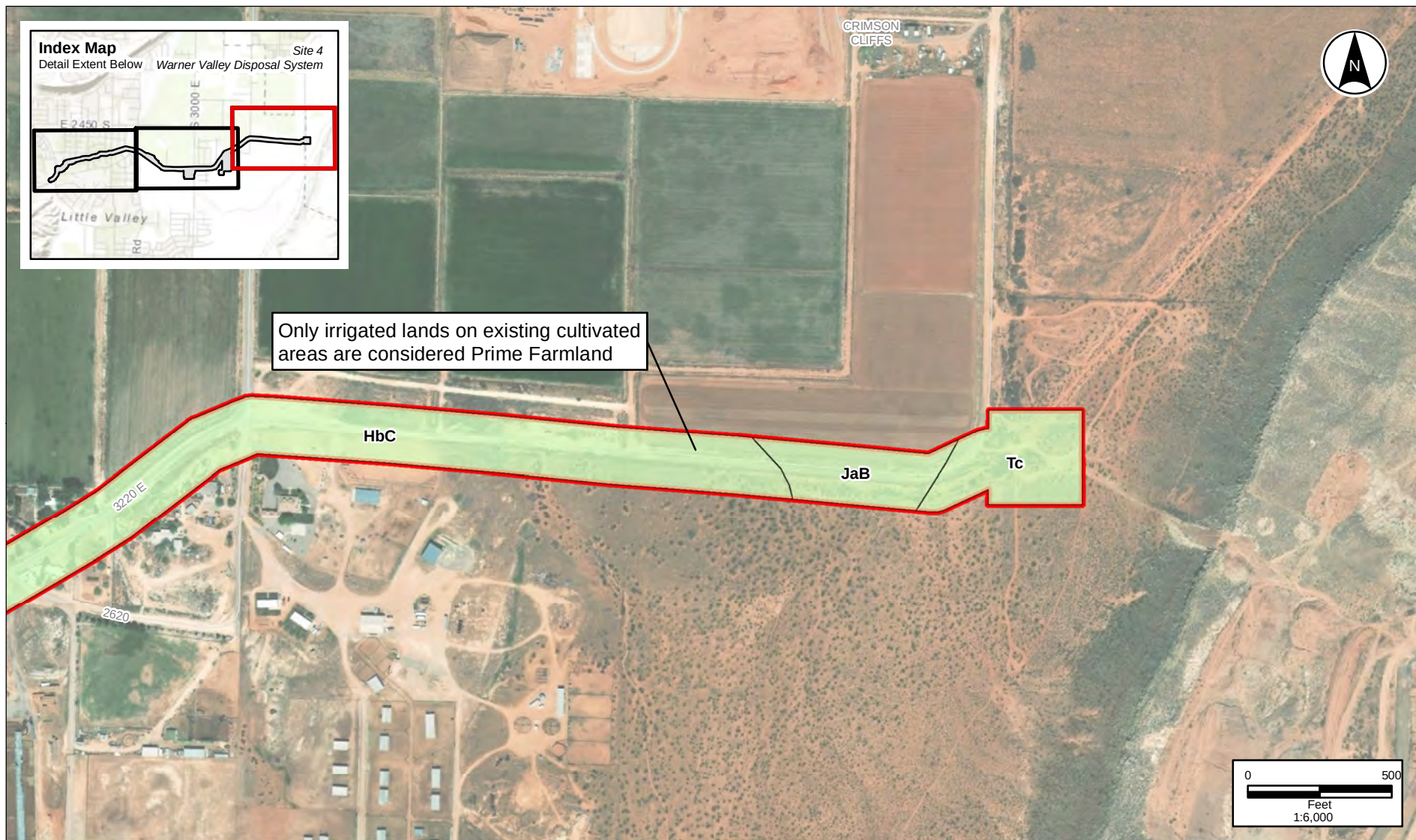
- Project Area
- Prime farmland if irrigated
- Soil Map Units:

HbC: Harrisburg fine sandy loam
Sc: St. George silty clay loam



Map C2.3B
Warner Valley Disposal System Soils

Warner Draw Watershed & Flood Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Prime farmland if irrigated
- Soil Map Units:**
- HbC: Harrisburg fine sandy loam

JaB: Junction fine sandy loam
Tc: Tobler fine sandy loam



Map C2.3C
Warner Valley Disposal System Soils

**Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA**



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

Legend

- Project Area
- Prime farmland if irrigated
- Soil Map Units:**
 - HbC: Harrisburg fine sandy loam
 - LeB: Leeds silty clay loam

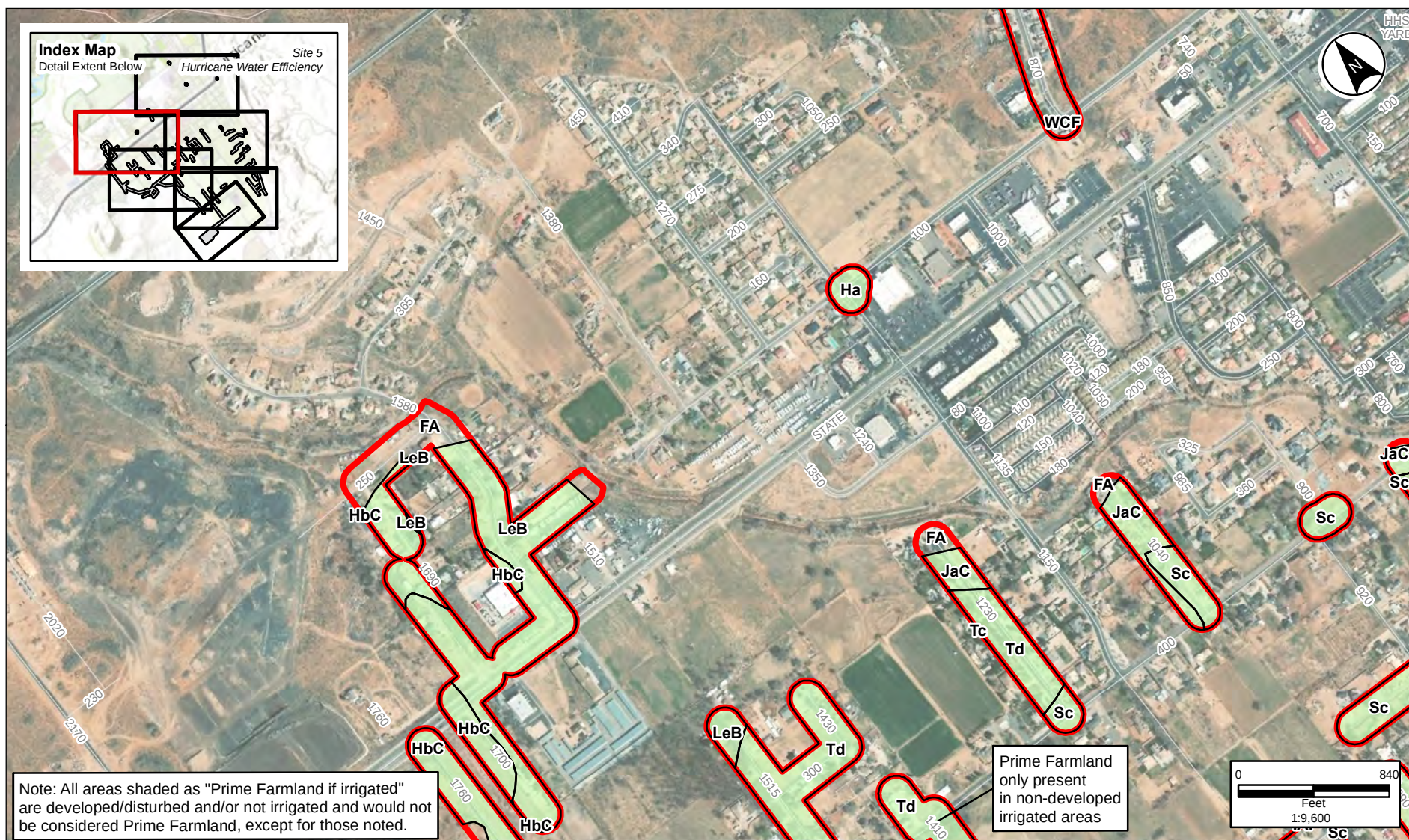
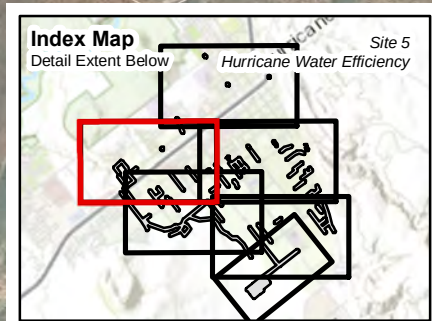
LeD: Leeds silty clay loam
SY: Stony colluvial land
Tc: Tobler fine sandy loam
WBD: Winkel gravelly fine sandy loam

WCF: Winkel-Rock outcrop complex



Map C2.4A Hurricane Water Efficiency Soils

**Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA**



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

Legend

- Project Area
- Prime farmland if irrigated
- Soil Map Units:**
- Ha: Hantz silty clay loam
- HbC: Harrisburg fine sandy loam

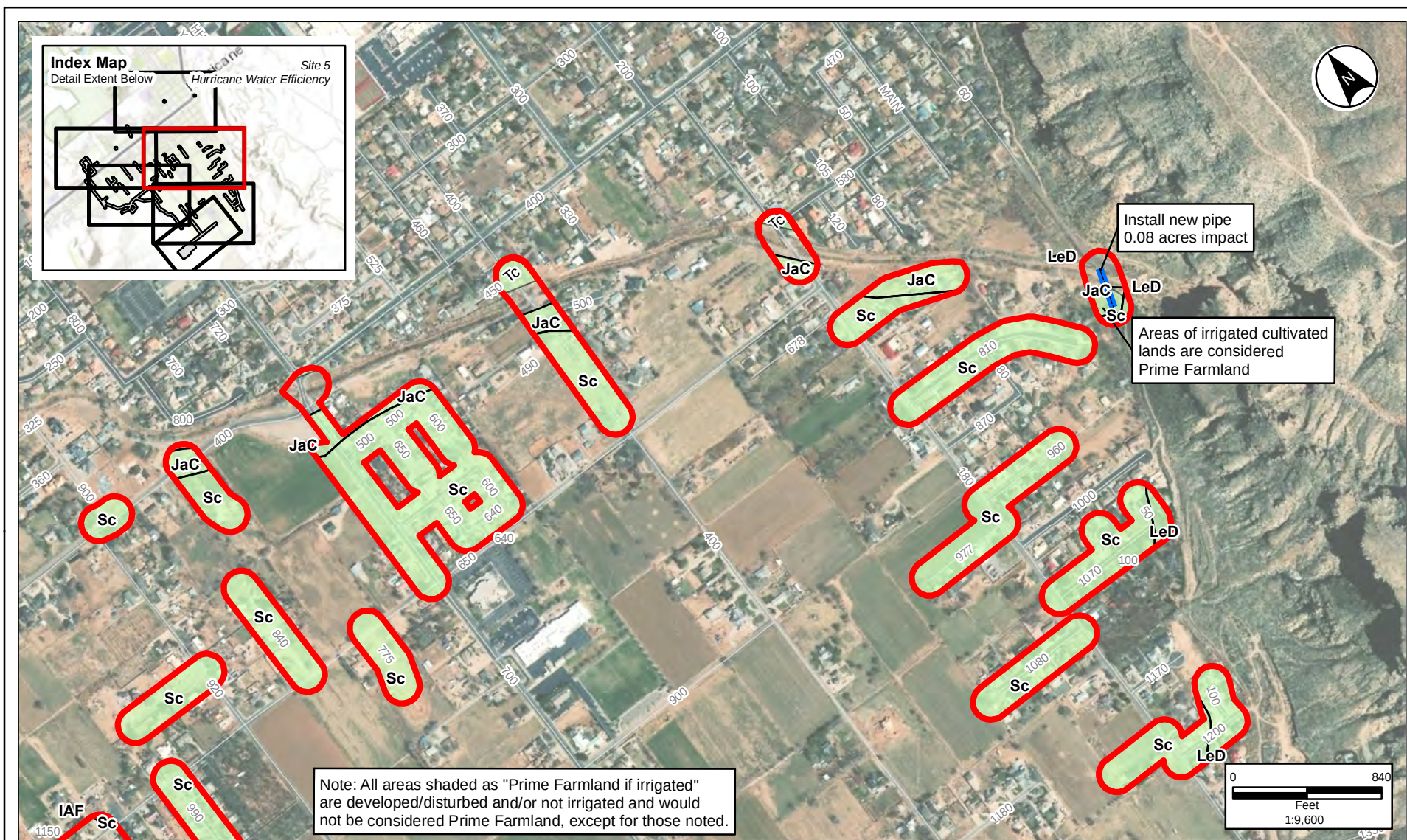
IAF: Isom cobbly sandy loam
JaC: Junction fine sandy loam
LeB: Leeds silty clay loam
Sc: St. George silty clay loam

Tc: Tobler fine sandy loam
Td: Tobler silty clay loam
WCF: Winkel-Rock outcrop complex



Map C2.4B Hurricane Water Efficiency Soils

**Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA**



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

Legend

- Project Area
- Prime farmland if irrigated
- New Pipe

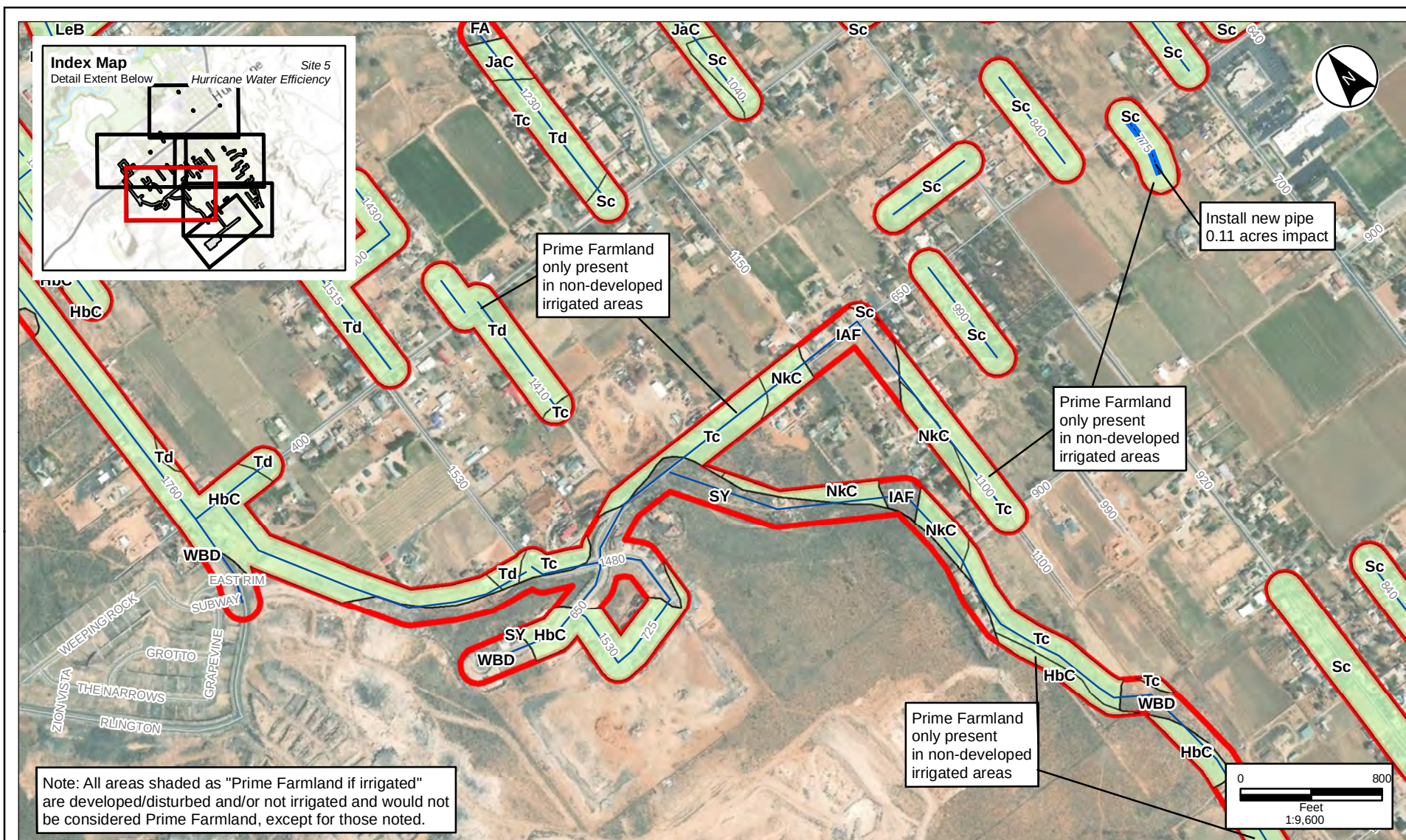
Soil Map Units:

