BIOLOGICAL ASSESSMENT REPORT
YUMA SECTOR TACTICAL INFRASTRUCTURE
PORT OF ENTRY, ANDRADE, IMPERIAL COUNTY, CALIFORNIA TO GRAY'S WELL, IMPERIAL COUNTY, CALIFORNIA

Prepared for:

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Baton Rouge, Louisiana 70820

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December 31, 2007

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REPORT SUMMARY

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Report Date: December 31, 2007

Report Title: Biological Assessment Report, Yuma Sector Tactical Infrastructure, Port of Entry, Andrade, Imperial County, California to Gray's Well, Imperial County, California.

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USGS Quadrangle: *Yuma West and Gray's Well* (7.5 minute)

Table of Contents

Page

List of Figures

List of Tables

1.0 SUMMARY

The U.S. Border Patrol proposes to construct a fence and road along the international boundary with Mexico between the Port-of-Entry at Andrade near the Arizona-California border and a location near Grays Well, approximately 10.7 miles to the west. Twelve listed species or species of special concern were identified as potentially occurring in the vicinity of the proposed project. Six of these species are state or federally listed. The remaining six species are considered species of special concern. Although species of special concern have not been listed, their status is so tenuous that they should be treated as listed species. After field assessments were performed it was determined that suitable habitat is present for eight of these species, five of which are listed as rare threatened, or endangered.

Direct and indirect impacts to these species may be avoided or minimized through the implementation of avoidance and minimization actions described in this report. If these actions are implemented mitigation or compensation should not be required. The proposed action would be in compliance with the federal Endangered Species Act and the California Endangered Species Act.

2.0 INTRODUCTION

The U.S. Border Patrol proposes to construct a fence and road along the international boundary with Mexico. The proposed California reach of the project is located along the international boundary with Mexico between the Port-of-Entry at Andrade near the Arizona-California border and a location near Grays Well, approximately 10.7 miles to the west (Figures 1 and 2). The project area surveyed for biological resources began at the international boundary and extended 18.3 meters (60 feet) north of the boundary.

3.0 METHODS AND SURVEY LIMITATIONS

Prior to the site visit, BFSA biologists reviewed the National Wetland Inventory (USFWS 2007) maps for the site to determine if wetlands may be present. Appropriate United States Geological Survey maps (7½ minute) were reviewed to determine if drainage features, including "blue-line streams" may be present. The National List of Hydric Soils (NCRS 2007) and the Soils Survey for Imperial County were consulted to establish soils associated with the proposed site. The California Natural Diversity Data Base was reviewed to determine the occurrence of sensitive species in the vicinity of the proposed action. The Bureau of Land Management El Centro Field Office was consulted to determine if that agency may have

particular concerns about the project route and sensitive species potentially affected by the proposed project.

Site visits were made December 6th and 13th, 2007. The western portion of the site was surveyed from an all terrain vehicle with frequent stops to assess terrain features and habitats and to search for wildlife sign and sensitive plants. The eastern portion of the site is deeply gullied with washes containing some wet areas. This portion of the proposed route was examined on foot by slowly walking over the site in a series of random transects to provide visual coverage of the entire site. Vegetation and wildlife species observed were recorded as field observations were made. Wildlife sign (scat, bones, feathers, tracks, dens, and burrows) were also recorded as encountered. Frequent pauses were made during the survey to watch and listen for wildlife.

4.0 BIOLOGICAL RESOURCES ASSOCIATED WITH THE AREA OF POTENTIAL EFFECT

Botanical Resources

Plant communities along the route consist of Mojave Creosote Scrub (34220) (Holland 1986) on Active Desert Dunes (22100) (Holland 1986) with interspersed areas of Mojave Wash Scrub (34250) (Holland 1986). The plant community towards the eastern end of the project tends to become more stabilized and could be considered Stabilized and Partially Stabilized Desert Dune (22200) (Holland 1986). On the eastern end of the proposed route, small areas of riverine vegetation were observed. With the exception of the riverine habitat, the proposed project route follows existing roads and trails. Plant communities have been extensively disturbed by off-road vehicles and pedestrian traffic. Plant species observed are listed in Table 1, below.

Plant species observed in the active and stabilized dune areas included Mormon tea, creosote bush, and spiny sena. Vegetation in the washes included the plant species observed in the dunes as well as species such as four-wing saltbush, white bursage, desert needlegrass, smoke tree, palo verde, salt cedar, athel, and cacti. In the wetter portions of some washes, arrow-weed, cottonwood, and cattail were also observed. Riverine vegetation is present on the east end of the propose project route. Vegetation in these areas is predominantly giant or common reed with a few black willows and arrow-weed.

Table 1 **Plant Species Observed**	
Common Name	**Scientific name**
Smoke Tree	*Dalea spinosa*
Athel	*Tamarix aphylla*
Salt Cedar	*Tamarix ramosissima*
Palo Verde	*Cercidium sp.*
Four-Wing Salt Bush	*Atriplex canescens*
Arrow-Weed	*Pluchea sericea*
Spiny Sena	*Cassia armata*
Beavertail Cactus	*Opuntia basilarus*
Cholla	*Opuntia ramosissima*
White Bursage	*Ambrosia dumosa*
Giant Reed	*Arundo donax*
Cattail	*Typha latifolia*
Black Willow	*Salix goodingii*
Cottonwood	*Populus fremontii*
Desert Needlegrass	*Achnatherum speciosum*
Mormon Tea	*Ephedera nevadensis*
Creosote Bush	*Larrea tridentata*

Six sensitive plant species were identified as potentially occurring on or near the proposed project site (CNDDB 2007). These are listed in Table 2, below.

Table 2 **Sensitive Plant Species Potentially Present**			
Common Name	***Scientific Name***	**Federal Status**	**State Status**
Peirson's Milk-Vetch	*Astralagus magdalenae var. peirsonii*	T	E
Wiggin's Croton	*Croton wigginsii*	None	R
Giant Spanish Needle	*Palafoxia arida var. gigantea*	SC	SC
Sand Food	*Pholisma sonorae*	SC	SC
Algodones Dunes Sunflower	*Helianthus niveus ssp. tephrodes*	None	E
Mud Nama	*Nama stenocarpum*	SC	SC

E – Endangered T – Threatened SC – Species of Concern R - Rare

Peirson's Milk-Vetch (*Astralagus magdalenae var. peirsonii)*

Peirson's milk-vetch is found in San Diego County, Imperial County, Arizona, Baja California and Sonora, Mexico. Peirson's milk-vetch is a short-lived perennial associated with well developed desert dunes. A population of this species is known to occur in the Algodones

Dunes in Imperial County (Reiser 1994). The California Natural Diversity Data Base (CNDDB) identifies the population in the Algodones Dunes as occurring immediately north of the All American Canal about 1,000 meters north of the proposed project site (Figure 4).

Site visits were conducted during the flowering season (December to April) for Peirson's milk-vetch. This species was not observed but suitable habitat is present.

Wiggin's Croton (*Croton wigginsii)*

Wiggin's croton is a perennial shrub in the spurge family (Euphorbiaceae). This species occurs on the Algodones Dunes in southeast Imperial County along the west side of the Algodones Dunes system. The CNDDB identifies a population of this species occurring approximately 3,000 meters north of the APE for the proposed project (Figure 5).

Wiggin's croton was not observed during the site visits; however, the flowering season for this species is March through May and specimens may not have been readily identifiable.

Giant Spanish Needle (*Palafoxia arida var. gigantea)*

The California Native Plant Society lists Giant Spanish needles as rare, threatened, or endangered in California and elsewhere (CNPS 2007).

Giant Spanish needle is a native drought-tolerant annual found at several locations in the Algodones Dunes, north of the proposed project site. The CNDDB identifies one of these sites as approximately 4,000 meters north of the proposed project (Figure 6).

Giant Spanish needle was not observed during the site visits; however, the flowering season for this species is February through May and specimens may not have been readily identifiable.

Sand Food (*Pholisma sonorae)*

The California Native Plant Society lists sand food as rare, threatened, or endangered in California and elsewhere (CNPS 2007).

Sand food is a perennial herb found in sand dunes. It is a root parasite and lacks chlorophyll. Its stems are fleshy and mostly buried in the sand. Host plant species include fan-leaf crinkle mat (*Tiquilia plicata*), indigo bush (*Psorothamnus emoryi*), white bursage (*Ambrosia dumosa*), and arrow-weed (*Pluchea sericea*) (CPC 2007). The CNDDB identifies sand food as occurring at the west end of the proposed project site and north of the All American Canal, approximately 1,000 meters north of the proposed site (Figure 7).

Sand food was not observed during the site visits; however, it may be most readily observed between April and June (CNPS 2007), and specimens may not have been readily identified.

Algodones Dunes Sunflower (*Helianthus niveus ssp. tephrodes)*

The California Native Plant Society lists the Algodones Dunes sunflower as rare, threatened, or endangered in California and elsewhere (CNPS 2007).

Algodones Dunes sunflower is a perennial of the sunflower family occurring in the Algodones Dunes, Imperial County, California. The CNDDB identifies this species as occurring in the dunes approximately 3,000 meters north of the proposed project site (Figure 8).

Site visits were conducted during the September through May flowering season for this species. Algodones Dunes sunflower was not observed but may occur within the proposed project area.

Mud Nama *(Nama stenocarpum)*

The California Native Plant Society lists mud nama as fairly endangered in California, but more common elsewhere (CNPS 2007).

Mud nama is an annual of the Waterleaf Family (Hydrophyllaceae) found along muddy embankments of marshes, swamps, and lakes. The CNDDB records mud nama occurring approximately 8,600 meters (5.3 miles) east of the eastern end of the proposed project site (Figure 9). Suitable habitat for this species is found around the small ponds identified on the eastern ends of the proposed project site; however, mud nama is an annual that blooms between January and July. The species could not be readily identified at the time of the field assessment.

Faunal Resources

Six sensitive animal species were identified as potentially occurring on or near the proposed project site (CNDDB 2007). These species are listed in Table 3, below.

