#### **COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS**

#### **COMPREHENSIVE PUBLIC LAND USE PLAN UPDATE**

#### **GIS MAP BOOK**



Prepared For: Department of Public Lands P.O. Box 500380 Saipan, MP 96950

Prepared By: Pacific Engineering Group & Services Tun Kiku Building Saipan, MP 96950

and

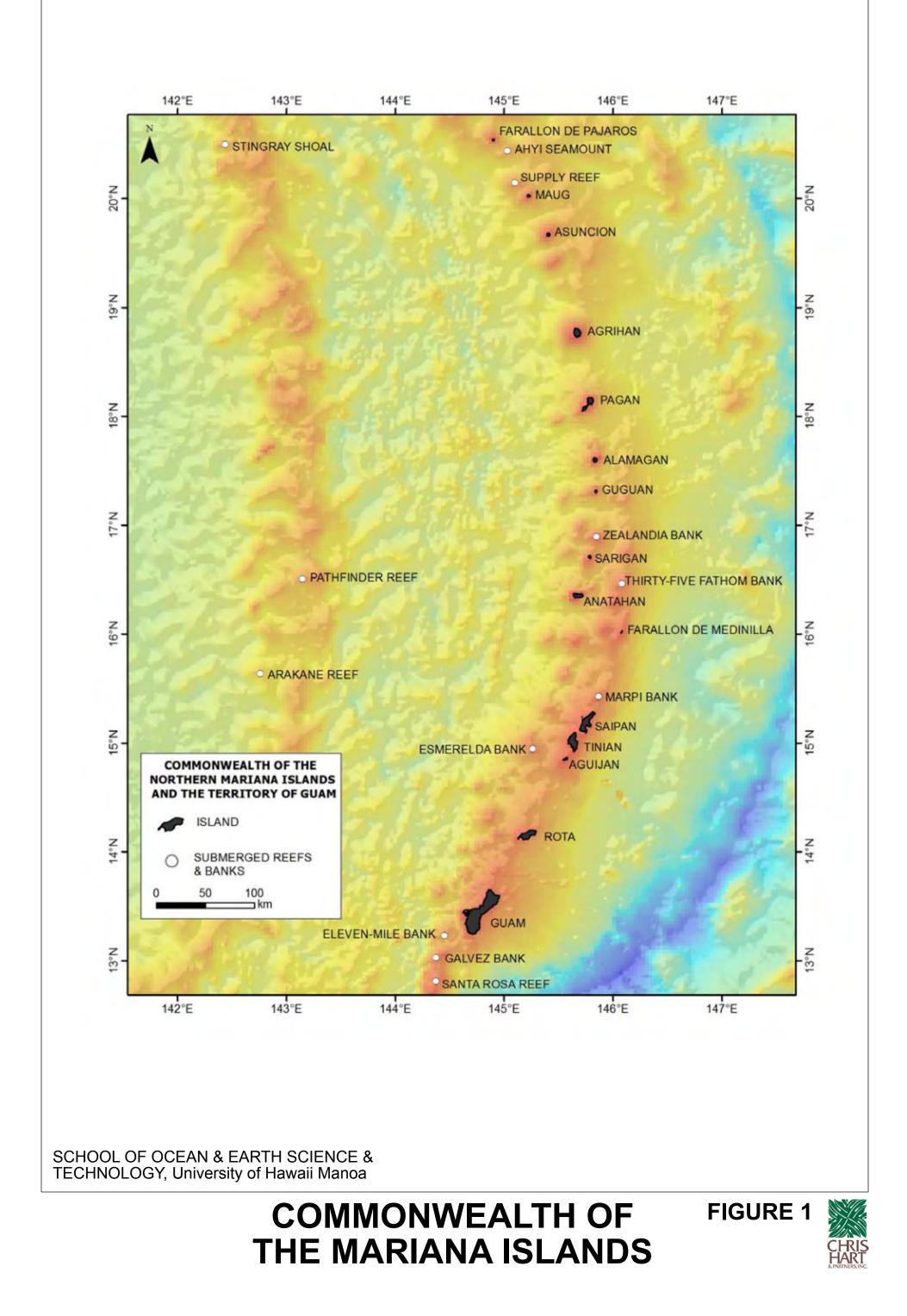
Chris Hart & Partners, Inc. 115 North Market Street Wailuku, Hawaii, 96793-1717

March 2019

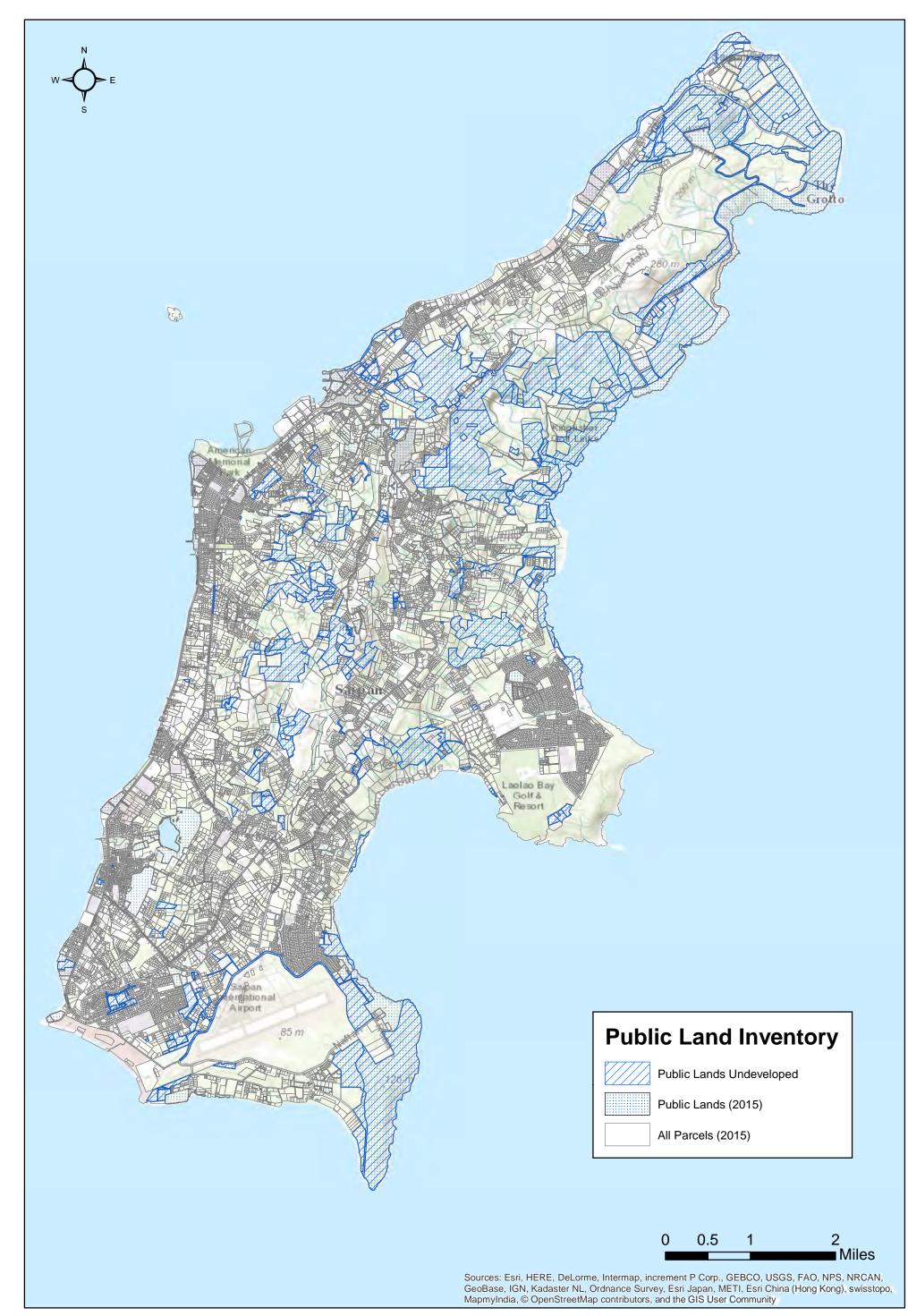
#### Index of Maps

CNMI Map	
Figure 1	CNMI Map
SAIPAN MAPS	
Figure S-1	Public Land Inventory
Figure S-2	Land Use Classification
Figure S-3.1	Hazard Maps FUDS
Figure S-3.2	EPA-EDR
Figure S-3.3	DPL Sites of Concern
Figure S-3.4	Brownfields
Figure S-4	Agricultural Map
Figure S-5	Prime Farmland Map
Figures S-6.1 – S-6.3	Soils Map
Figures S-7.1 – S-7.2	Topographic Map
Figure S-8	FEMA Flood Zones
Figure S-9	DFW Protected areas
Figure S-10	Historic Sites
Figure S-11	Water Resources
Figure S-12	Wetlands
Figure S-13	Schools and Tsunami Inundation Zone
Figures S-14.1 – S-14.3	Suitability Maps
Figures S-15.1- S-15.2	Future Public Land Use Maps
Figures S-16.1 – 16.3	Small Parcel Public Uses
Figure S-17	Mañagaha Map

TINIAN MAPS	
Figure T-1	Public Land Inventory
Figure T-2	Land Use Classification
Figure T-3	Soils Map
Figure T-4	Topographic Map
Figure T-5	Flood Hazard Map
Figure T-6	Historic Sites
Figure T-7	Vegetation Map
Figure T-8	Hazards Map
Figure T-9	Public Land Suitability Map
Figure T-10	Future Public Land Use Map
Figure T-11	Aguiguan Map
ROTA MAPS	
Figure R-1	Public Land Inventory
Figure R-2	Land Use Classifications
Figure R-3	Agricultural Uses
Figure R-4	Soils Map
Figure R-5	Vegetation Map
Figure R-6	Topographic Map
Figure R-7	Environmental Concerns Site Map
Figure R-8	Public Land Suitability Map
Figure R-9	Future Public Land Use Map
NORTHERN ISLAND MAPS	
Figure N-1	Agrihan Future Land Uses
Figure N-2	Pagan Future Land Uses
Figure N-3	Alamagan Future Land Uses
Figure N-4	Anatahan Future Land Uses



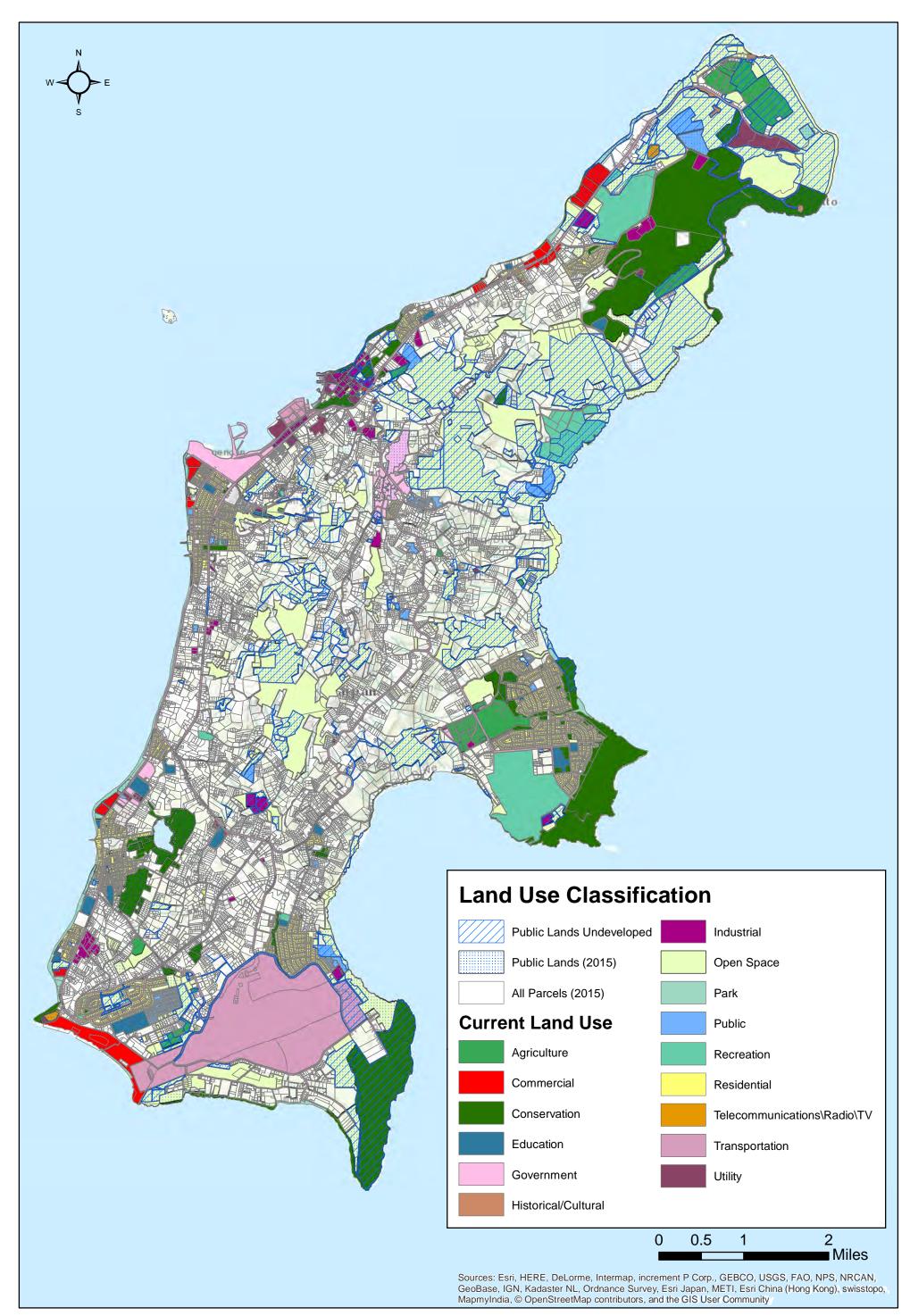
#### SAIPAN MAPS



**FIGURE S-1** 



Parcels & Land Use from 2015 DPL BECQ CAD file prepared by The Baldwin Group Inc., a NOAA contractor



**FIGURE S-2** 



Parcels & Land Use from 2015 DPL BECQ CAD file prepared by The Baldwin Group Inc., a NOAA contractor

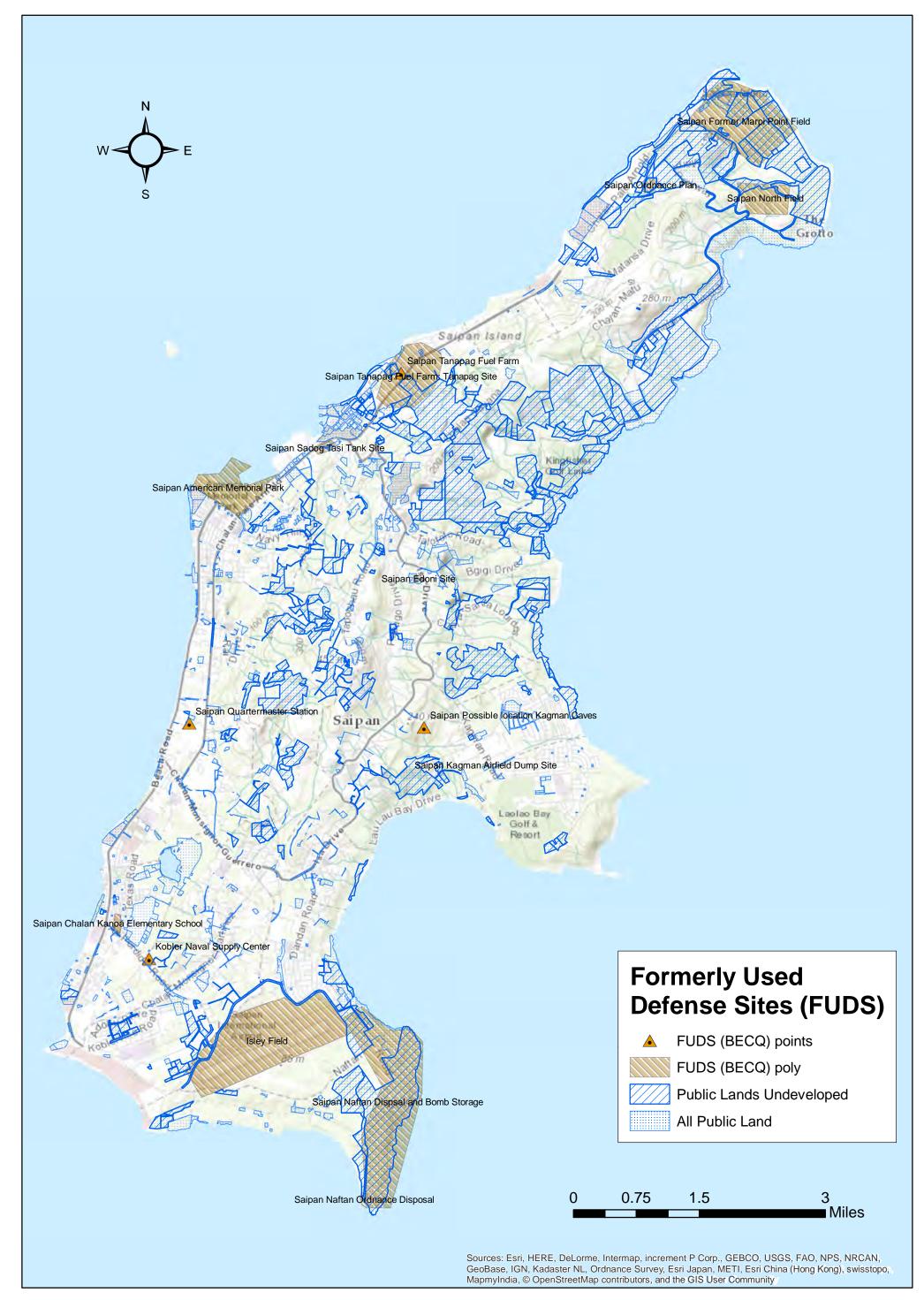
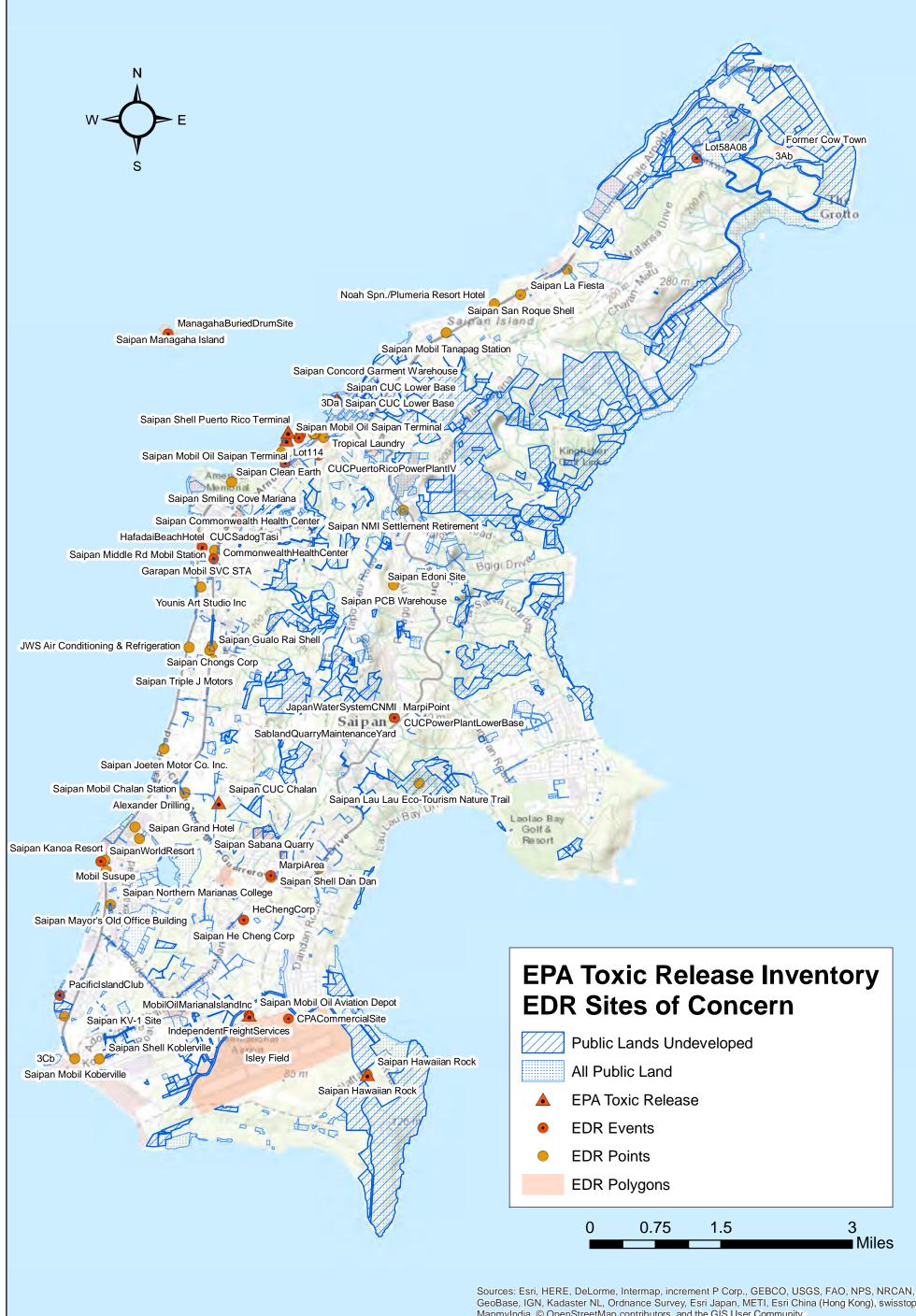


FIGURE S-3.1



Information by CNMI Bureau of Environmental & Coastal Quality



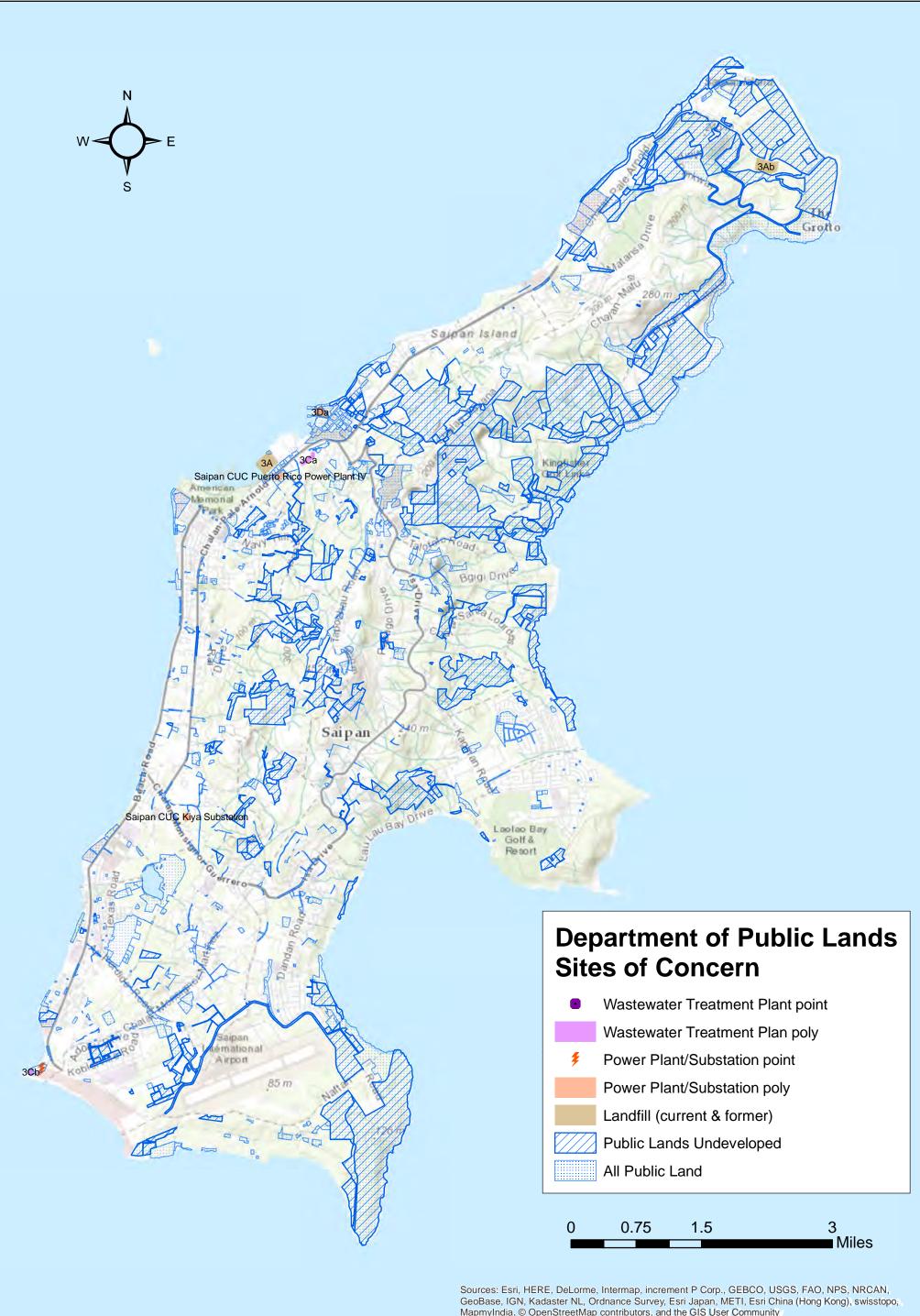
GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