- IAF: Isom cobbly sandy loam
- JaC: Junction fine sandy loam
- LeD: Leeds silty clay loam
- Sc: St. George silty clay loam



Map C2.4C Hurricane Water Efficiency Soils

Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

Legend

- Project Area
- New Pipe
- Prime farmland if irrigated
- Soil Map Units:**
- HbC: Harrisburg fine sandy loam

IAF: Isom cobbly sandy loam
JaC: Junction fine sandy loam
LeB: Leeds silty clay loam
NkC: Nikey sandy loam

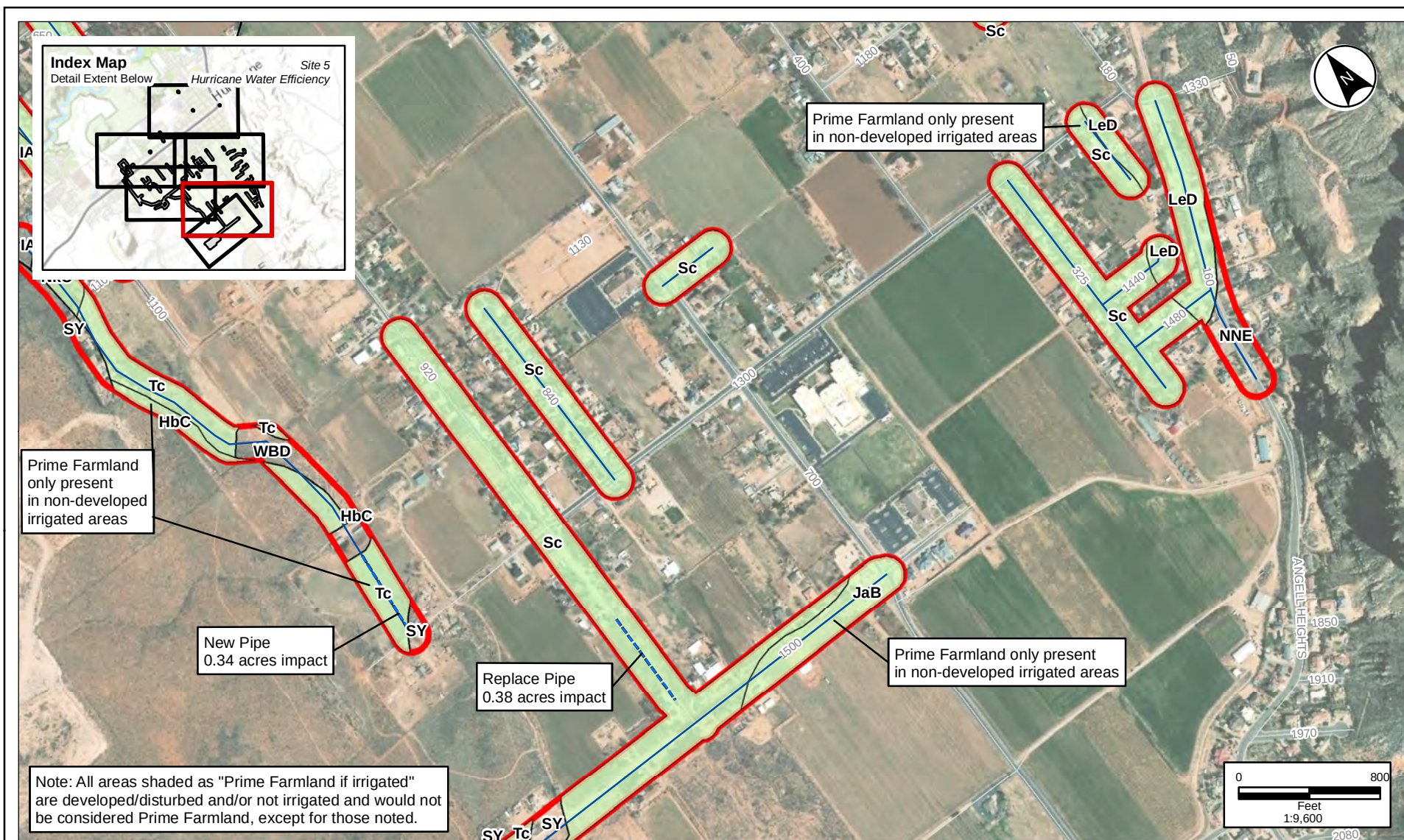
SY: Stony colluvial land
Sc: St. George silty clay loam
Tc: Tobler fine sandy loam
Td: Tobler silty clay loam

WBD: Winkel gravelly fine sandy loam



Map C2.4D Hurricane Water Efficiency Soils

Warner Draw Watershed & Flood Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

Legend

- Project Area
- Prime farmland if irrigated
- Soil Map Units:**
- HbC: Harrisburg fine sandy loam

- IAF: Isom cobbly sandy loam
- JaB: Junction fine sandy loam
- LeD: Leeds silty clay loam
- NNE: Nikey-Isom complex

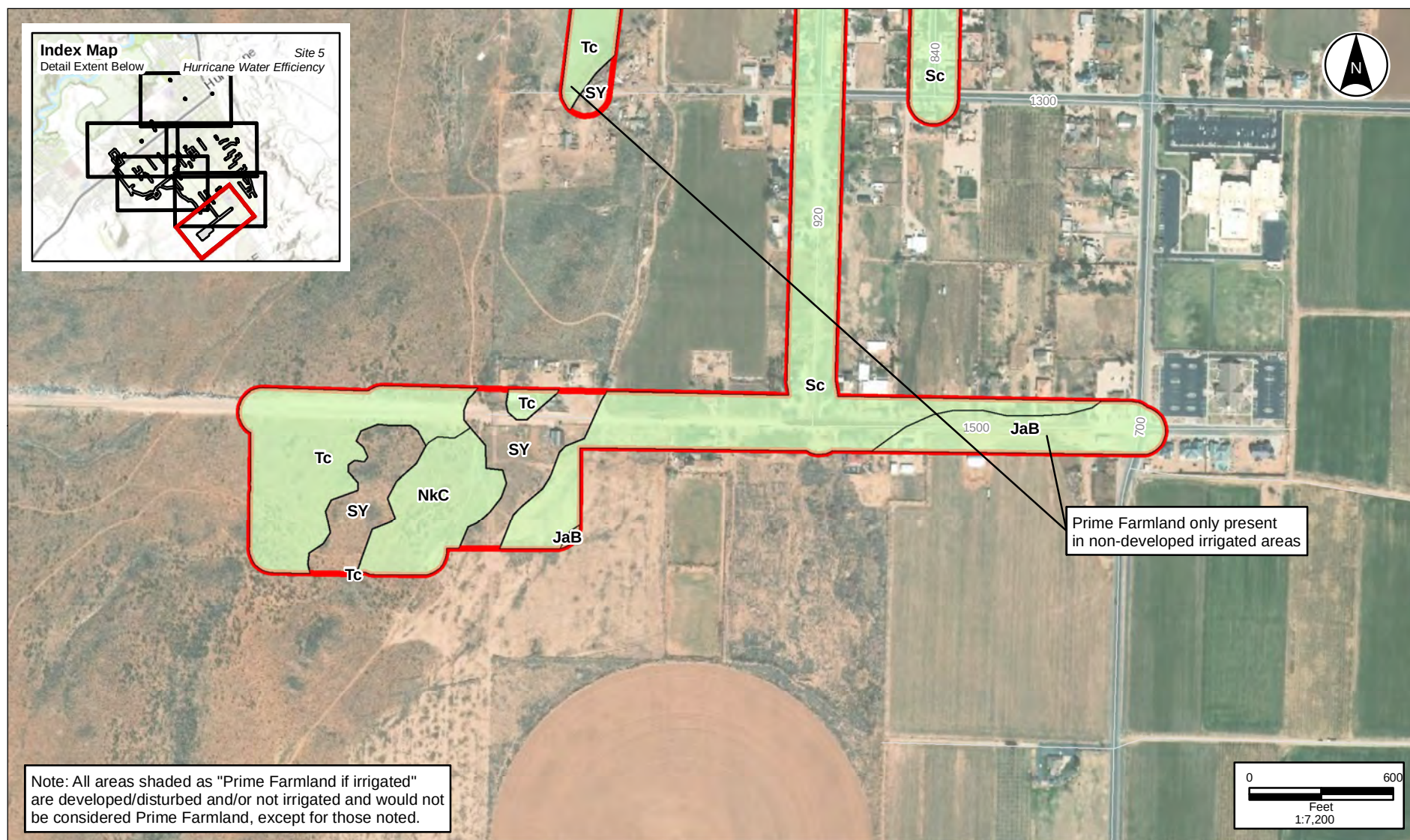
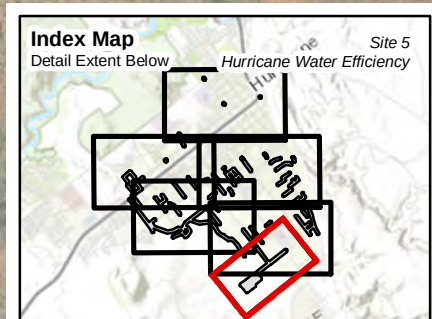
- NkC: Nikey sandy loam
- SY: Stony colluvial land
- Sc: St. George silty clay loam
- Tc: Tobler fine sandy loam

- WBD: Winkel gravelly fine sandy loam



Map C2.4E Hurricane Water Efficiency Soils

**Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA**



Note: All areas shaded as "Prime Farmland if irrigated" are developed/disturbed and/or not irrigated and would not be considered Prime Farmland, except for those noted.



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

Legend

- Project Area
- Prime farmland if irrigated
- Soil Map Units:**
- JaB: Junction fine sandy loam
- NkC: Nikey sandy loam

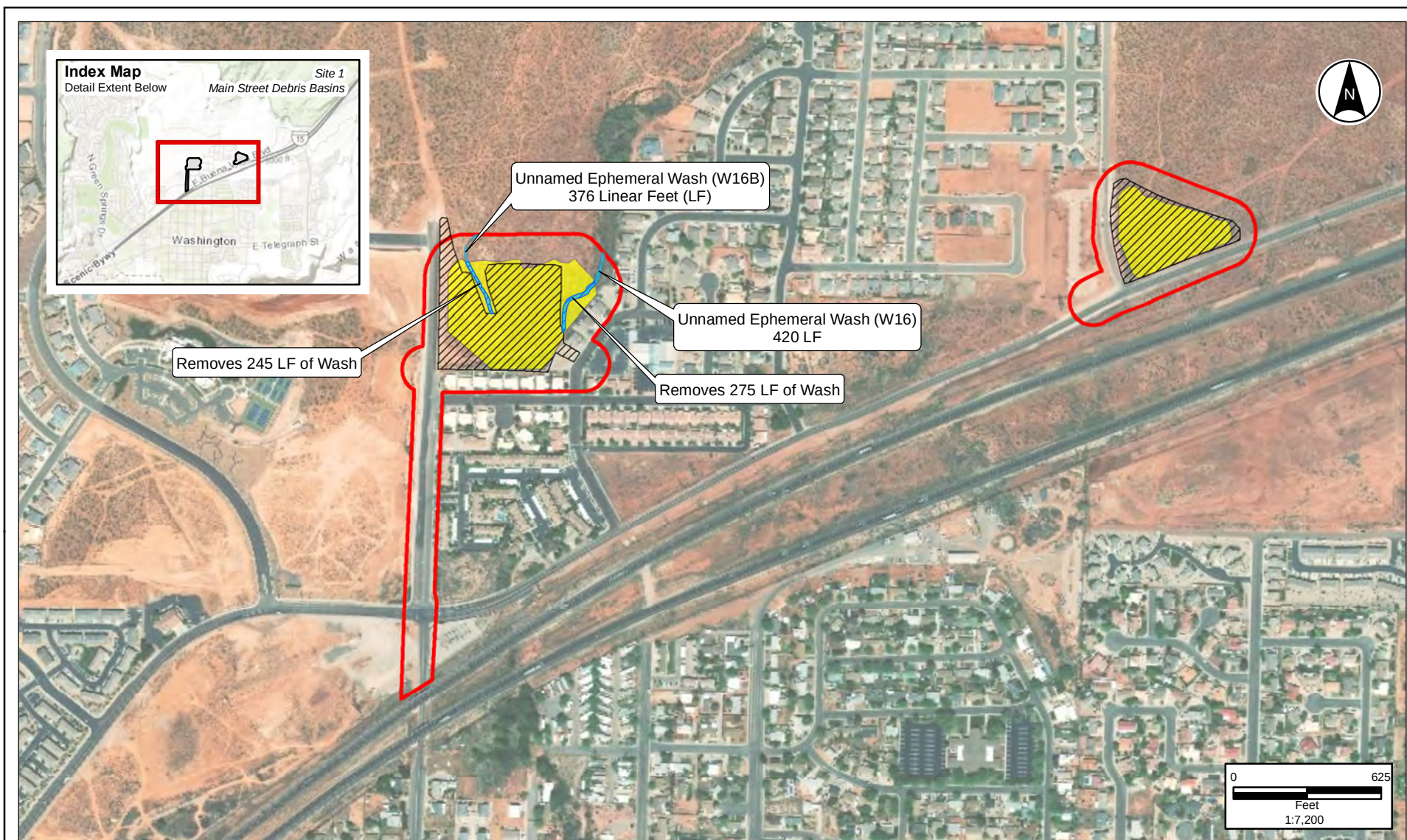
SY: Stony colluvial land
Sc: St. George silty clay loam
Tc: Tobler fine sandy loam



Map C2.4F
Hurricane Water Efficiency Soils

**Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA**

Waters of the U.S. & Wetland Maps



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2018
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

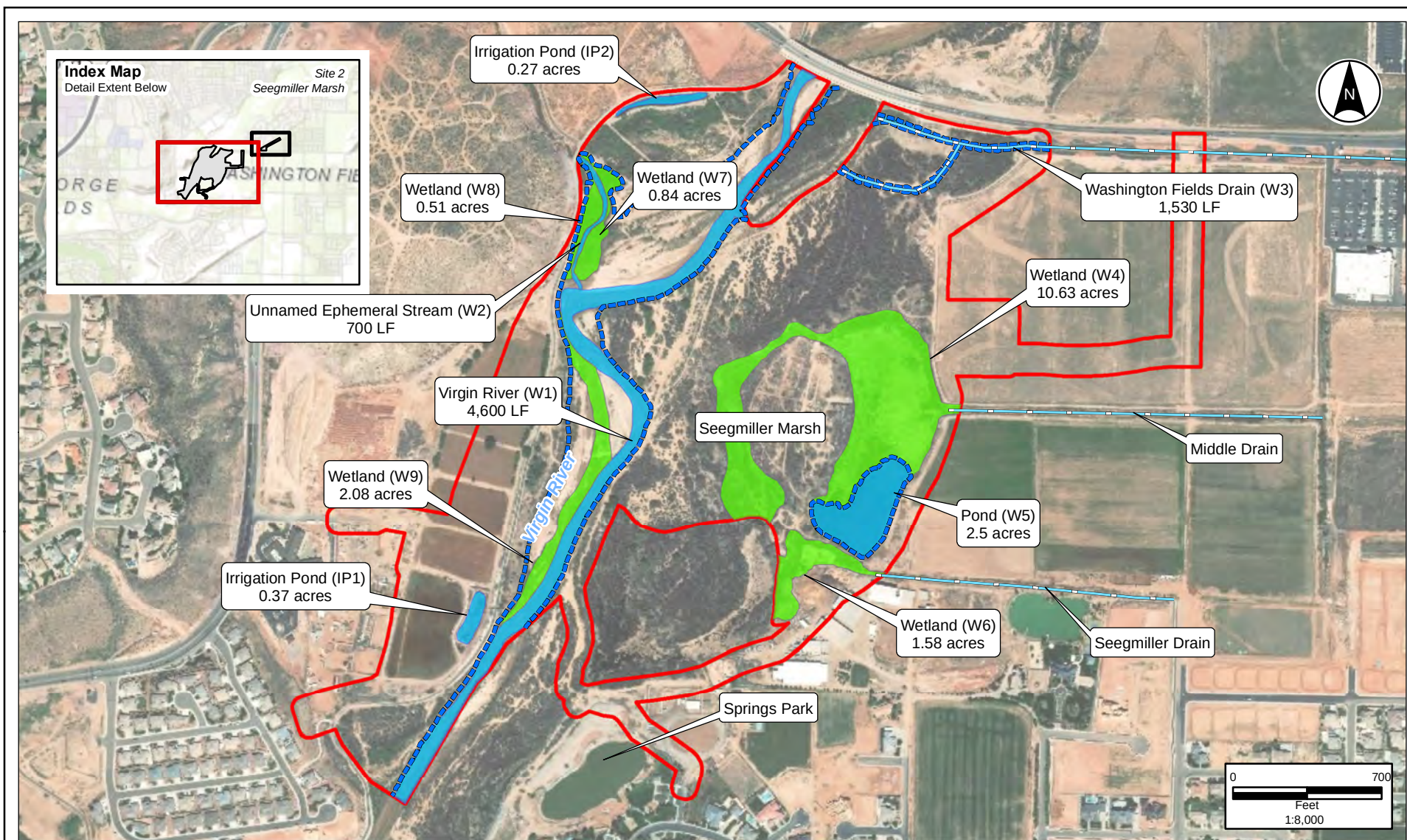
Legend

- Project Area
- Existing Disturbance*
- Proposed Debris Basin
- Channel OHHM
- Impact Area