Table 3
Sensitive Animal Species Potentially Present (CNDDB 2007)

Common Name	*Scientific Name*	Federal Status	State Status
Flat-Tailed Horned Lizard	*Phrynosoma mcallii*	SC	SC
Western Yellow-Billed Cuckoo	*Coccyzus americanus occidentalis*	C	E
California Black Rail	*Laterallus jamaicensis coturniculus*	None	T
Yuma Clapper Rail	*Rallus longirostris yumanensis*	E	T
Western Burrowing Owl	*Athene cunicularia hypugea*	SC	SC
Colorado Valley Woodrat	*Neotoma albigula venusta*	SC	SC

E – Endangered T – Threatened, SC – Species of Concern

Flat-Tailed Horned Lizard (*Phrynosoma mcallii)*

The flat-tailed horned lizard is a state and federal species of concern. Typical habitat for the flat-tailed horned lizard is sandy desert hardpan or gravel flats with scattered sparse vegetation. The species is generally found in areas with a high density of harvester ants and fine windblown sand, but rarely occurs on dunes.

Flat-tailed horned lizards were not observed during site visits. Cool weather may have kept individuals inactive. Suitable habitat for this species exists all along the proposed project site, particularly in the desert hardpan near the east end (Figure 10). Possible flat-tailed lizard tracks were observed on the western end of the proposed project site; however, the tracks were too degraded for positive identification. Very few harvester ants, the principal food source for the species, were observed in the proposed project site. This may have been the result of recent rains and cooler weather. The presence or absence of flat-tailed horned lizards in the proposed project area could not be determined with certainty.

Western Yellow-Billed Cuckoo (*Coccyzus americanus occidentalis)*

The Yellow-billed Cuckoo is listed as a California Endangered Species and a U.S. Forest Service Sensitive Species. The western subspecies of yellow-billed cuckoo was considered for federal listing but was not listed because of discrepancies in genetic data. The California Yellow-billed Cuckoo breeds in scattered locations where suitable habitat is available throughout California, Idaho, Utah, Arizona, New Mexico, extreme western Texas, and possibly Nevada and western Colorado (Laymon 1998). There are two recorded sighting of this species

approximately 3,500 meters northeast of the eastern end of the proposed project site (Figure 11). Another record exists approximately 5,700 meters east of the project site in the vicinity of Laguna Dam (CNDDB 2007).

Western yellow-billed cuckoos are generally found in dense riparian cover often adjacent to agricultural areas. With the exception of a small area along the Colorado River, suitable habitat for this species was not observed in the proposed project area. The riparian habitat along the Colorado lacks the trees and adjacent agricultural development this species seems to prefer. The western yellow-billed cuckoo is not likely to occur within the proposed project site.

California Black Rail (*Laterallus jamaicensis coturniculus)*

The California black rail is listed as threatened by the State of California but is not currently listed by the U.S. Fish and Wildlife Service. The California Black Rail is believed to be a resident of marshes in the San Francisco Bay area and along the lower reaches of the Colorado River in California and Arizona. The CNDDB contains one record for this species near Winterhaven, approximately 7,600 meters east of the eastern terminus of the proposed project site.

There are scattered pockets of potentially suitable habitat for this species in small areas of hydrophytic vegetation (washs 2, 5, and 6; Figure 3) and along the Colorado River at the eastern end of the project site (Figure 12). Black rails were not seen or heard during site visits but focused surveys were not conducted. Given the nature of the habitat included in the proposed project site, it is highly unlikely black rails are present but the possibility does exist.

Yuma Clapper Rail (*Rallus longirostris yumanensis)*

The Yuma clapper rail is listed and endangered by the U.S. Fish and Wildlife Service and threatened by the California Department of Fish and Game.

The Yuma Clapper Rail is generally a resident of shallow, freshwater marshes containing dense stands of cattails and bulrushes along the lower Colorado River in California and Arizona and at the Salton Sea in Imperial County, California.

There is scattered habitat for the Yuma clapper rail along the proposed project site, particularly in the dense cattail stands at the eastern end of the site. The CNDDB contains several records for this species in that area. Yuma clapper rails were not seen or heard during site visits; however a focused survey was not conducted. There is potential for this species to be present in small areas supporting hydrophytic vegetation (washs 2, 5, and 6; Figure 3) along the route of the proposed project and in the riverine vegetation on the eastern end of the proposed site (Figure 13).

Western Burrowing Owl (*Athene cunicularia hypugea)*

The Burrowing Owl is a small, long-legged owl found in grasslands, rangelands, agricultural areas, deserts, or any other dry, open area with low vegetation. They nest and roost in burrows excavated by burrowing mammals such as ground squirrels. Burrowing owls may also make use of structures such as culverts and irrigation stand-pipes as nests and roosts. Burrowing owls tend to be active during the day, although most hunting is still done at dawn, dusk, or at night.

The CNDDB contains one record of western burrowing owls approximately 1,000 meters north of the proposed project site and north of the All American Canal (Figure 14). Low open vegetation preferred by the western burrowing owl occurs all along the proposed project route, however, suitable burrows or structures were not observed during site visits. It is unlikely this species occurs within the proposed project site.

Colorado Valley Woodrat (*Neotoma albigula venusta)*

The Colorado Valley woodrat is found in desert habitats in southeastern San Bernardino County, central and eastern Riverside County, eastern San Diego County, and throughout Imperial County. Distribution may be affected by the availability of nest-building materials. In rocky areas, plant material such as cholla, prickly pear, or mesquite may be piled around a crevice with the nest at the crevice. Nests may also be constructed under shrubs or cactus. Nests are often large and are generally very noticeable.

The CNDDB has records of this species along the Colorado River immediately to the north of the proposed project route (Figure 15). There is generally a lack of nest building materials along the proposed project route. Nest structures were not observed. It is unlikely the Colorado Valley woodrat is present along the route of the proposed project.

Wetlands and other Jurisdictional Waters

Wetlands are defined by the presence or absence of three wetland criteria: wetland hydrology, wetland soils, and hydrophytic vegetation. All three criteria must be met before a site is considered wetland (USCOE 1987).

Three washes along the proposed project route contain areas of standing water. Hydrophytic vegetation such as cottonwoods, arrow-weed, cattail, and salt cedar occur in these wet areas. Water appears to have accumulated in these areas as a result of human intervention. Low berms and scrapes have been constructed along the border. These tend to intercept and pond surface runoff. The scrapes appear to be deep enough to also intercept water subbing from the unlined All American Canal north of the project site. The proposed concrete lining of the

canal will undoubtedly result in these small wet areas drying up. Soils associated with the proposed project route have not been mapped. They tend to be sands, sandy gravels, and sandy loam in some locations. These soils appear to have a Munsell Color Value of 10YR with a hue of 4 to 6 and a chroma ranging from 4 to 8 when wet. Generally, a soil must have matrix chroma of less than 2 to be considered hydric.

Hydrophytic vegetation and wetland hydrology are present in some areas along the proposed route. Soils associated with these areas lack hydric characteristics. Since one of the three required criteria, hydric soils, has not been met, the areas discussed above are not considered wetlands. Although not identified as wetlands, these areas retain important wildlife values and may provide suitable habitat for sensitive species such as Yuma clapper rail.

5.0 DISCUSSION

Twelve listed species or species of special concern were identified as potentially occurring in the vicinity of the proposed project. Six of these species are state or federally listed. The remaining six species are considered species of special concern. Although species of special concern have not been listed their status is so tenuous that they should be treated as listed species. After field assessments were performed it was determined that suitable habitat is present for eight of these species within the project area.

Table 4
Summary of Sensitive Species Potentially Present

Common Name	*Scientific Name*	Federal Status	State Status
Peirson's Milk-Vetch	*Astralagus magdalenae peirsonii*	T	E
Wiggin's Croton	*Croton wigginsii*	None	R
Sand Food	*Pholisma sonorae*	SC	SC
Giant Spanish Needle	*Palafoxia arida var. gigantean*	SC	SC
Algodones Dunes Sunflower	*Helianthus niveus ssp. tephrodes*	None	E
Mud Nama	*Nama stenocarpum*	SC	SC
Flat-Tailed Horned Lizard	*Phrynosoma mcallii*	SC	SC
California Black rail	*Laterallus jamaicensis coturniculus*	None	T
Yuma Clapper Rail	*Rallus longirostris yumanensis*	E	T

E – Endangered T – Threatened SC – Species of Concern R – Rare

The area potentially affected by the proposed action includes known occurrences of sand food. The site is immediately adjacent to populations of Peirson's milk-vetch. Algodones Dune sunflower, mud nama, Wiggin's croton and giant Spanish needle may also occur within the

proposed project site; however, the timing of the site visits did not permit positive identification of these species. There is potential for the proposed action to directly affect these species.

Suitable habitat for the flat-tailed horned lizard occurs within the area surveyed, and this species occurs within 1,000 meters of the site. The greatest potential for the occurrence of this species is likely to be on the eastern end of the proposed site.

Suitable habitat for the Yuma clapper rail occurs at several locations on the east end of the proposed site. These areas are focused on small ponds immediately adjacent to the project site. Although hydrophytic vegetation and wetland hydrology are present, these areas lack hydric soils and do not constitute wetlands. Where canals and the Colorado River are involved, larger expanses of rail habitat are present, and Yuma clapper rails have been recorded along the river at the eastern end of the project site. The proposed action is not likely to intrude on rail habitat but there is potential for noise generated by construction to interfere with clapper rails during the breeding season. Generally noise levels with a time-weighted average of 60 dB(A) per hour or greater are considered detrimental to breeding birds.

The California black rail may occur in those areas providing suitable habitat for the Yuma clapper rail. If present, the black rail like the Yuma clapper rail is not likely to be directly impacted by the proposed action but may experience indirect impacts as a result of construction related noise.

Recommended Avoidance or Minimization Measures

Potential impacts to sensitive biological resources would be avoided or minimized by assigning a biological monitor to the proposed project. The monitor would work ahead of construction crews searching for the species identified in Table 4. If any of these species are encountered, the on-site project supervisor and the Bureau of Land Management (BLM) would be advised immediately.

When the species encountered are special interest species, the BLM would be consulted regarding relocation of the individuals encountered to appropriate areas. If the species encountered are state or federally listed, the appropriate agency would be consulted and buffers would be established around each occurrence. Construction would not be permitted within these buffer areas.

If project construction is scheduled to take place during the breeding season for the Yuma clapper rail and the California black rail, the project biologist would identify potentially suitable habitat and conduct protocol surveys in advance of any construction activity. If either species is

detected, construction will not be permitted during the breeding season for the species present. Alternatively, noise impacts may be attenuated through the use of sound barriers that would reduce noise levels to less than 60 dB(A) per hour or by budgeting noise to ensure the 60 dB(A) per hour level is not exceeded. Monitoring of noise levels would be conducted daily throughout the breeding season whenever construction is in close proximity to suitable habitat for either species.