# SAIPAN

**FIGURE S-3.2** 



Information by US EPA & EDR Consultants



MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

# SAIPAN

**FIGURE S-3.3** 



Information by CNMI DPL

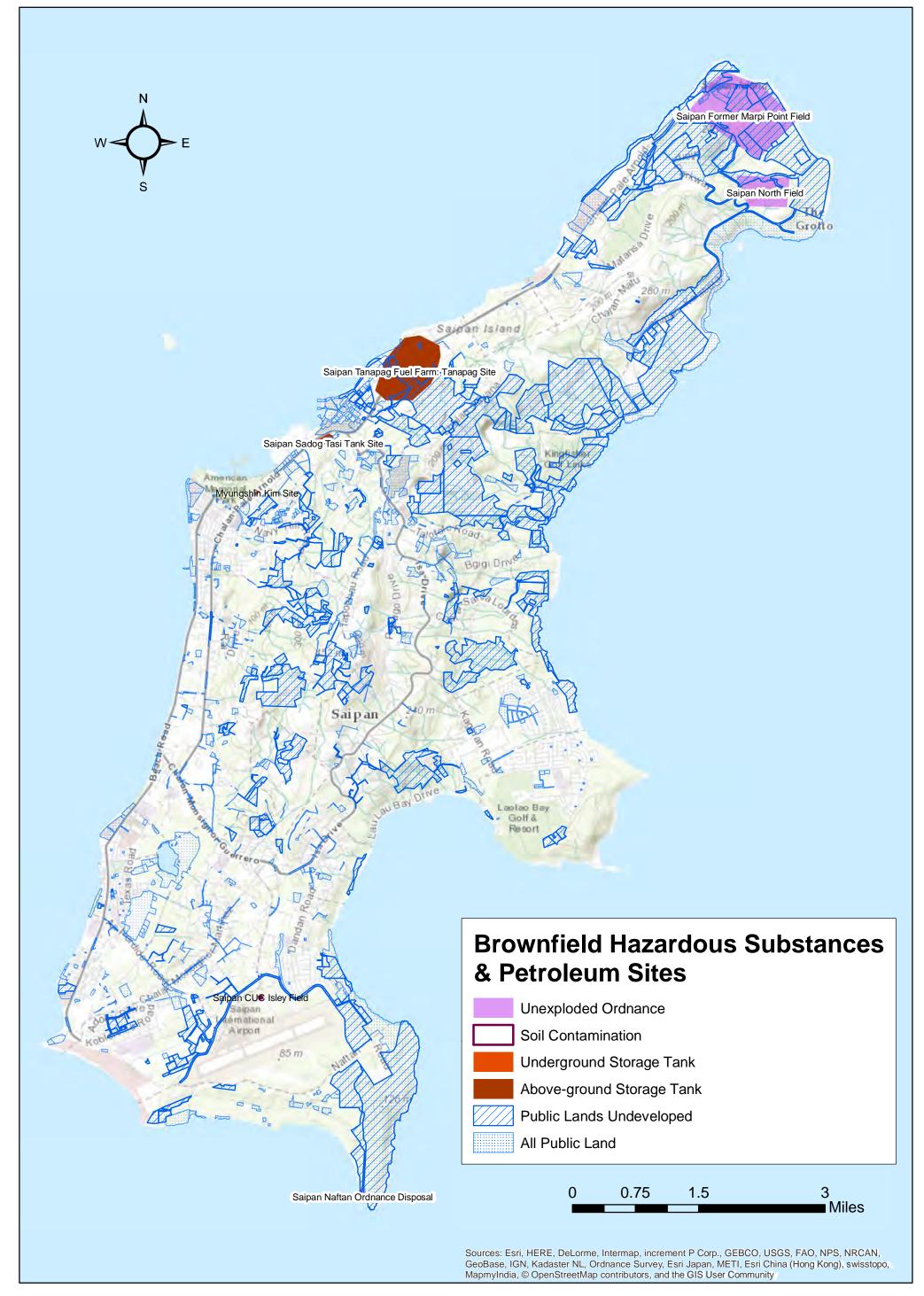
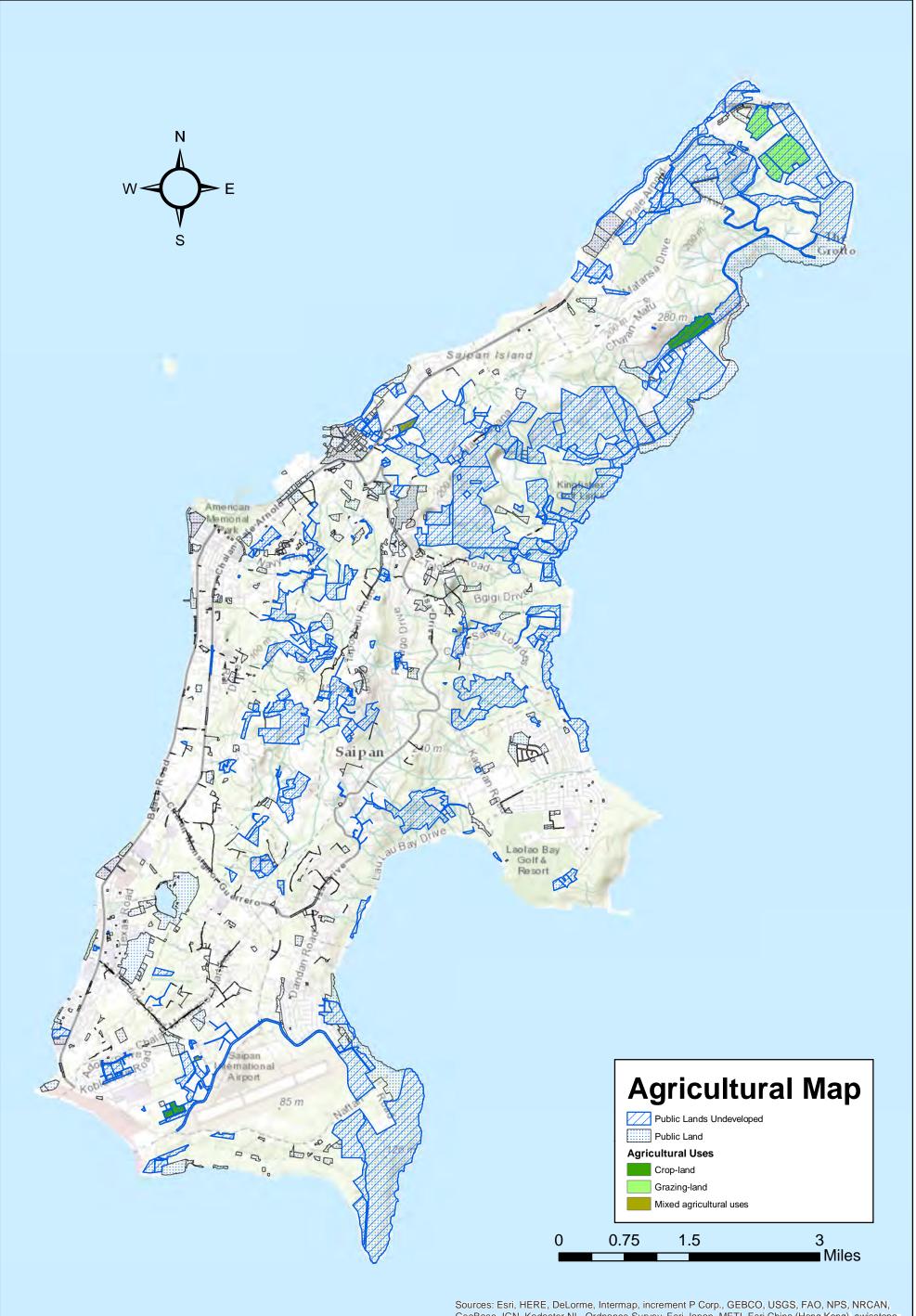




FIGURE S-3.4



Information by CNMI Bureau of Environmental & Coastal Quality



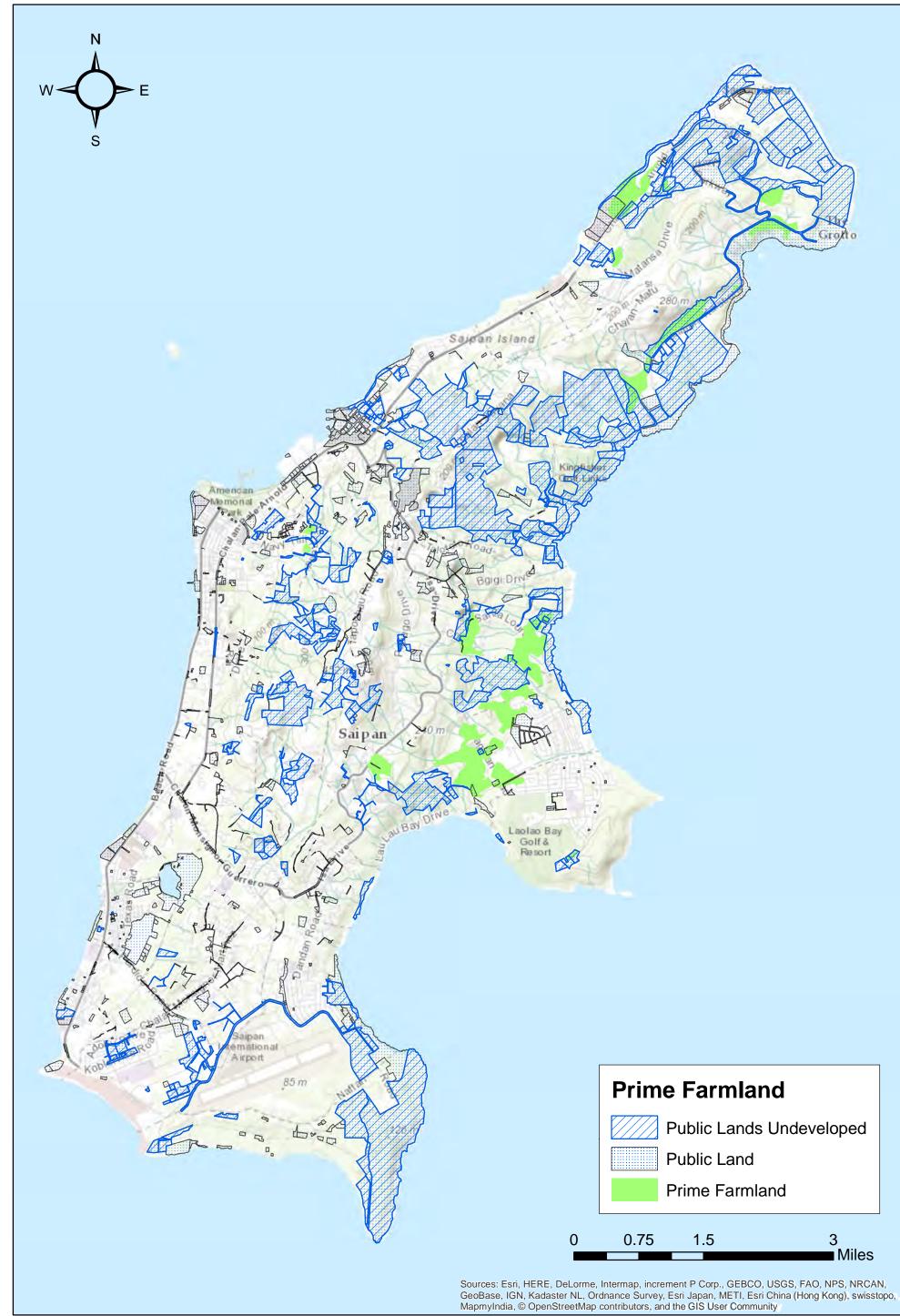
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

#### **SAIPAN**

**FIGURE S-4** 



Information by CNMI Department of Public Lands



**FIGURE S-5** 



Prime Farmland Designation from National Cooperative Soil Survey data

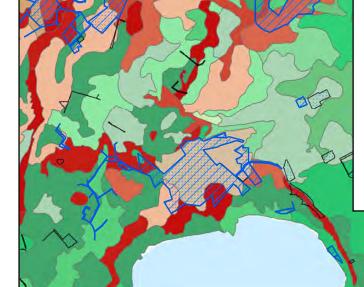
#### Soils - North

Public Lands Undeveloped

Туре

Agfayan variant-Rock outcrop complex, 15 to 30 percent slopes
 Agfayan variant-Rock outcrop complex, 30 to 60 percent slopes
 Akina-Badland complex, 15 to 30 percent slopes
 Akina-Badland complex, 30 to 60 percent slopes

Chinen-Urban land complex, 0 to 5 percent slopes
Chinen-Urban land complex, 5 to 15 percent slopes
Inarajan clay, 0 to 5 percent slopes
Kagman clay, 0 to 5 percent slopes
Kagman clay, 5 to 15 percent slopes
Kagman very gravelly sandy loam, 0 to 5 percent slopes
Laolao clay, 15 to 30 percent slopes



E

Banaderu clay loam, 3 to 5 percent slopes
Banaderu clay loam, 5 to 15 percent slopes
Banaderu-Rock outcrop complex, 15 to 30 percent slopes
Banaderu-Rock outcrop complex, 5 to 15 percent slopes
Chacha clay, drained, 0 to 5 percent slopes
Chinen clay loam, 0 to 5 percent slopes
Chinen clay loam, 15 to 30 percent slopes
Chinen clay loam, 5 to 15 percent slopes
Chinen very gravelly sandy loam, 0 to 5 percent slopes
Chinen very gravelly sandy loam, 5 to 15 percent slopes
Chinen very gravelly sandy loam, 5 to 15 percent slopes
Chinen-Rock outcrop complex, 15 to 30 percent slopes
Chinen-Rock outcrop complex, 3 to 15 percent slopes

Laolao clay, 30 to 60 percent slopes
Laolao clay, 5 to 15 percent slopes
Mesei variant muck, 0 to 2 percent slopes
Quarry
Rock outcrop-Takpochao complex, 60 to 99 percent slopes
Saipan clay, 0 to 5 percent slopes
Saipan clay, 5 to 15 percent slopes
Saipan very gravelly sandy loam, 0 to 5 percent slopes
Shioya loamy sand, 0 to 3 percent slopes
Shioya-Urban land complex, 0 to 3 percent slopes
Takpochao-Rock outcrop complex, 3 to 15 percent slopes

Takpochao-Rock outcrop complex, 30 to 60 percent slopes

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

1

0.5

### SAIPAN

0

**FIGURE S-6.1** 



2

Information by US Dept. of Agriculture, Natural Resources Conservation Service

#### **Soils - Central**

Public Lands Undeveloped Soils

Agfayan variant-Rock outcrop complex, 15 to 30 percent slopes Agfayan variant-Rock outcrop complex, 30 to 60 percent slopes Akina-Badland complex, 15 to 30 percent slopes Akina-Badland complex, 30 to 60 percent slopes

Kagman clay, 5 to 15 percent slopes Kagman very gravelly sandy loam, 0 to 5 percent slopes Kagman-Urban land complex, 0 to 5 percent slopes Landfill

Laolao clay, 15 to 30 percent slopes Laolao clay, 30 to 60 percent slopes

Laolao clay, 5 to 15 percent slopes

Туре



Ν

5

Chacha clay, drained, 0 to 5 percent slopes Chinen clay loam, 0 to 5 percent slopes Chinen clay loam, 15 to 30 percent slopes Chinen clay loam, 5 to 15 percent slopes Chinen very gravelly sandy loam, 0 to 5 percent slopes Chinen very gravelly sandy loam, 5 to 15 percent slopes Chinen-Rock outcrop complex, 15 to 30 percent slopes Chinen-Rock outcrop complex, 3 to 15 percent slopes Chinen-Urban land complex, 0 to 5 percent slopes Chinen-Urban land complex, 5 to 15 percent slopes Inarajan clay, 0 to 5 percent slopes Kagman clay, 0 to 5 percent slopes

Mesei variant muck, 0 to 2 percent slopes Quarry

Rock outcrop-Takpochao complex, 60 to 99 percent slopes

Saipan clay, 0 to 5 percent slopes

Saipan clay, 5 to 15 percent slopes

Saipan very gravelly sandy loam, 0 to 5 percent slopes

Saipan very gravelly sandy loam, 5 to 15 percent slopes

Shioya loamy sand, 0 to 3 percent slopes

Shioya-Urban land complex, 0 to 3 percent slopes

Takpochao-Rock outcrop complex, 15 to 30 percent slopes

Takpochao-Rock outcrop complex, 3 to 15 percent slopes

Takpochao-Rock outcrop complex, 30 to 60 percent slopes Water

0 0.5 2 1 Miles

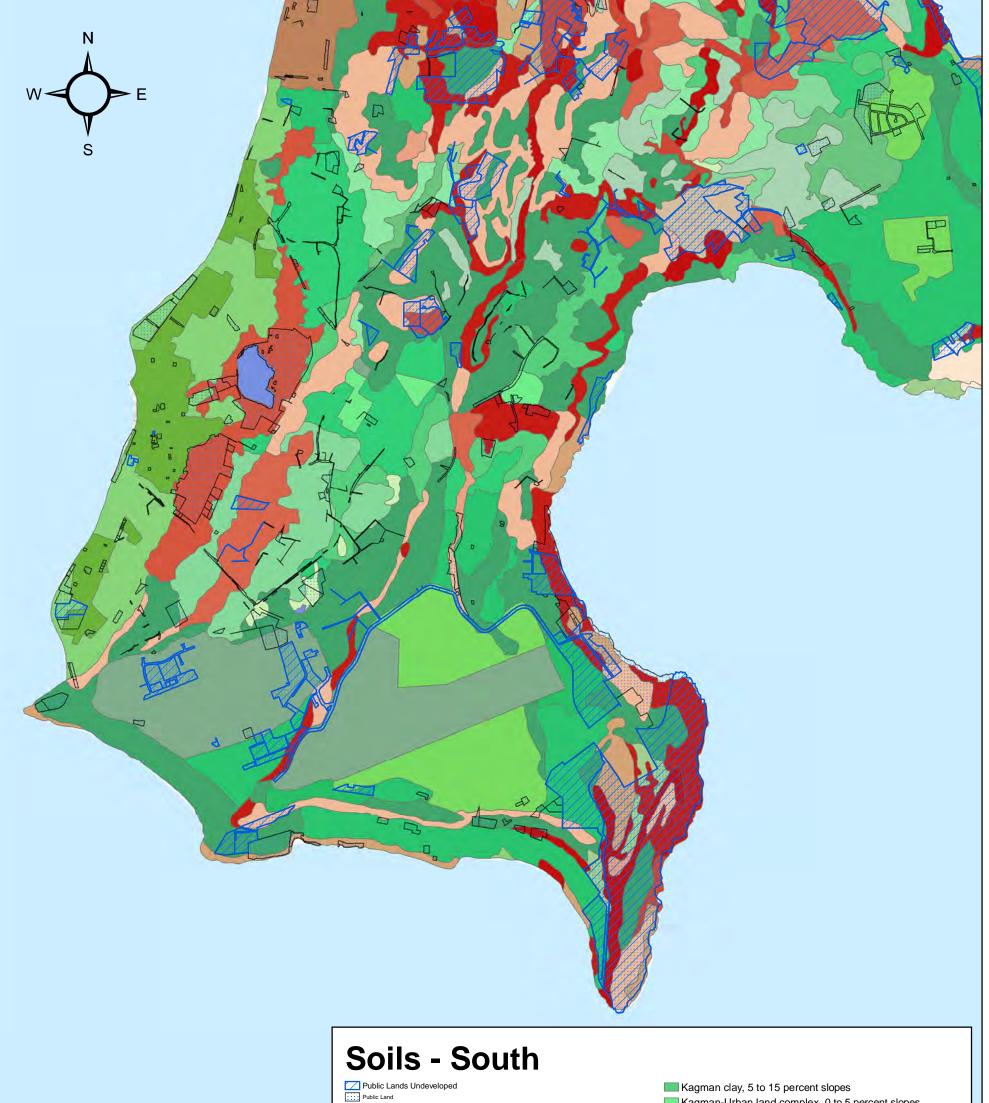
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

#### SAIPAN

**FIGURE S-6.2** 



Information by US Dept. of Agriculture, Natural Resources Conservation Service



Kagman-Urban land complex, 0 to 5 percent slopes Soils Laolao clay, 15 to 30 percent slopes Туре Laolao clay, 30 to 60 percent slopes Laolao clay, 5 to 15 percent slopes Agfayan variant-Rock outcrop complex, 30 to 60 percent slopes Mesei variant muck, 0 to 2 percent slopes Akina-Badland complex, 15 to 30 percent slopes Quarry Chacha clay, drained, 0 to 5 percent slopes Rock outcrop-Takpochao complex, 60 to 99 percent slopes Chinen clay loam, 0 to 5 percent slopes Saipan clay, 0 to 5 percent slopes Chinen clay loam, 15 to 30 percent slopes Saipan clay, 5 to 15 percent slopes Chinen clay loam, 5 to 15 percent slopes Saipan very gravelly sandy loam, 0 to 5 percent slopes Chinen very gravelly sandy loam, 0 to 5 percent slopes Shioya loamy sand, 0 to 3 percent slopes Chinen very gravelly sandy loam, 5 to 15 percent slopes Shioya-Urban land complex, 0 to 3 percent slopes Chinen-Rock outcrop complex, 15 to 30 percent slopes Takpochao-Rock outcrop complex, 15 to 30 percent slopes Chinen-Rock outcrop complex, 3 to 15 percent slopes Takpochao-Rock outcrop complex, 3 to 15 percent slopes Chinen-Urban land complex, 0 to 5 percent slopes Takpochao-Rock outcrop complex, 30 to 60 percent slopes Inarajan clay, 0 to 5 percent slopes Water Kagman clay, 0 to 5 percent slopes