*Excavation/Fill from June 2019 construction activities



Map C3.1
Main Street Debris Basins
Waters of the US & Wetlands
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



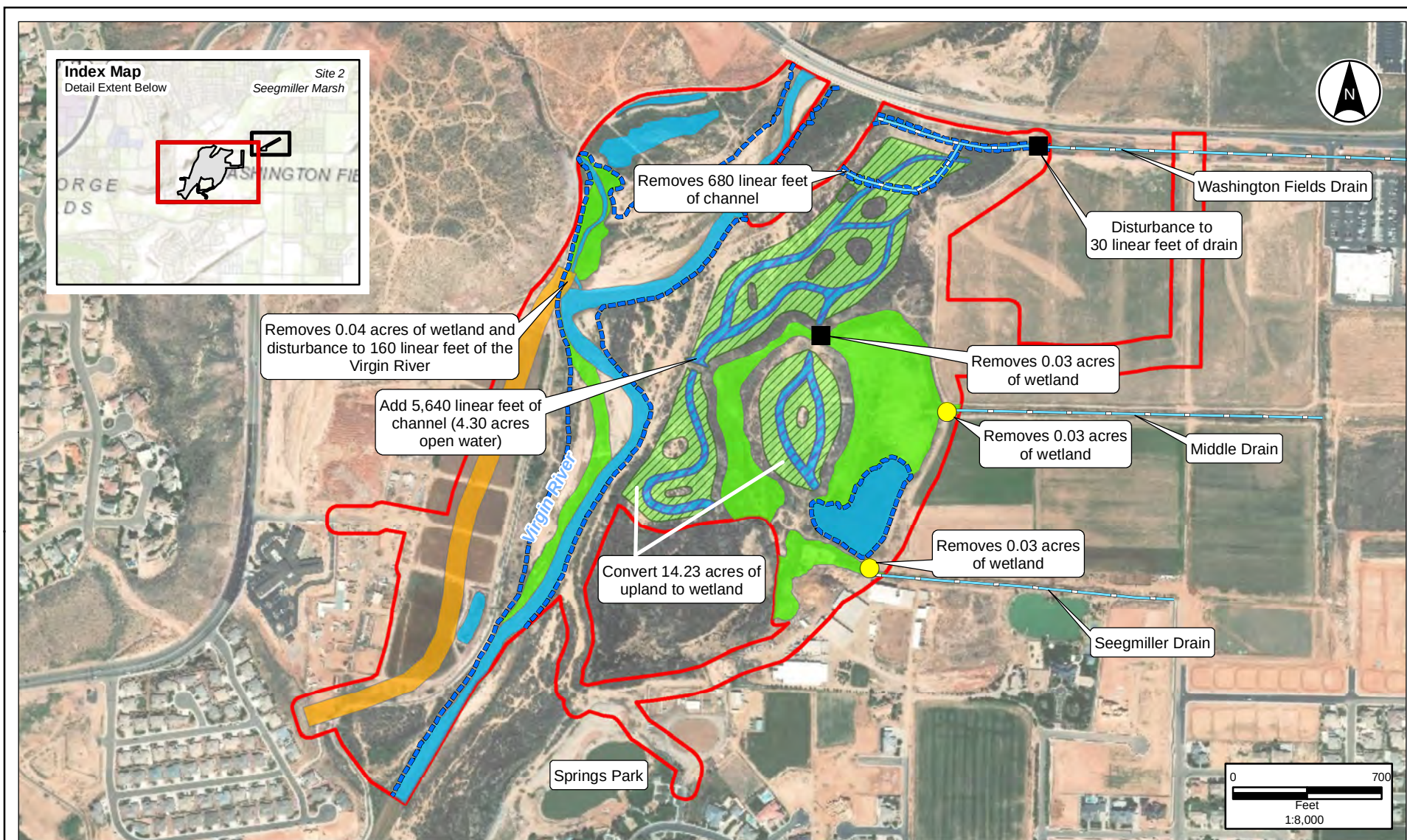
NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2018
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Drainage Ditch
- Emergent Wetland
- Open Water
- OHWM



Map C3.2A
Seegmiller Marsh
Waters of the US & Wetlands
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



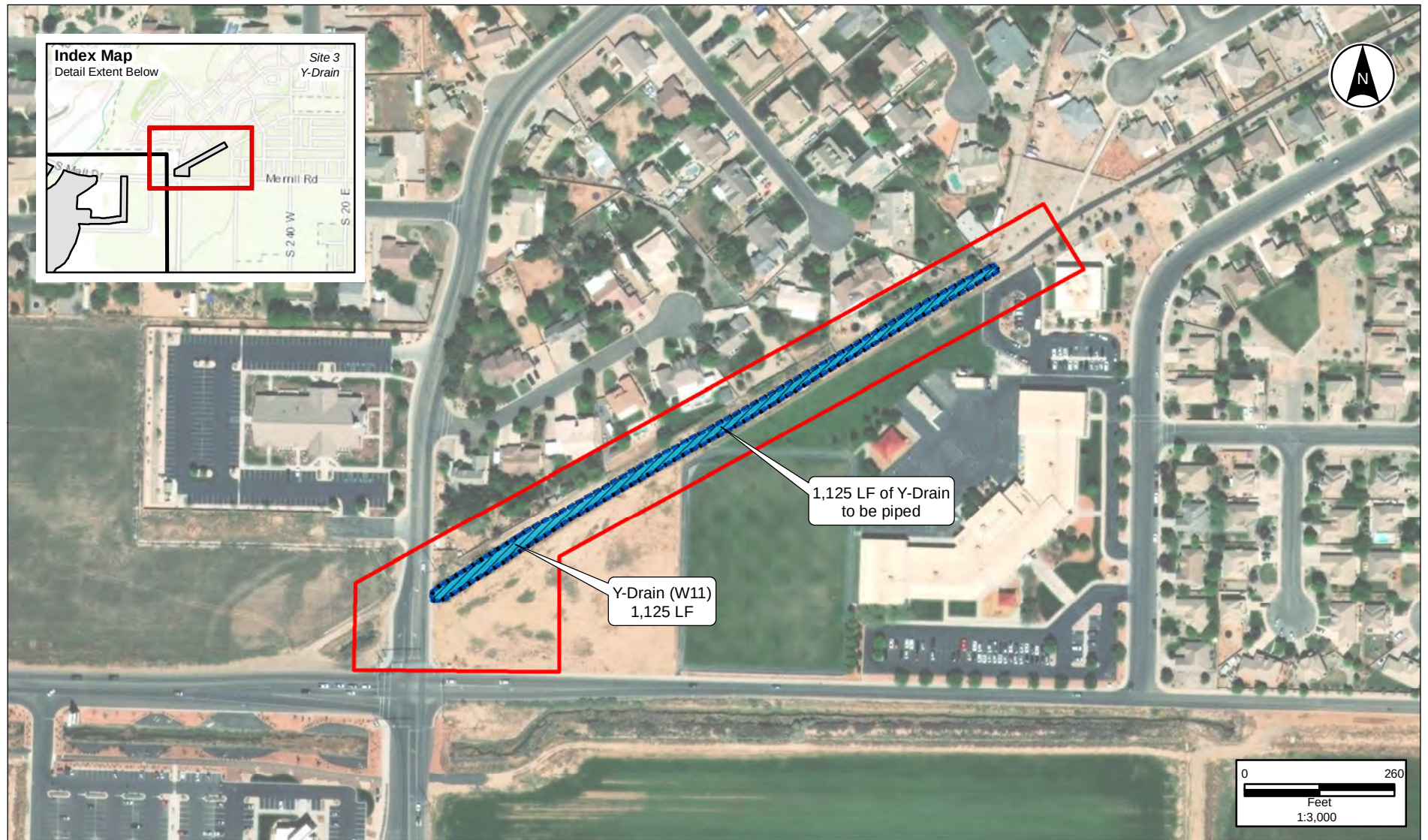
NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2018
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- | | | |
|---|--|---|
| Project Area | New Channel | New Culvert |
| Existing Channel/Open Water | New Wetland | Drainage Ditch |
| Existing Wetland | Erosion Protection | OHWM |
| | New Pedestrian Bridge | |



Map C3.2B
Seegmiller Marsh
Waters of the US & Wetlands Impacts
Warner Draw Watershed & Flood Prevention Operations Project Plan-EA



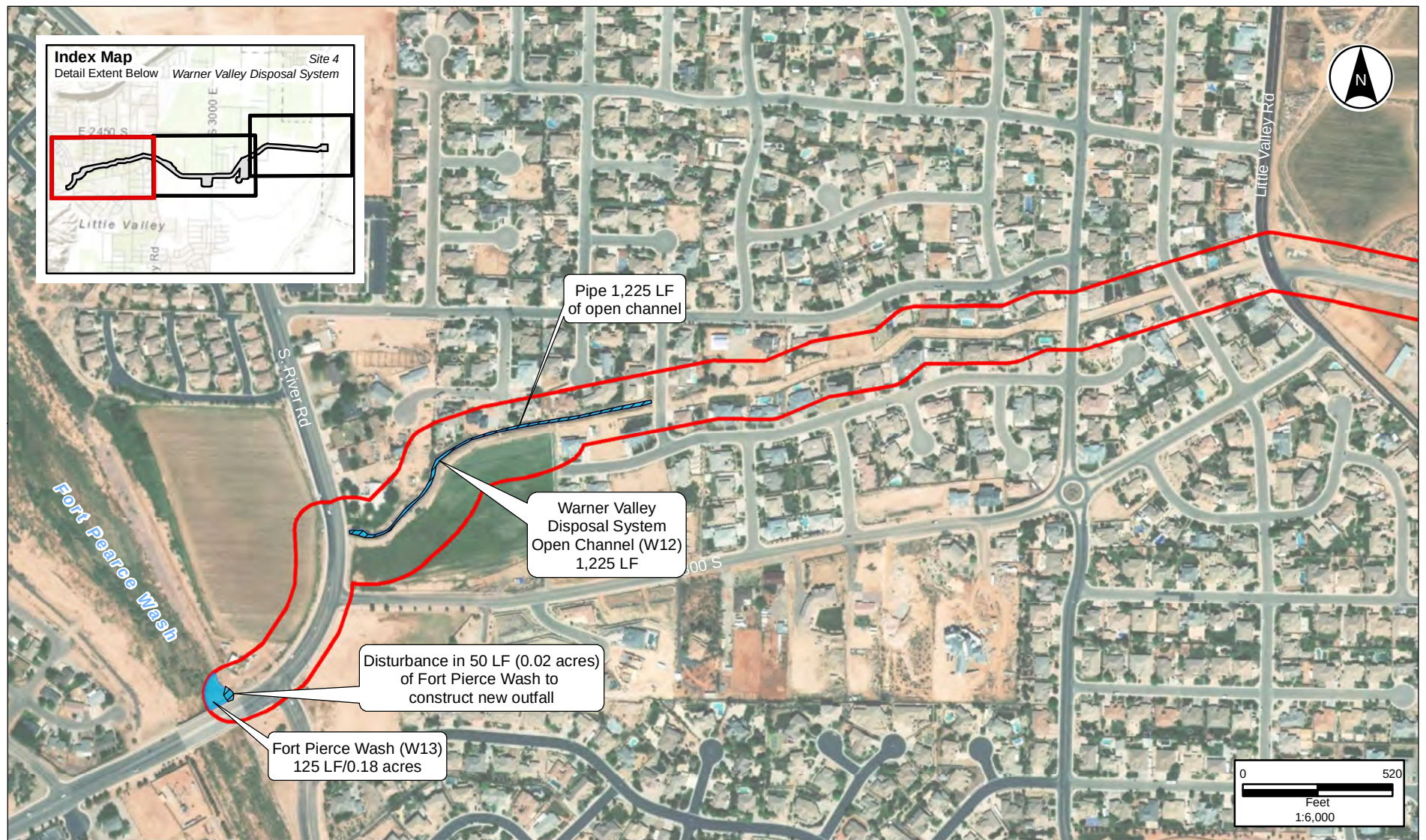
NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2018
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Open Water
- OHWM
- Impact Area



Map C3.3
Y-Drain
Waters of the US & Wetlands
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



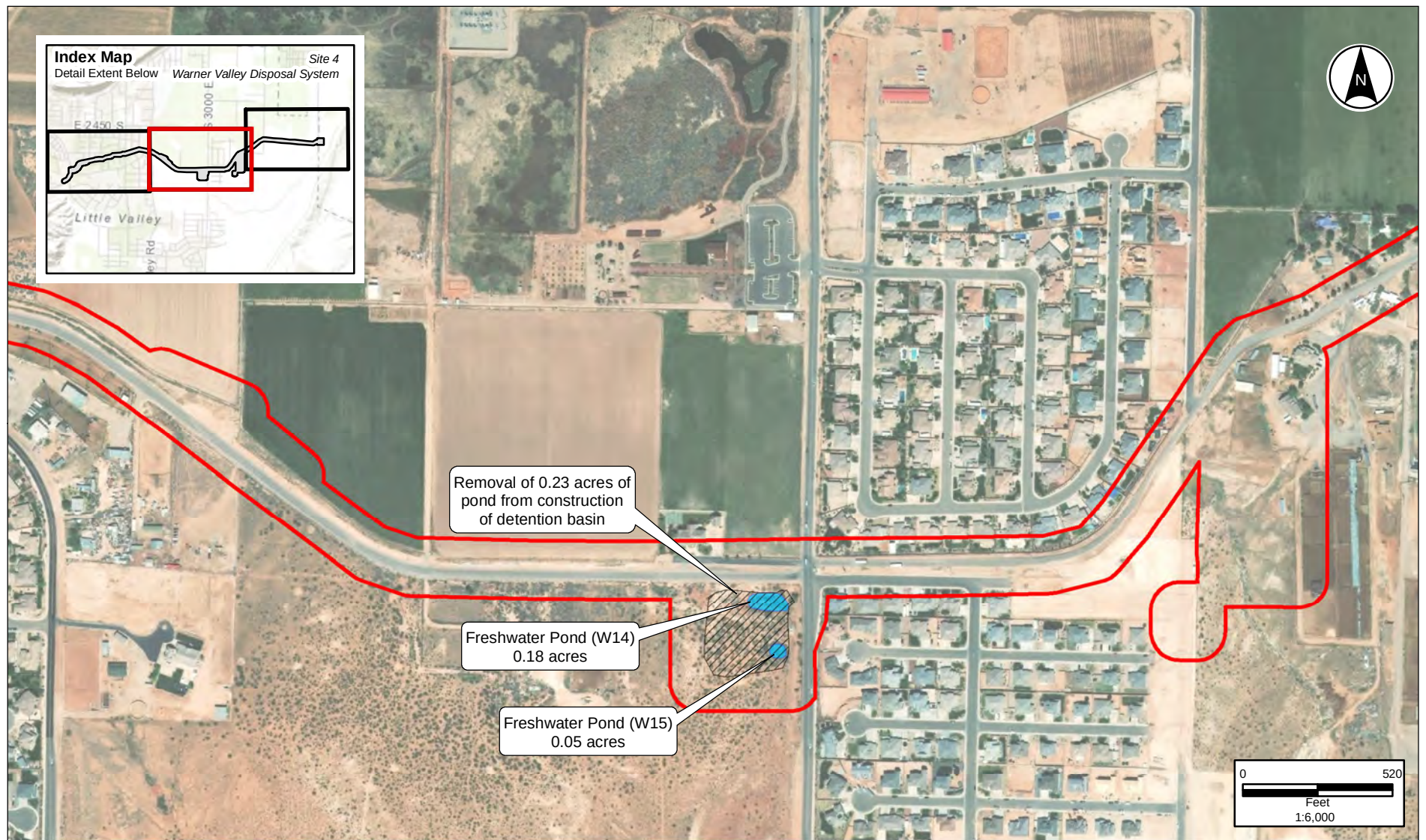
NAD 1983 UTM Zone 12N
Source: Esri, USGS, Bowen Collins 2018
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Open Water
- Impact Area



Map C3.4A
Warner Valley Disposal System
Waters of the US & Wetlands
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