All excavations that cannot be backfilled at the end of the workday will be covered. The biological monitor will inspect all excavations at the beginning of the workday and will remove any vertebrates that may have fallen into the excavations.

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.

DATE:_____SIGNED: _____
Senior Biologist

1) Fieldwork performed and report prepared by:

_____
Signature

Laurence N. Dean
Name

Senior Biologist
Title

7.0 BIBLIOGRAPHY

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8.0 LIST OF PREPARERS

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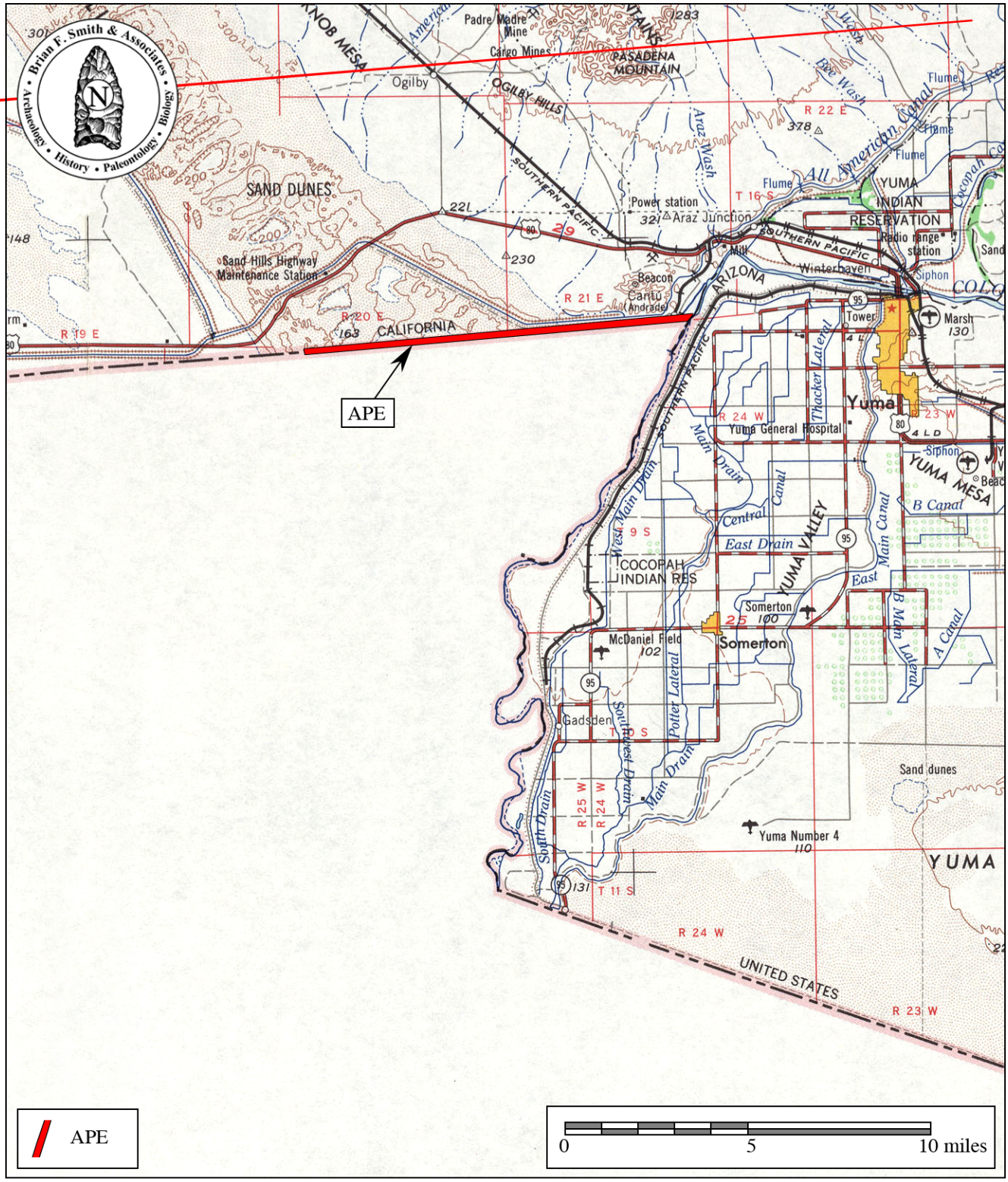

Figure 1

General Vicinity Map

The Yuma Sector Project

USGS *El Centro* (1:250,000 series)

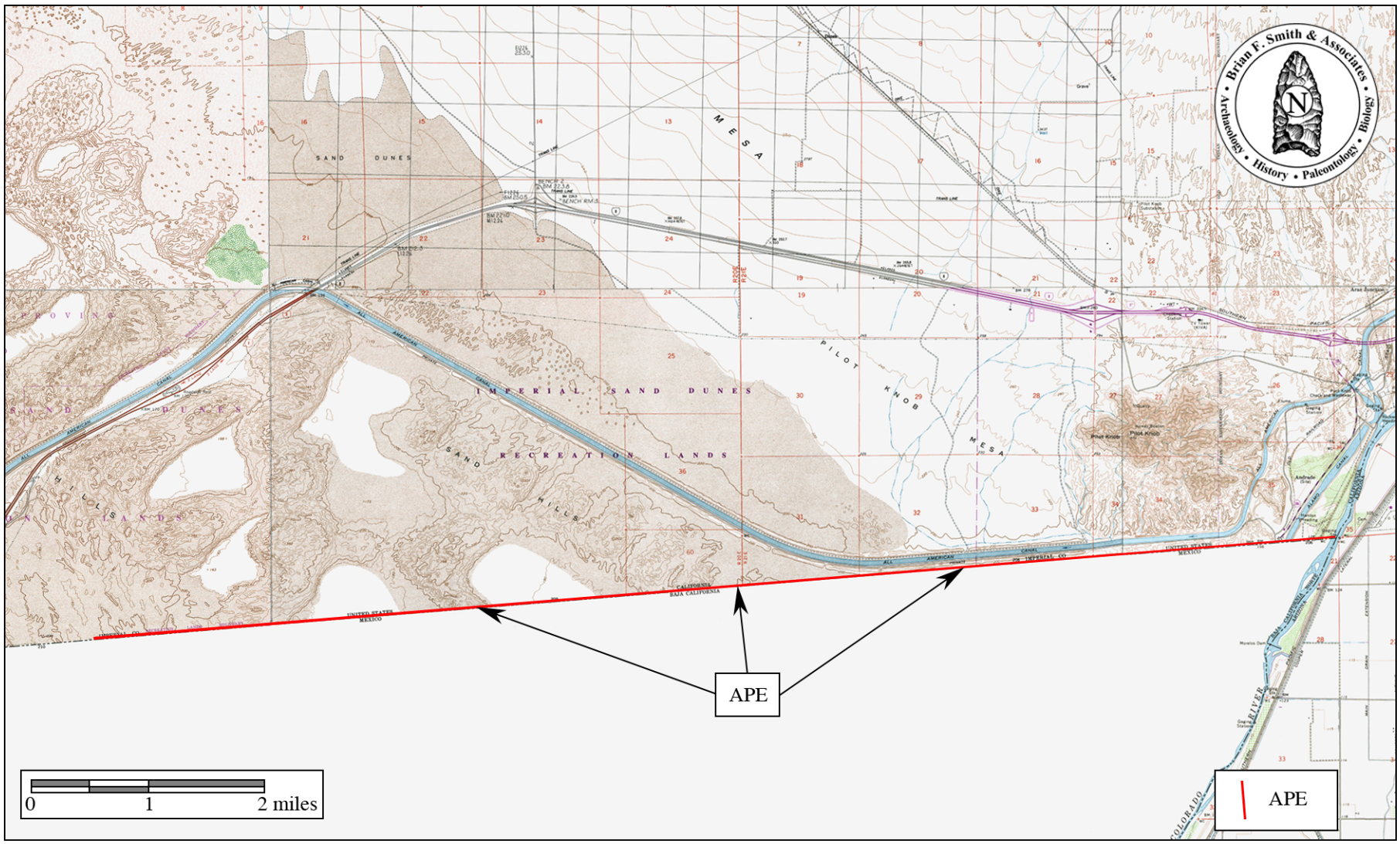

Figure 2

Project Location Map

The Yuma Sector Project

USGS *Araz, Grays Well, Grays Well NE, Ogilby, Cactus,* and *Yuma West* Quadrangles (7.5 minute series)