> 0 2 0.5 1 Miles

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

#### SAIPAN

FIGURE S-6.3



Information by US Dept. of Agriculture, Natural Resources Conservation Service

Agfayan variant-Rock outcrop complex, 15 to 30 percent slopes

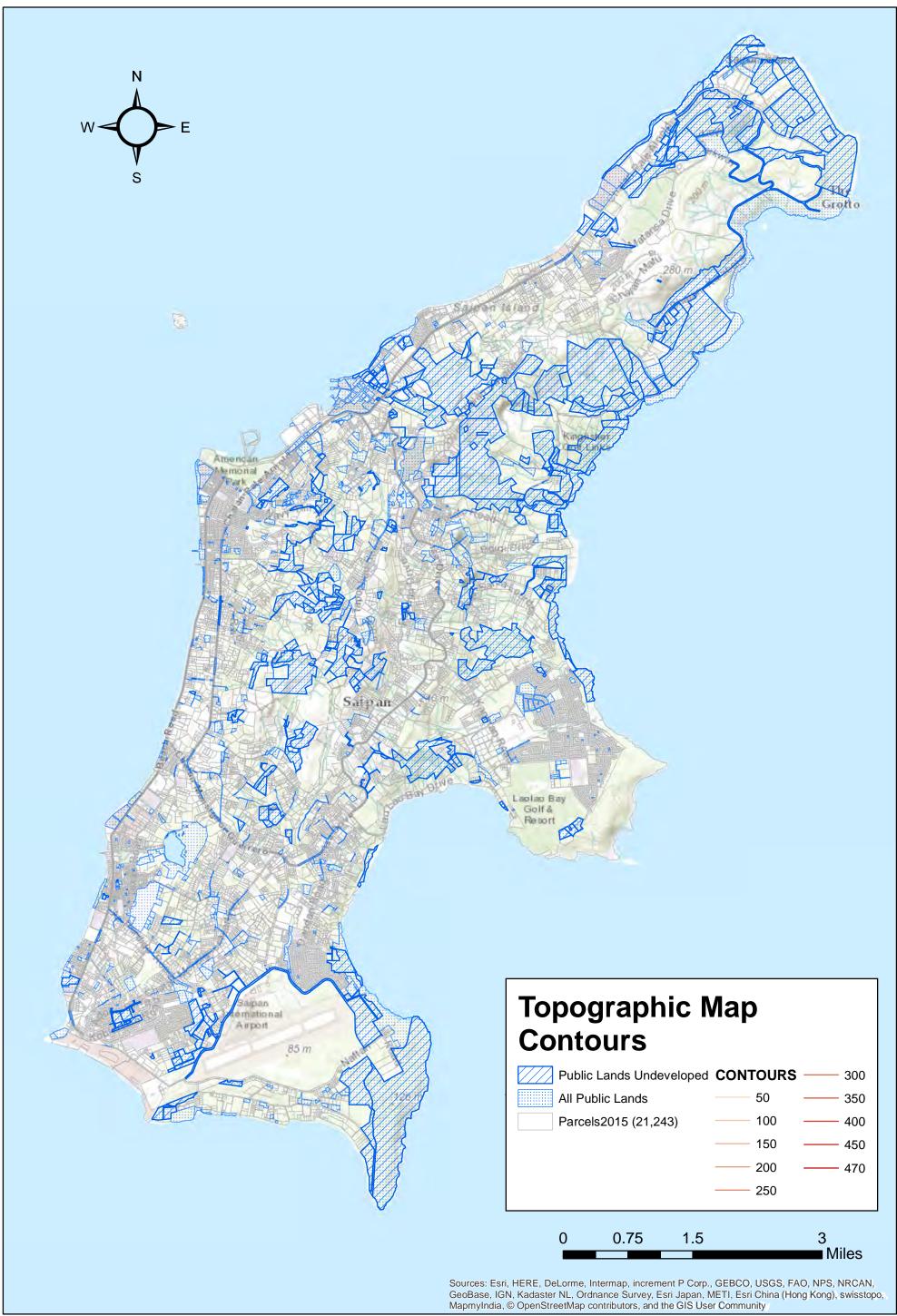


FIGURE S-7.1



Information by USGS

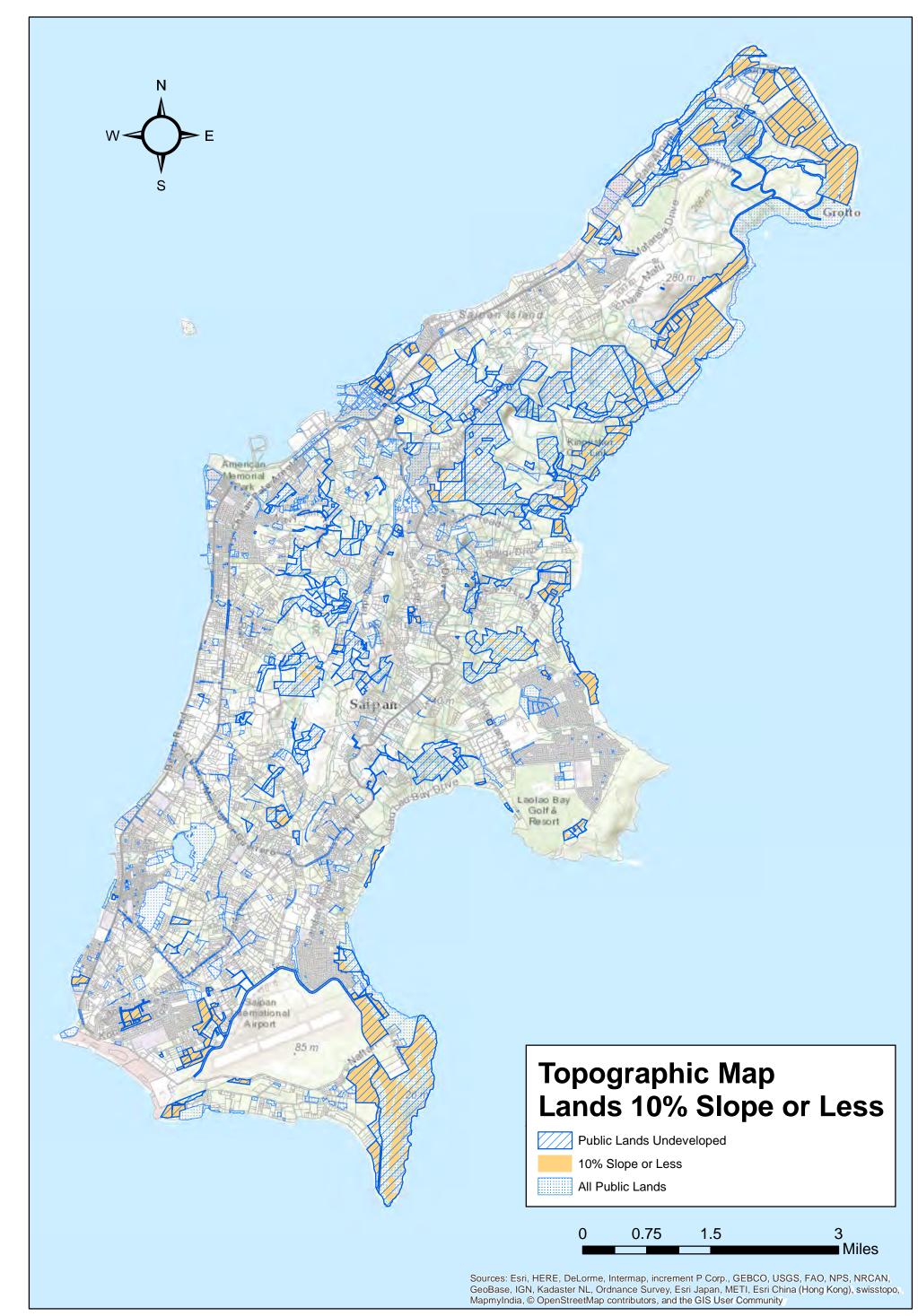
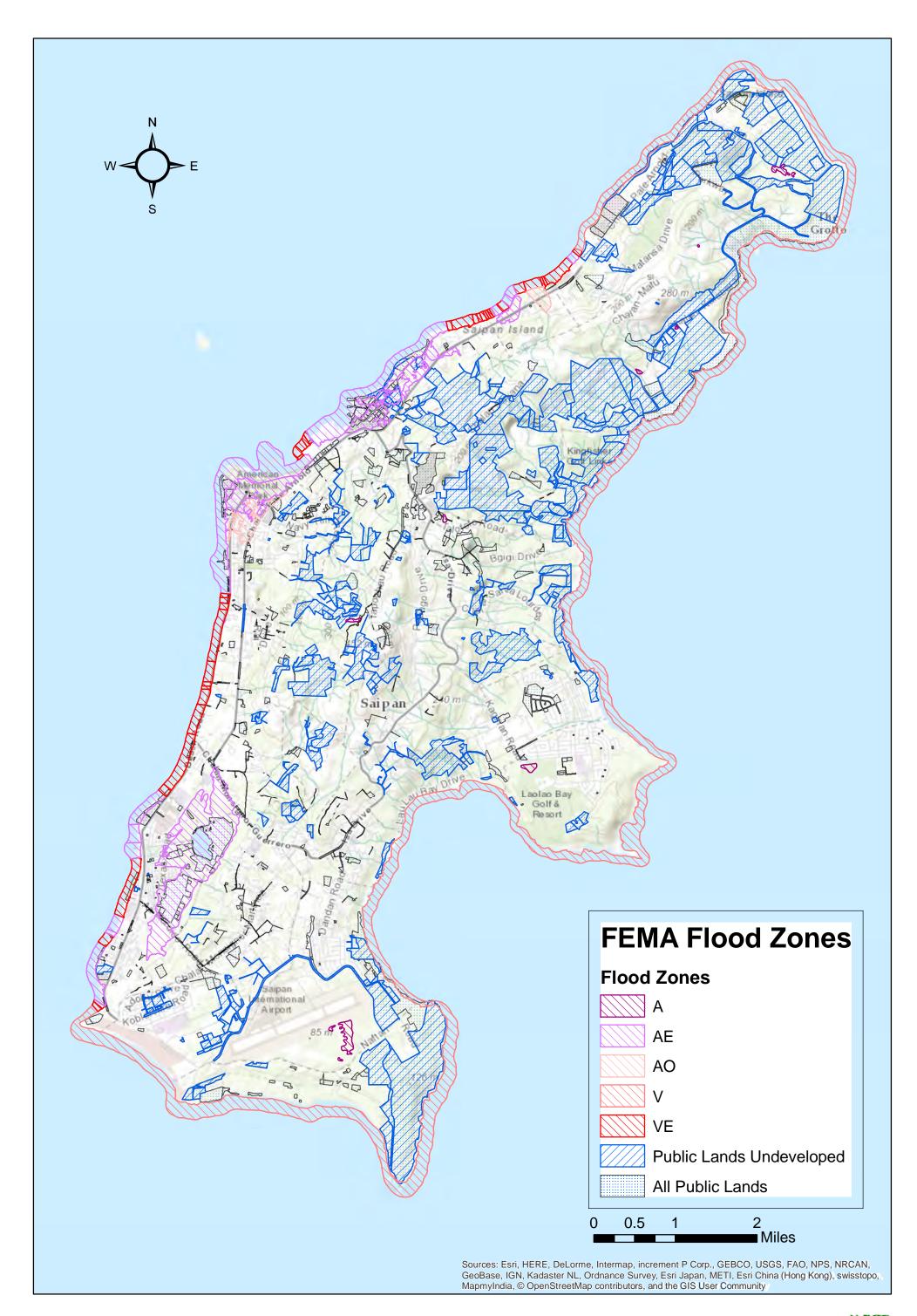


FIGURE S-7.2



Information by USGS

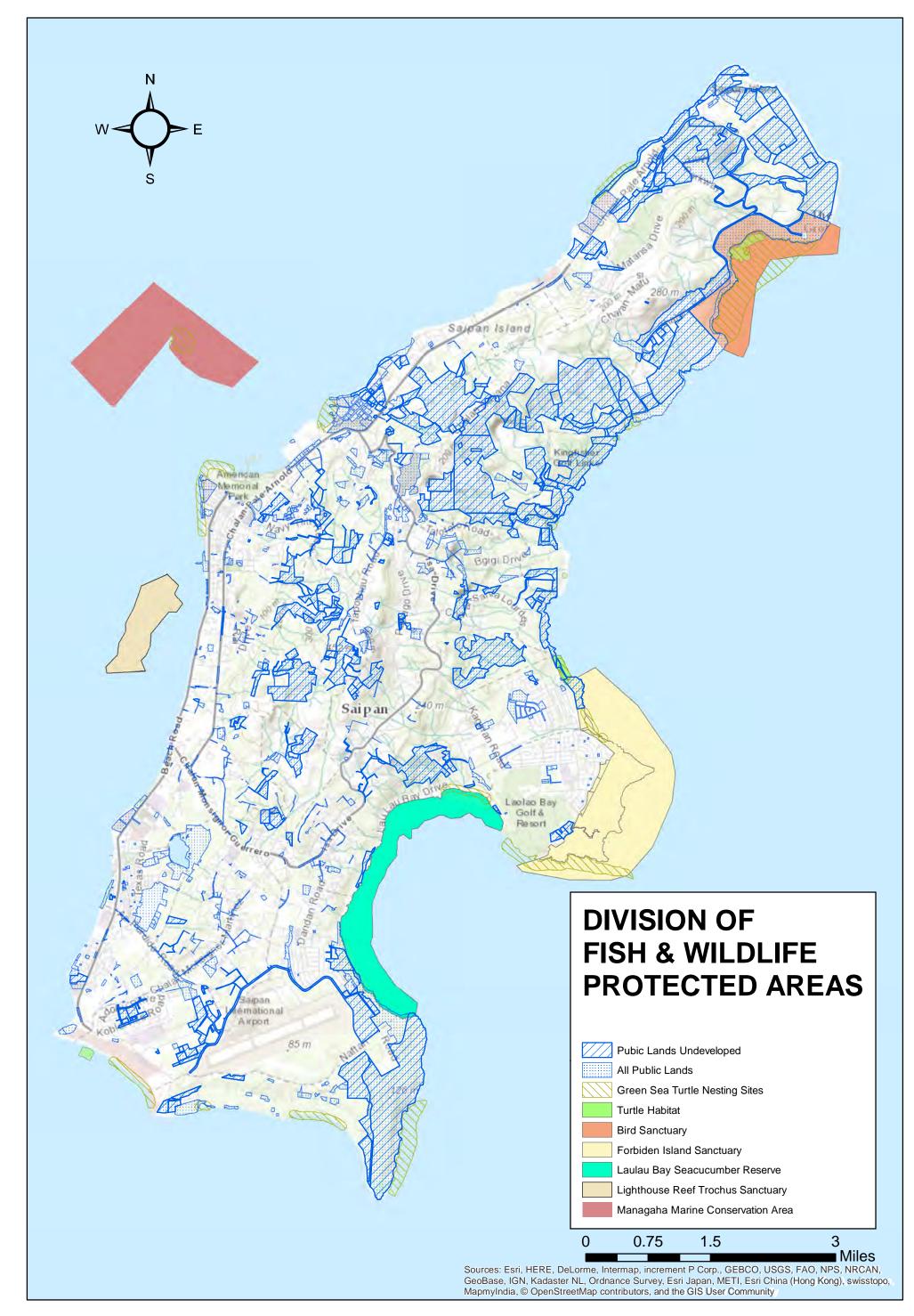




**FIGURE S-8** 



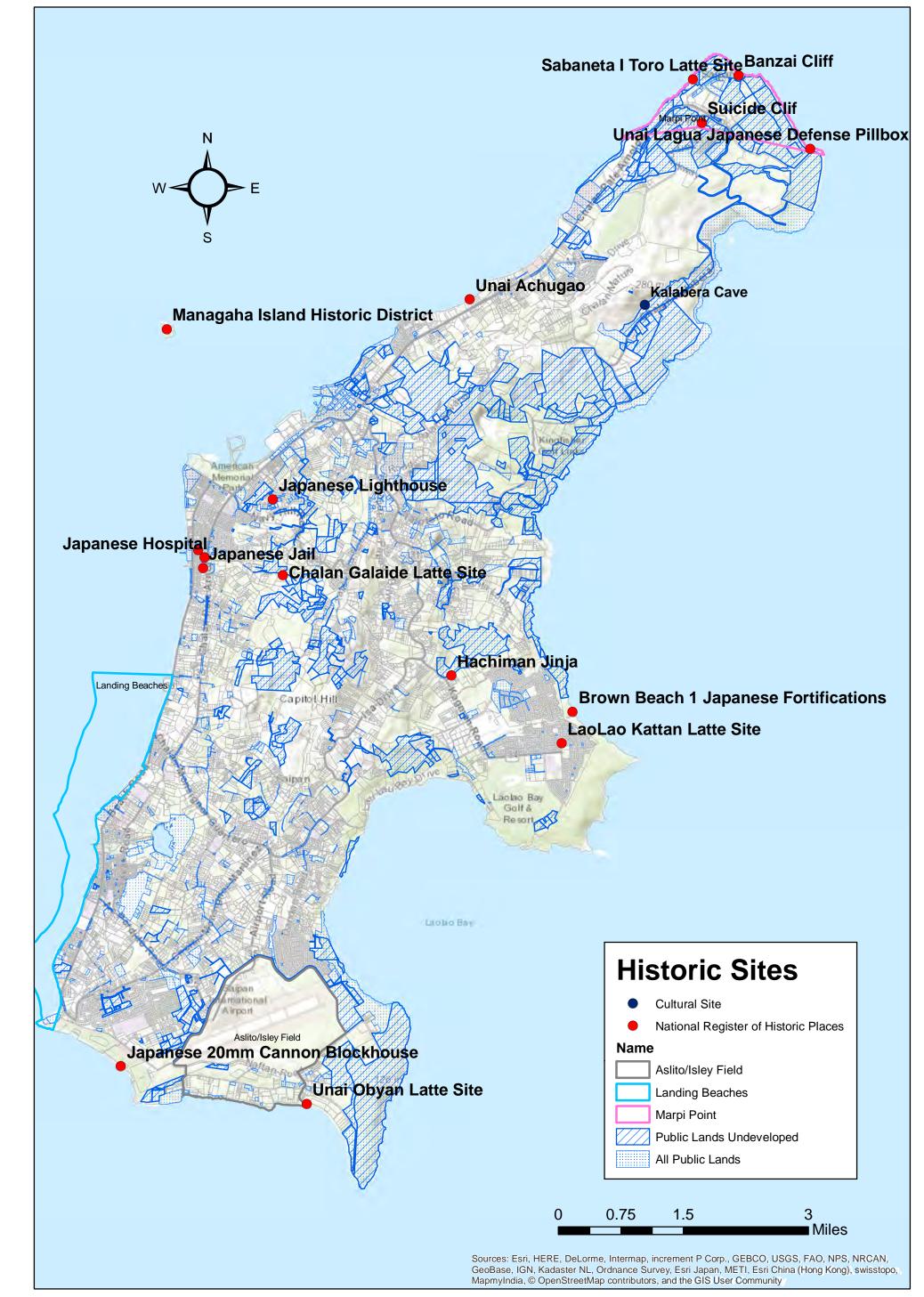
Information by U.S. Federal Emergency Management Agency



**FIGURE S-9** 



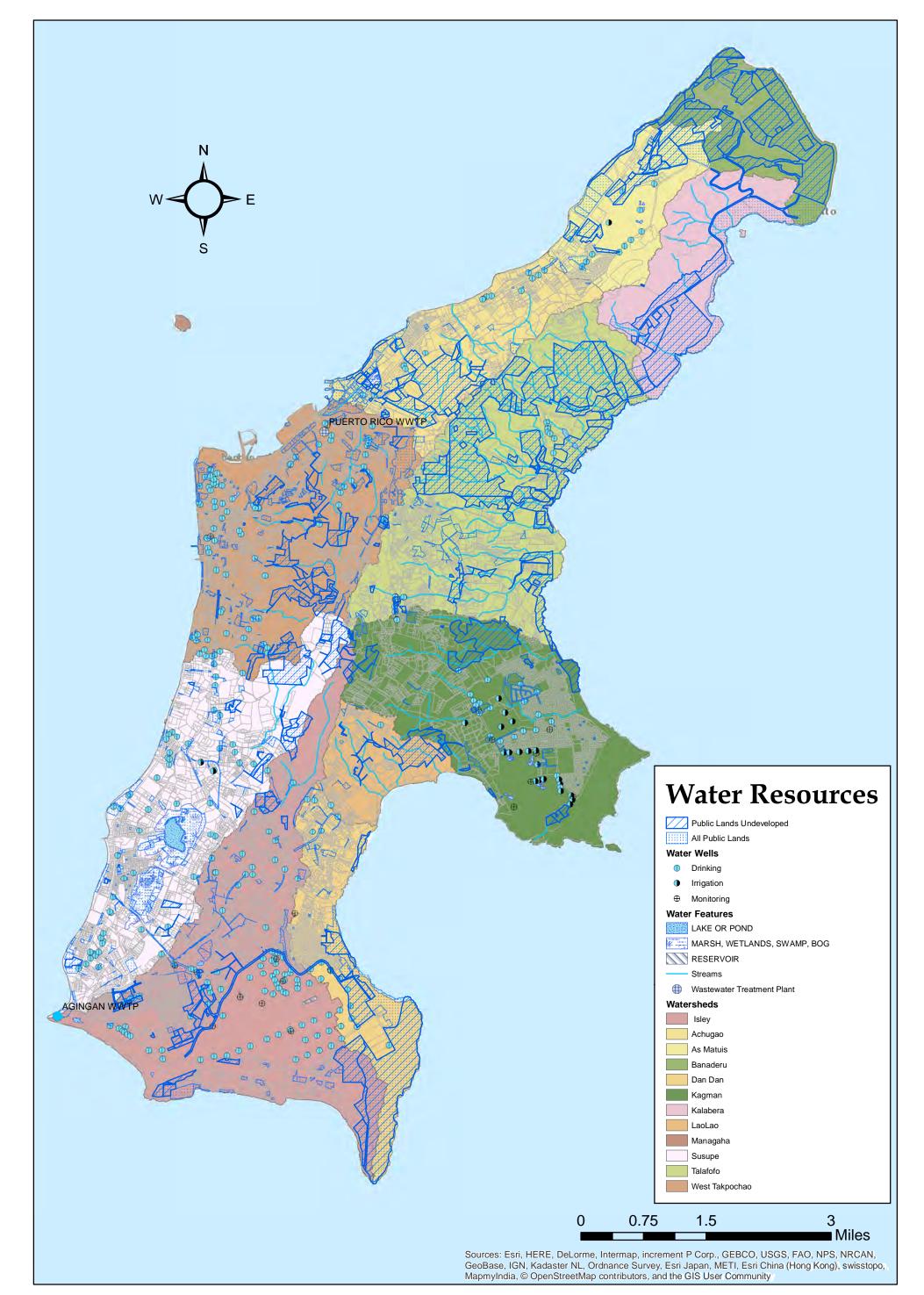
Protected area information from CNMI Division of Fish & Wildlife







Information provided by CNMI Historic Preservation Office









Information from CNMI Division of Coastal Resource Management & Bureau of Environmental Coastal Quality

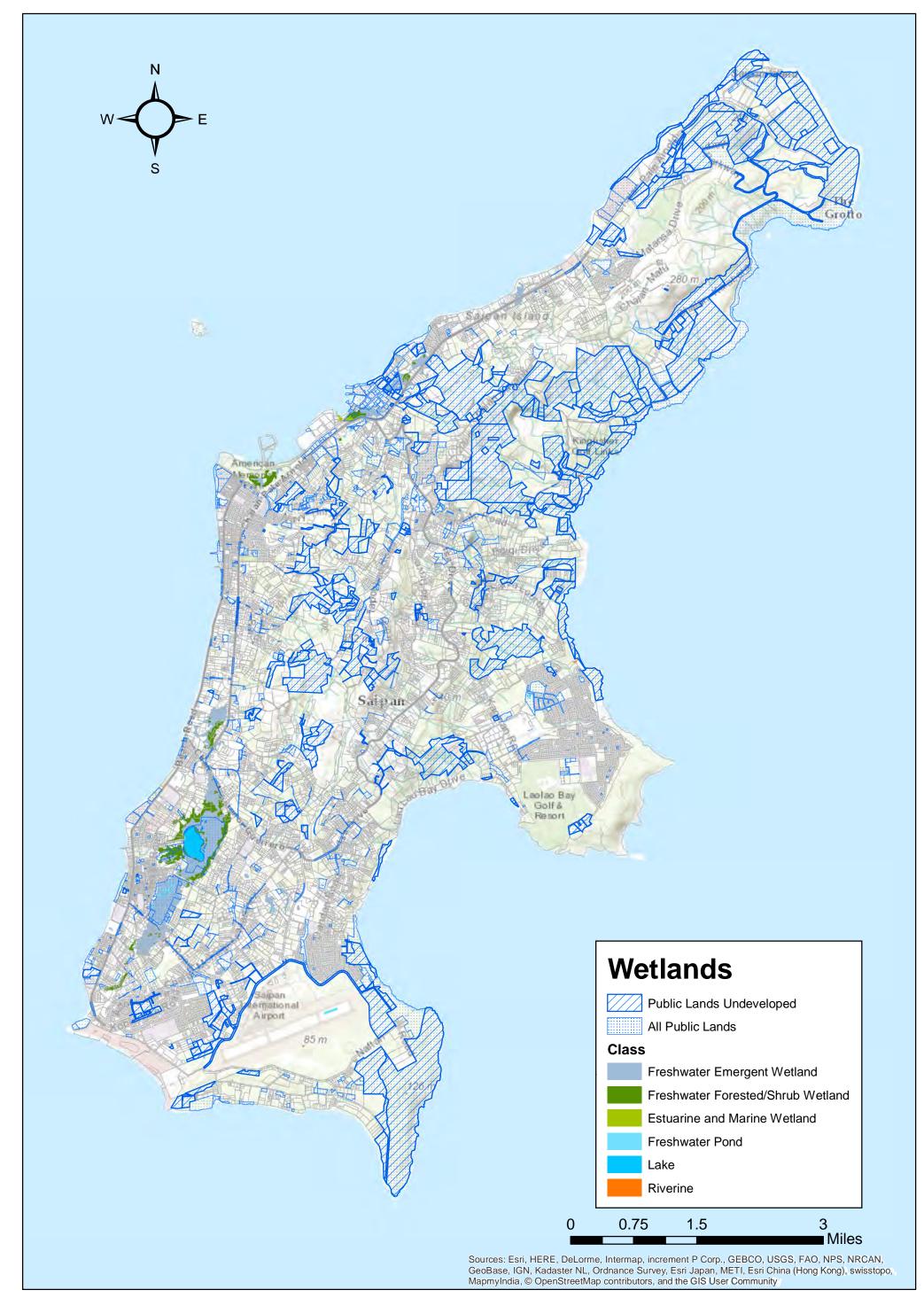


FIGURE S-12



Information from CNMI Division of Coastal Resource Management

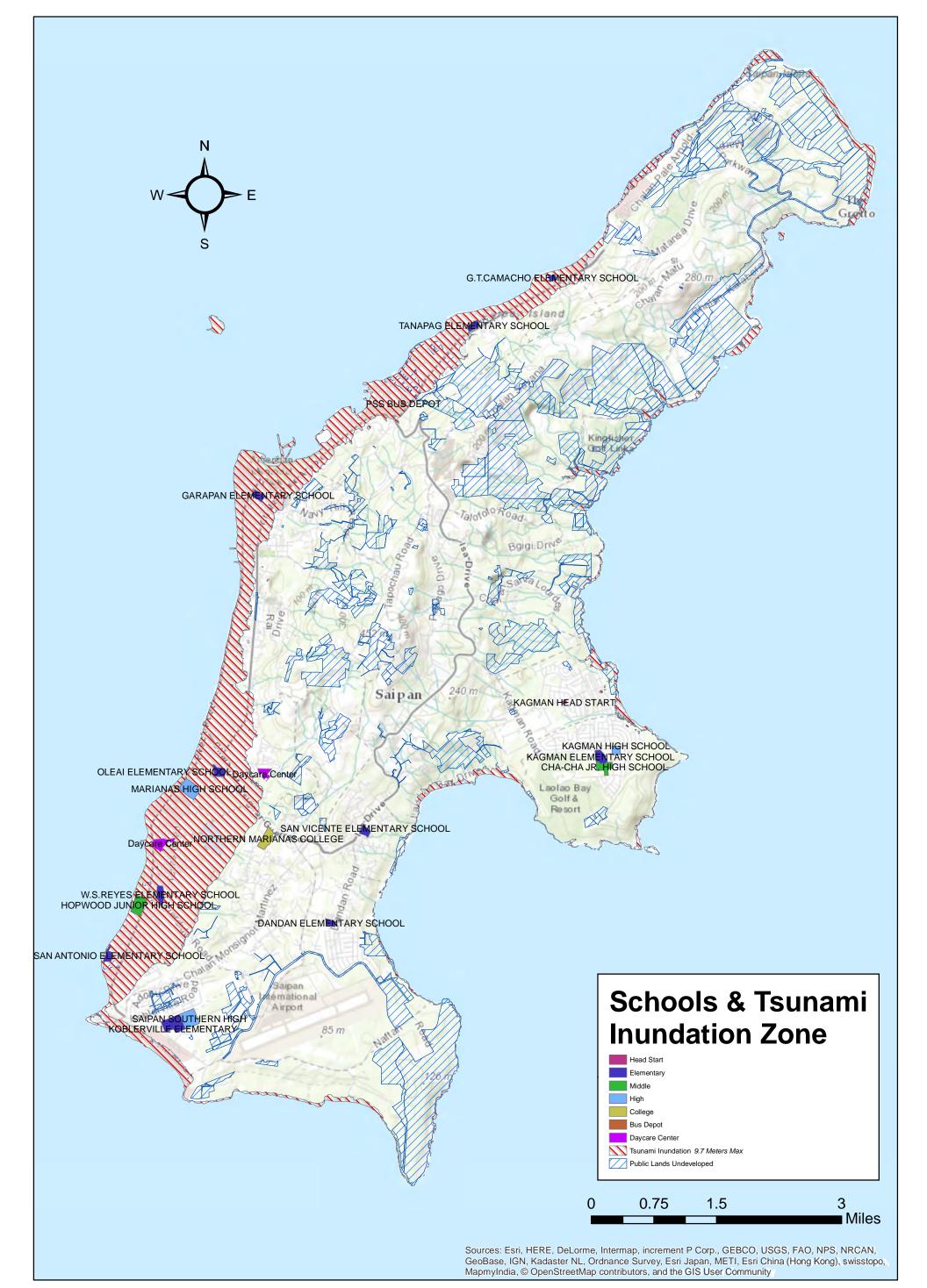


FIGURE S-13



School information from CNMI DPL. Tsunami information from U.S. National Oceanic & Atmospheric Administration