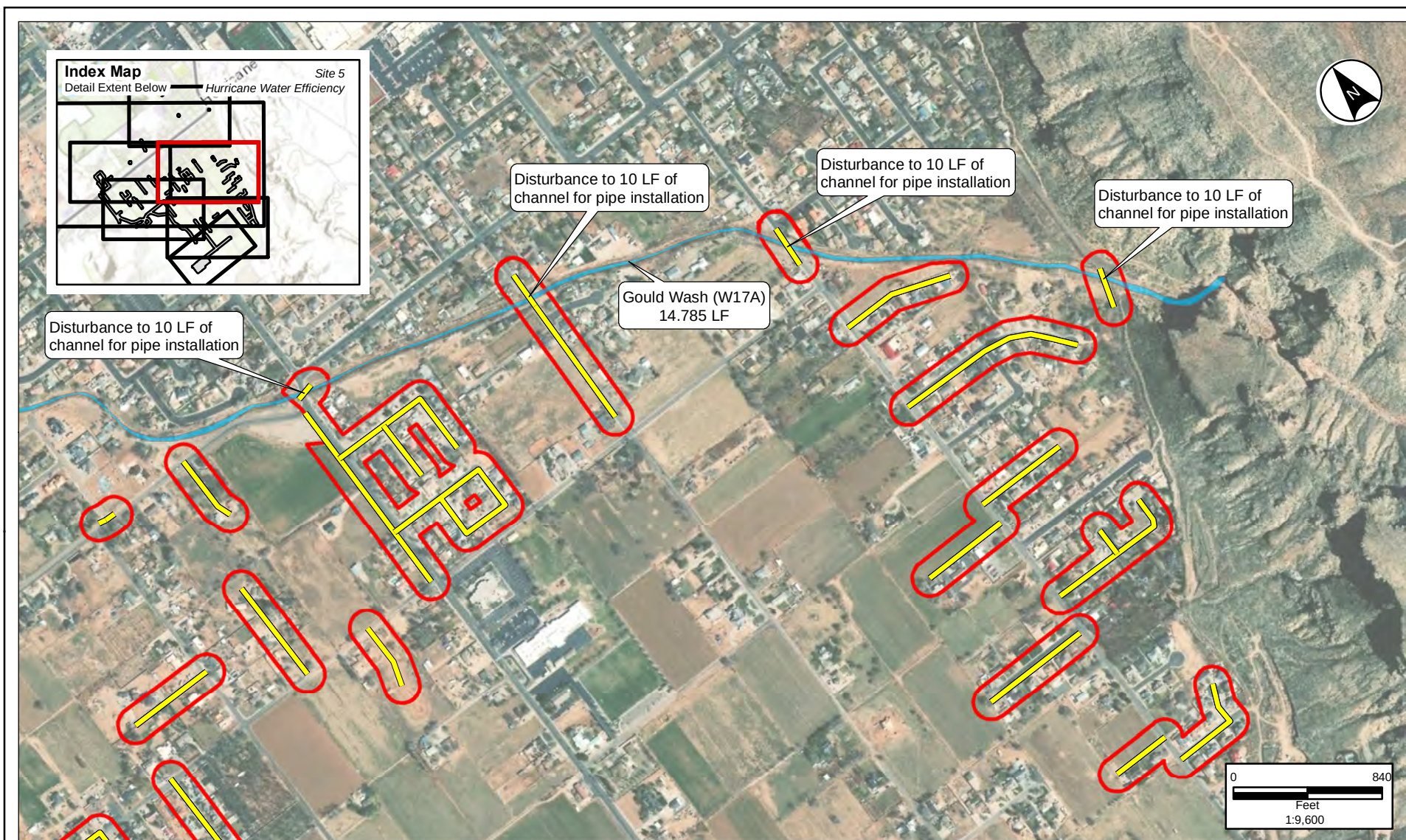
NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2018
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Pond
- Impact Area



Map C3.4B
Warner Valley Disposal System
Waters of the US & Wetlands
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



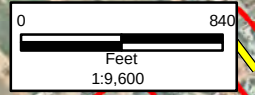
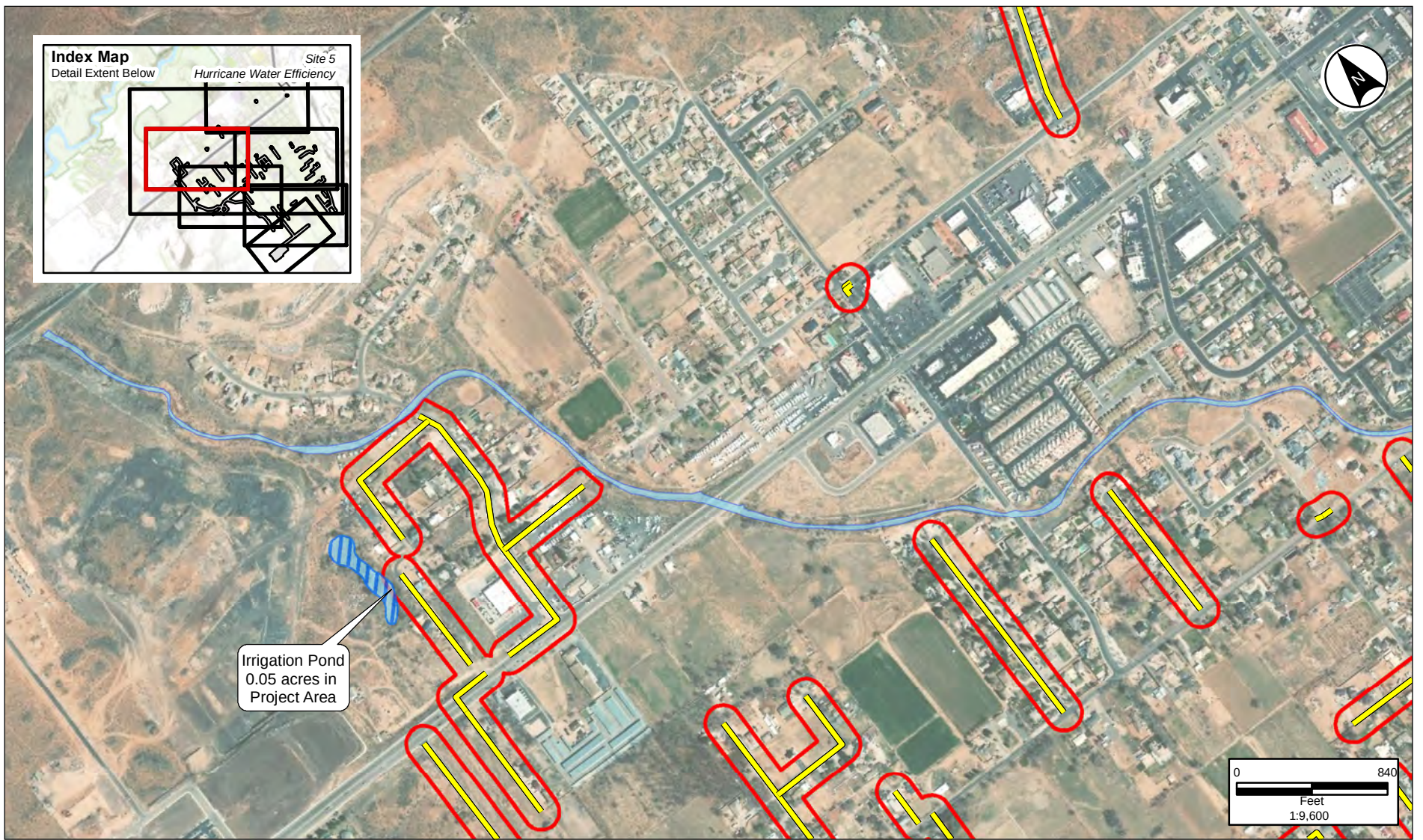
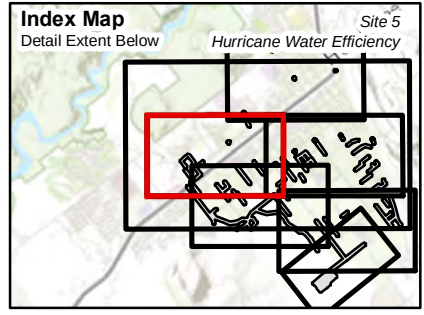
NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2018
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

Legend

- Project Area
- Proposed Piping
- Channel OHWM



Map C3.5A
Hurricane Water Efficiency
Waters of the US & Wetlands
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2018
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

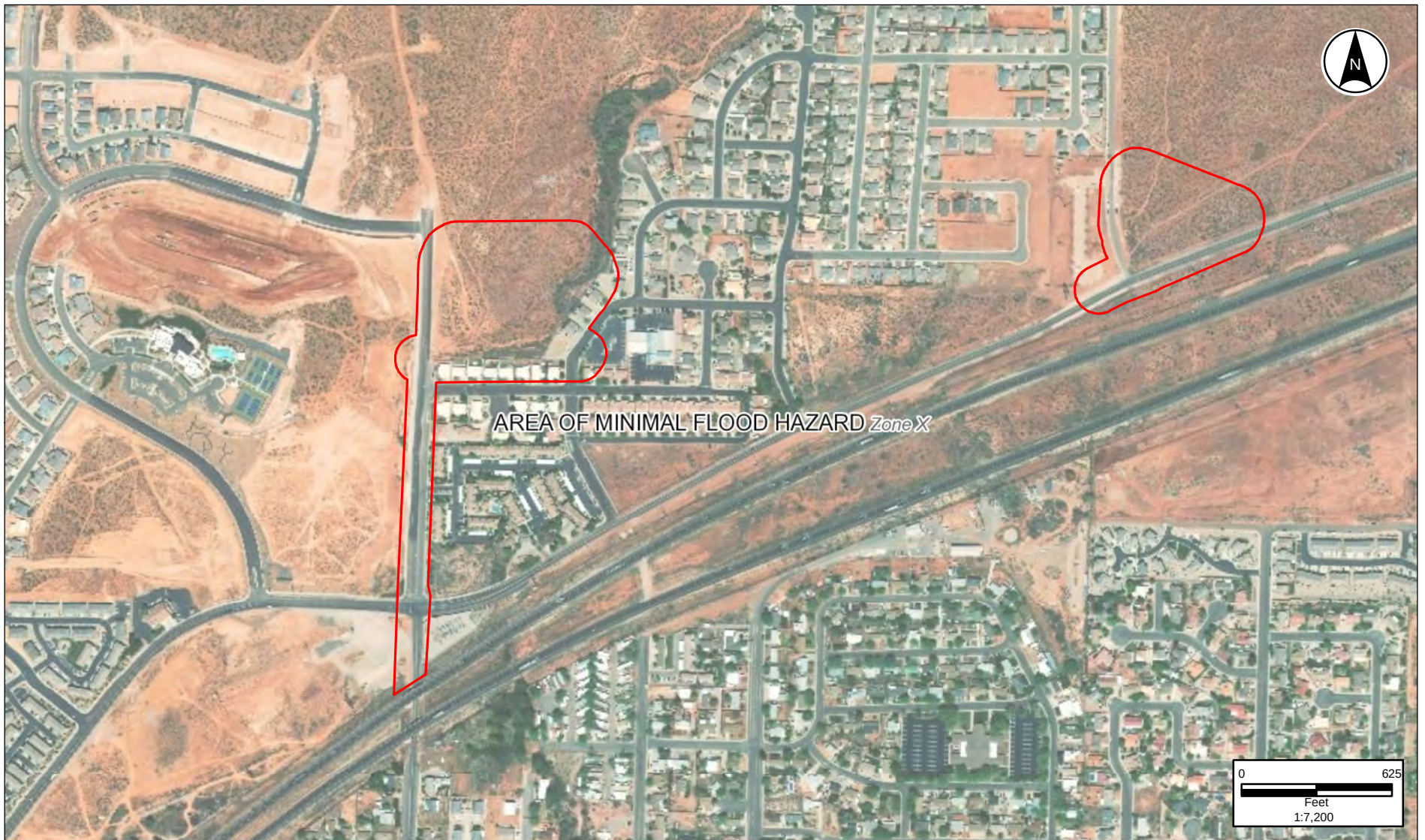
Legend

- Project Area
- Proposed Piping
- Channel OCHWM
- Pond



Map C3.5B
Warner Valley Disposal System
Waters of the US & Wetlands
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA

FEMA Maps



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

Legend

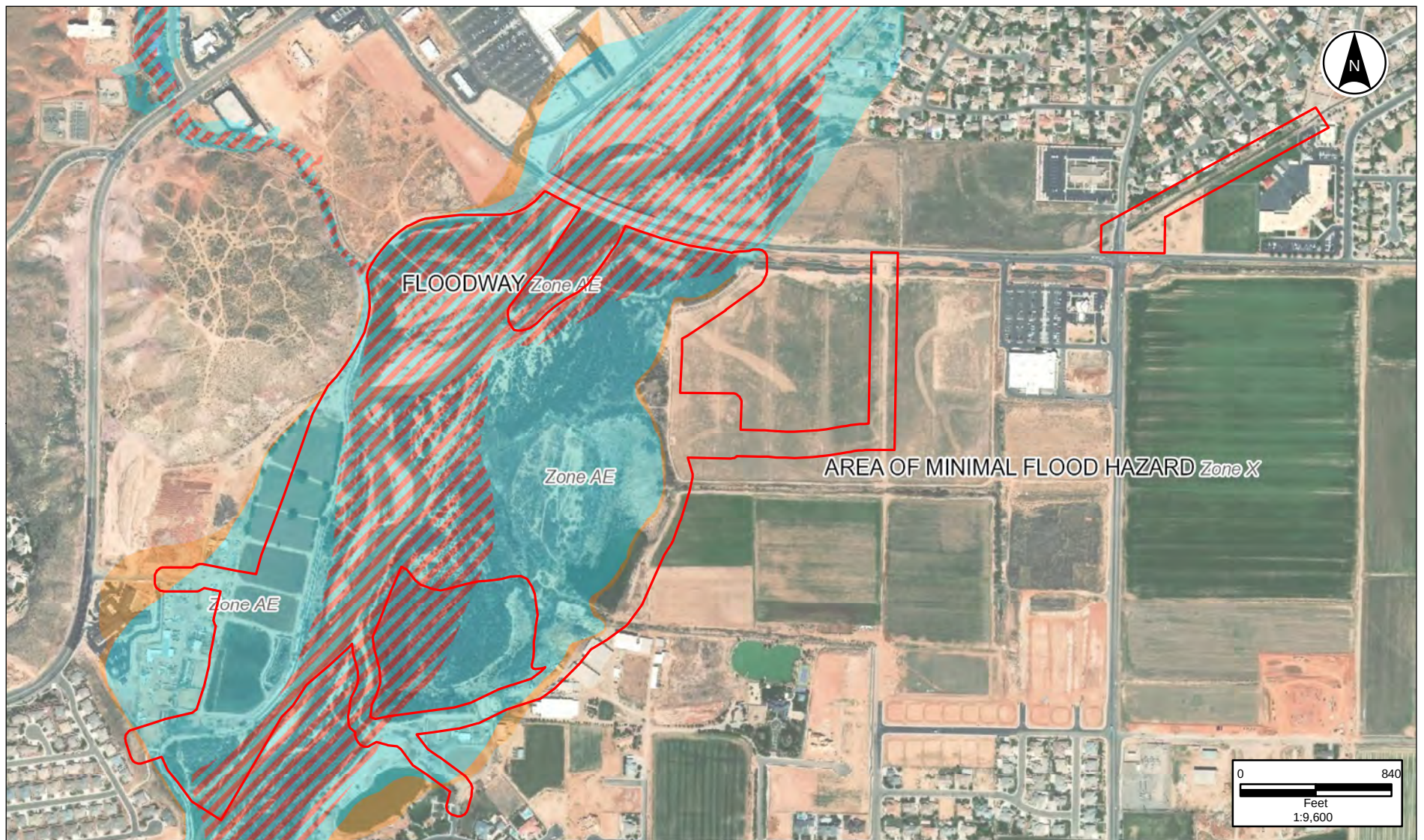
Project Area

Flood Hazard Zones
Zone Type

Zone X Shaded (0.2% Annual
 Chance Flood Hazard)



Map C4.1
Main Street Debris Basin
FEMA Flood Zones
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