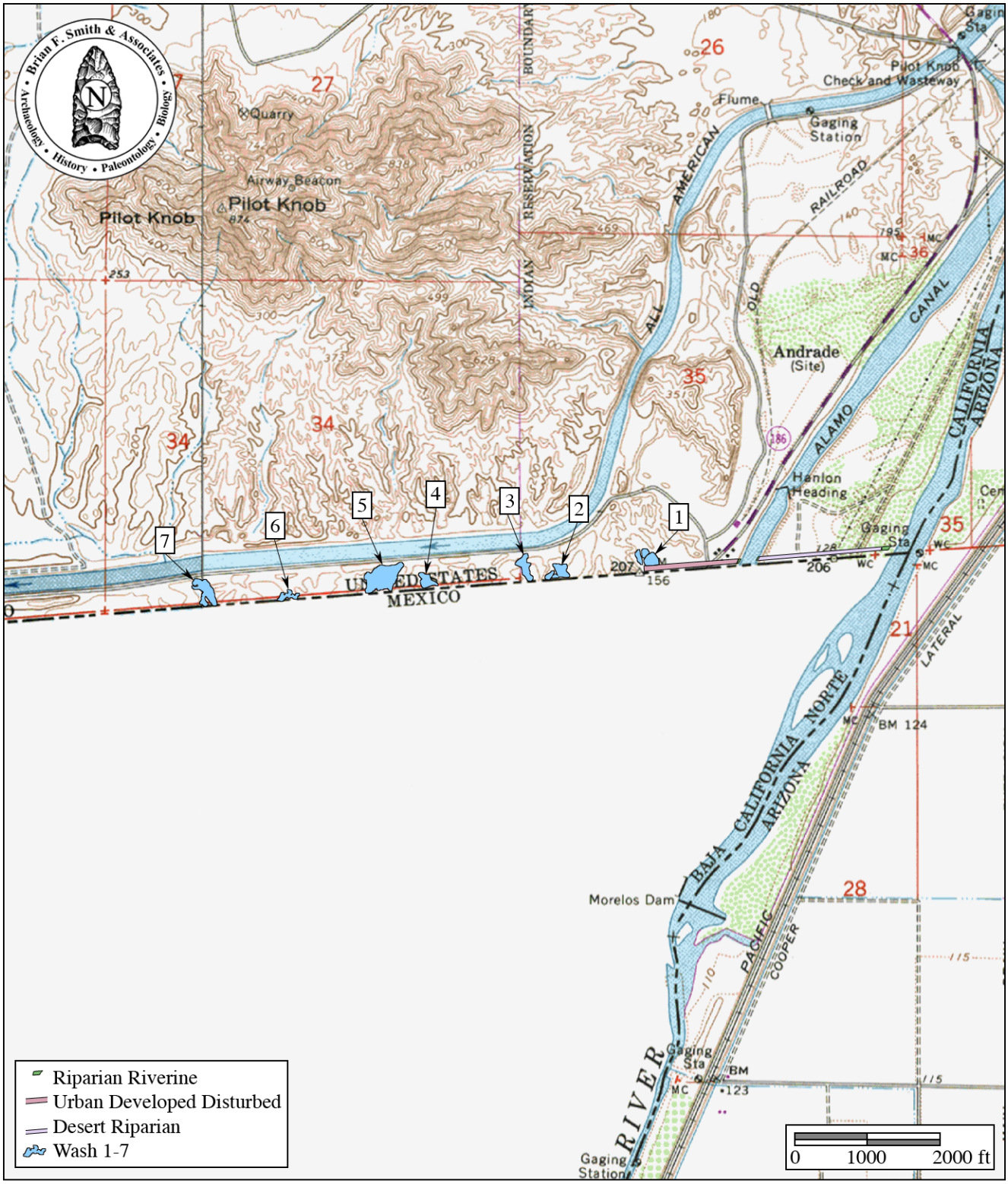

Figure 3

East End Yuma Tactical Infrastructure Survey Area

Vegetation Map

USGS *Grays Well NE,* and *Yuma West* Quadrangles (7.5 minute series)

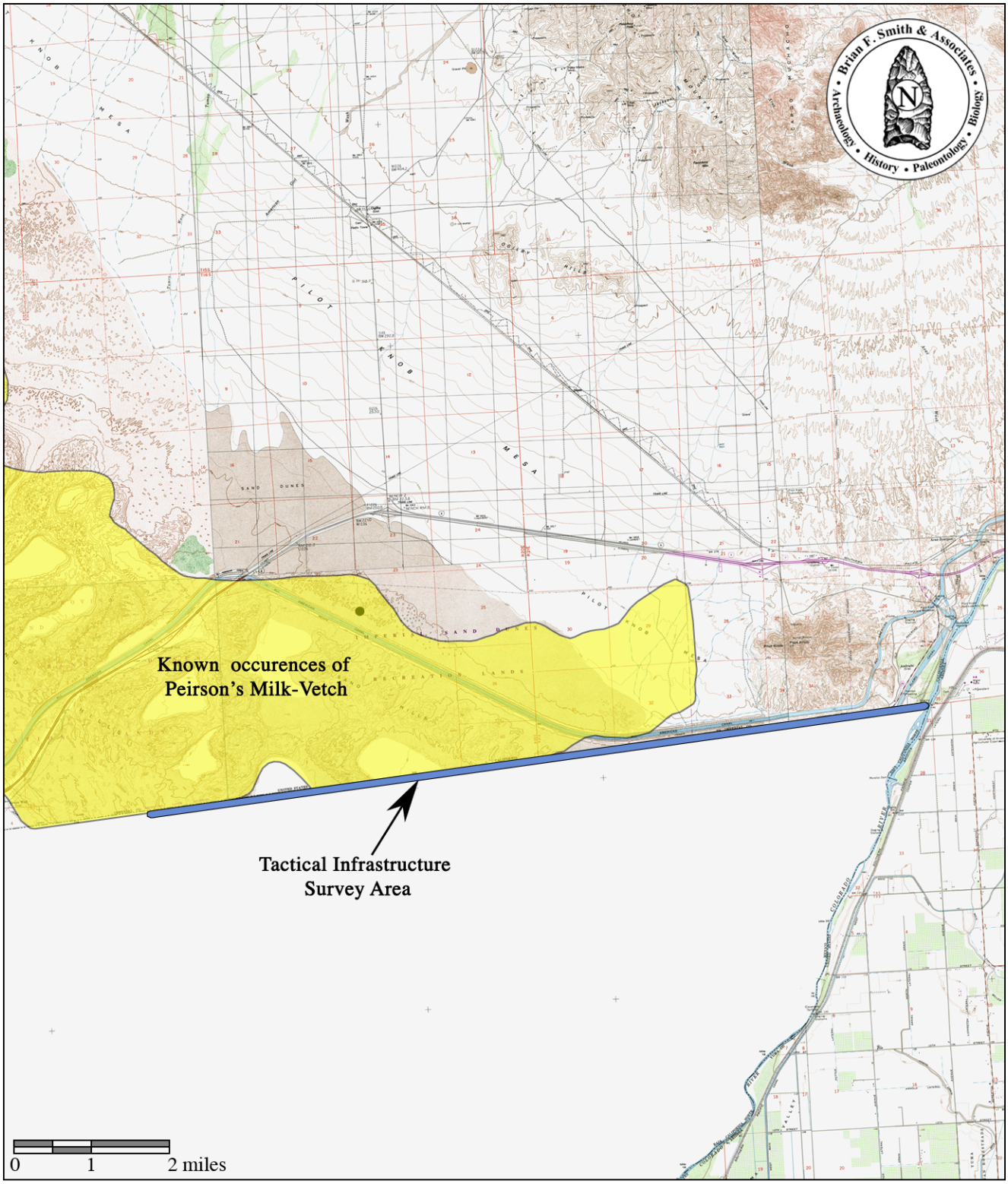

Figure 4

Generalized Distribution Map:

Peirson's Milk-Vetch (*Astragalus magdalenae var. peirsonii)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

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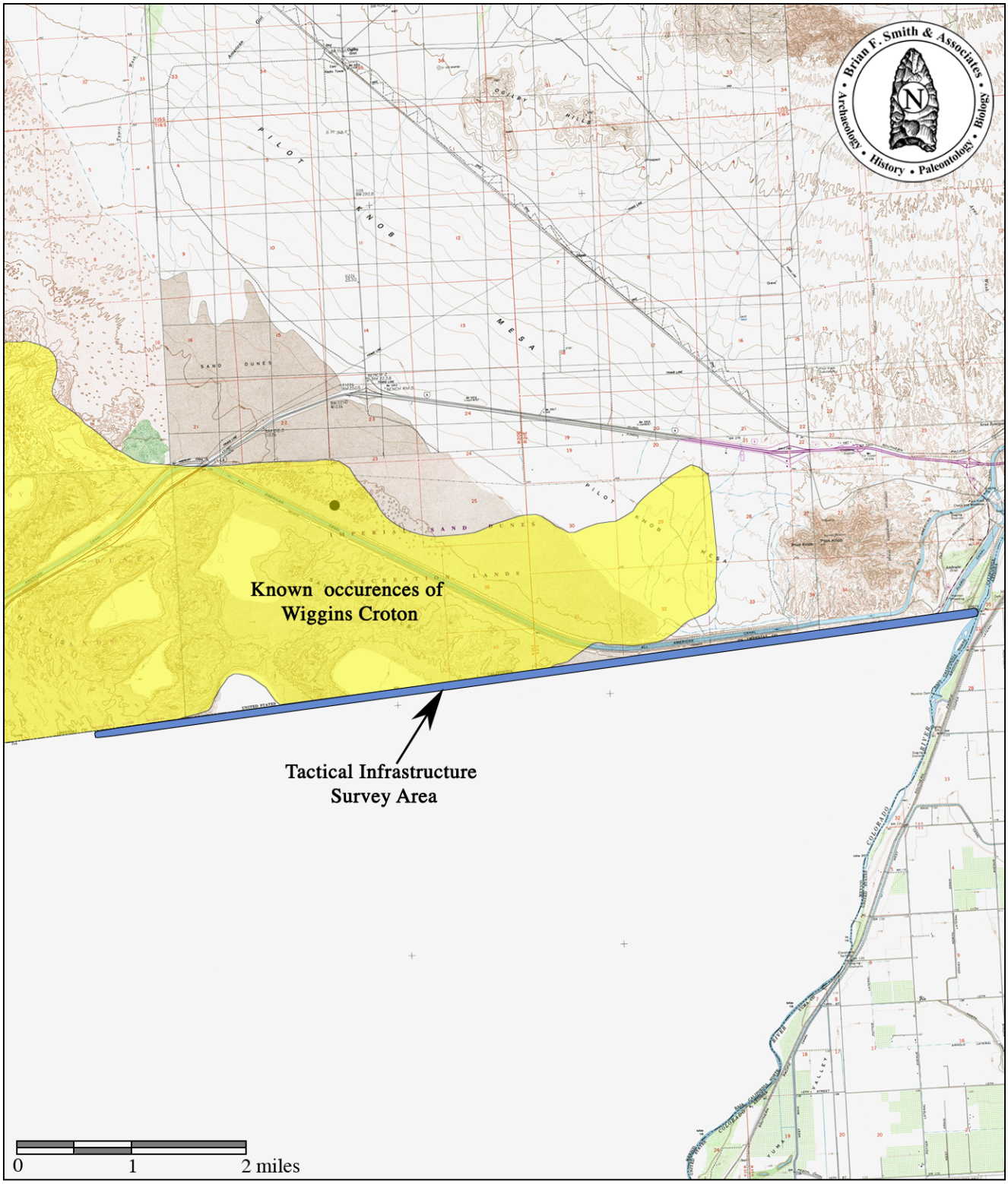

Figure 5

Generalized Distribution Map:
Wiggin's Croton (*Croton wigginsii)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