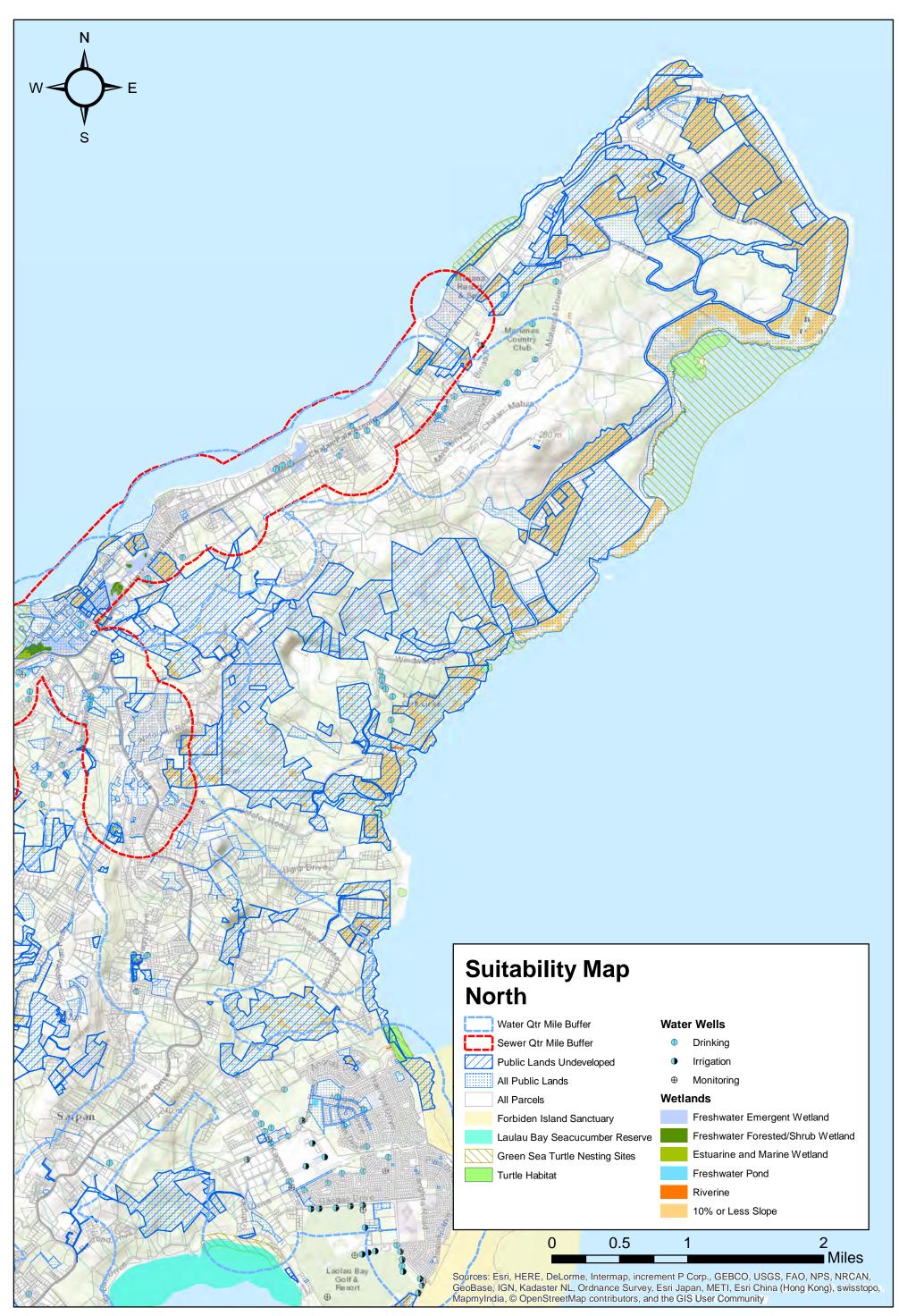


FIGURE S-14.1



Information from CNMI DPL, BECQ, CRM, & DFW

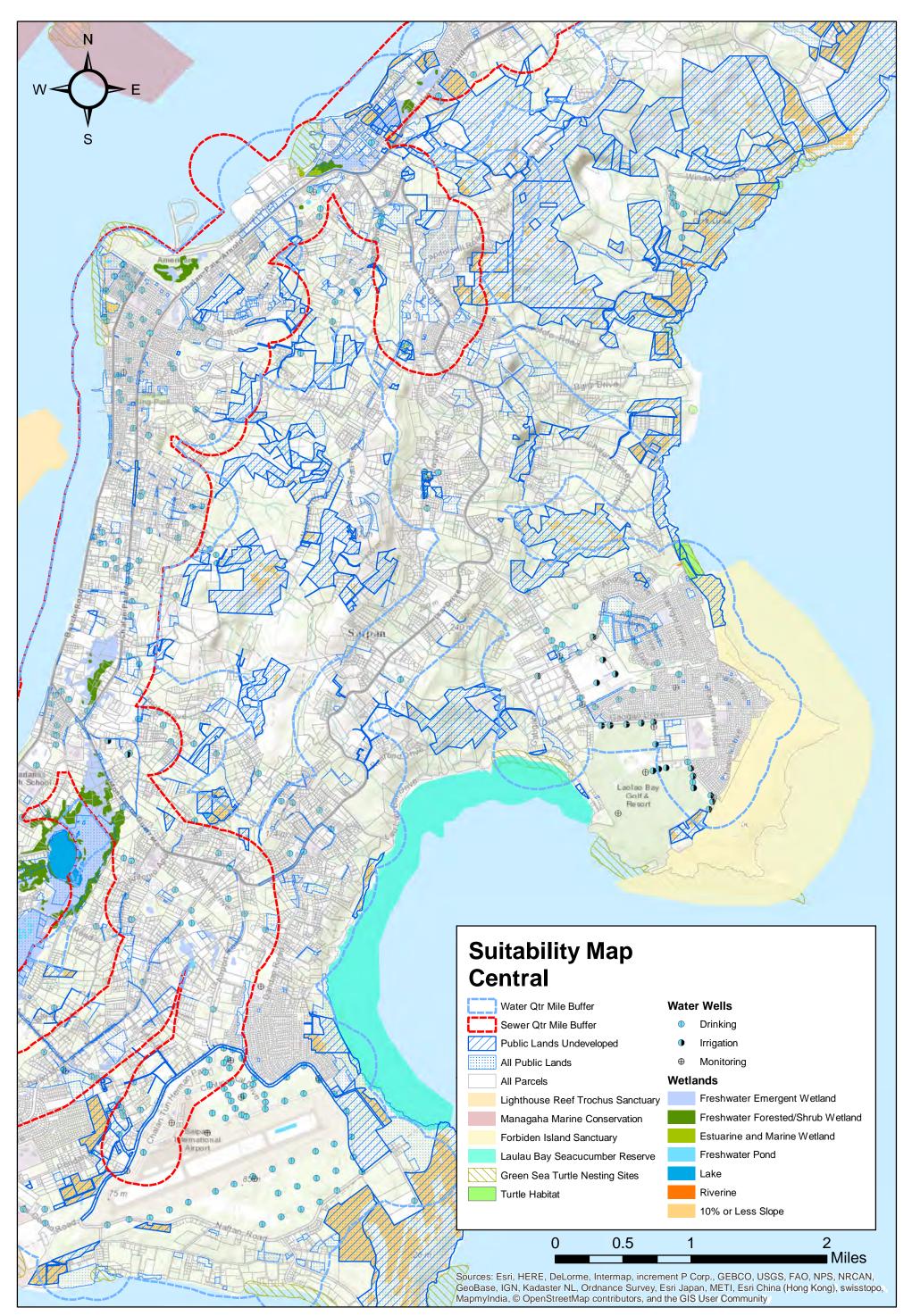


FIGURE S-14.2



Information from CNMI DPL, BECQ, CRM, & DFW

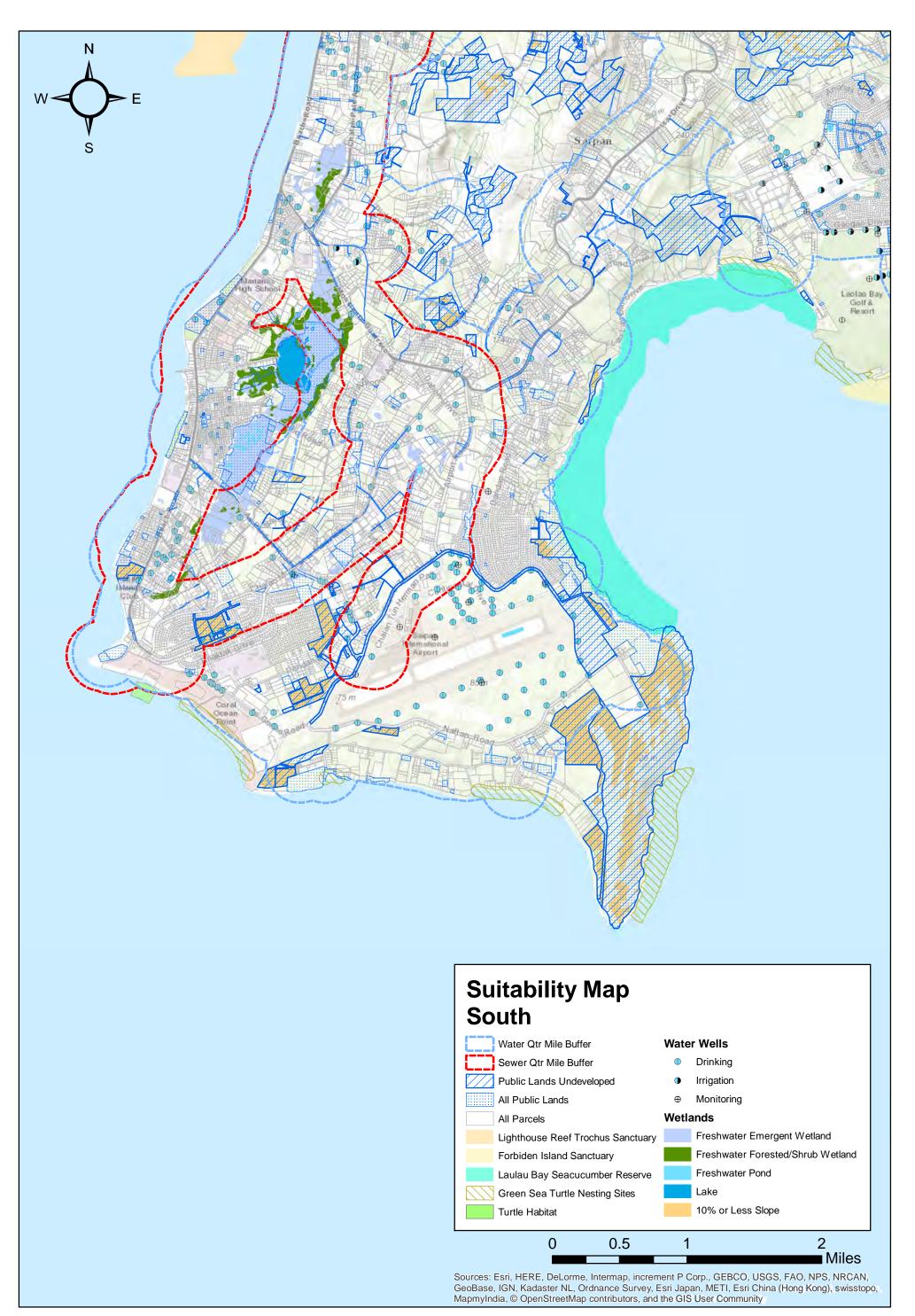


FIGURE S-14.3



Information from CNMI DPL, BECQ, CRM, & DFW

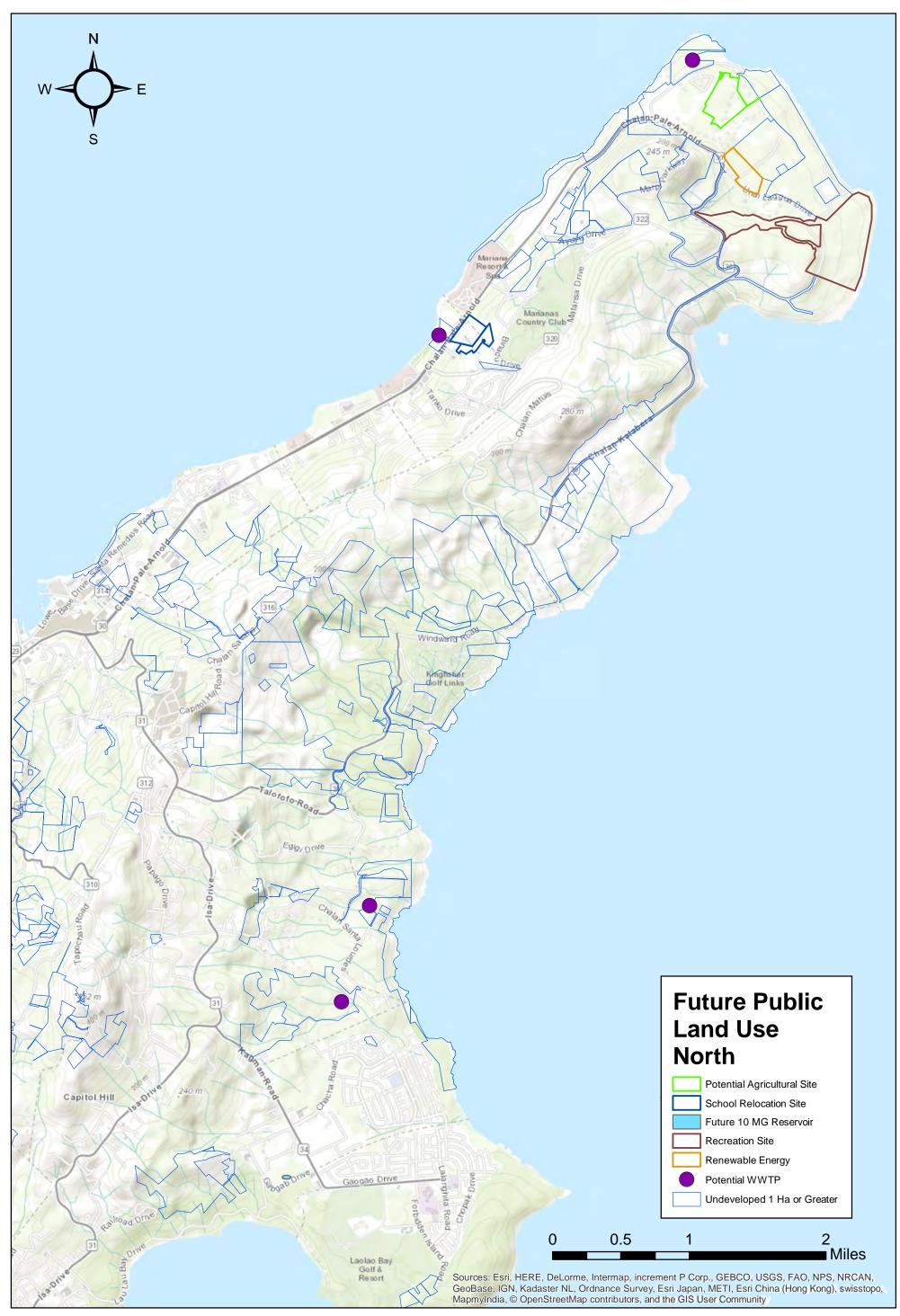
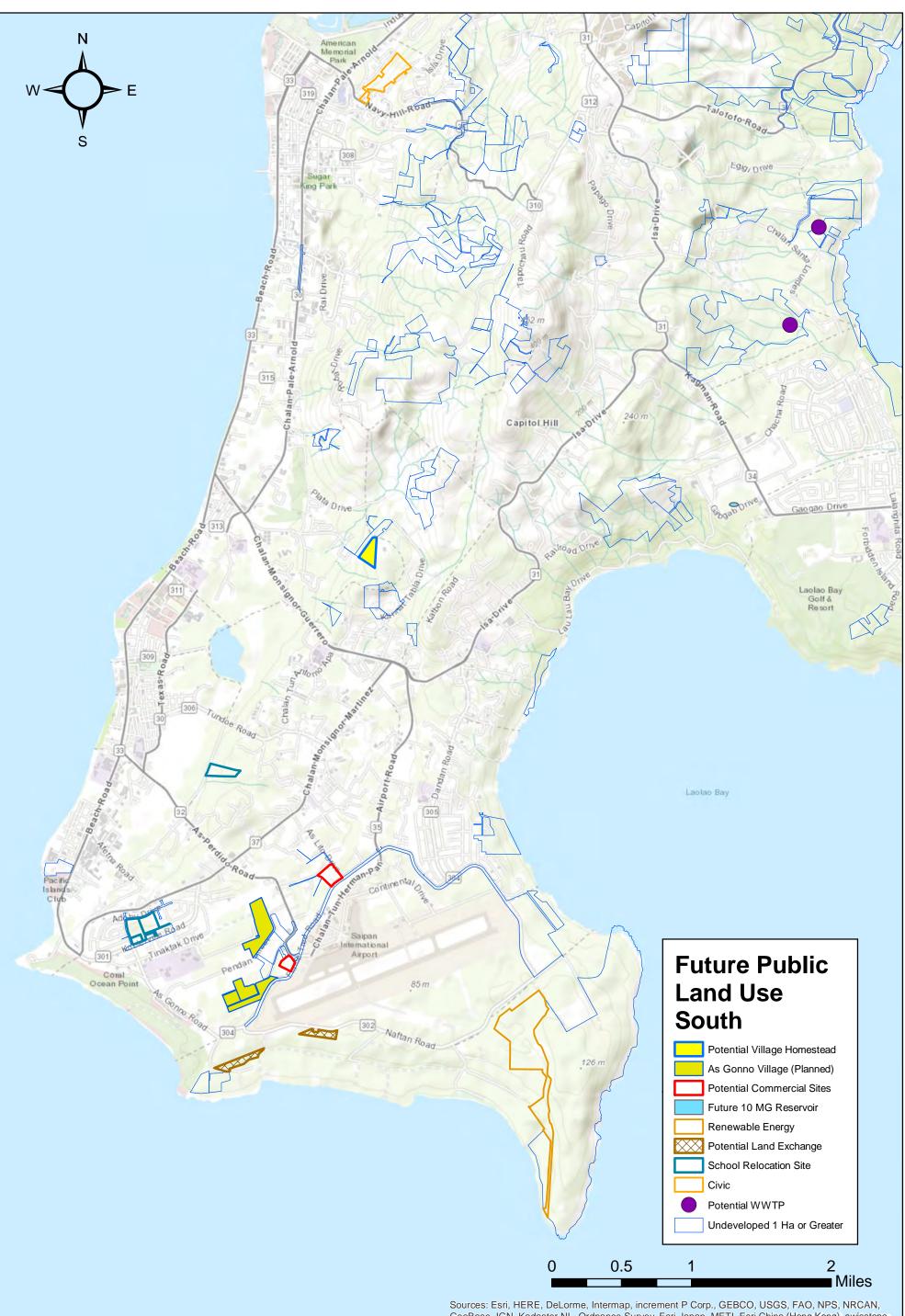