Legend

Project Area

Flood Hazard Zones

Zone Type

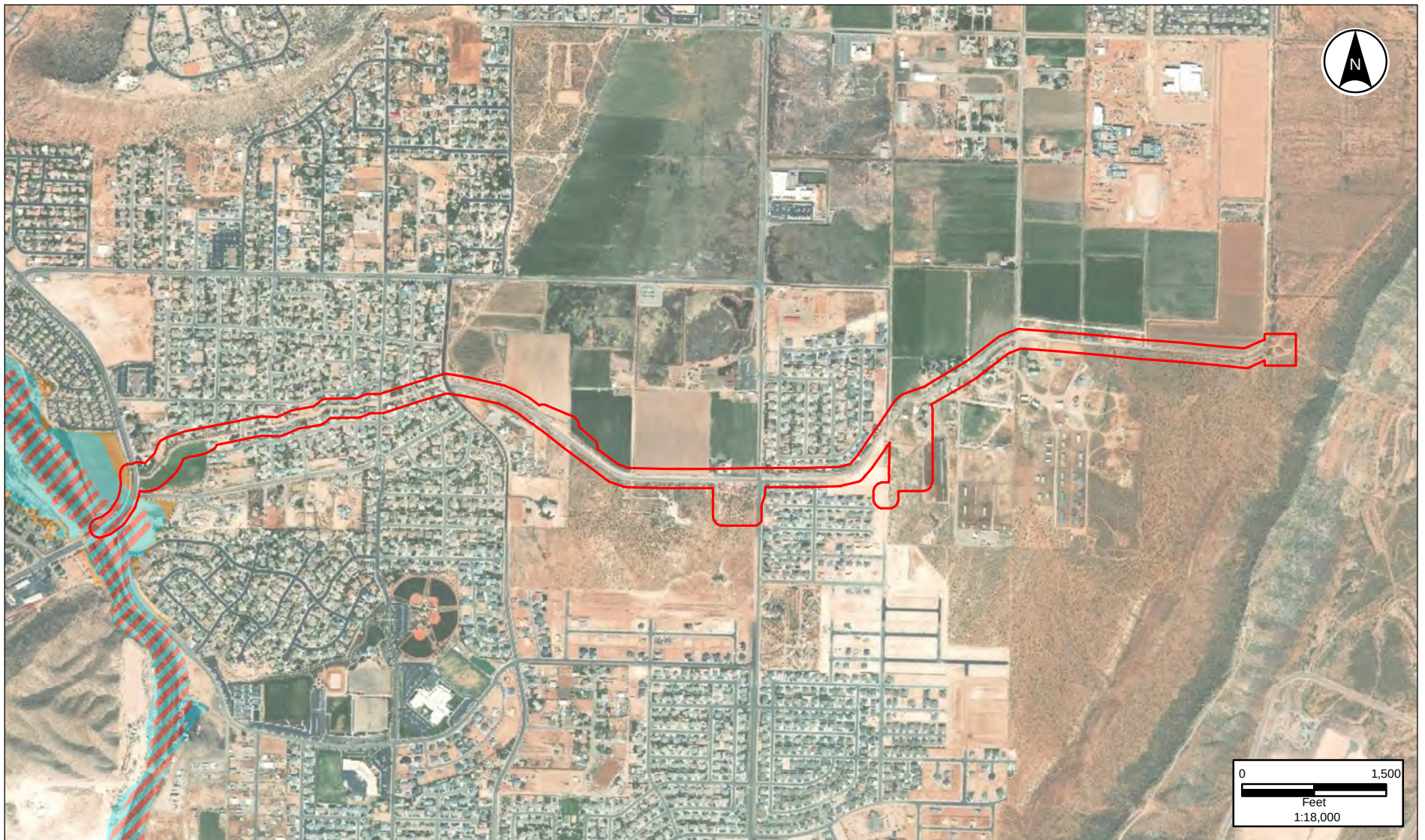
Zone AE (1% Annual
 Chance Flood Hazard)

Regulatory Floodway

Zone X Shaded (0.2% Annual
 Chance Flood Hazard)



Map C4.2
Seegmiller Marsh and Y-Drain
FEMA Flood Zones
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

Legend

Project Area

Regulatory Floodway

Flood Hazard Zones

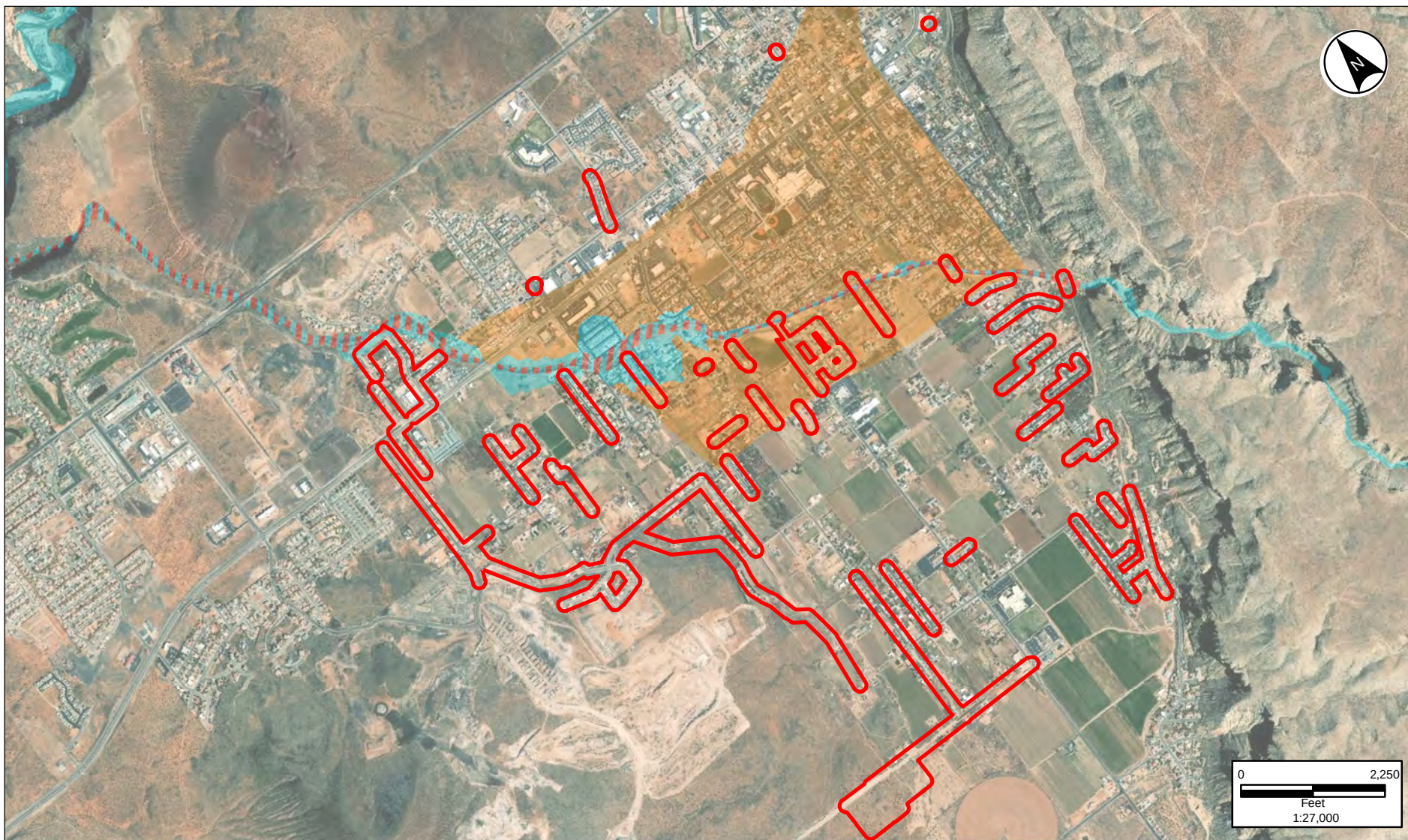
Zone X Shaded (0.2% Annual Chance Flood Hazard)

Zone Type

Zone AE (1% Annual Chance Flood Hazard)



Map C4.3
Warner Valley Disposal System
FEMA Flood Zones
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe September 2016

Legend

 Project Area

Regulatory Floodway

Flood Hazard Zones Zone Type

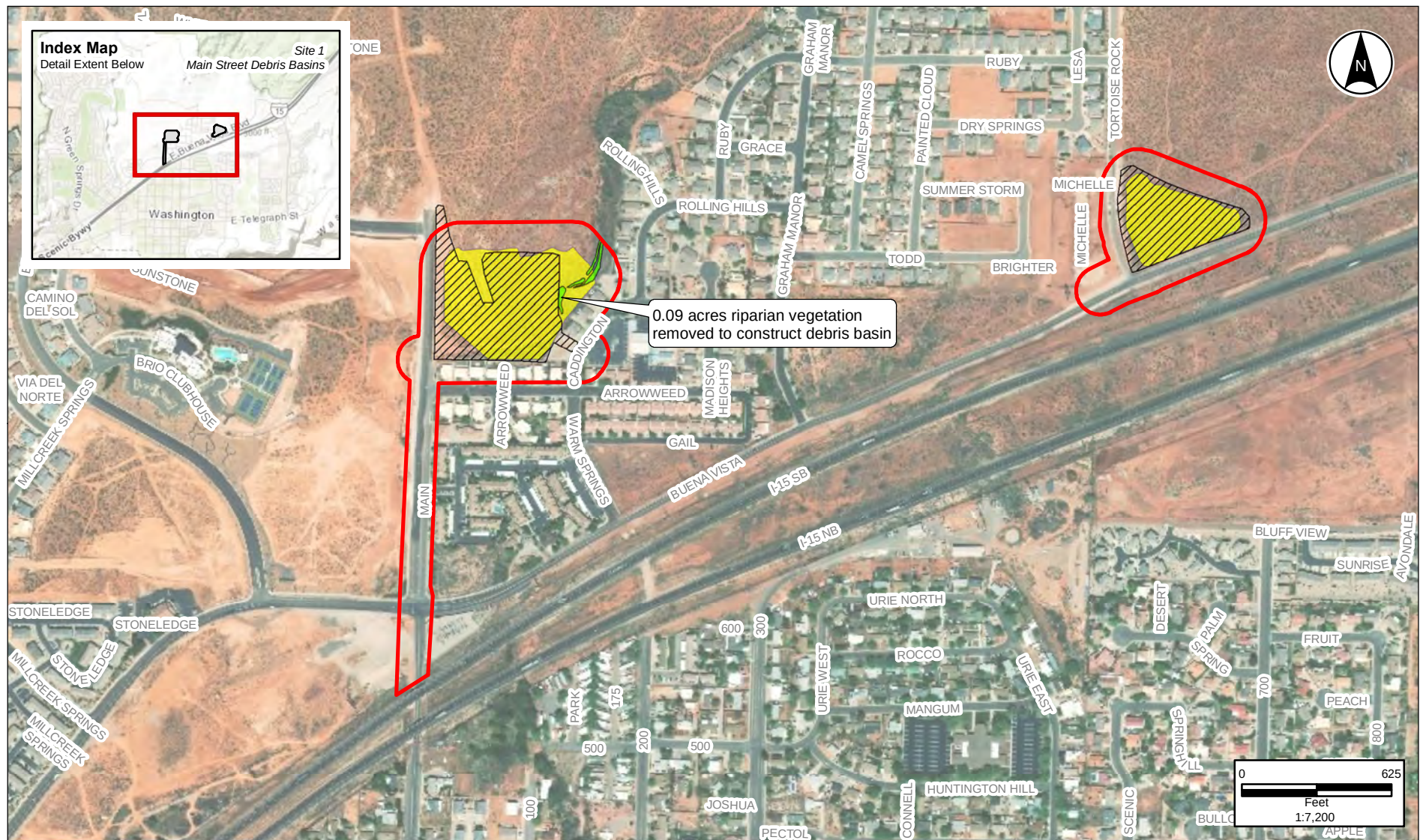
Zone X Shaded (0.2% Annual
Chance Flood Hazard)

Zone AE (1% Annual
Chance Flood Hazard)



Map C4.4
Hurricane Water Efficiency
FEMA Flood Zones
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA

Riparian Area Maps



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2019
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

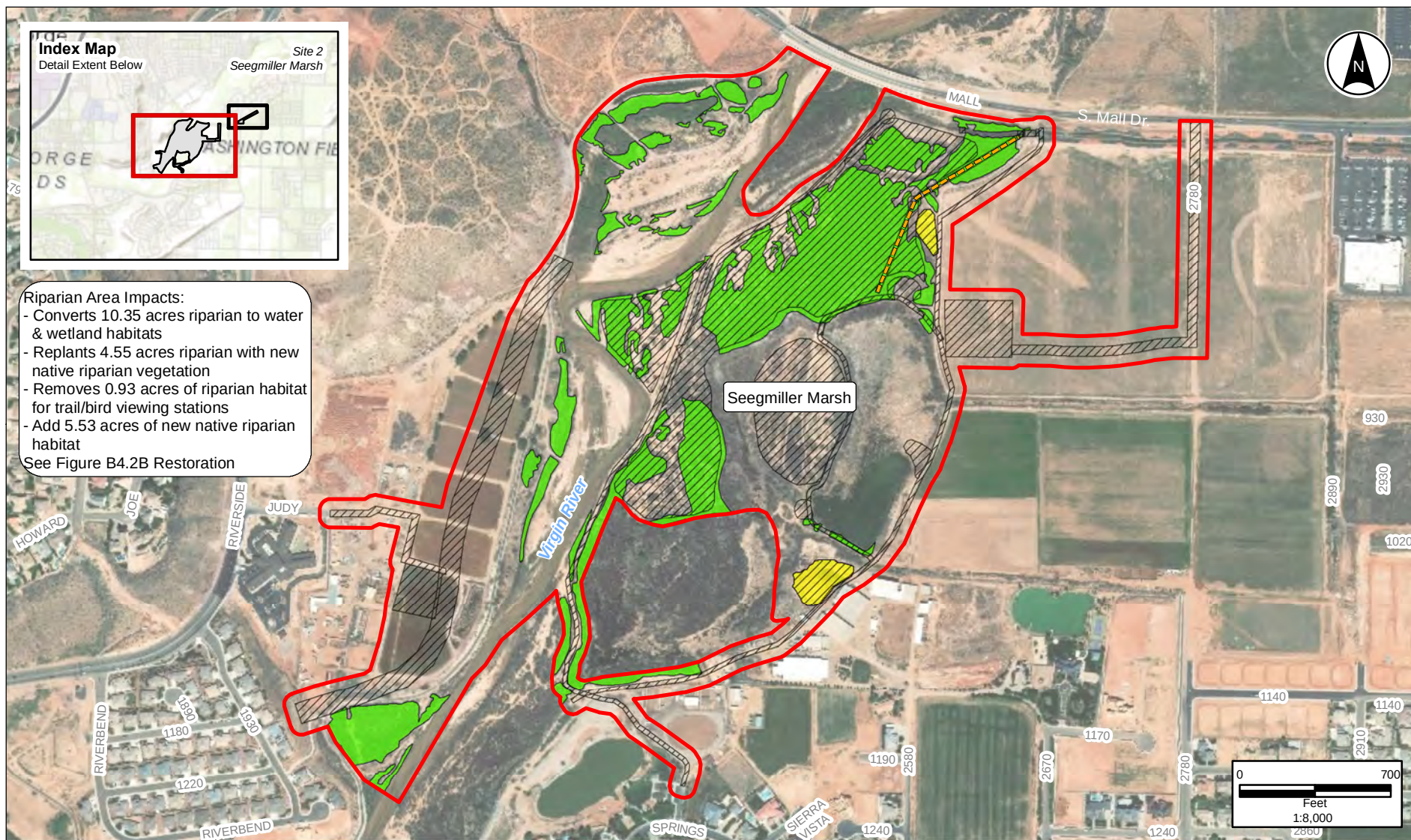
- Project Area
- Riparian Areas
- Existing Disturbance*
- Proposed Debris Basin