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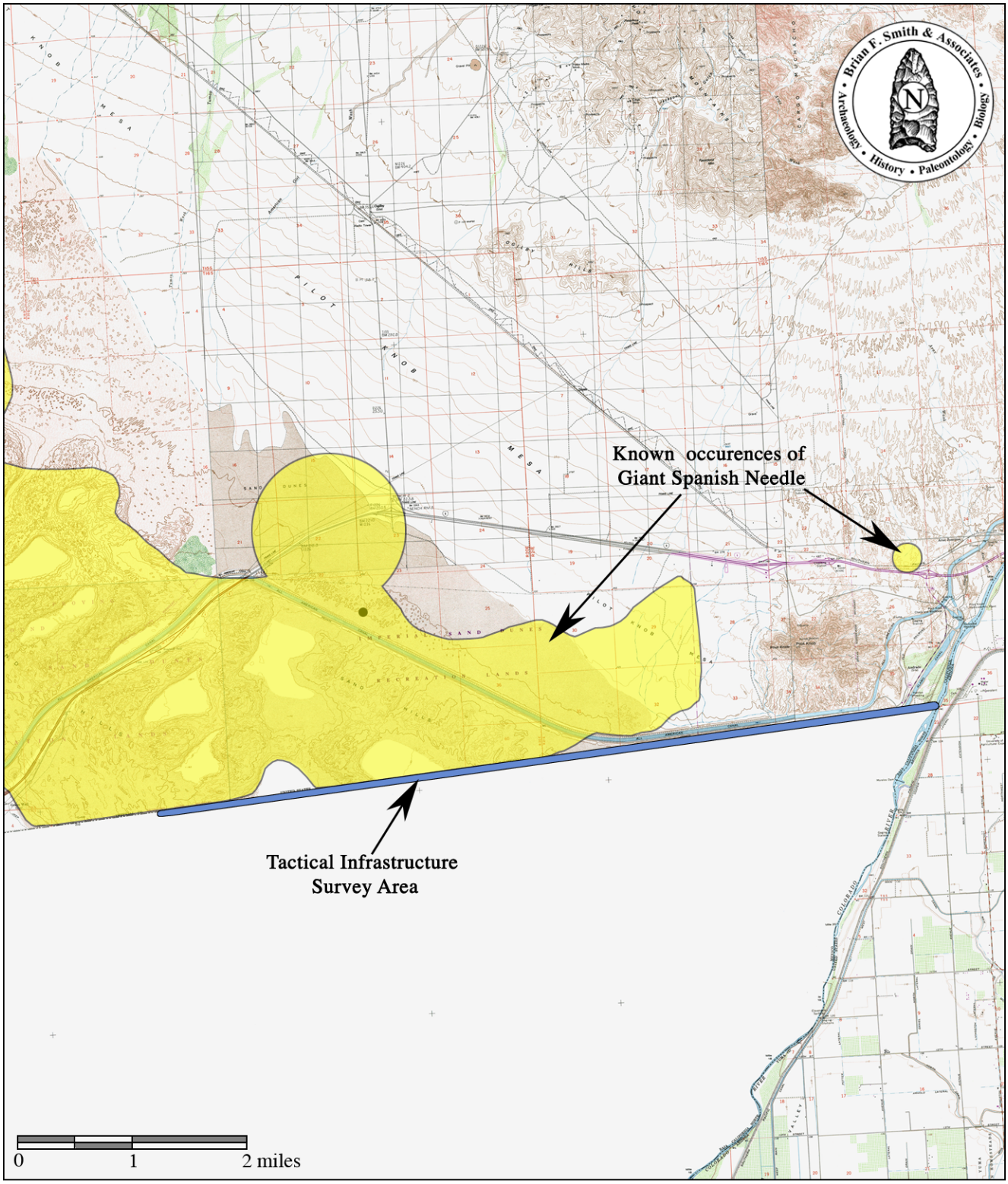

Figure 6

Generalized Distribution Map:

Giant Spanish Needle (*Palafoxia arida var. gigantea*)

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

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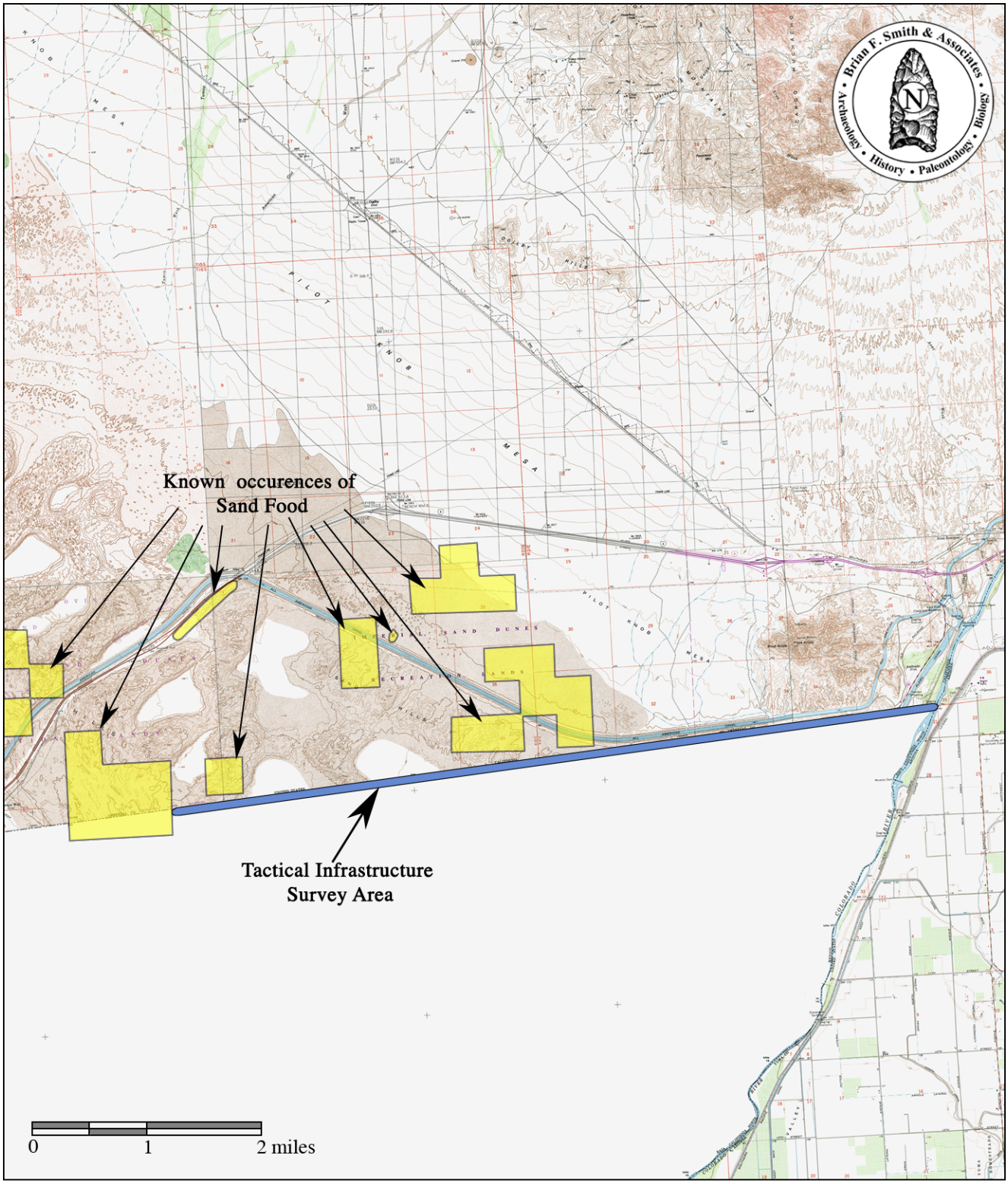

Figure 7

Generalized Distribution Map:

Sand Food (*Pholisma sonorae)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

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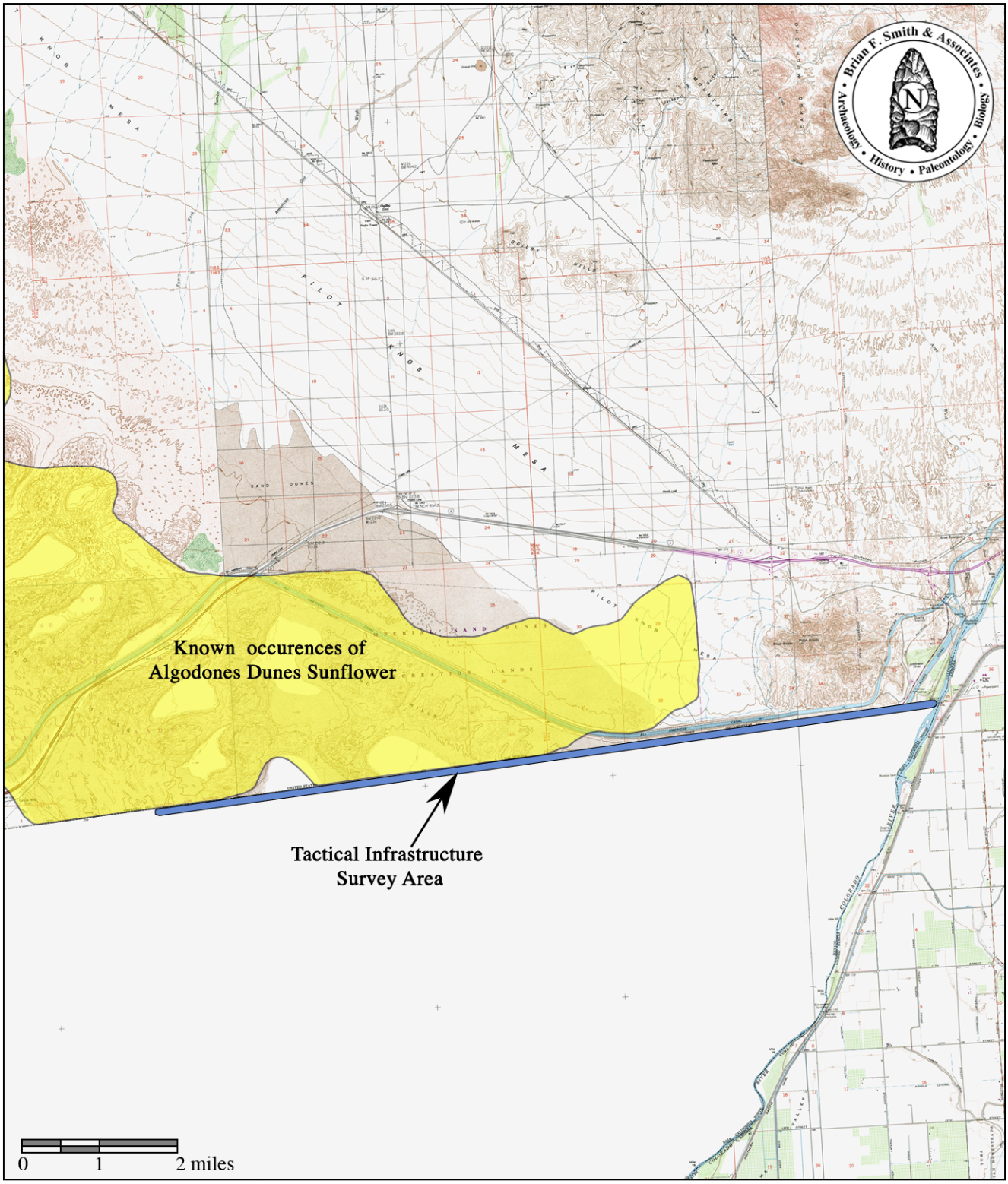