FIGURE S-15.1



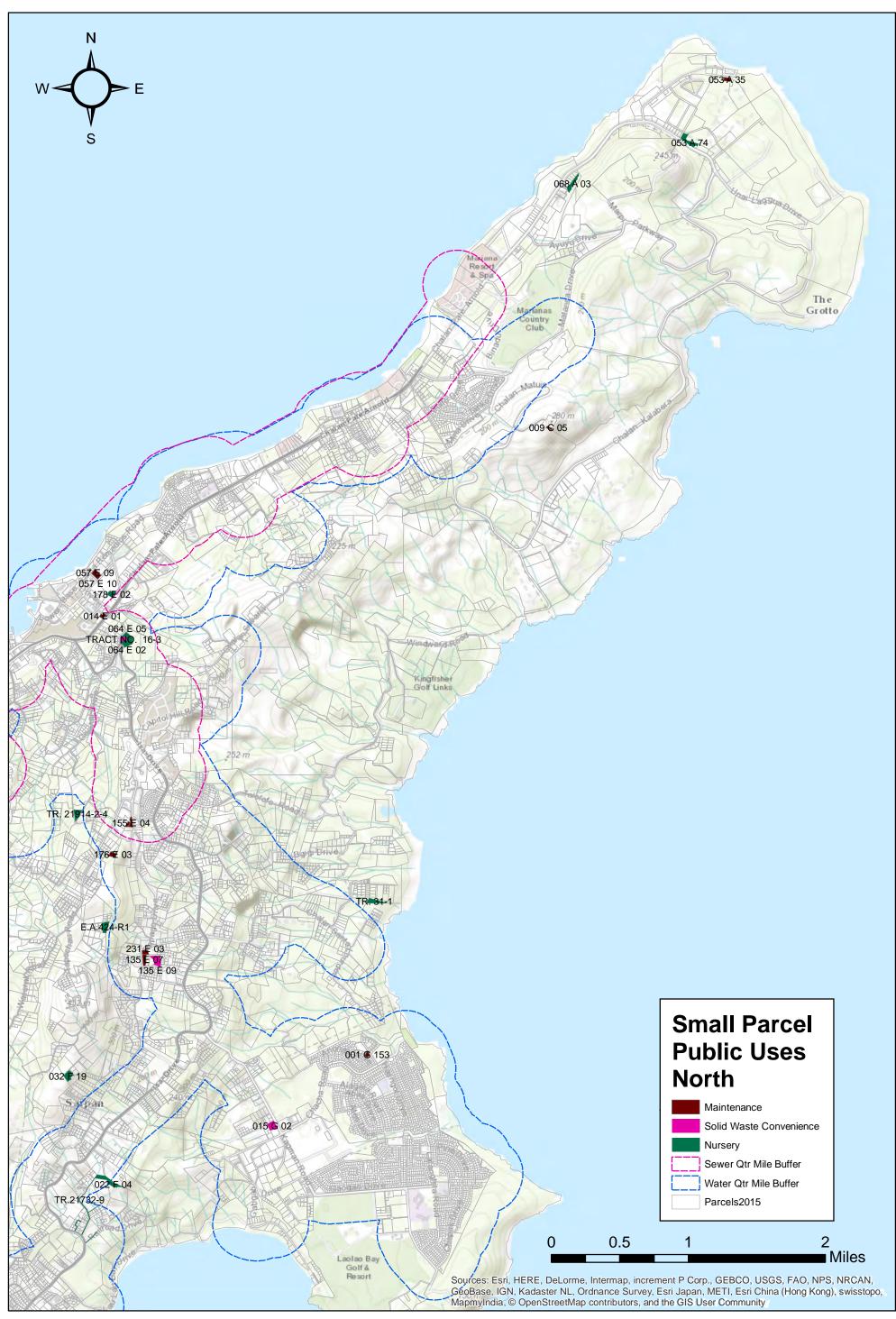


Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

### **SAIPAN**

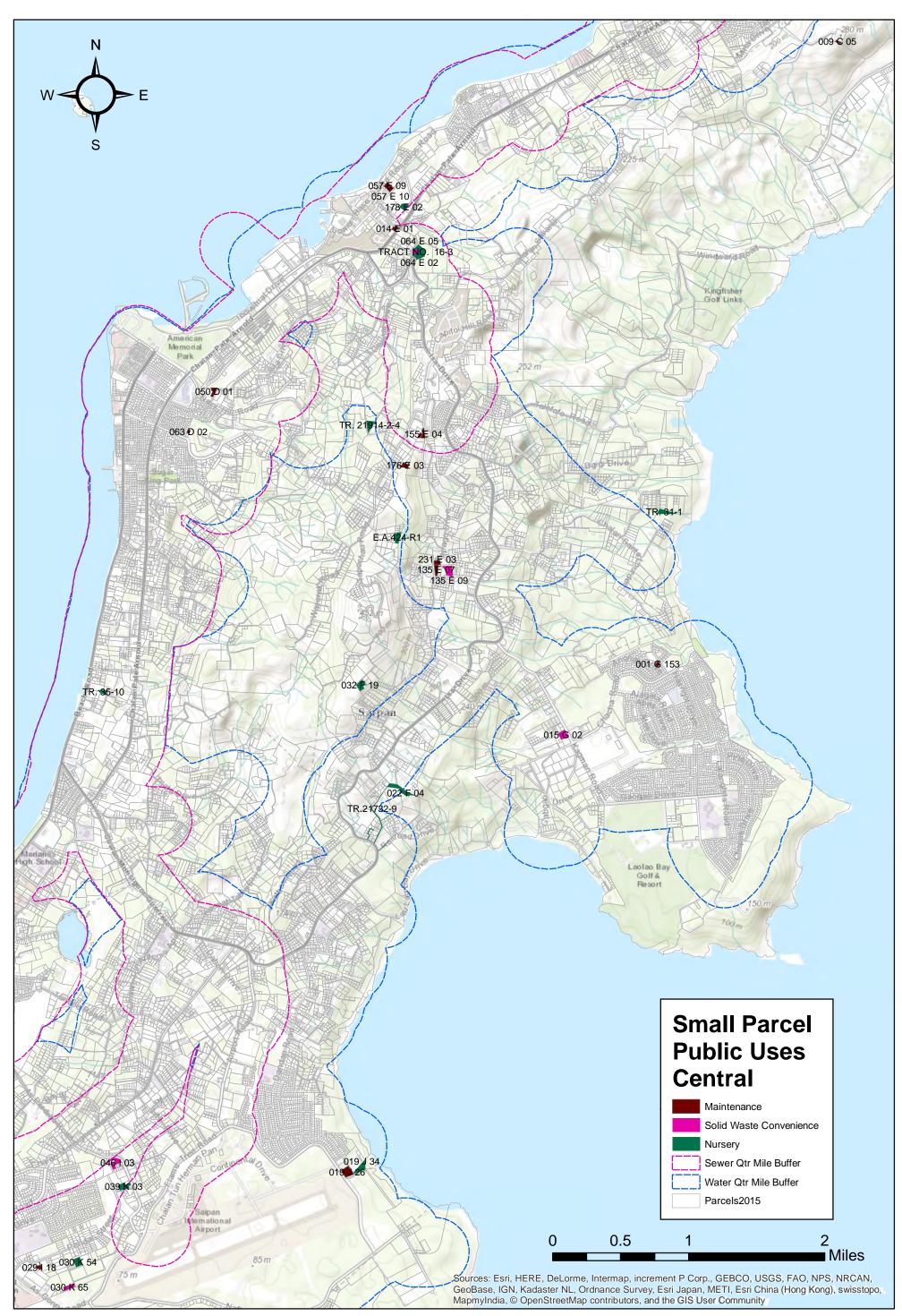
#### **FIGURE S-15.2**





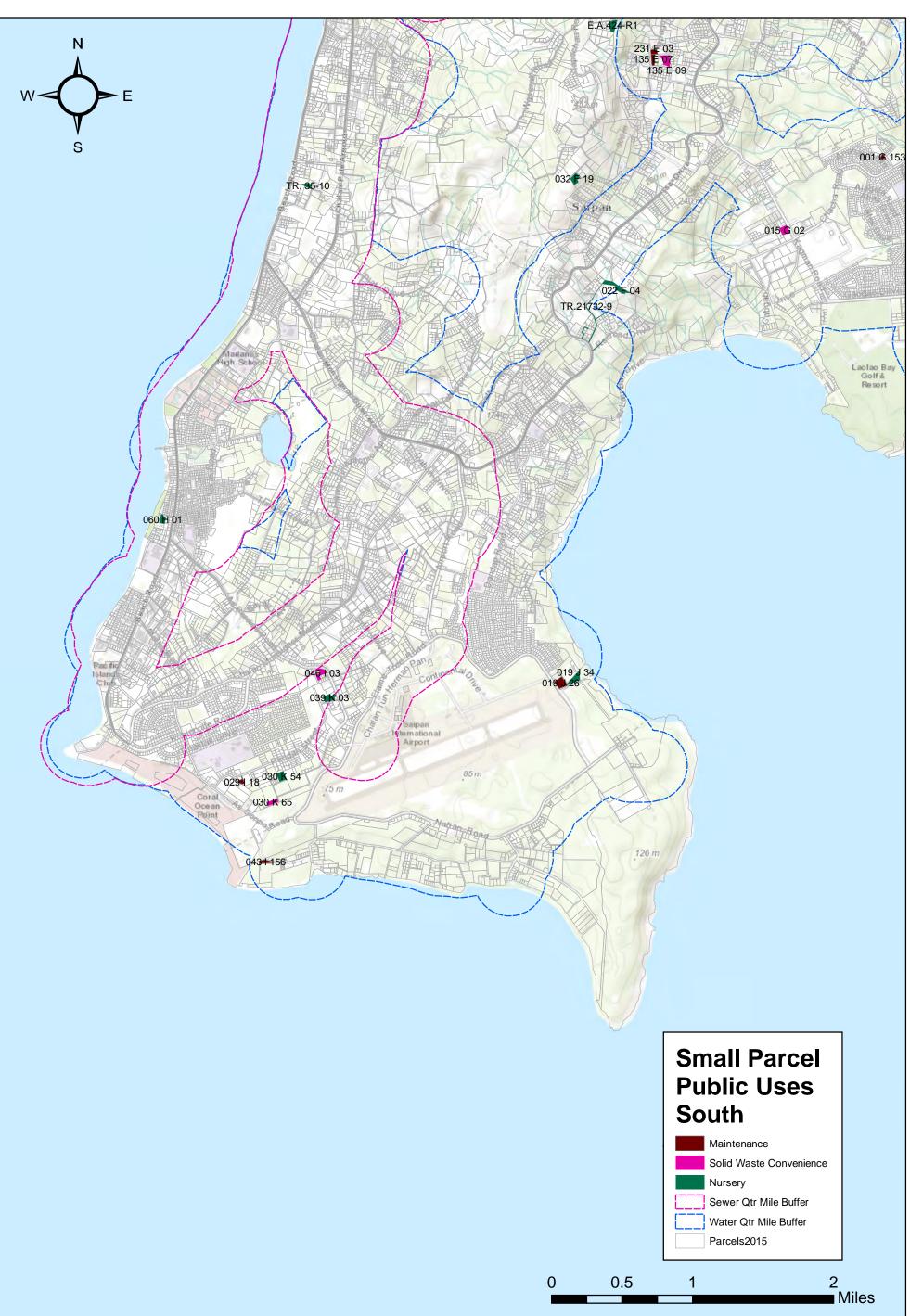
#### FIGURE S-16.1





#### FIGURE S-16.2



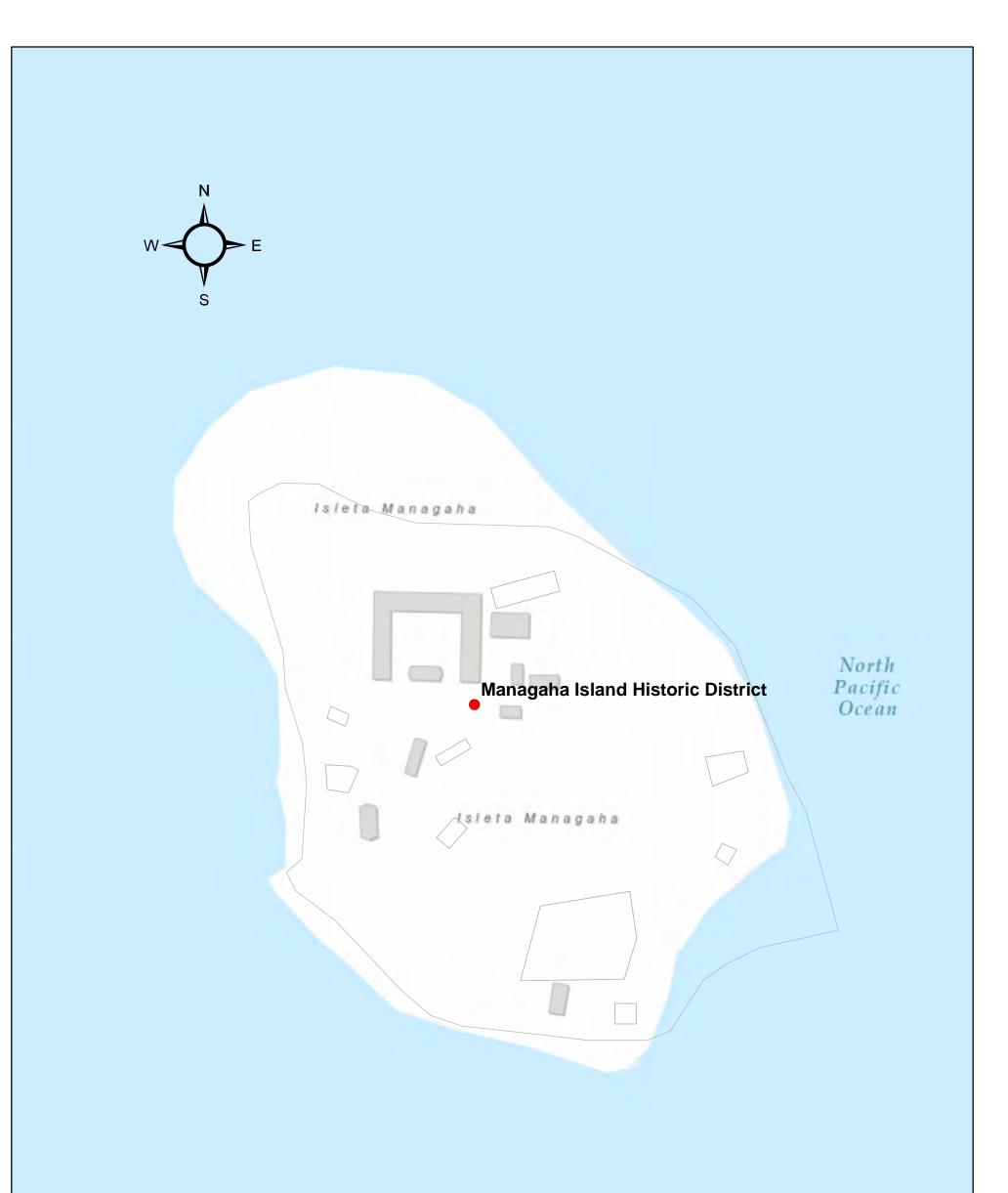


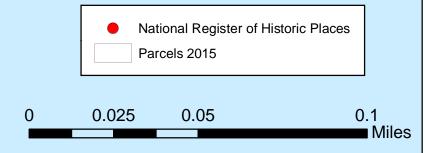
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

### **SAIPAN**

#### FIGURE S-16.3







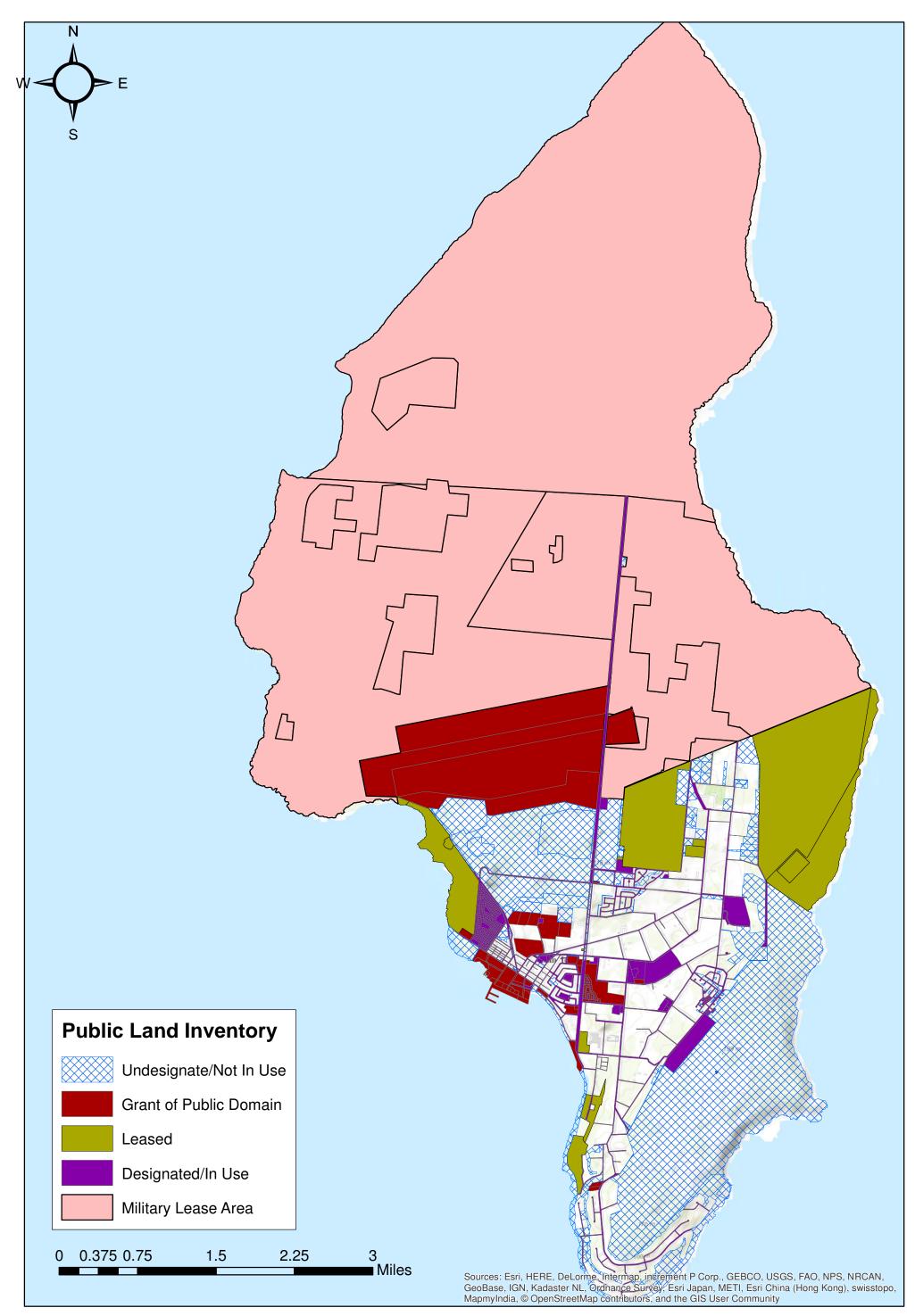
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

# SAIPAN - MANAGAHA FIGURE S-17



Information provided by CNMI Historic Preservation Office

#### TINIAN MAPS

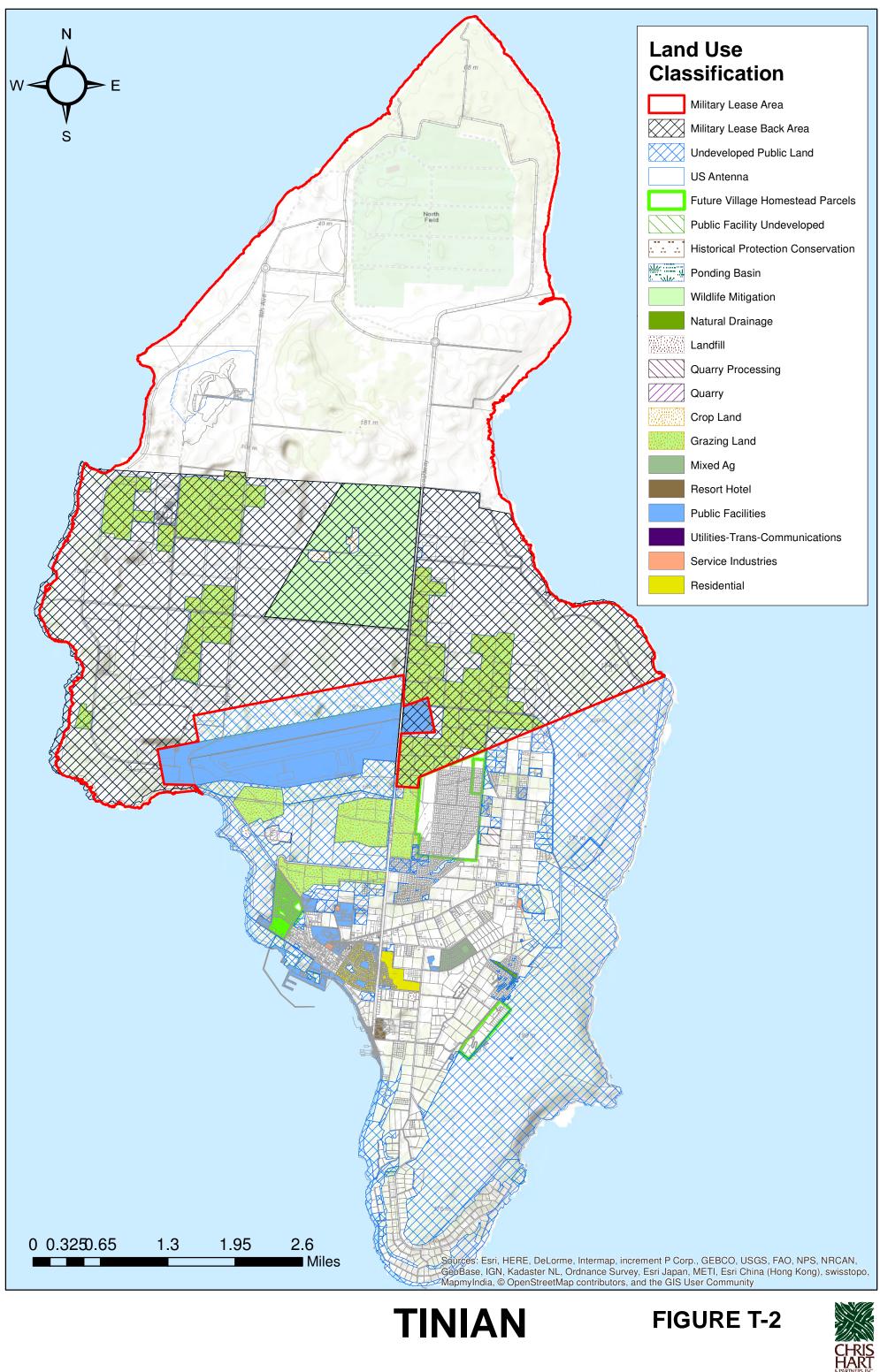


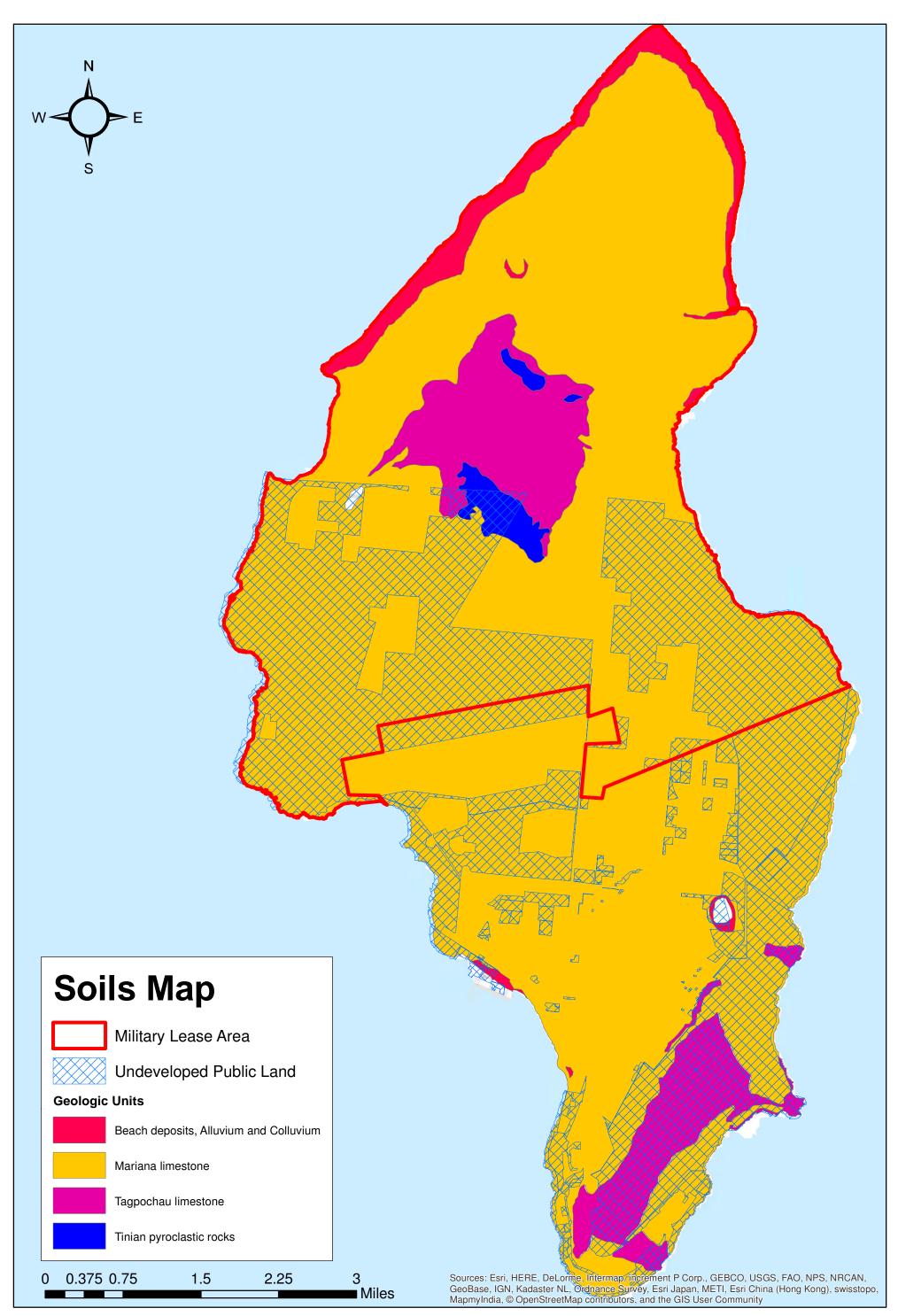
#### TINIAN

FIGURE T-1



SOURCE: DPL Unifed Parcel Database & Coastal Resources Managment Office



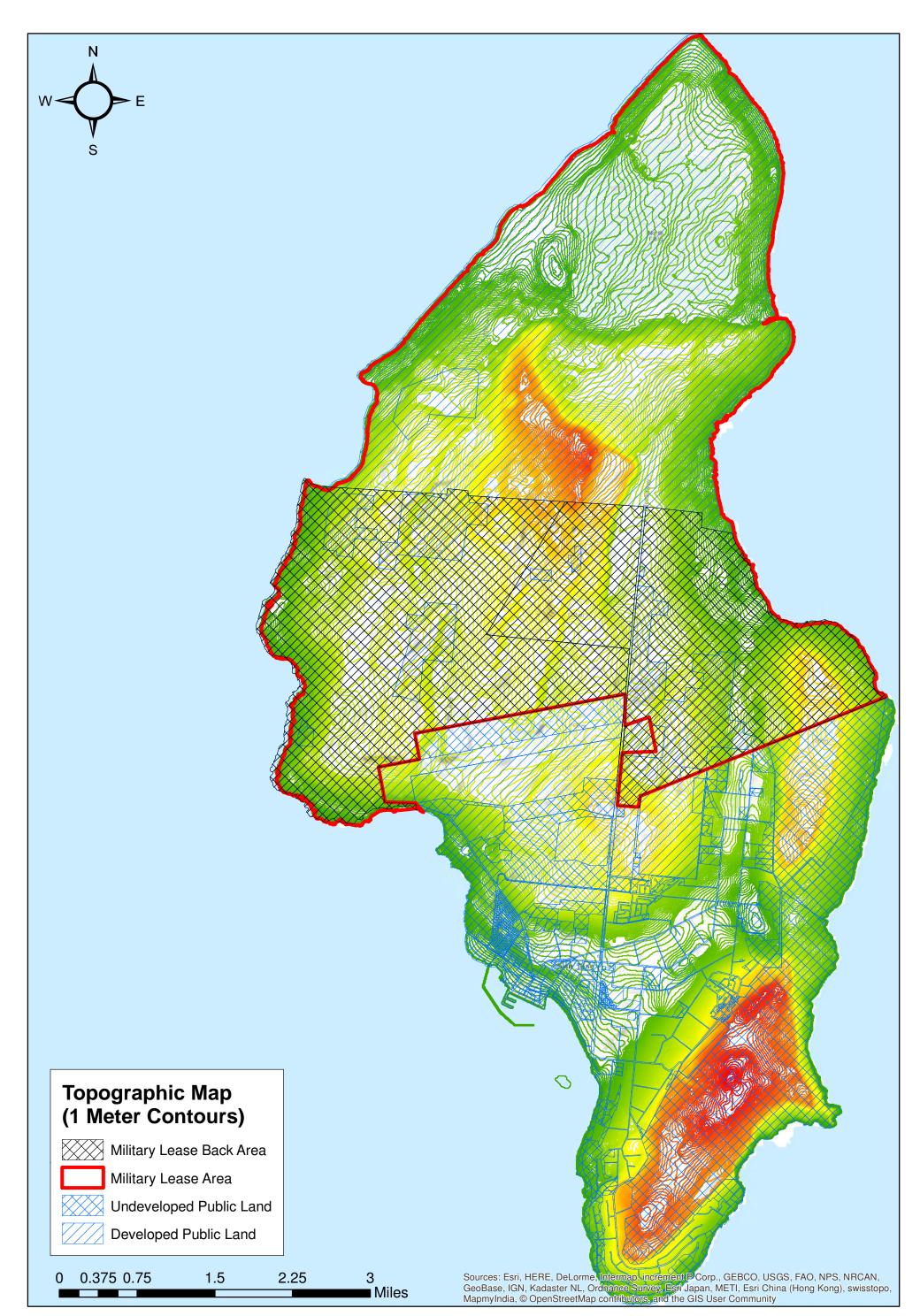


## TINIAN

FIGURE T-3



SOURCE: DPL Unifed Parcel Database & Coastal Resources Managment Office & Soil Conservation Service-US Dept. of Agriculture