*Excavation/Fill from June 2019 Construction Activities

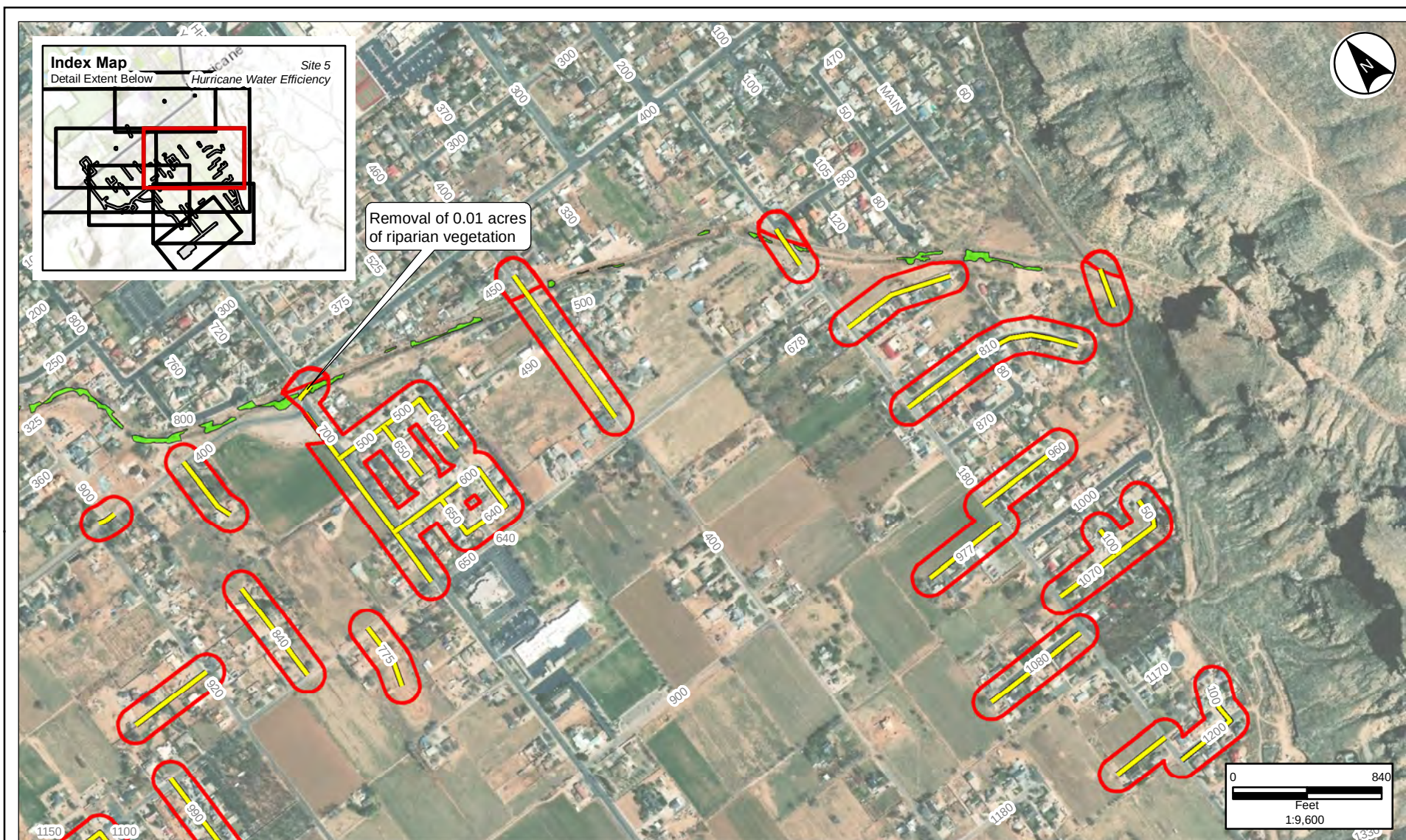


Map C5.1 Main Street Debris Basins Riparian Areas

Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2019
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
Bowen Collins 2019
McMillen Jacobs Associates 2019
Image: DigitalGlobe September 2016

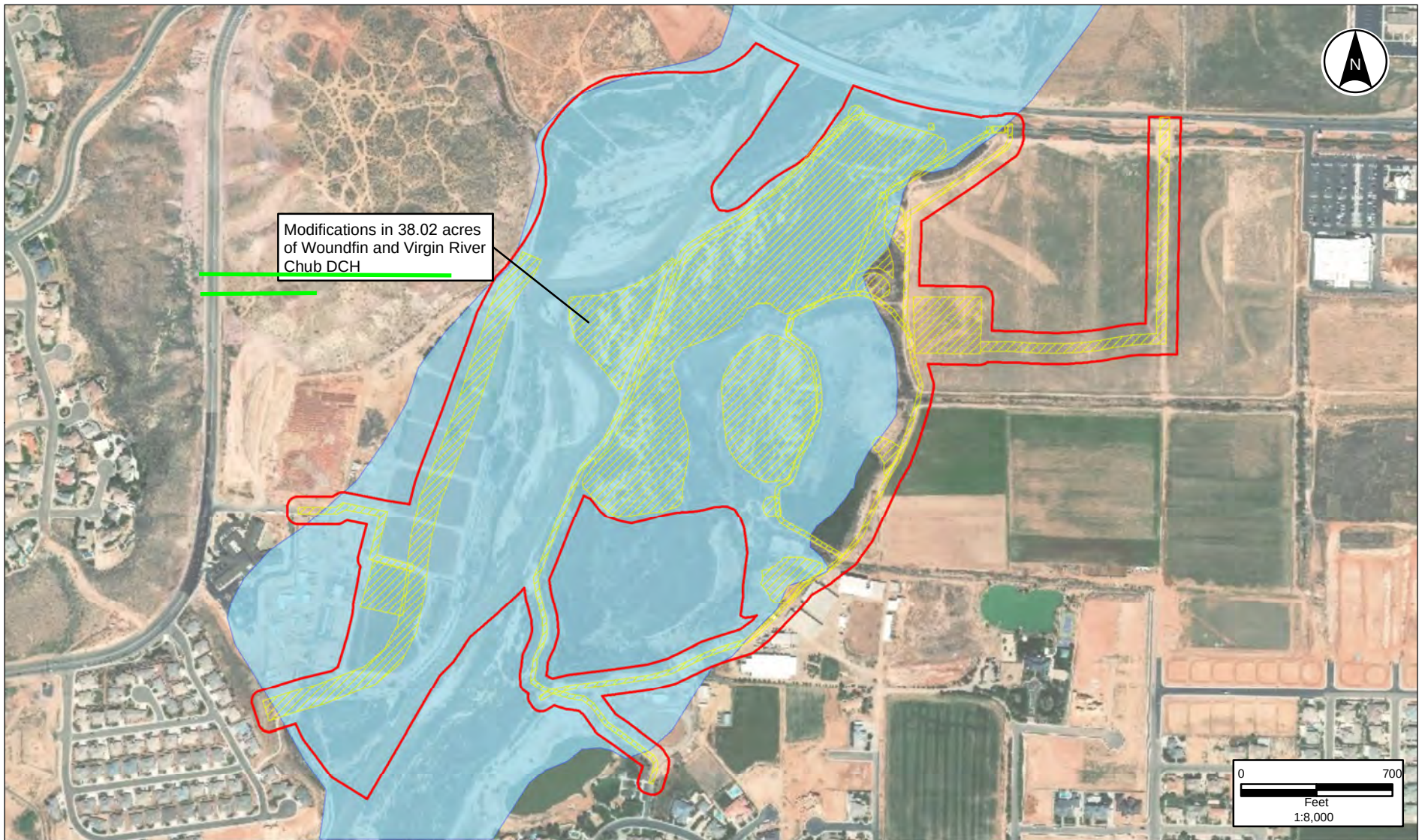
Legend

- Project Area
- Proposed Piping
- Riparian Areas



Map C5.4
Hurricane Water Efficiency
Riparian Areas
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA

Critical Habitat Maps



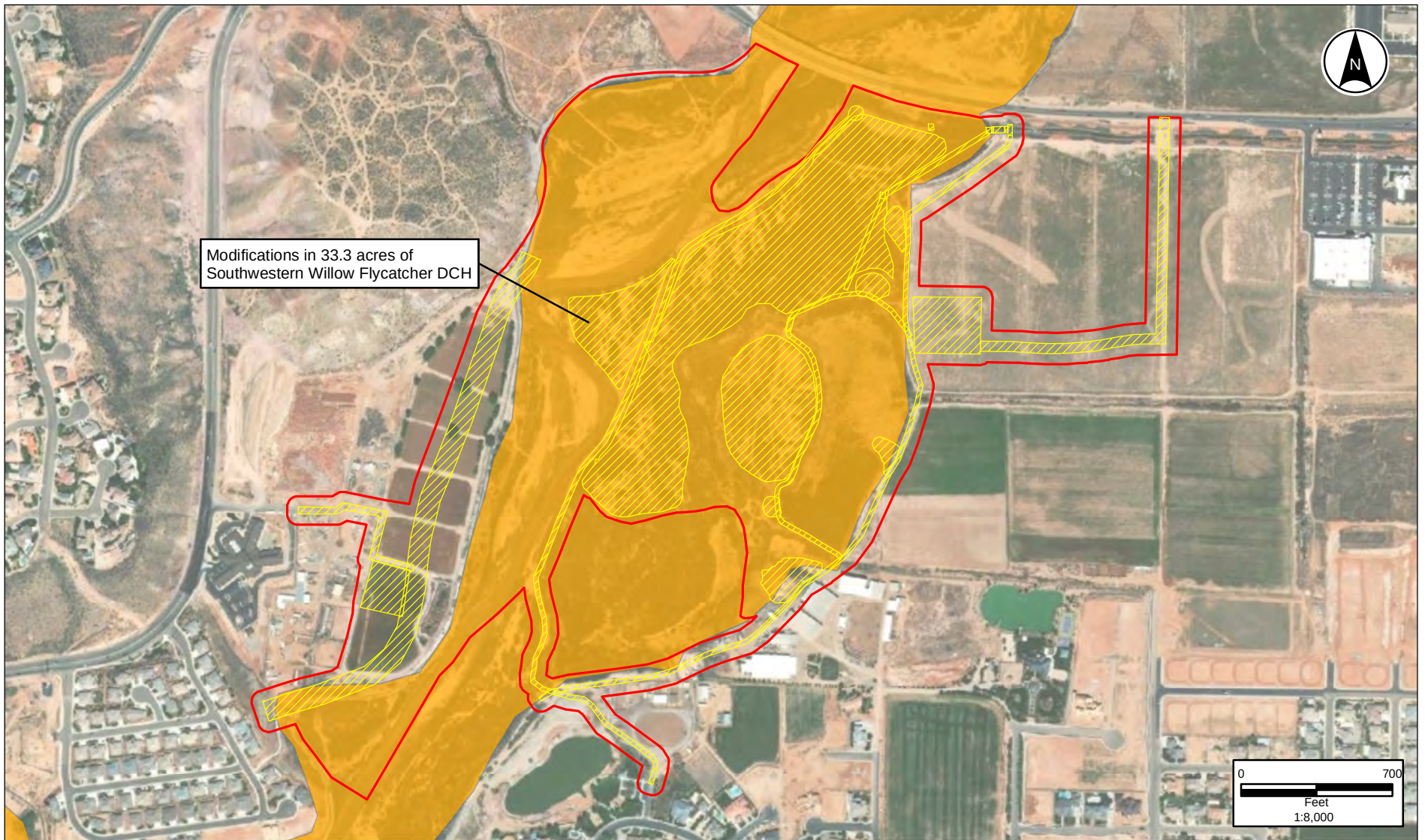
NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

- Project Area
- Disturbance Boundary
- Woundfin & Virgin River Chub Designated Critical Habitat (DCH)



Map C6.1A
Seegmiller Marsh
Critical Habitat (Fish Species)
Warner Draw Watershed & Flood Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

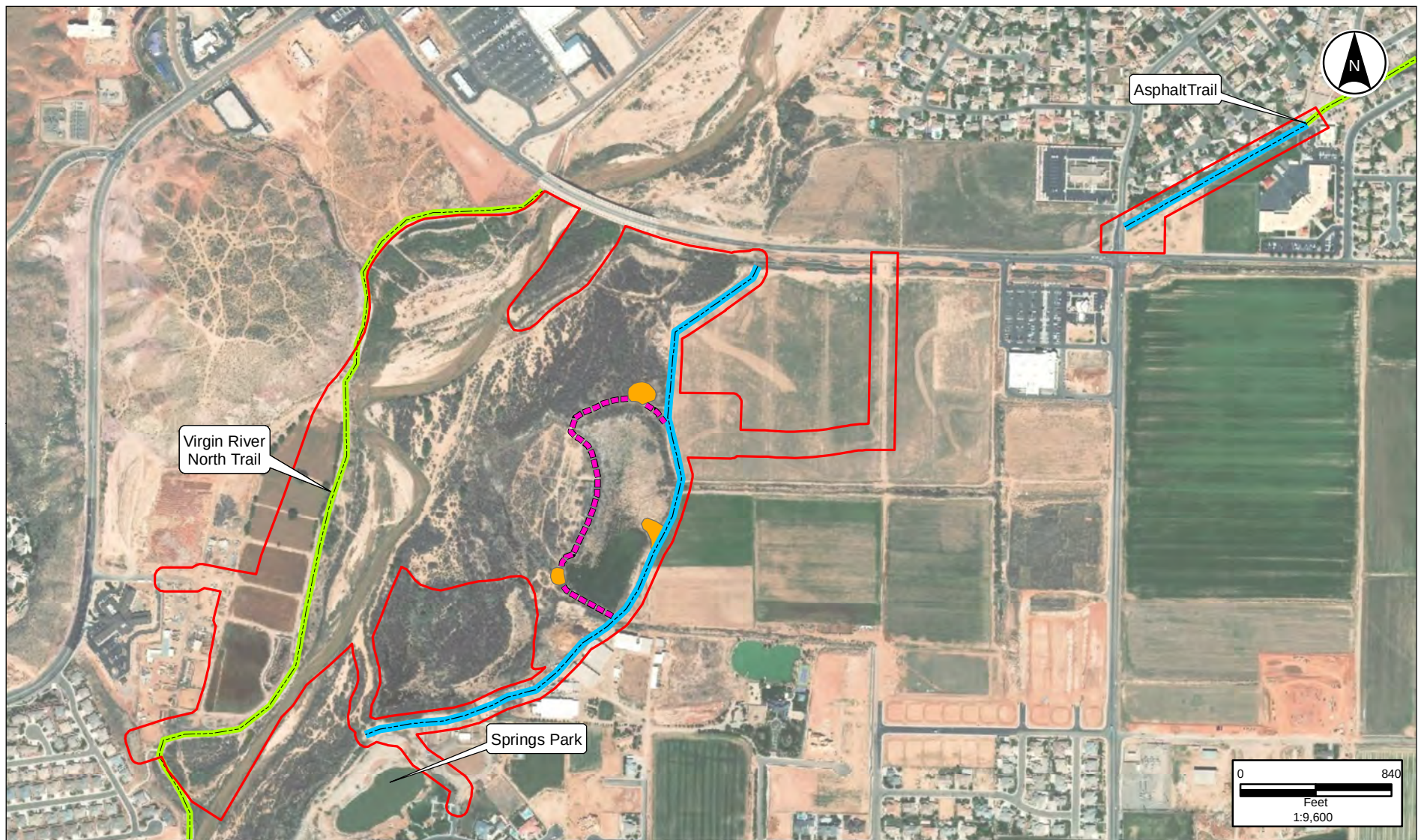
Legend

- Project Area
- Disturbance Boundary
- Southwestern Willow Flycatcher Designated Critical Habitat (DCH)



Map C6.1B
Seegmiller Marsh
Critical Habitat (Bird Species)
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA

Recreation Maps



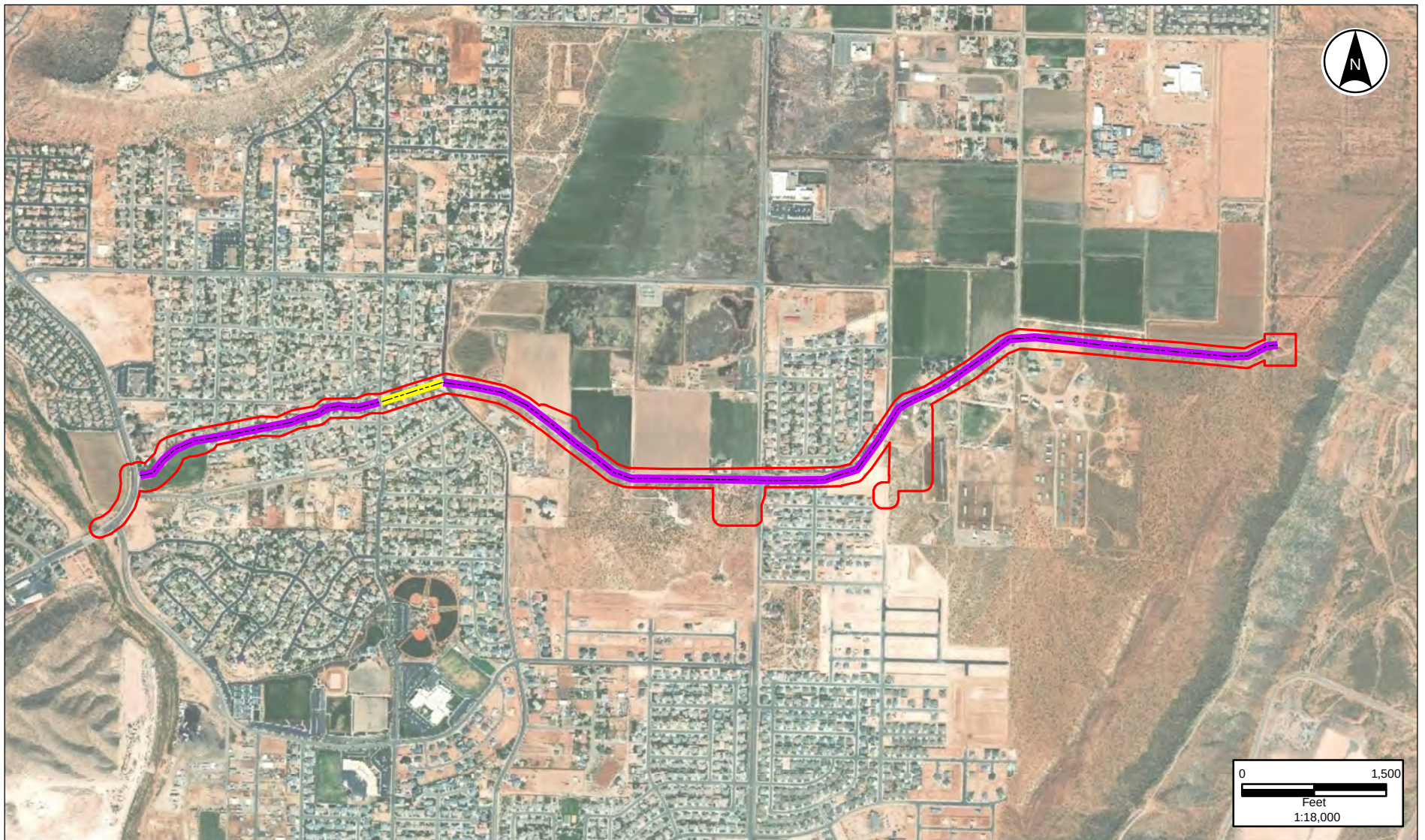
NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