Figure 8

Generalized Distribution Map:

Algodones Dunes Sunflower (*Helianthus niveus ssp. tephrodes)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

/Users/editing4/Documents/1_Projects/Yuma Tactical Infrastructure/Finished/Algodones Dunes Sunflower

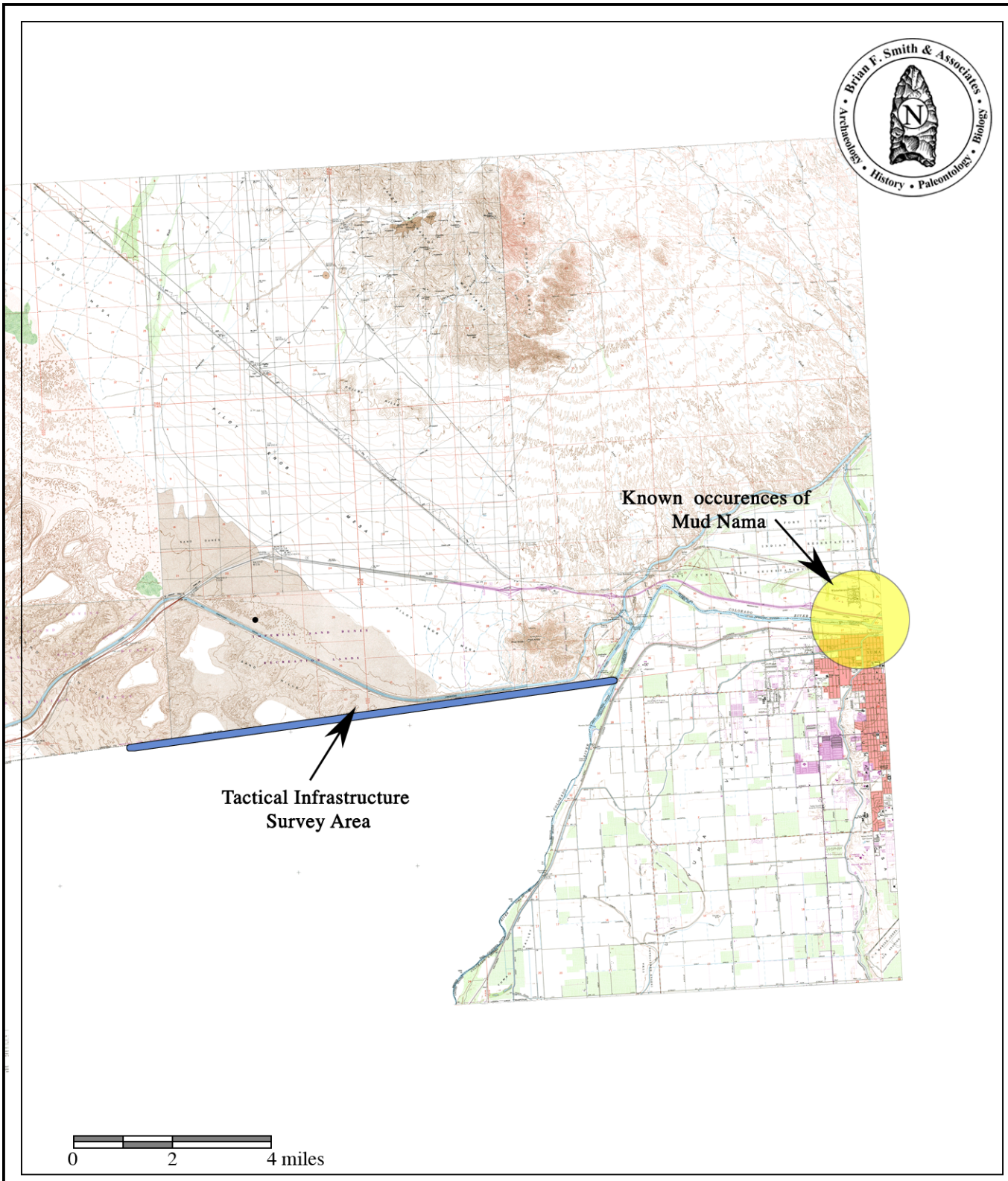

Figure 9

Generalized Distribution Map:

Mud Nama (*Nama stenocarpum)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

/Users/editing4/Documents/1_Projects/Yuma Tactical Infrastructure/Finished/Mud Nama

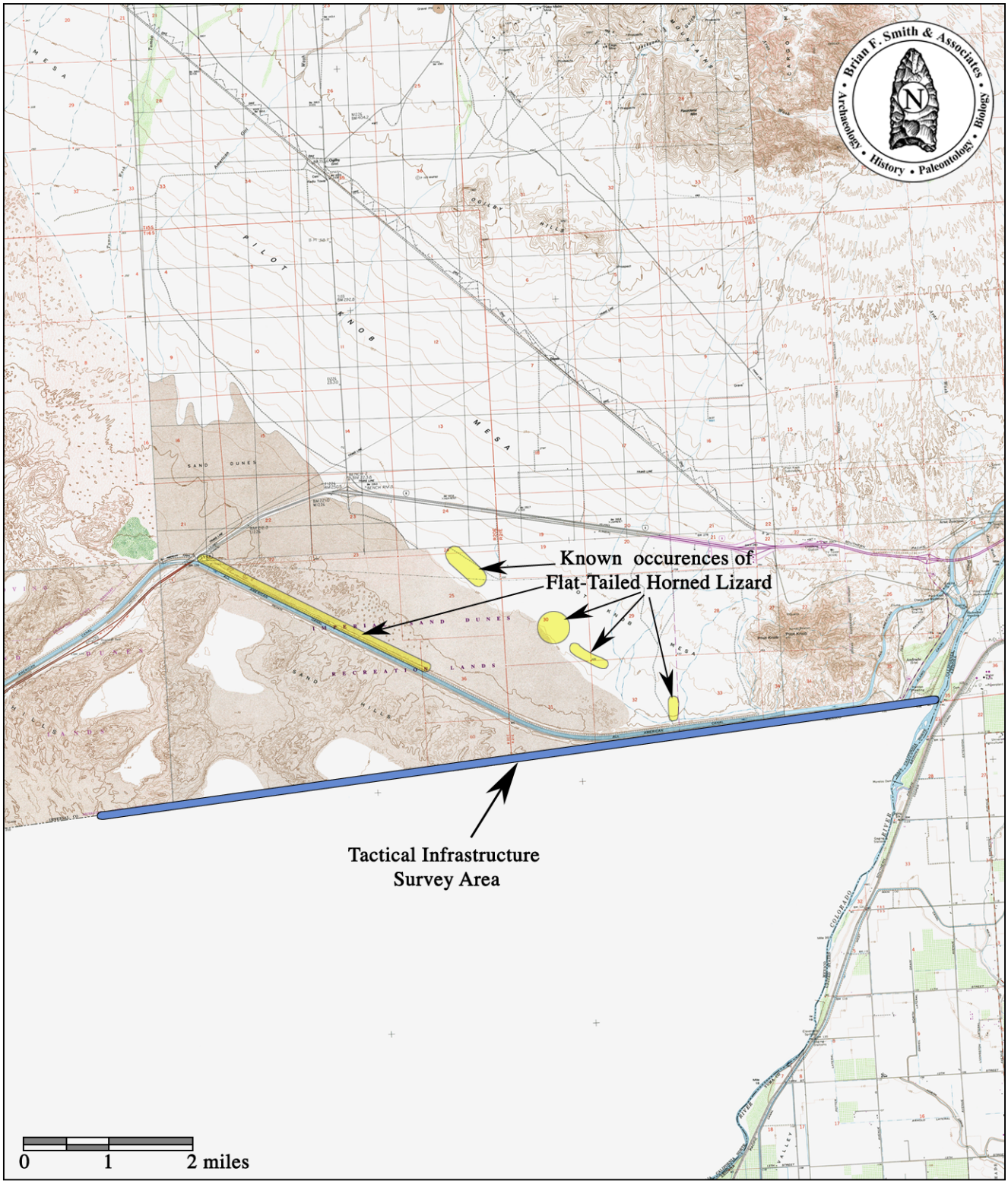

Figure 10

Generalized Distribution Map:

Flat-Tailed Horned Lizard (*Phrynosoma mcallii)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

/Users/editing4/Documents/1_Projects/Yuma Tactical Infrastructure/Flat-Tailed Horned Lizard