## TINIAN

FIGURE T-4



SOURCE: CNMI Bureau of Environmental & Coastal Quality

### Flood Hazard Map



Military Lease Back Area

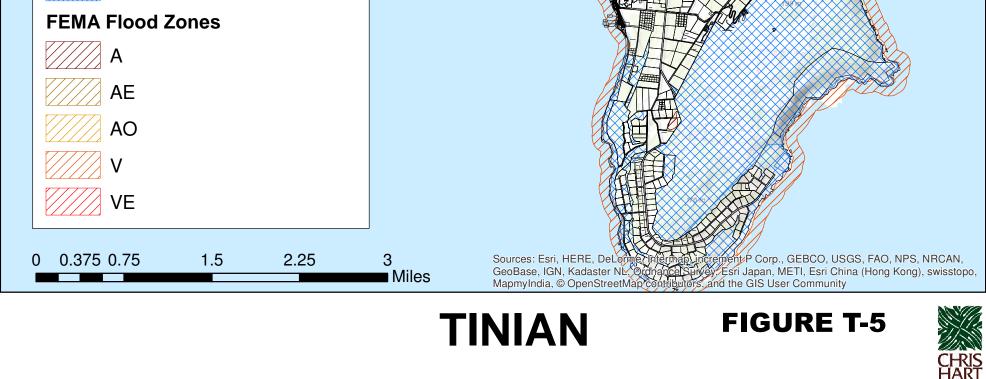
Ν

W

Military Lease Area

School/Education Facility

Undeveloped Public Land



Nooc

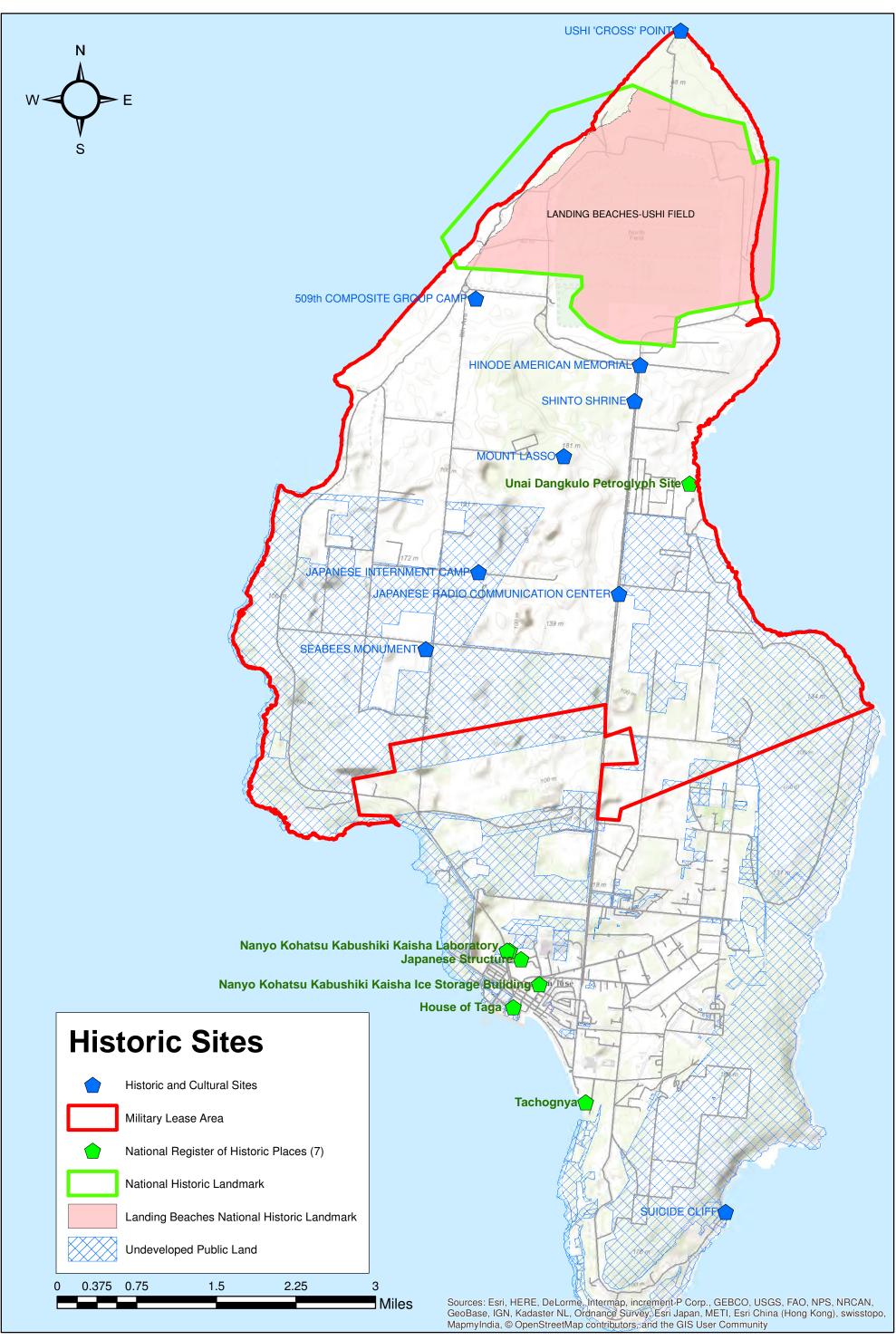
North Field

8 8

181 m

AN

FEMA Flood Insurance Rate Maps (FIRMs) for Saipan, Tinian and Rota. Flood Insurance rate maps are FEMA. Use of these maps is subject to FEMA guidelines.

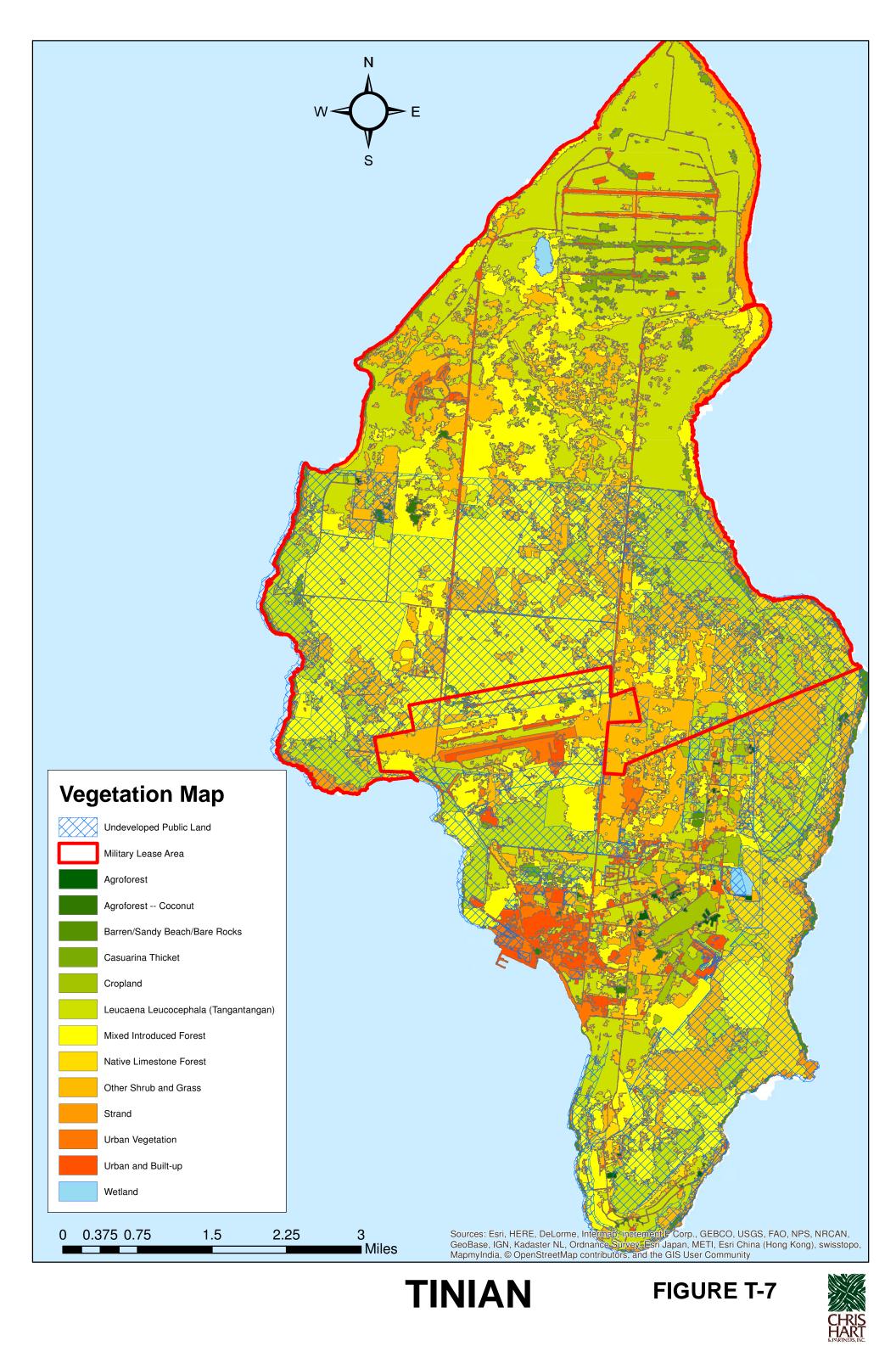


## TINIAN

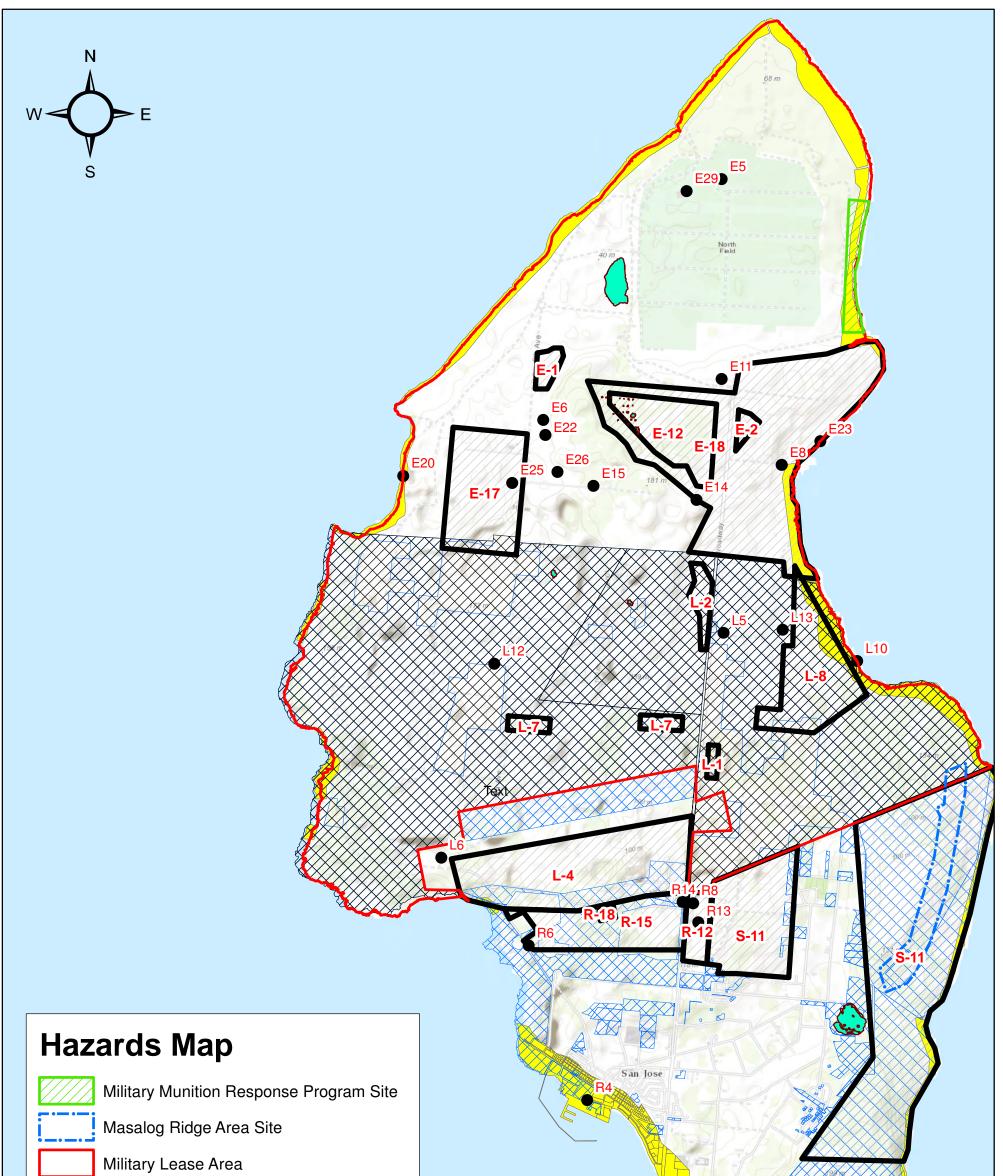
FIGURE T-6



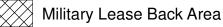
SOURCE: CJMT EIS/OEIS April 2015 & DPL Unifed Parcel Database & Coastal Resources Managment Office



Pacific Island Vegetatoion Mapping and Mornitoring Project by the Pacific Island Imagery Consortium. Derived in 2005 from IKNONOS and Quickbird imagery.







Areas of Potential Environmental Concern



Areas of Potential Environmental Concern



Undeveloped Public Land

Tsunami Affected Areas (approx.)

1.5	2.25	3
		Miles
	1.5	1.5 2.25

Sources: Esri, HERE, DeLorme, Intermap, increment P. Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

## **TINIAN**

**FIGURE T-8** 



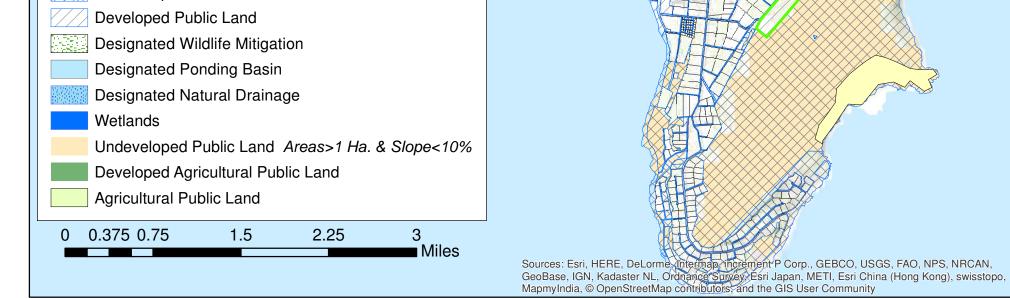
Data based on Figure 3.16-1 Tinian Areas of Potential Environmental Concern and Military Munitions Response Program Sites, CJMT EIS/OEIS April 2015 Tsunami inormation interpolated from fig. 4.5 - NOAA OAR Special Report- Tsunami Hazard Assessment Special Series VIo.3 2013

### **Public Land Suitability Map**

Military Lease Area Military Lease Back Area Water Wells ullet**Conservation Area** Future Village Homestead

Ν

Undeveloped Public Land



## TINIAN

igodol

**FIGURE T-9** 



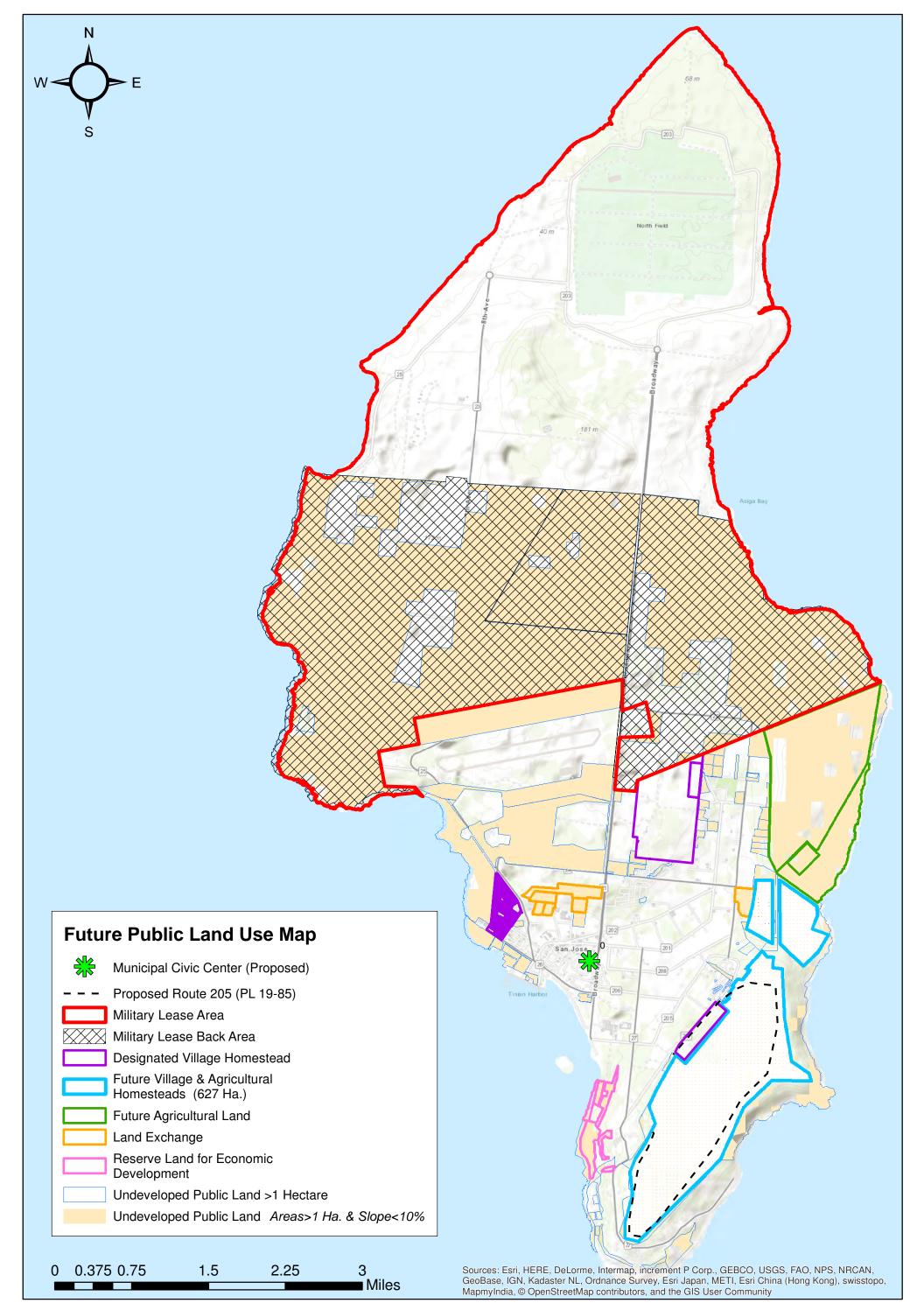
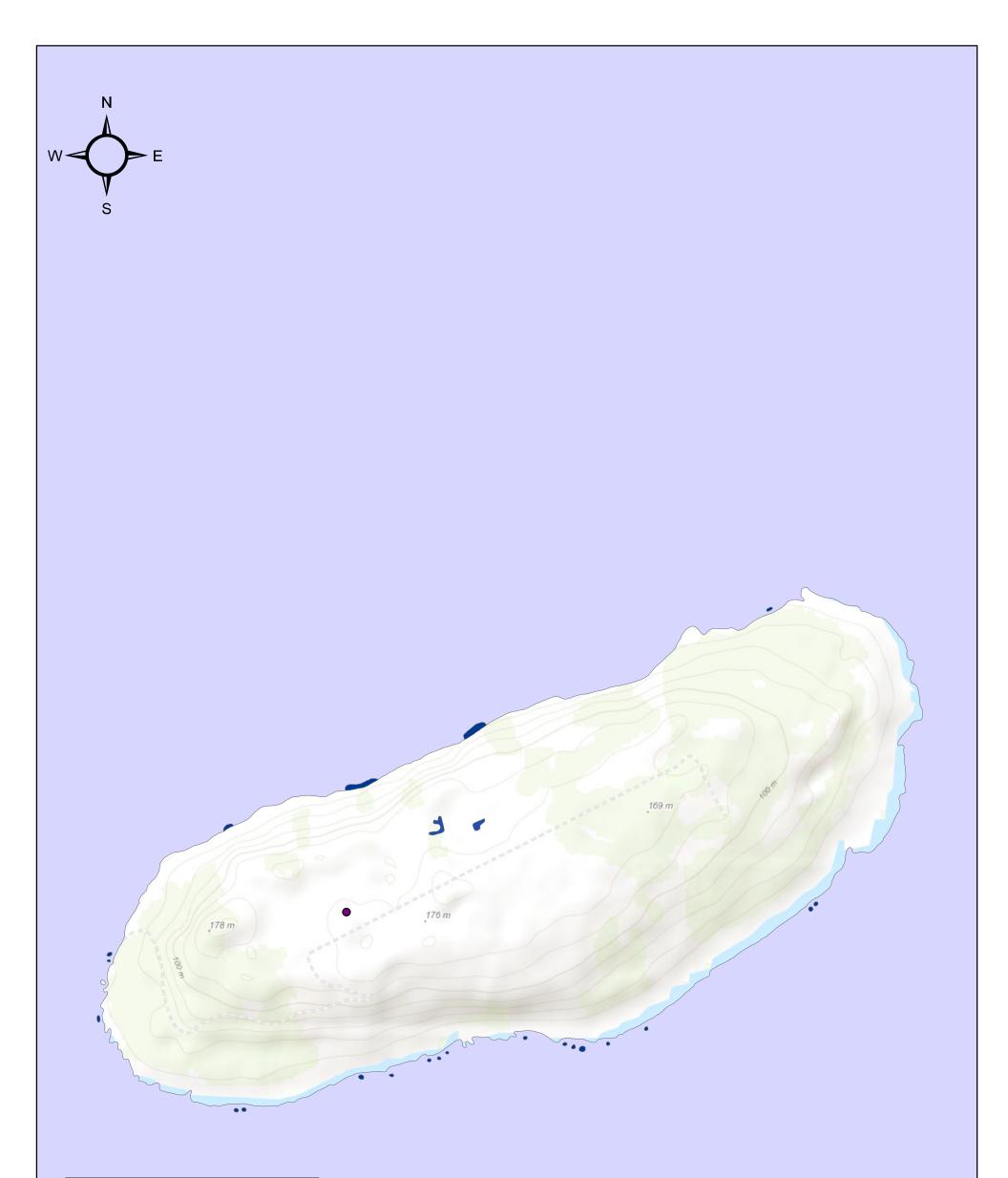