Legend

- Project Area
- Existing Asphalt Trail
- Proposed Bird Viewing Station
- Proposed Gravel Trail
- Proposed Asphalt Trail



Map C7.1
Seegmiller Marsh and Y-Drain
Recreation
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

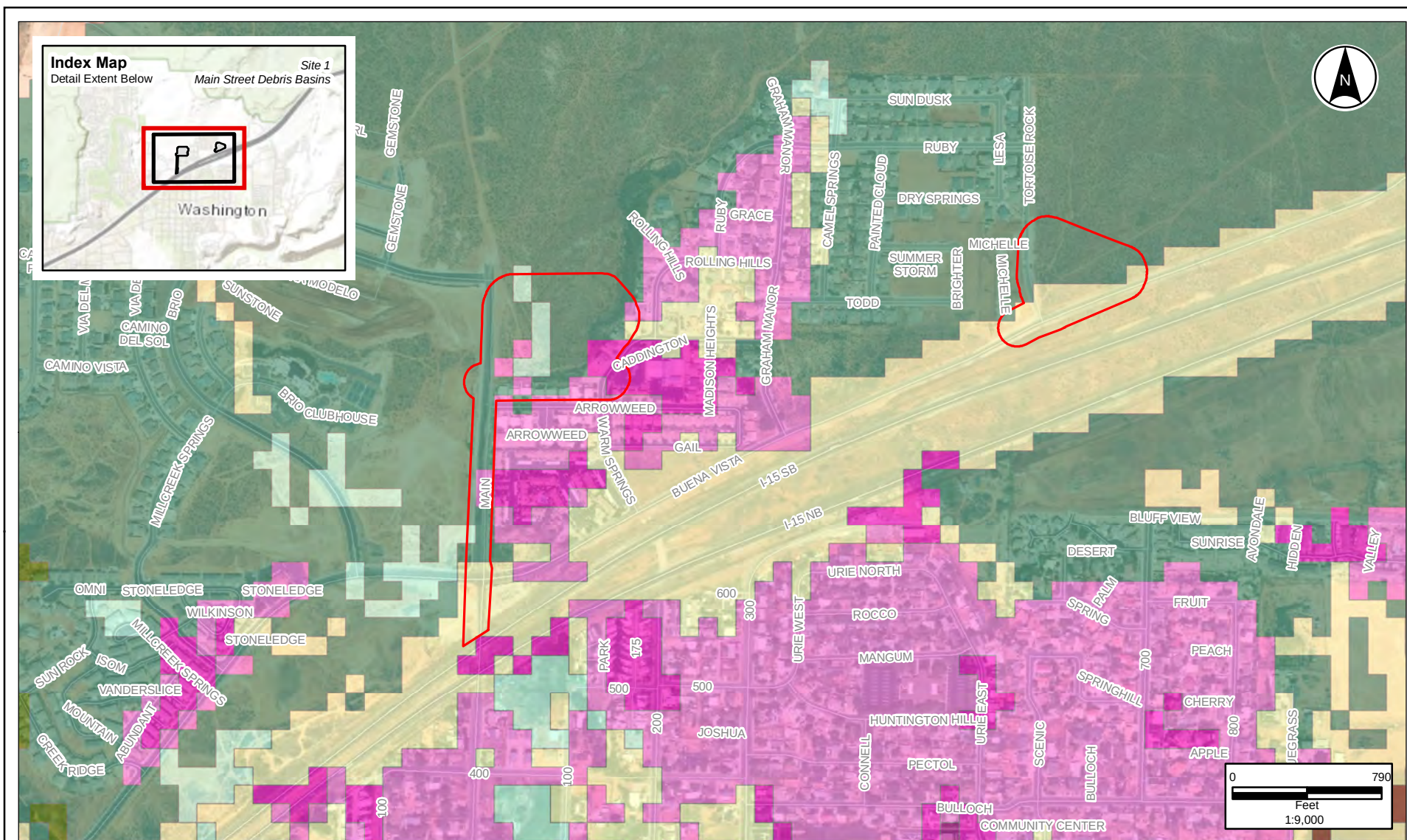
Legend

- Project Area
- Proposed Asphalt & Equestrian Trail
- Existing Asphalt & Equestrian Trail



Map C7.2
Warner Valley Disposal System
Recreation
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA

Land Use Maps



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

 Project Area

Land Use

Developed, Open Space

Developed, Low Intensity

Developed, Medium Intensity

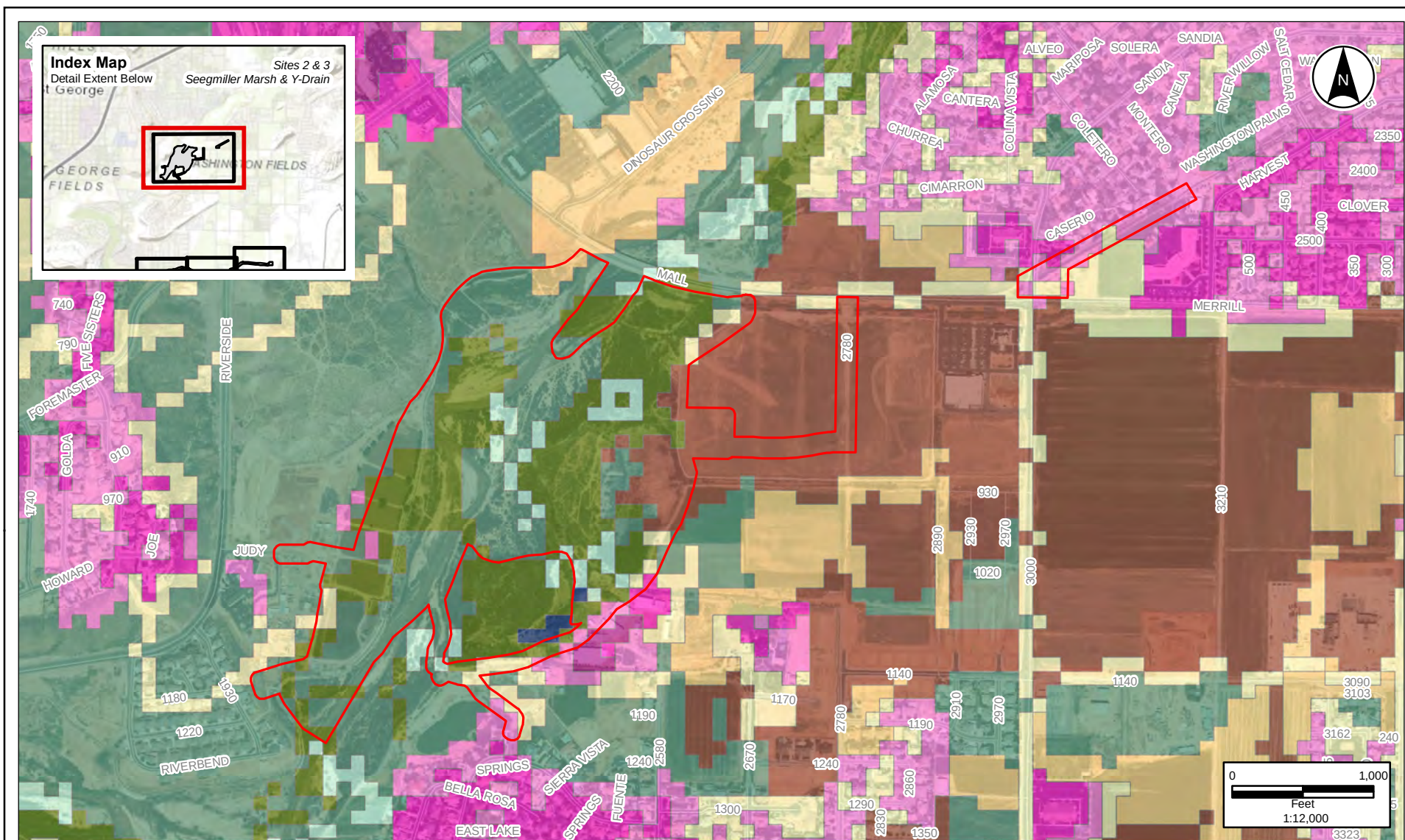
Herbaceous

Shrub/Scrub



Map C8.1 Main Street Debris Basins Land Use

Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
Source: Esri, USGS,
McMillen Jacobs Associates 2019
Image: DigitalGlobe October 2017

Legend

 Project Area

Land Use

Hay/Pasture

Cultivated Crops

Developed, Open Space

Developed, Low Intensity

Developed, Medium Intensity

Developed, High Intensity

Herbaceous

Shrub/Scrub

Woody Wetlands

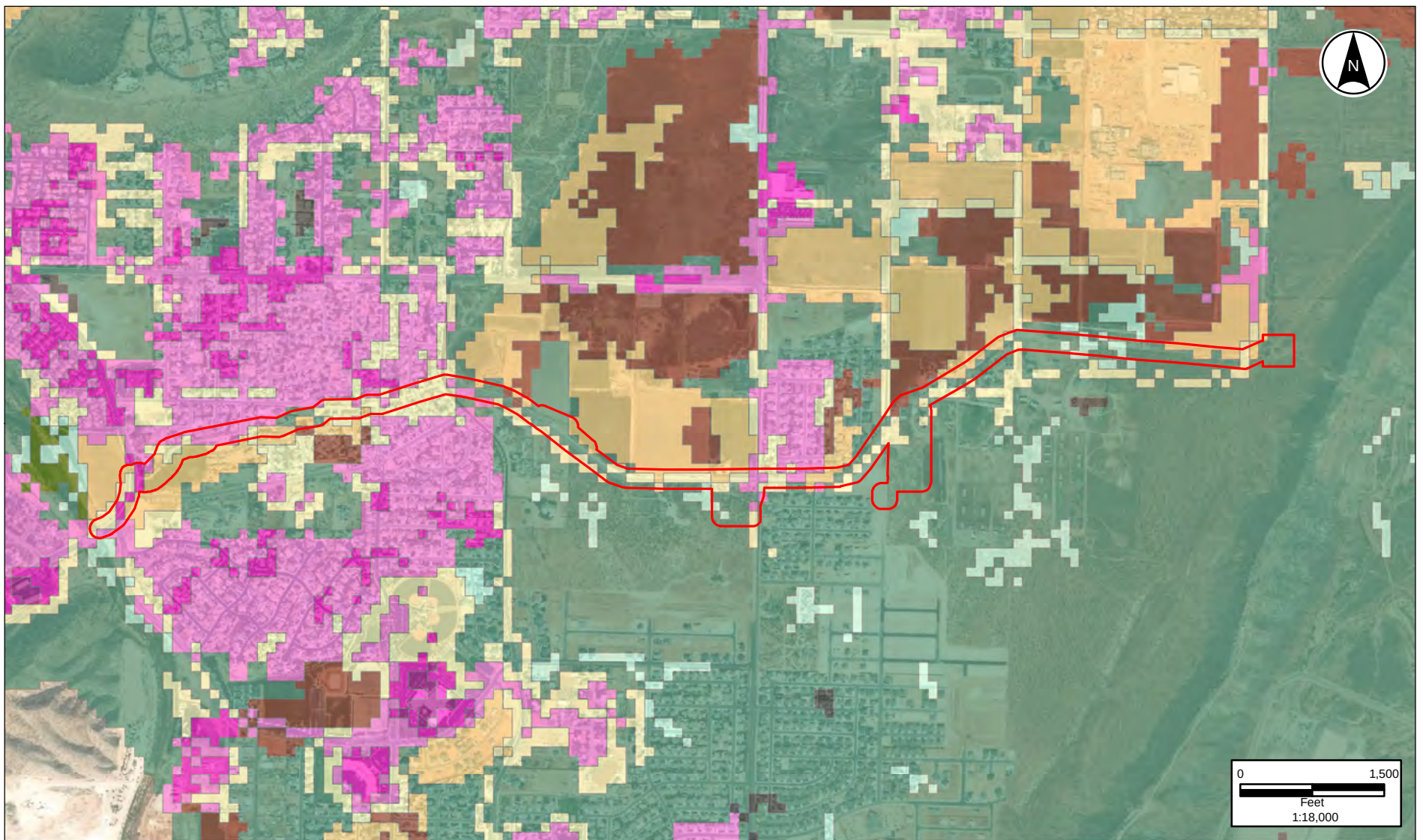
Open Water



United States Department of Agriculture
Natural Resources Conservation Service

Map C8.2
Seegmiller Marsh and Y-Drain
Land Use

Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



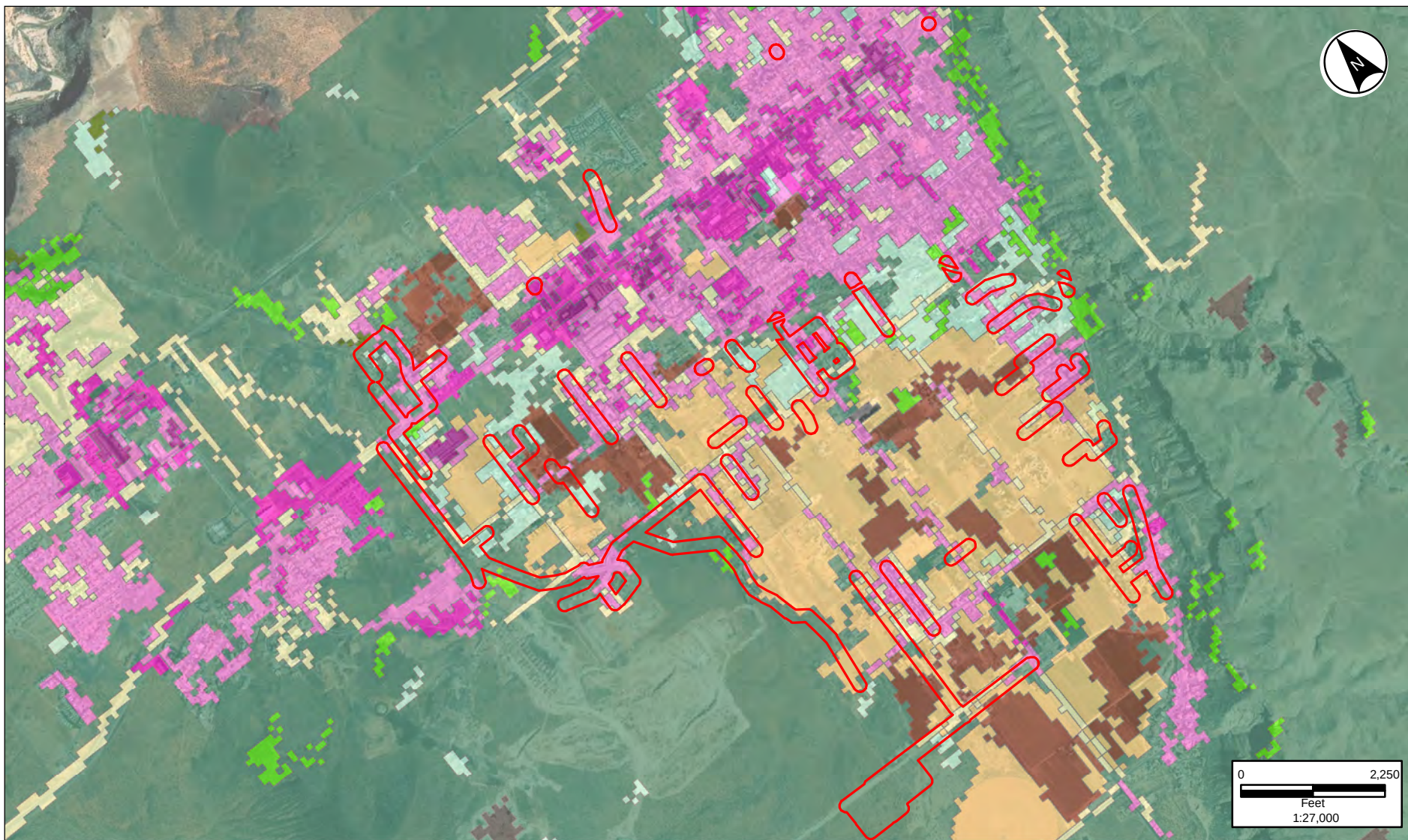
NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