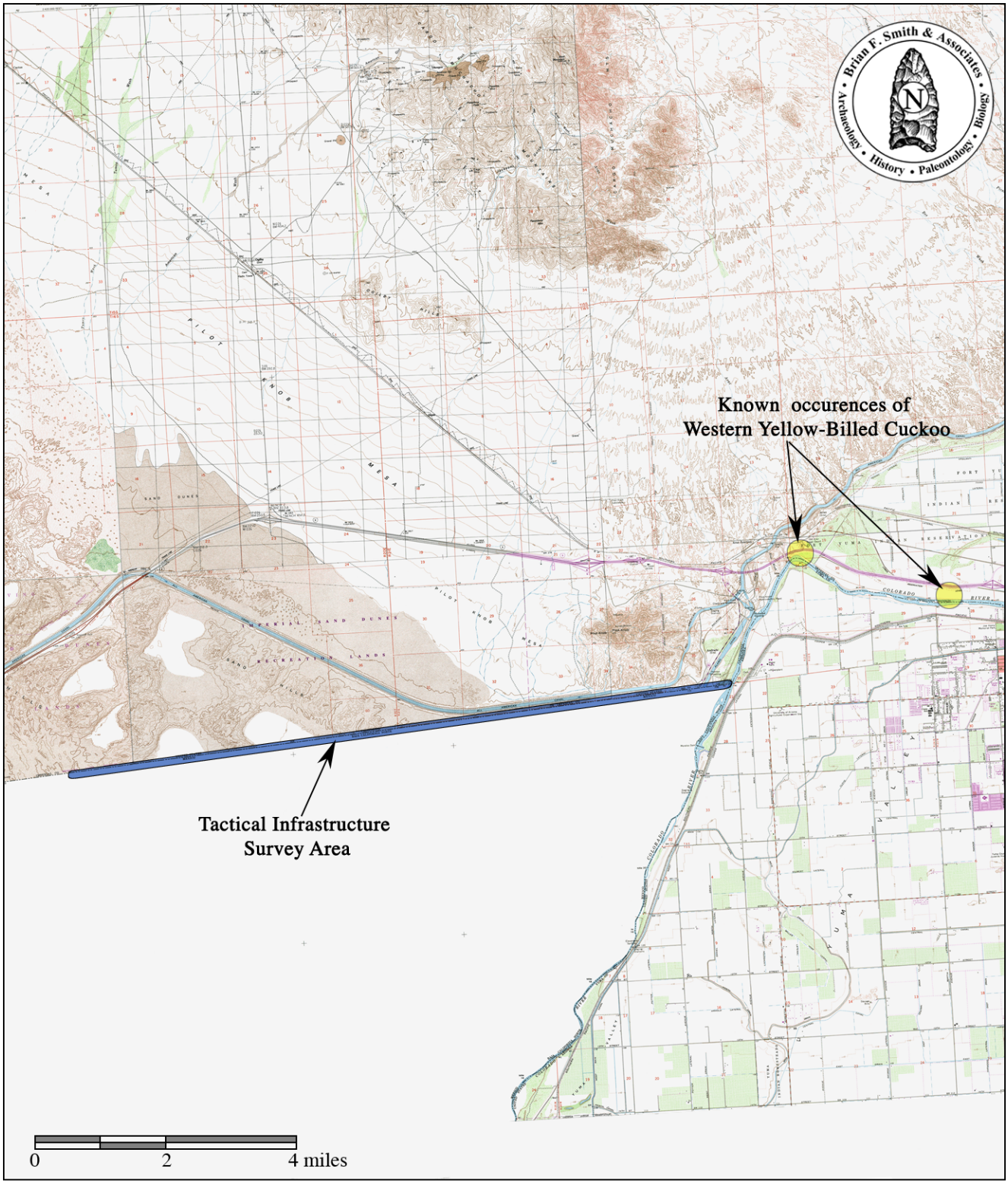

Figure 11

Generalized Distribution Map:

Western Yellow-Billed Cuckoo (*Coccyzus americanus occidentalis)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

/Users/editing4/Documents/1_Projects/Yuma Tactical Infrastructure/Western Yellow-Billed Cuckoo

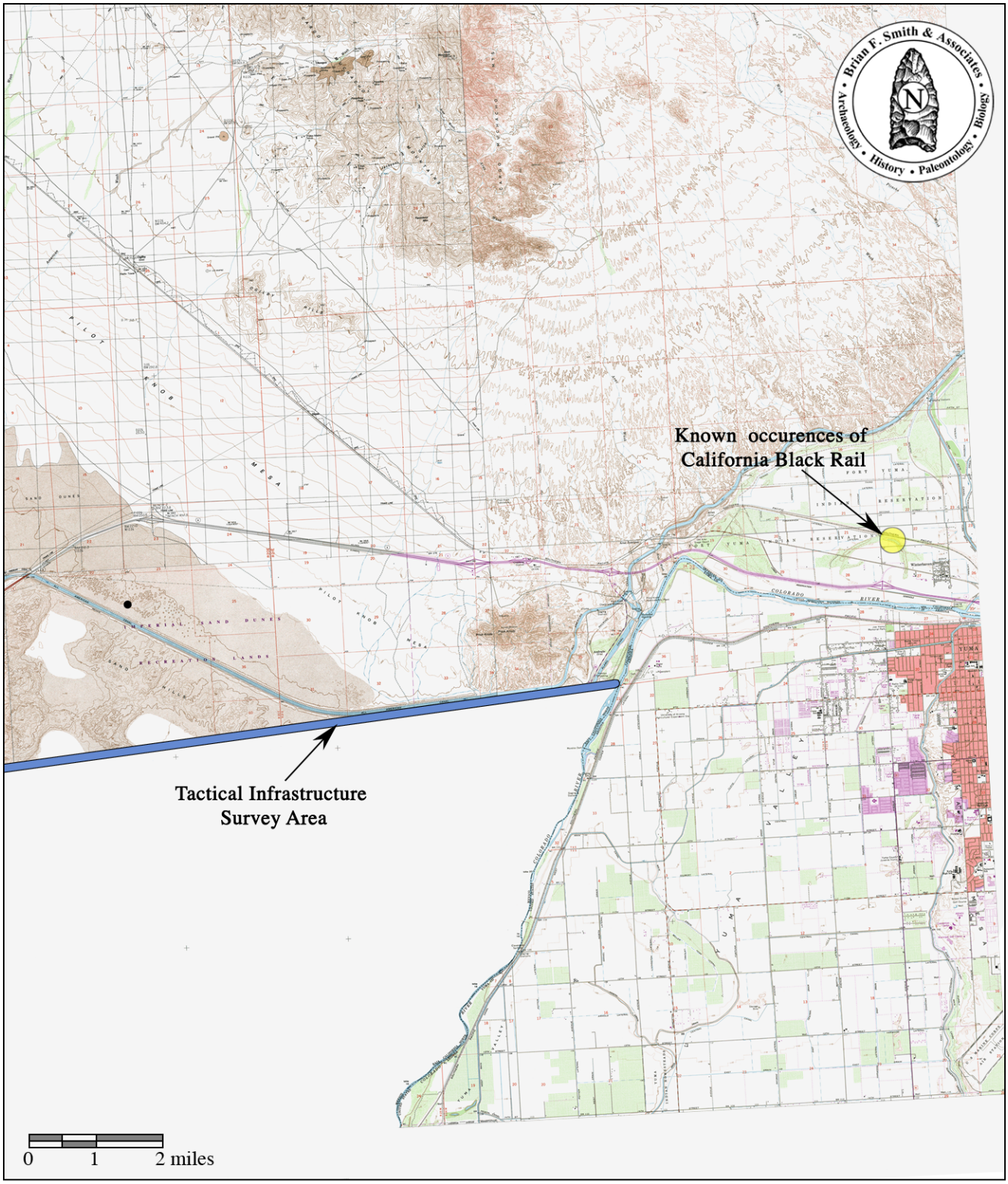

Figure 12

Generalized Distribution Map:

California Black Rail (*Laterallus jamaicensis coturniculus)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

/Users/editing4/Documents/1_Projects/Yuma Tactical Infrastructure/California Black Rail

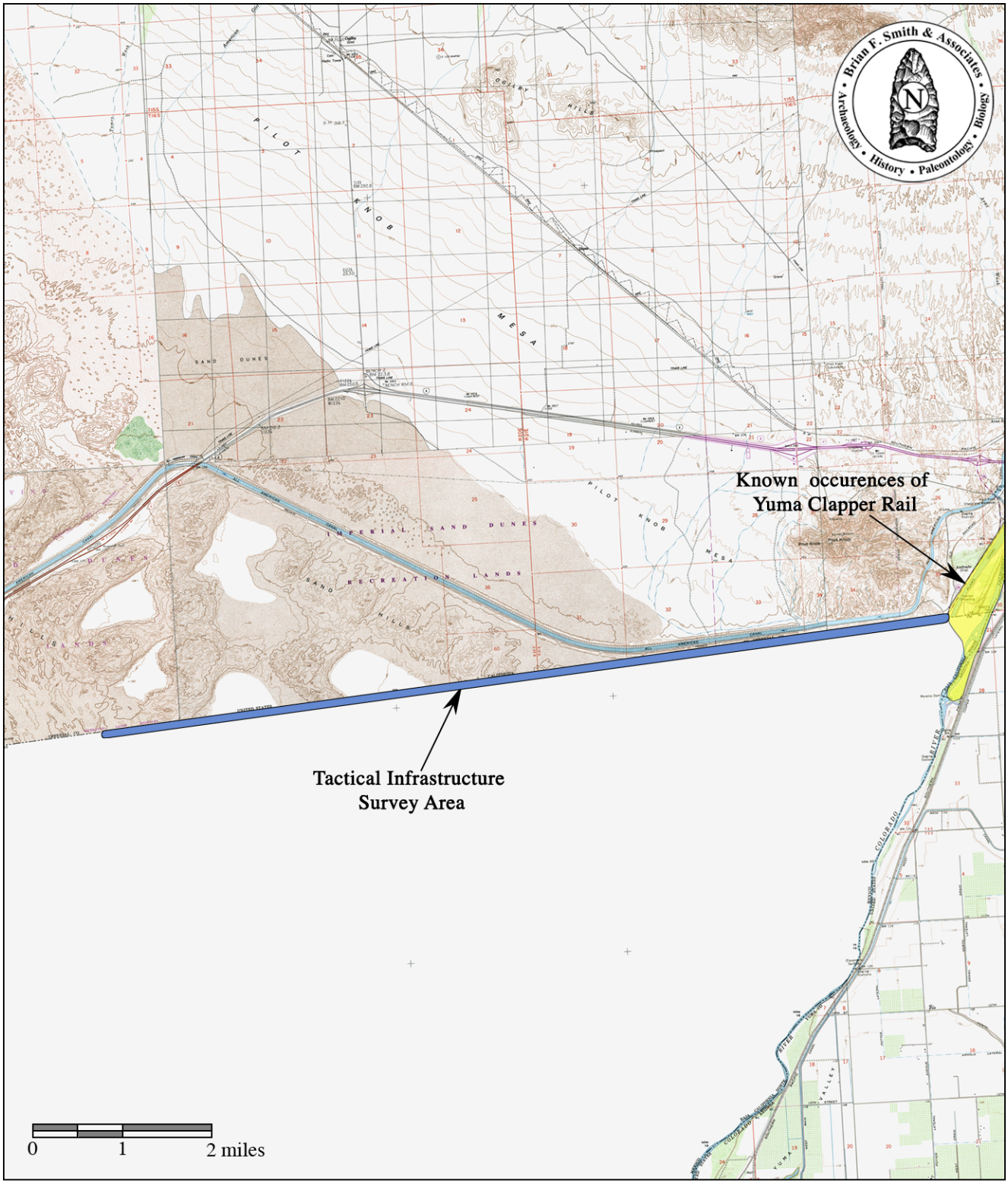

Figure 13

Generalized Distribution Map:

Yuma Clapper Rail (*Rallus longirostris yumanensis)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

/Users/editing4/Documents/1_Projects/Yuma Tactical Infrastructure/Yuma Clapper Rail

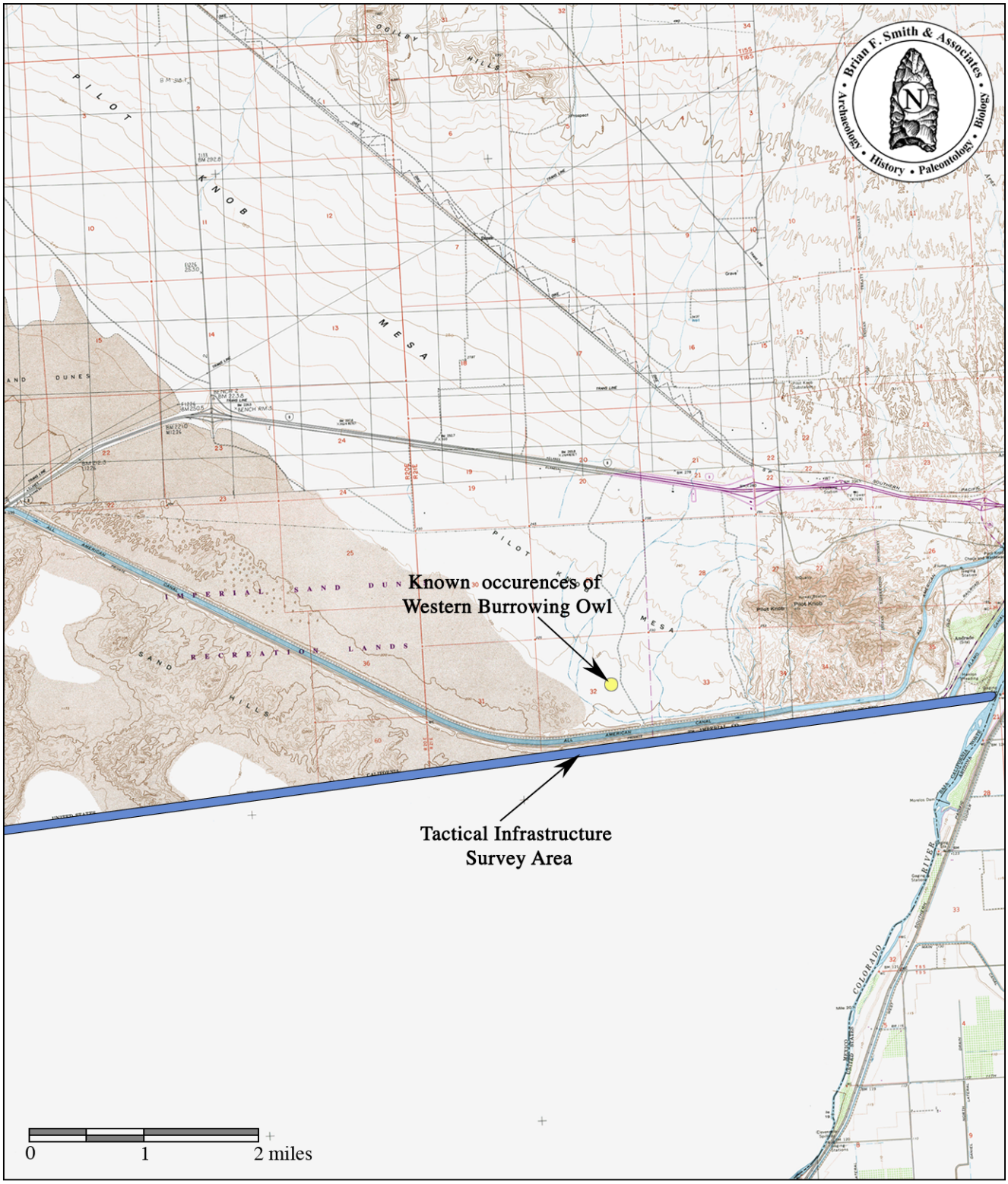

Figure 14

Generalized Distribution Map:

Western Burrowing Owl (*Athene cunicularia)*

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

/Users/editing4/Documents/1_Projects/Yuma Tactical Infrastructure/Western Burrowing Owl

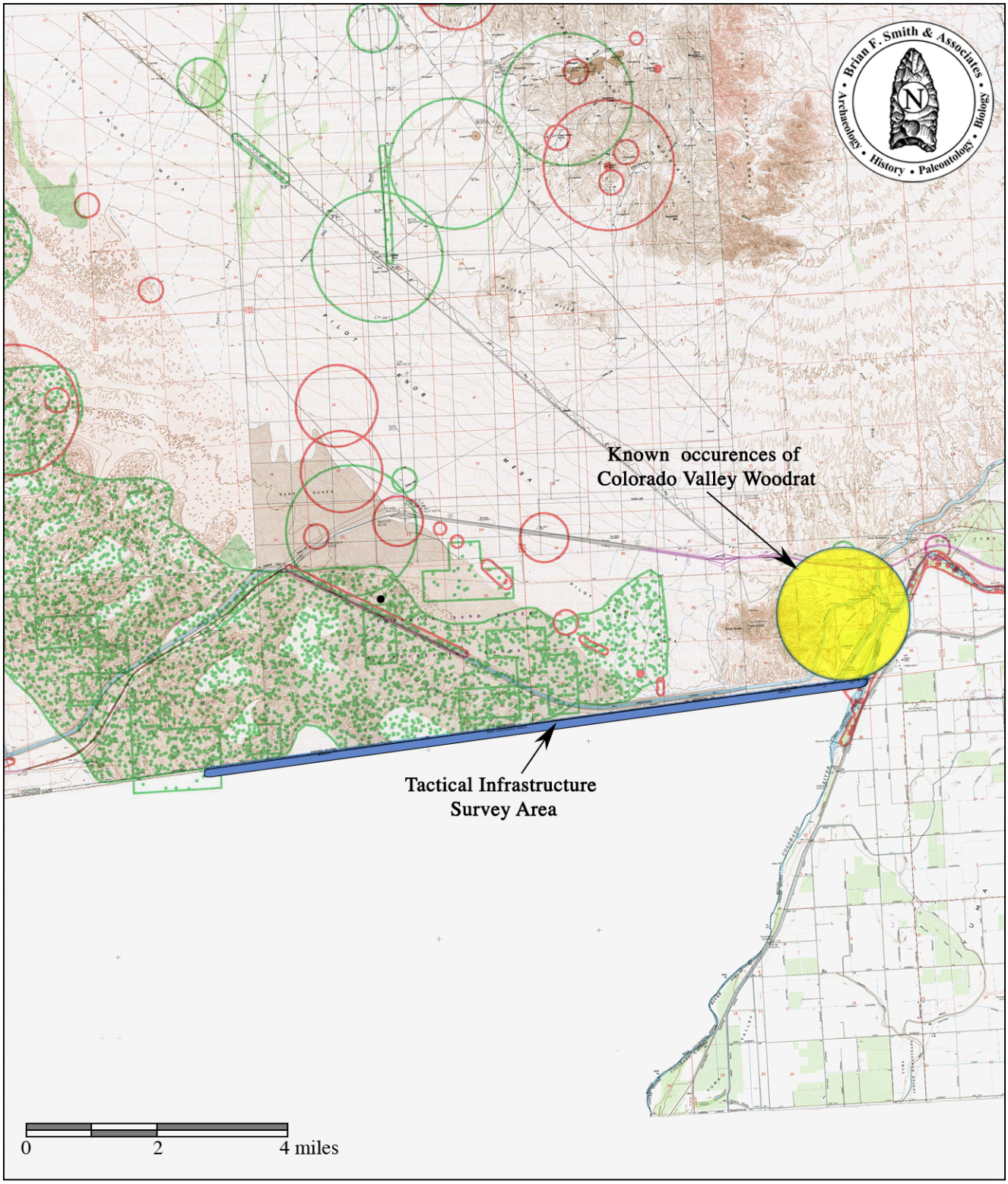

Figure 15

Generalized Distribution Map:

Colorado Valley Woodrat (*Neotoma albigula venusta*)

In Vicinity of Proposed Action

(Araz, Cactus, Grays Well, Grays Well NE, Ogilby, and Yuma West Quadrangles)

/Users/editing4/Documents/1_Projects/Yuma Tactical Infrastructure/Colorado Valley Woodrat

APPENDIX 1

Project Photographs

Plate 1. Mojave Creosote Scrub community at Boundary Monument 209.

Plate 2. Existing fence and Urban/Disturbed/Exotic vegetation along border near the Port of Entry at Algodones/Andrade. Baja California is on the right of the photograph.

Plate 3. Dunes and Mojave Creosote Scrub.
Landform in the left background is Pilot Knob near Winterhaven, Arizona.

Plate 4. Area of hydrophytic vegetation and standing water identified as "Wetland 1" on the Vegetation Map (Figure 3). Algodones, Baja California, Mexico is in the background. Potential fence construction would parallel the road seen near the houses and is not likely to intrude into this wet area. The site does provide marginal suitable habitat for the Yuma clapper rail. If construction occurs in this area during the rail breeding season, a focused survey would be conducted to determine if rails are present. If rails are present, noise attenuation measures would be required.

Plate 5. Area of hydrophytic vegetation and standing water identified as "Wetland 2" on the Vegetation Map (Figure 3). Construction of the proposed fence would be limited to the berm on the right (south) side of the photograph. Potentially suitable habitat for the Yuma clapper rail and California black rail may occur in the area on the left side of the photograph. If construction is planned for this area during the rail breeding season, a survey would be required to determine if rails are present. If rails are present, noise attenuation measures would be required.

Plate 6. Second area of hydrophytic vegetation identified as Wetland 2 on the Vegetation Map (Figure 3).

Plate 7. Third area of hydrophytic vegetation encountered and identified as Wetland 3 on the Vegetation Map. Construction of the proposed fence would be limited to the berm on the right (south) side of the photograph. Potentially suitable habitat for the Yuma clapper rail and California black rail may occur in the area on the left side of the photograph. If construction is planned for this area during the rail breeding season, a survey would be required to determine if rails are present. If rails are present, noise attenuation measures would be required.

Plate 8. Typical wash along the survey route. Generally vegetation in these areas consists of salt cedar, palo verde, creosote bush, and scattered smoke tree.