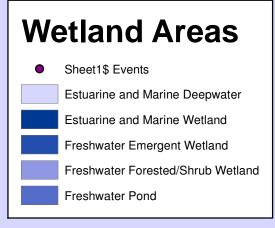


FIGURE T-10



SOURCE: DPL Unifed Parcel Database & Coastal Resources Managment Office







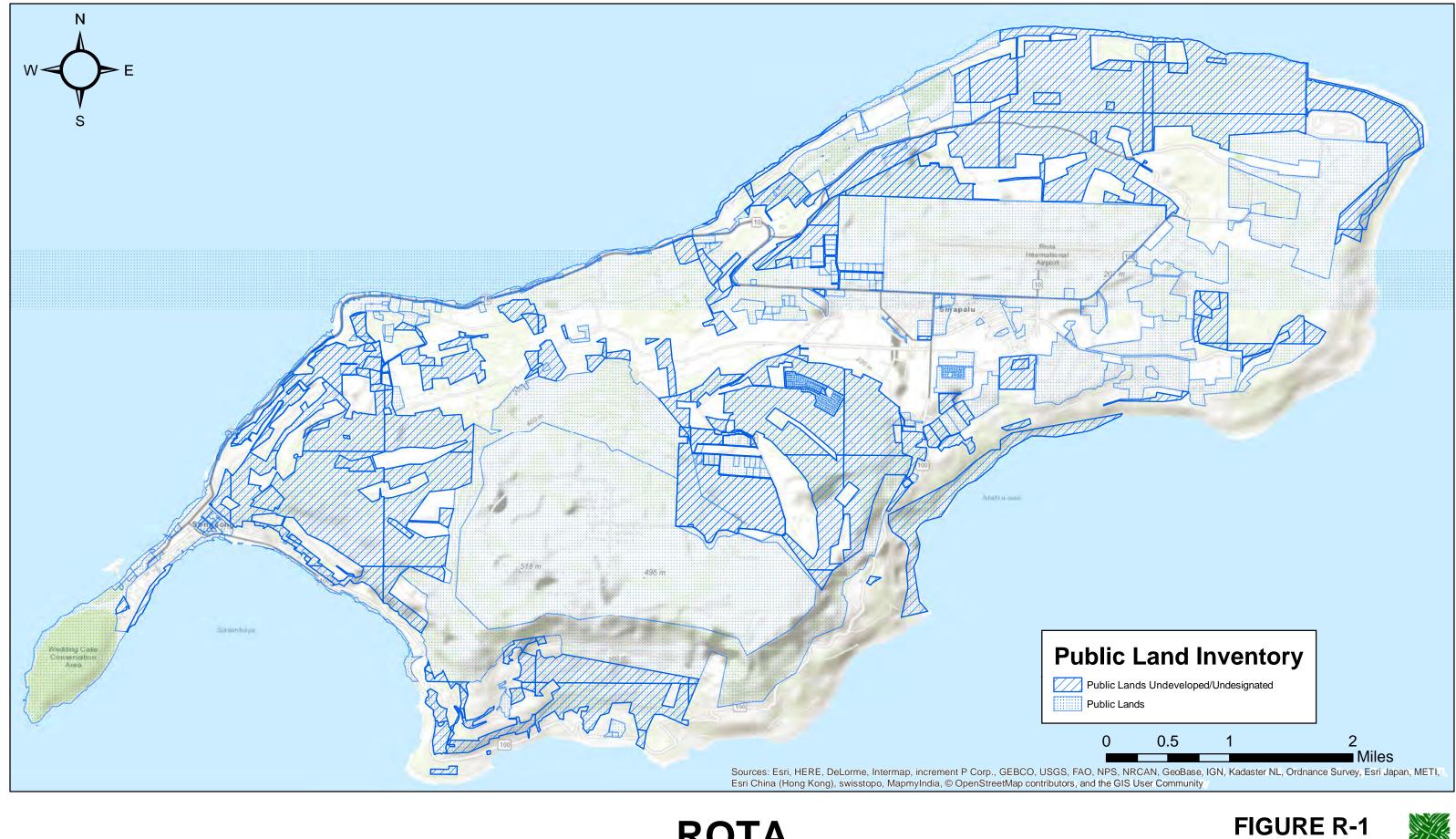
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

## AGUIGUAN

FIGURE T-11

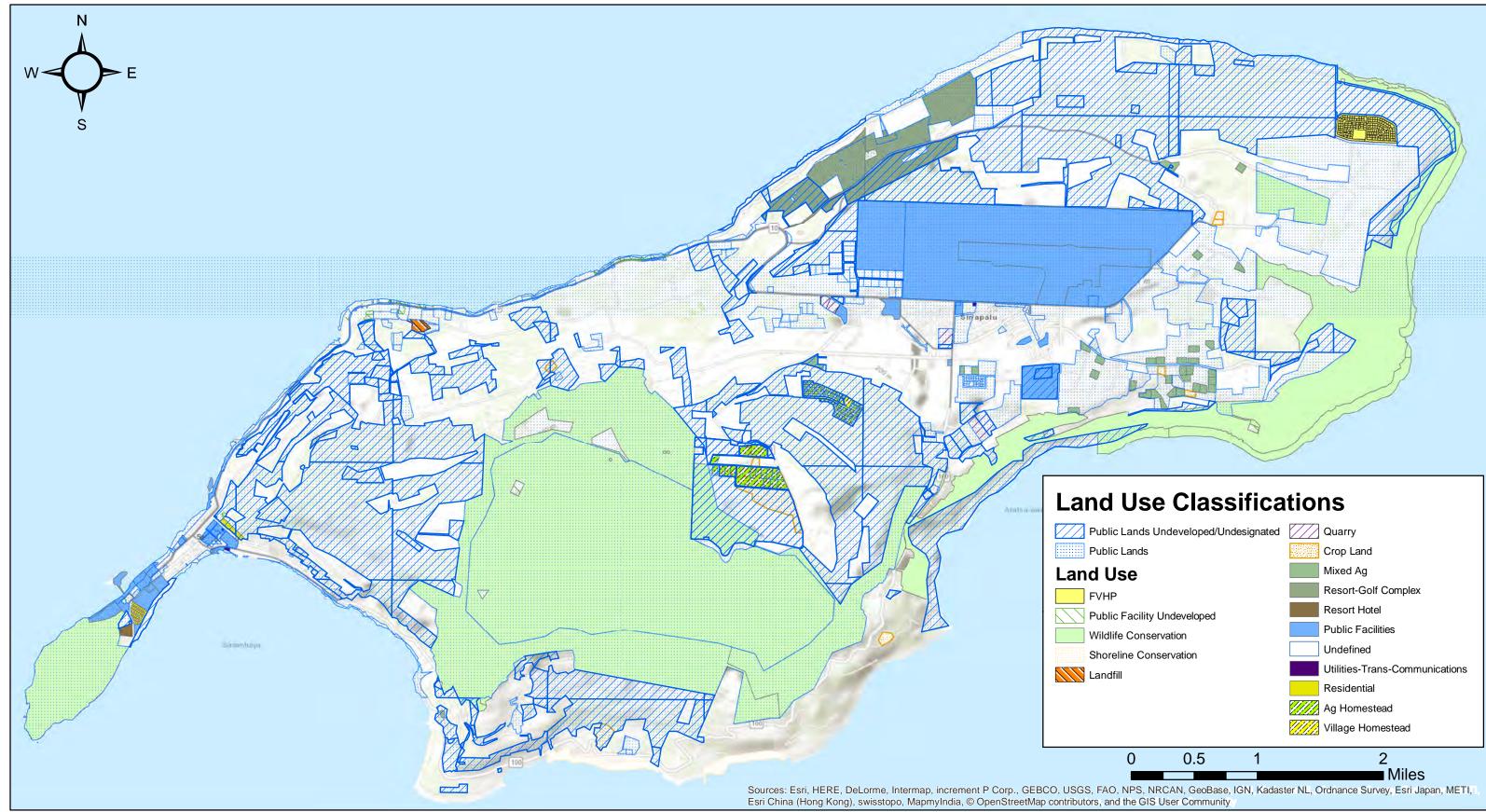


### ROTA MAPS



Information by CNMI DPL



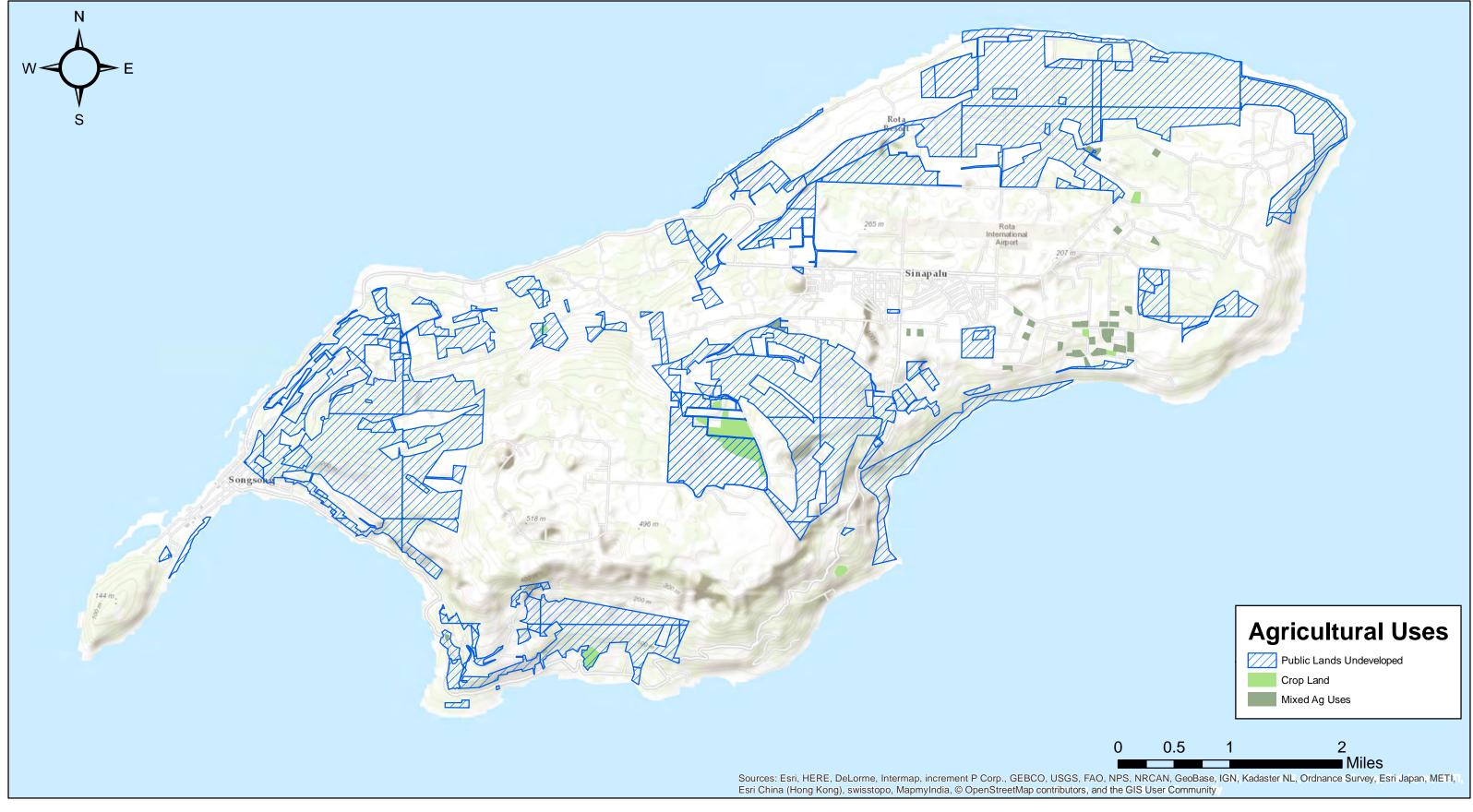


Information by CNMI DPL

blic Lands Undevelope	d/Undesignated	Quarry
blic Lands		Crop Land
Use		Mixed Ag
HP		Resort-Golf Complex
blic Facility Undevelope	d	Resort Hotel
Idlife Conservation		Public Facilities
oreline Conservation		Undefined
ndfill		Utilities-Trans-Communications
		Residential
		Ag Homestead
		Village Homestead
0 0.5	1	2



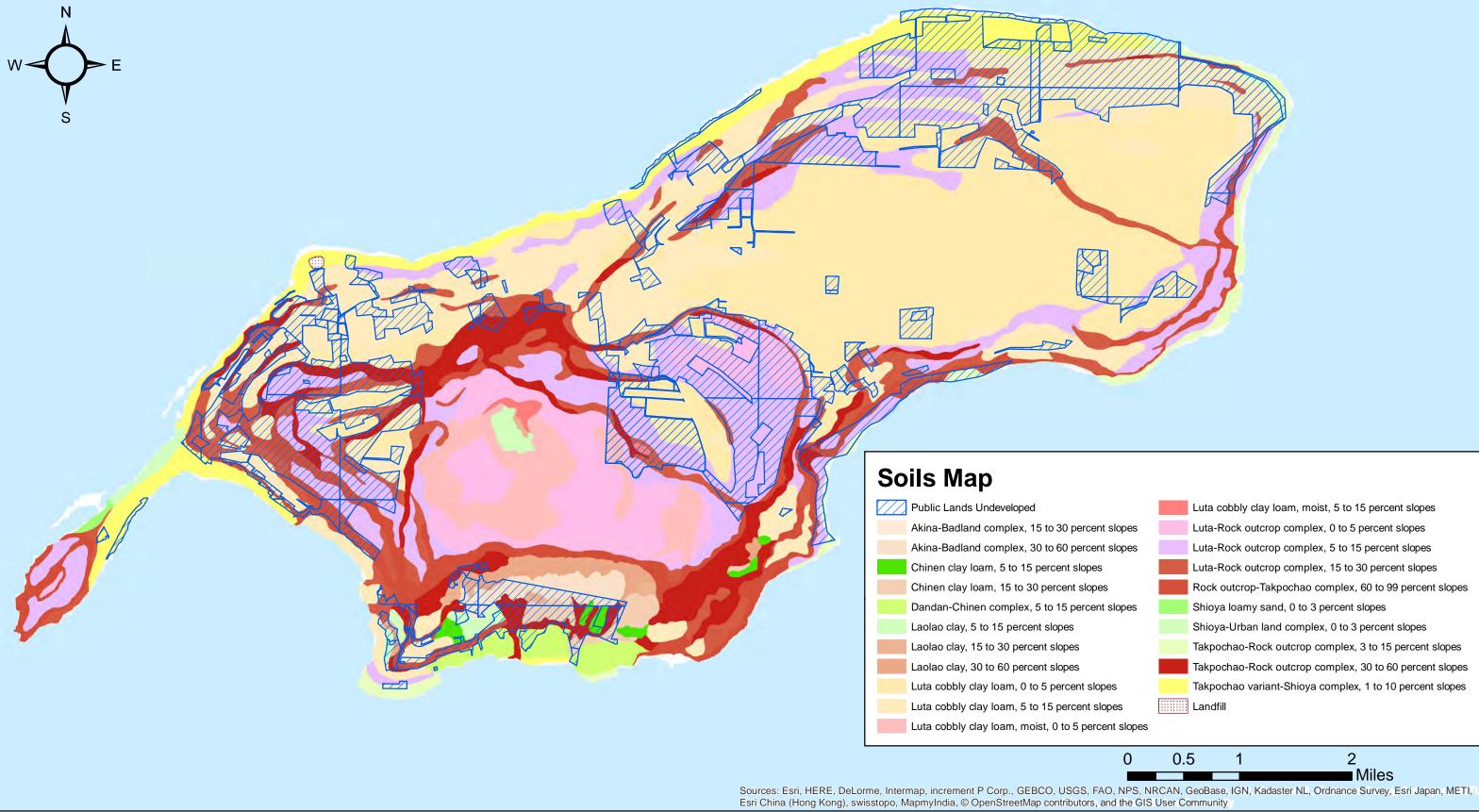




Information by CNMI Department of Public Lands





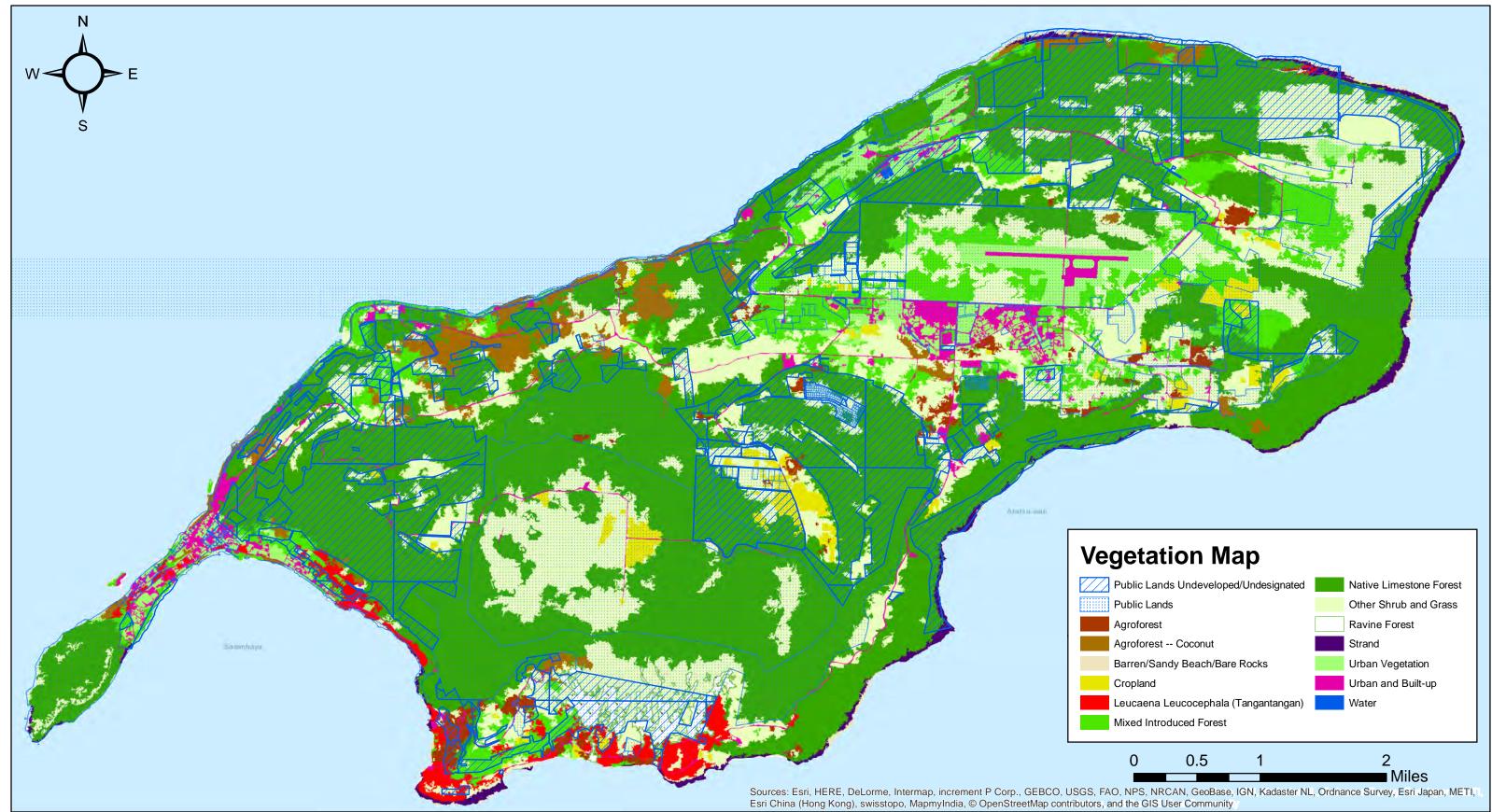


	Luta cobbly clay loam, moist, 5 to 15 percent slopes
nt slopes	Luta-Rock outcrop complex, 0 to 5 percent slopes
nt slopes	Luta-Rock outcrop complex, 5 to 15 percent slopes
6	Luta-Rock outcrop complex, 15 to 30 percent slopes
es	Rock outcrop-Takpochao complex, 60 to 99 percent slopes
nt slopes	Shioya loamy sand, 0 to 3 percent slopes
	Shioya-Urban land complex, 0 to 3 percent slopes
	Takpochao-Rock outcrop complex, 3 to 15 percent slopes
	Takpochao-Rock outcrop complex, 30 to 60 percent slopes
pes	Takpochao variant-Shioya complex, 1 to 10 percent slopes
lopes	Landfill
ent slopes	