Legend

- | | | |
|------------------|-----------------------------|---------------------------|
| Project Area | Developed, Open Space | Developed, High Intensity |
| Land Use | Developed, Low Intensity | Herbaceous |
| Barren Land | Developed, Medium Intensity | Shrub/Scrub |
| Hay/Pasture | | Woody Wetlands |
| Cultivated Crops | | |



Map C8.3
Warner Valley Disposal System
Land Use
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe September 2016

Legend

 Project Area

Land Use

Barren Land

Hay/Pasture

Cultivated Crops

Developed, Open Space

Developed, Low Intensity

Developed, Medium Intensity

Developed, High Intensity

Herbaceous

Shrub/Scrub

Deciduous Forest

Evergreen Forest

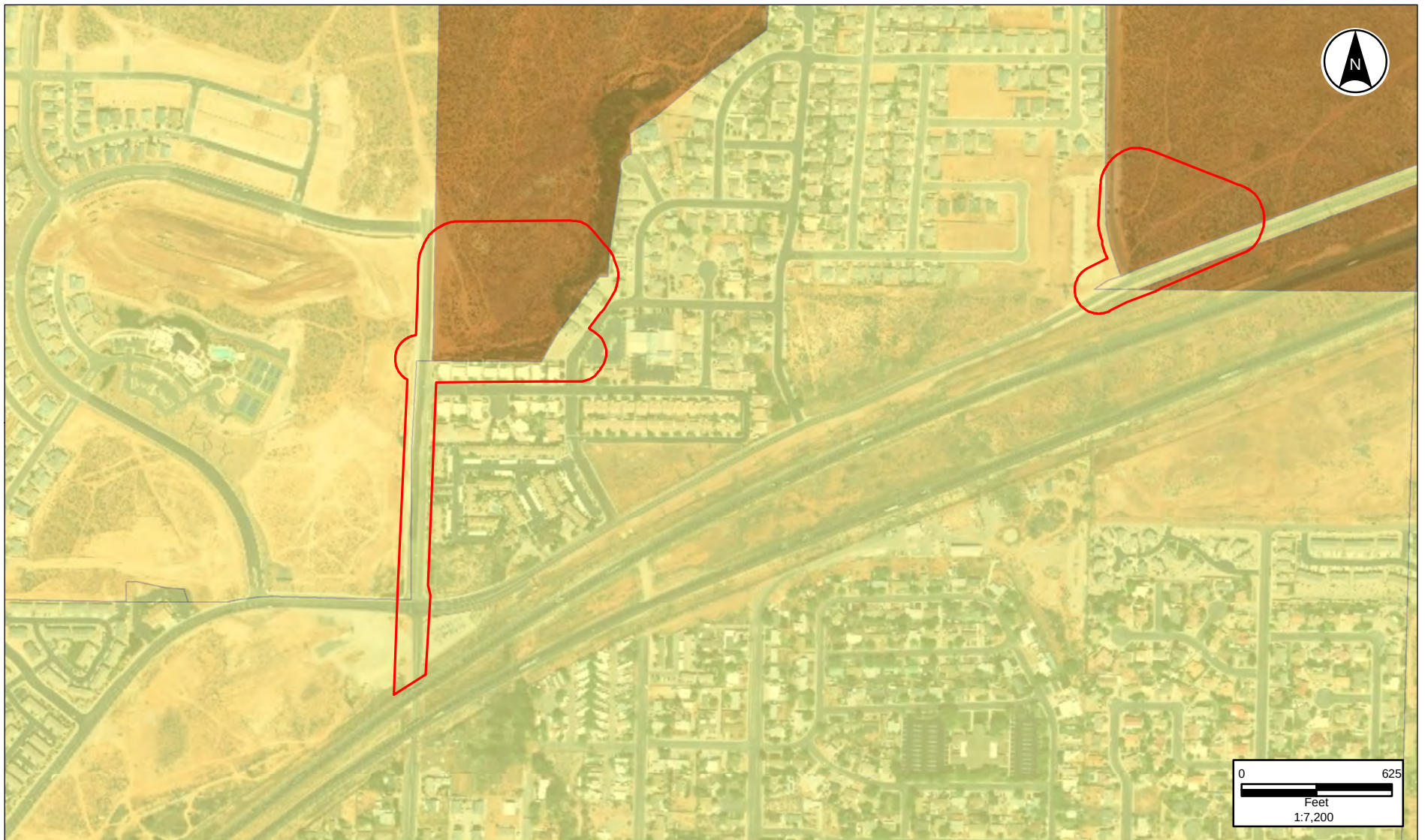
Mixed Forest

Woody Wetlands



Map C8.4
Hurricane Water Efficiency
Land Use
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA

Land Ownership Maps



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

Legend

Project Area

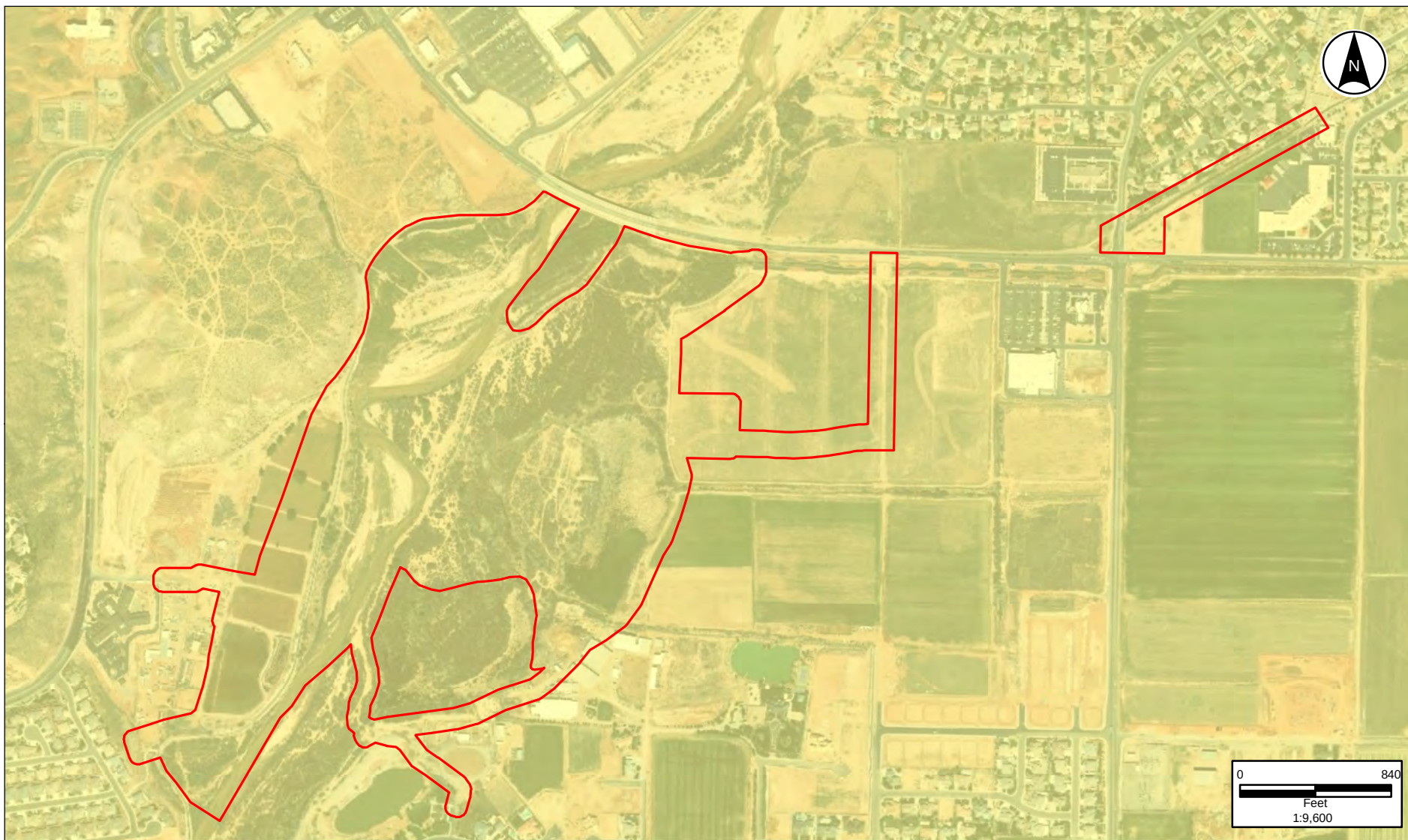
Land Ownership

Private

State



Map C9.1
Main Street Debris Basins
Land Ownership
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

Legend

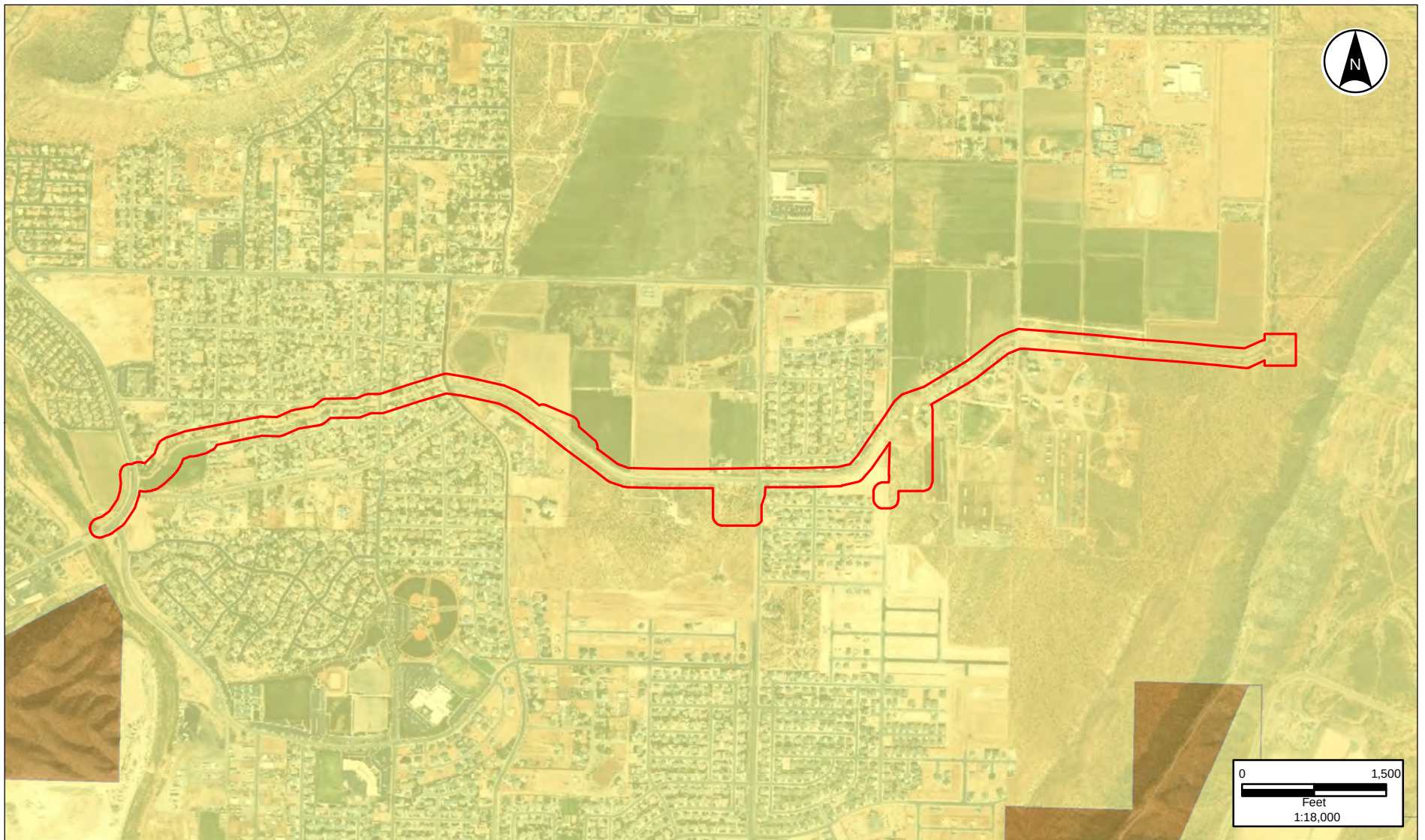
Project Area

Land Ownership

Private



Map C9.2
Seegmiller Marsh and Y-Drain
Land Ownership
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe October 2017

Legend

Project Area

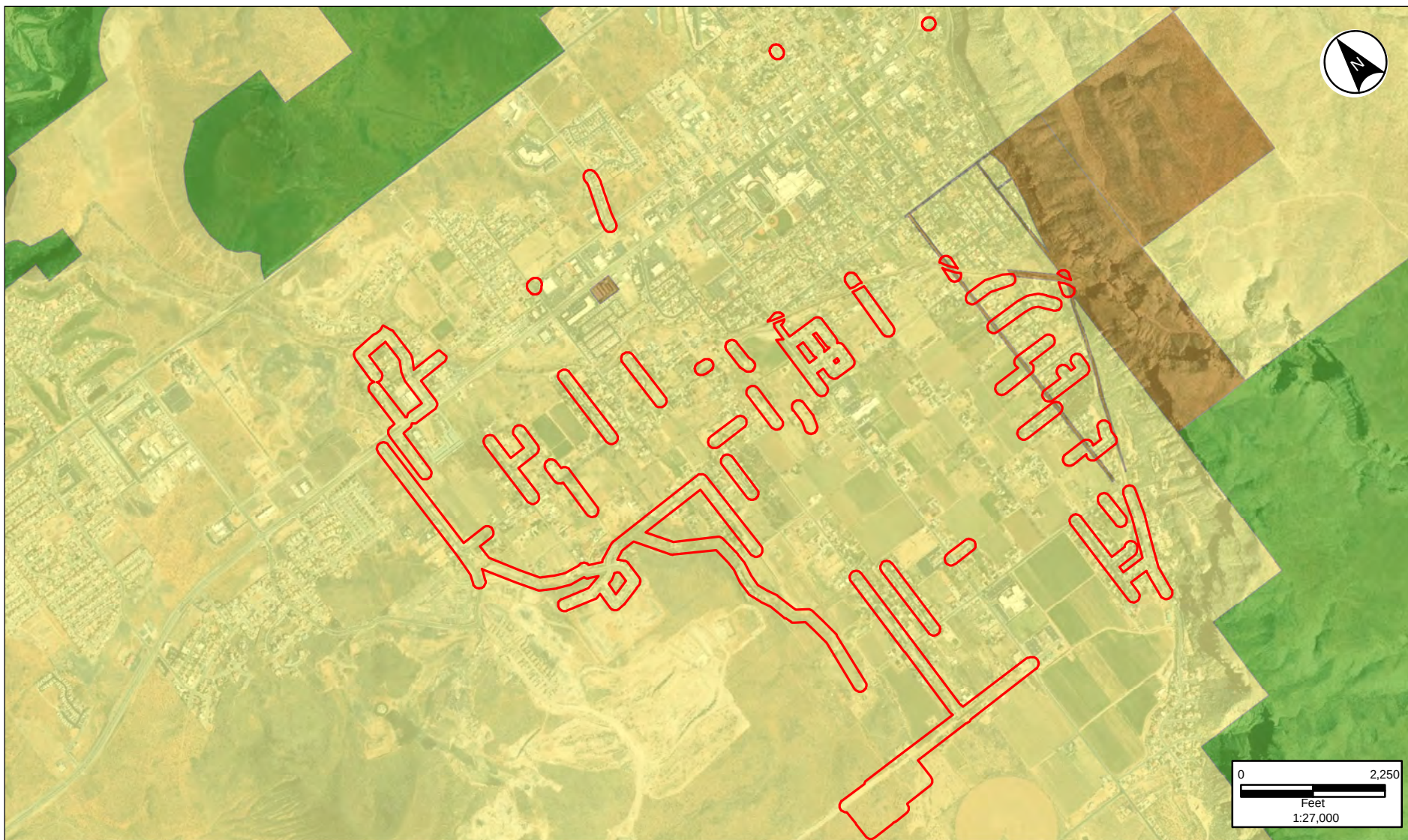
Land Ownership

Private

State



Map C9.3
Warner Valley Disposal System
Land Ownership
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA



NAD 1983 UTM Zone 12N
 Source: Esri, USGS,
 McMillen Jacobs Associates 2019
 Image: DigitalGlobe September 2016

Legend

- Project Area
- Land Ownership**
- Federal
- Private
- State



Map C9.4
Hurricane Water Efficiency
Land Ownership
Warner Draw Watershed & Flood
Prevention Operations Project Plan-EA