2 Miles

**FIGURE R-4** 

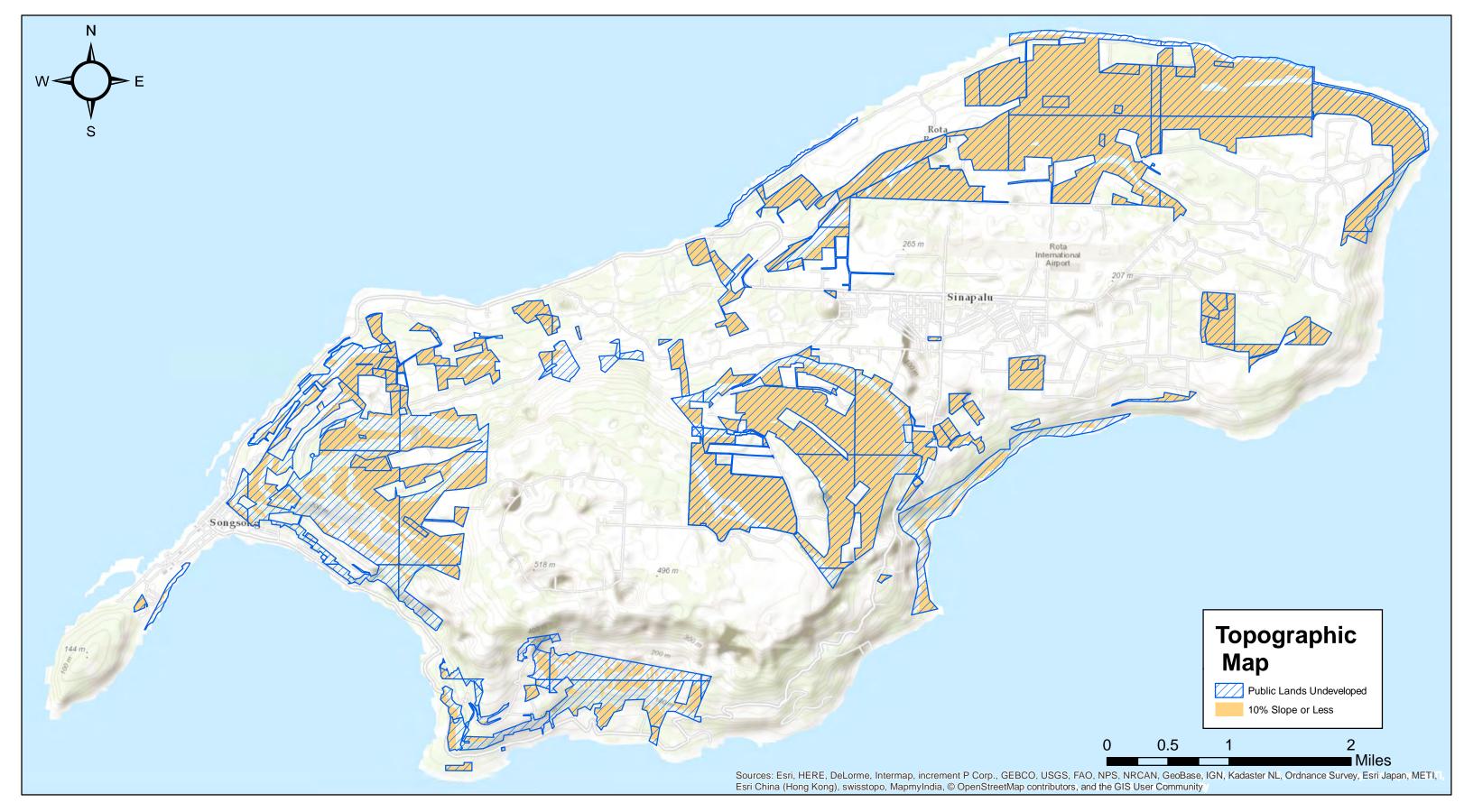




Information by U.S. Forestry Service

**FIGURE R-5** 

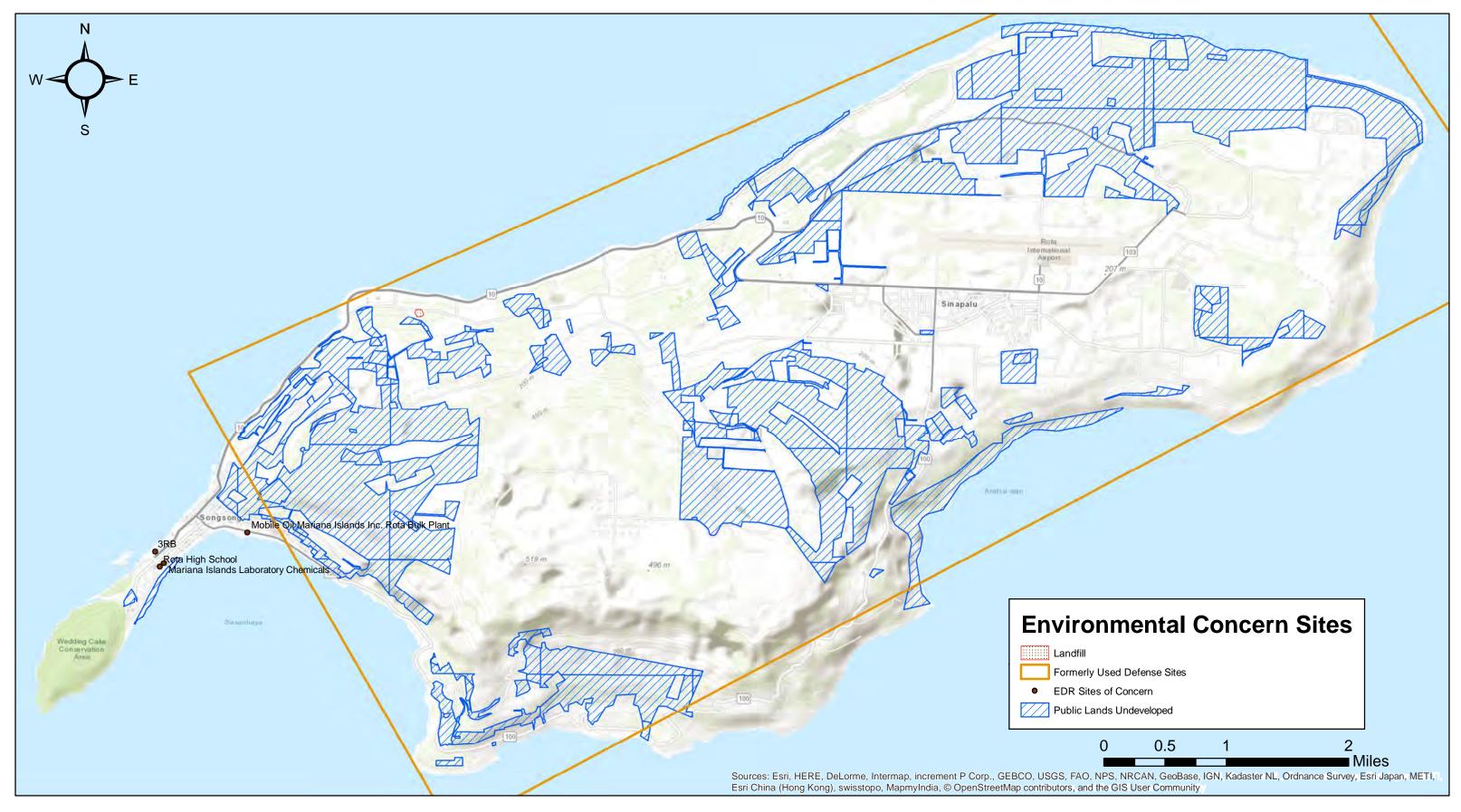




Information by U.S. Geological Survey



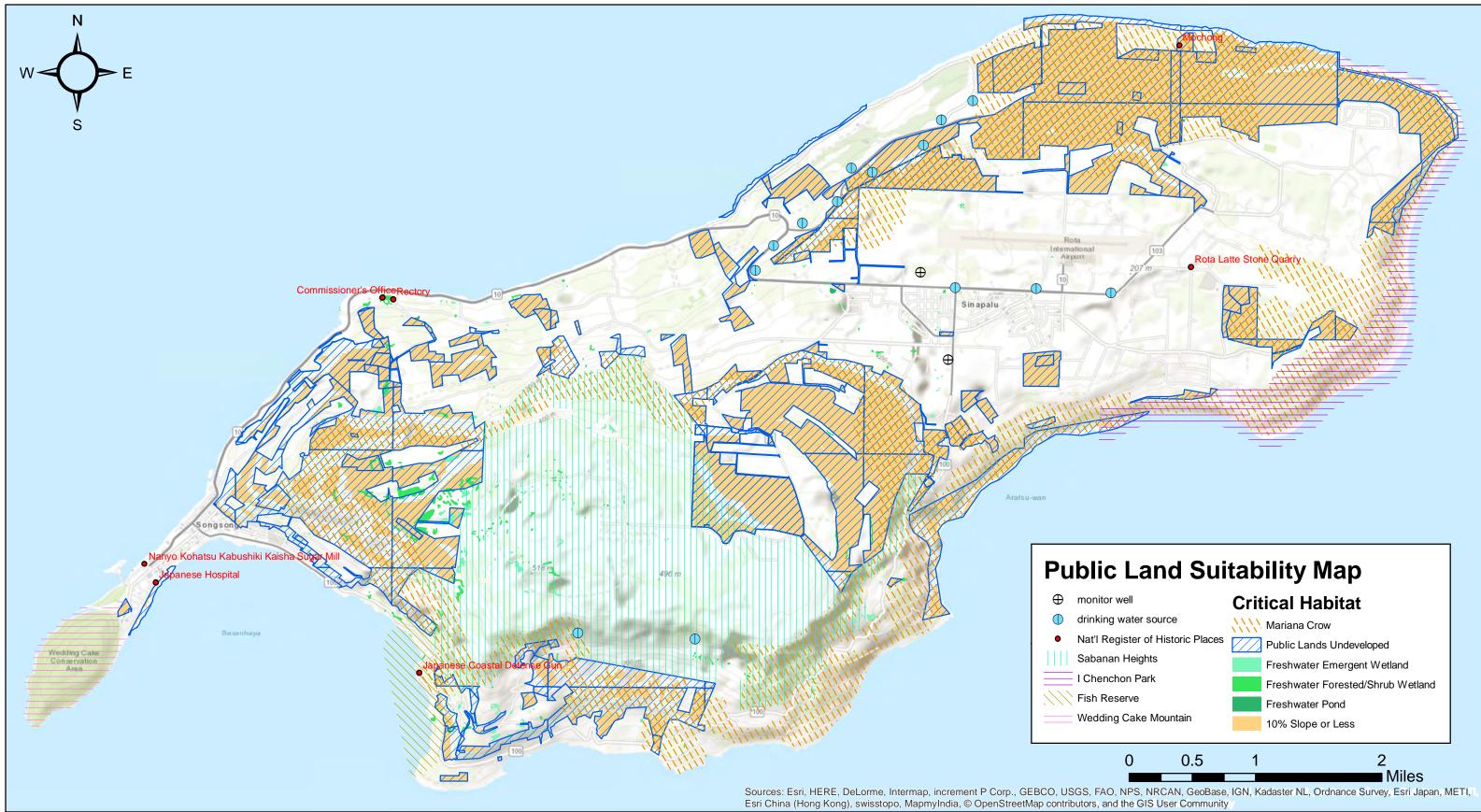




Information by CNMI BECQ & U.S. Army Corps of Engineers



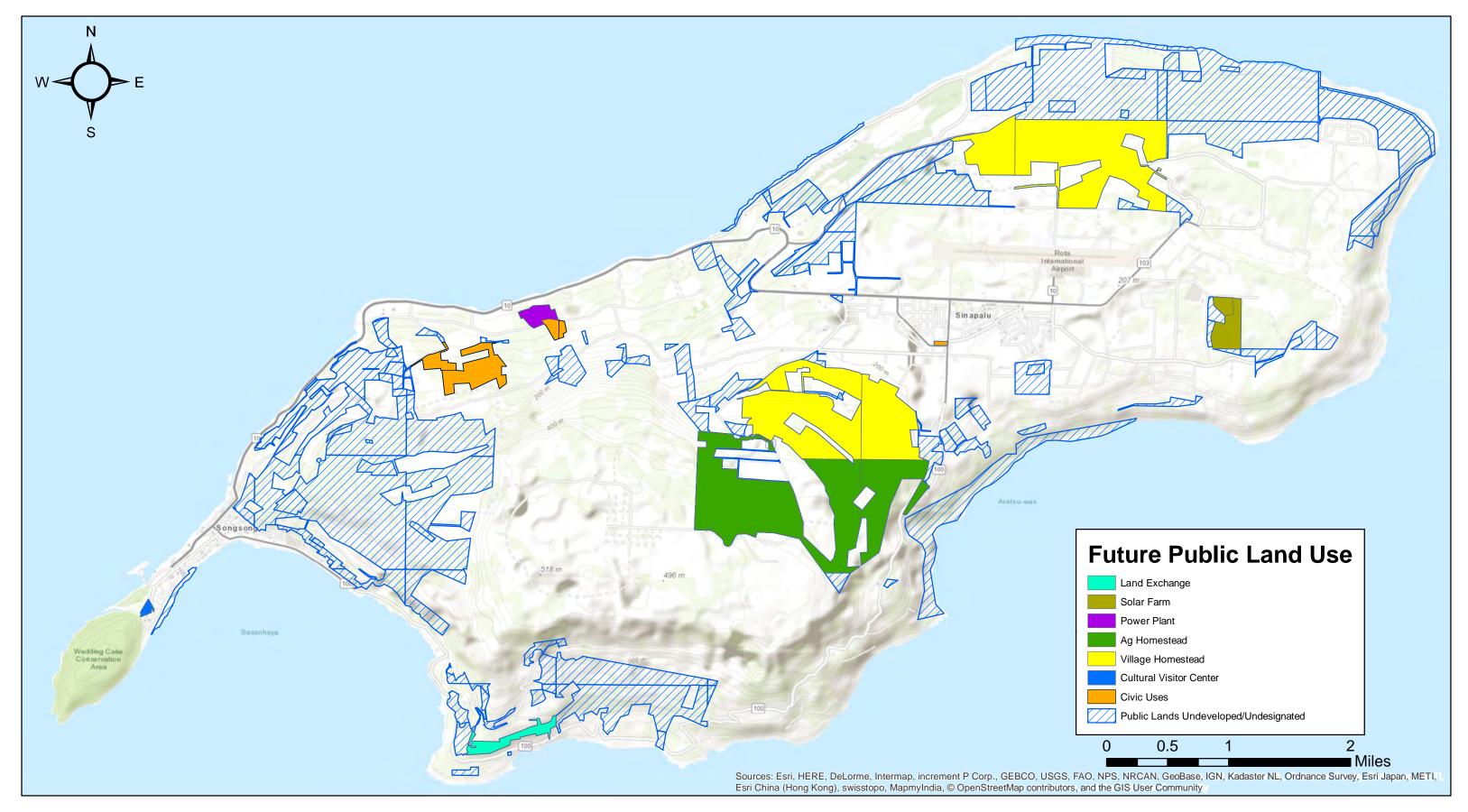




Information by CNMI BECQ, F&W, & DPL



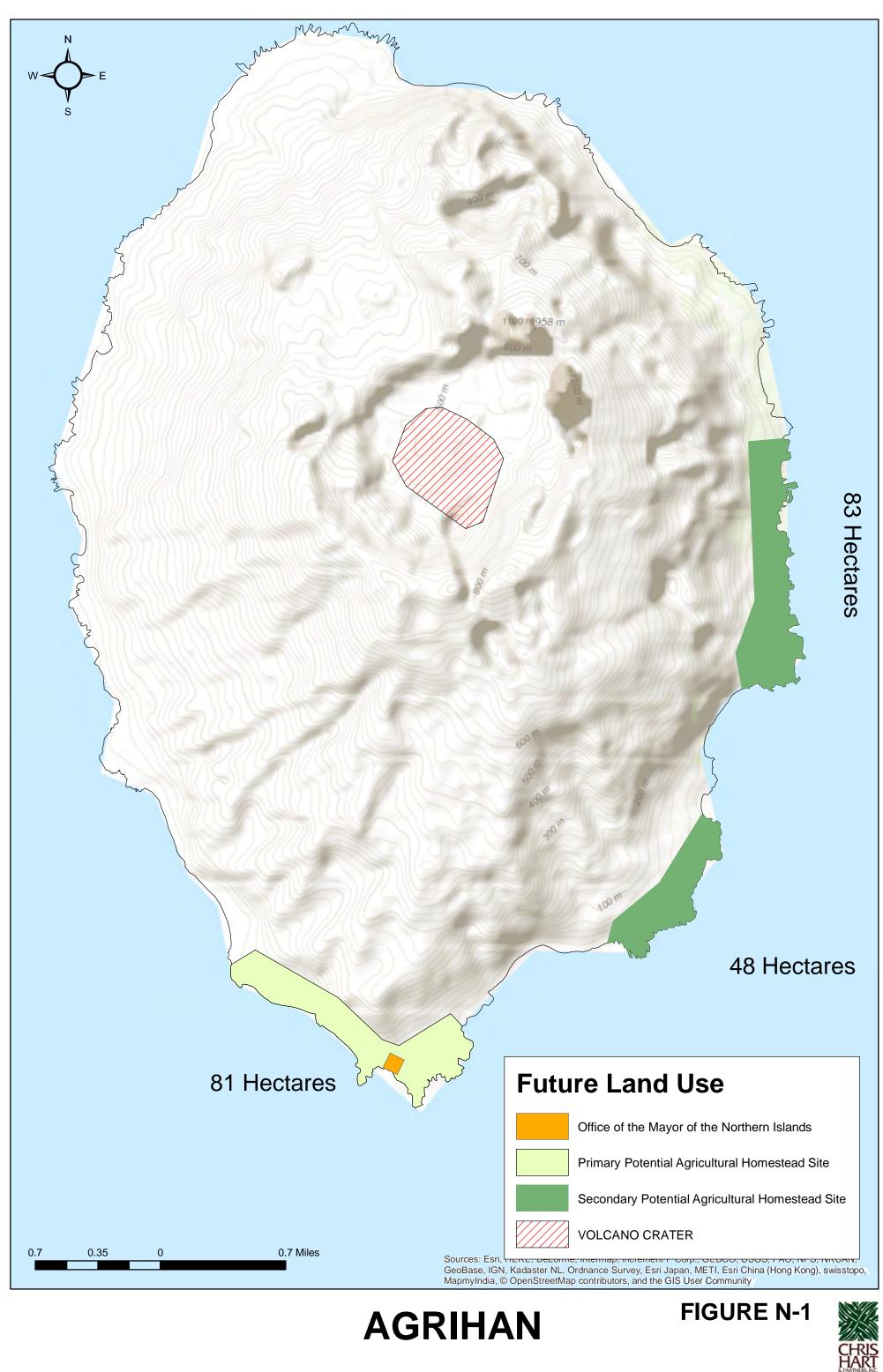




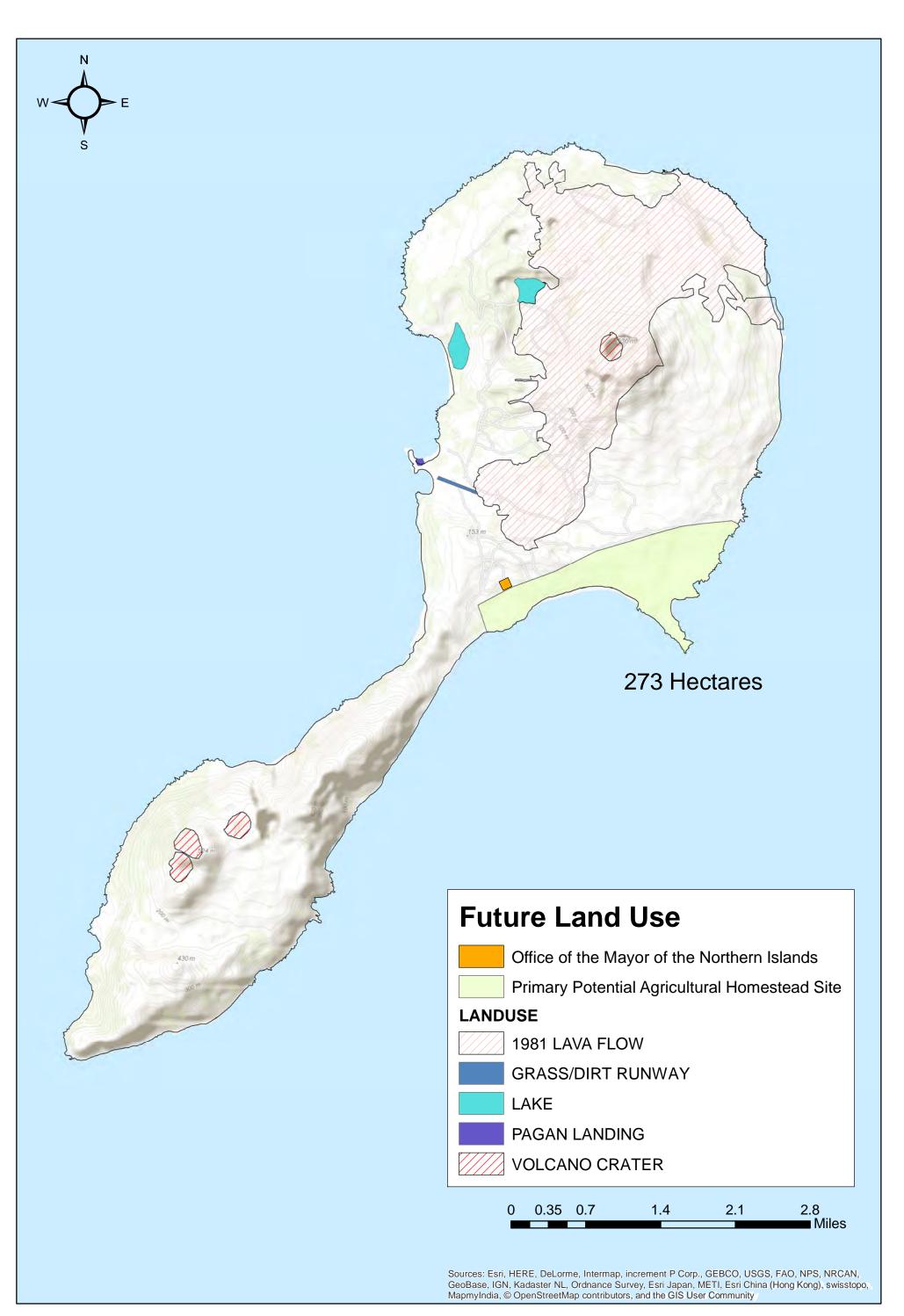




### NORTHERN ISLAND MAPS



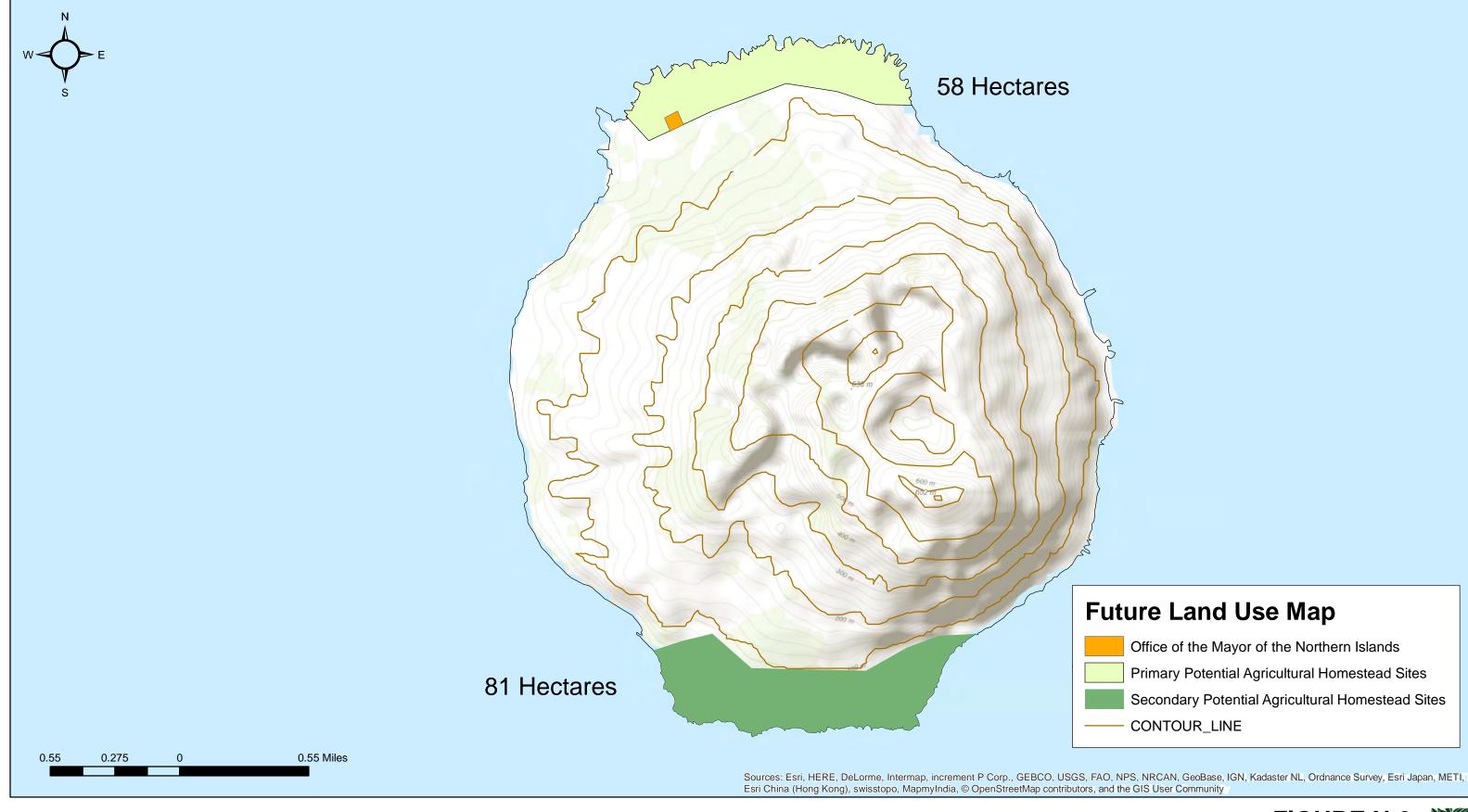




# PAGAN







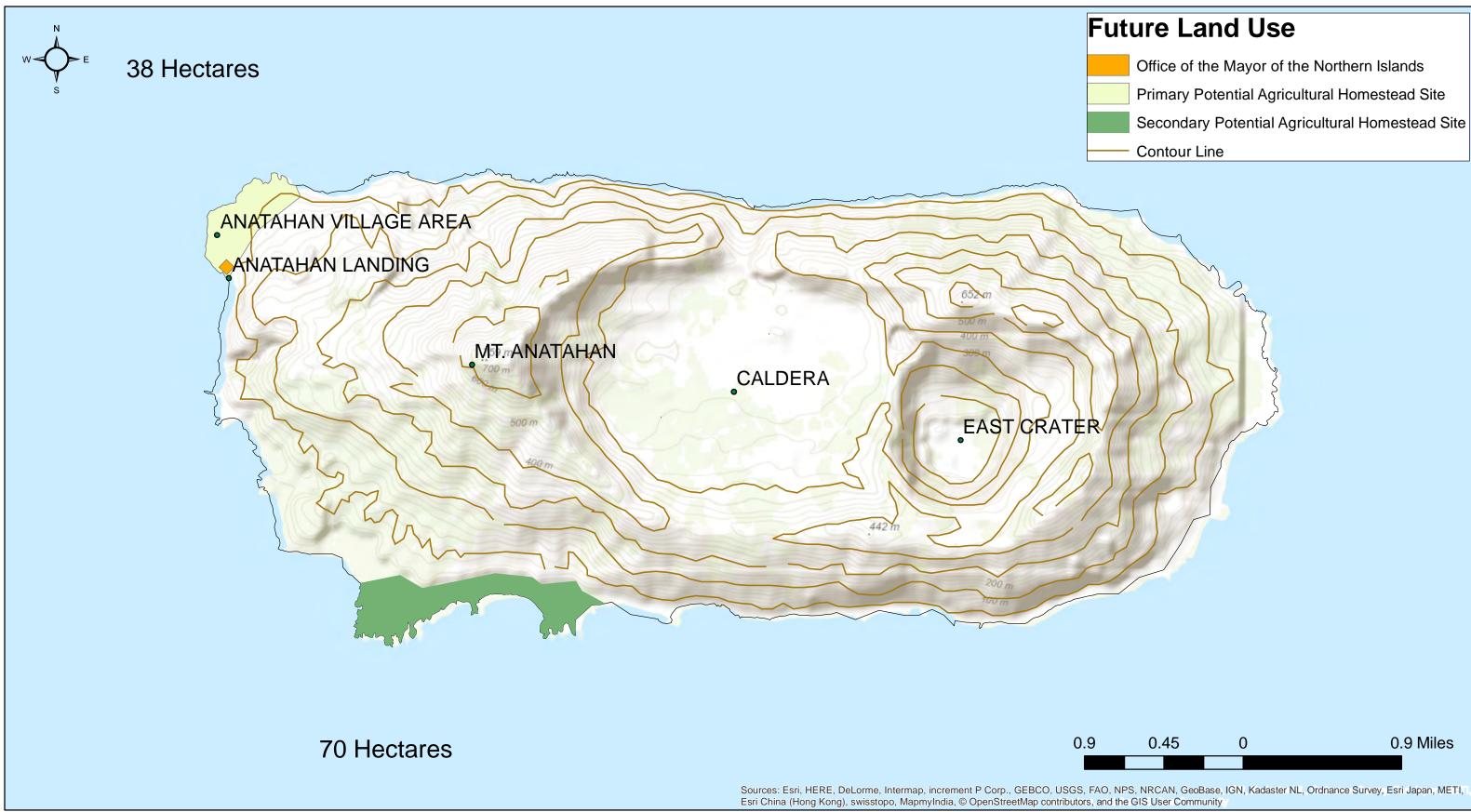
# ALAMAGAN

### Future Land Use Map

Office of the Mayor of the Northern Islands Primary Potential Agricultural Homestead Sites Secondary Potential Agricultural Homestead Sites CONTOUR\_LINE







**ANATAHAN** 



