

Unalaska Land Use Inventory: 2014

City of Unalaska
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INTRODUCTION

The City of Unalaska Department of Planning intends to conduct a full inventory of land use annually in order to understand the status of existing land uses in the community. Planning for the future land use requires a solid foundation of knowledge about the present land use. This inventory can be used as a basis for future planning or a gauge of progress of established goals. Since this is the first annual land use inventory for Unalaska, it can be used as a baseline for future analysis as well as a starting point for the continued land use planning efforts. Here we establish the existing conditions before defining a future vision.

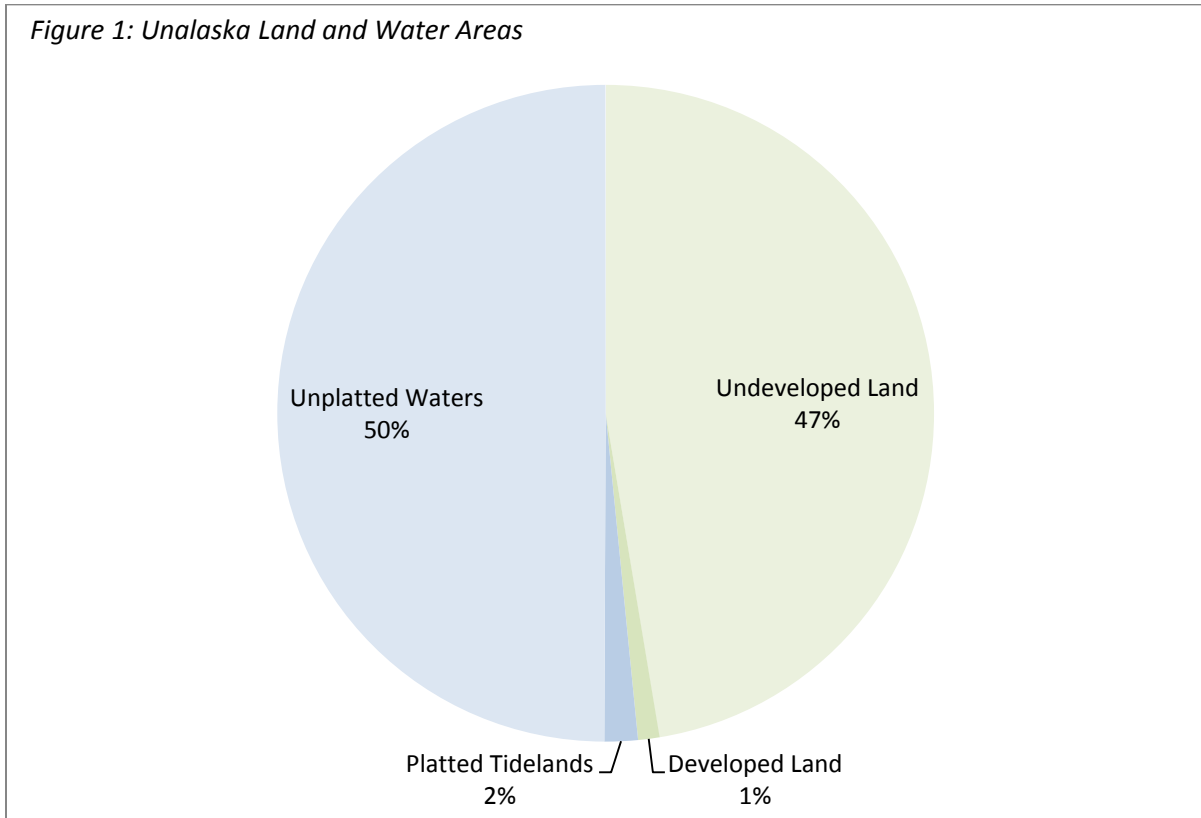
This analysis is parcel-by-parcel, meaning that each piece of individual property in the city is evaluated in determining its specific land use. Ultimately we should be able to step back and gain a general perspective of how land is being used in different areas of the community and see some broad trends, but we can also look at each property individually. Categories were created based on the needs of Unalaska so that the resulting inventory would make sense and have relevance for this community. The analysis section at the end of this document discusses some of the broad trends seen in the inventory, such as the differences in land use between the two islands and the general quantitative values. See the series of maps in the appendix of this document to fully visualize the land use inventory.

The City of Unalaska has extensive boundaries that cover a large land and water area. To gain an understanding of the limits of the city, Table 1 and Figure 1 describe the four types of area encompassed by the city limits. Map 1 in the Appendix shows the entire City with the area broken into the four categories of this table to visualize the areas and locations of each.

Table 1: Summary of City of Unalaska Land and Water Areas

Total City: 134,609 Acres (100%)			
Water: 69,408 Acres (52%)		Land: 65,201 Acres (48%)	
<u>Unplatted Waters</u> 67,201 Acres (50%) Unplatted water areas not suitable for development	<u>Platted Tidelands</u> 2,207 Acres (2%) Platted water areas near shoreline intended for development or subsistence use	<u>Developed</u> 1,421 Acres (1%) Platted land in the developed community area part of road/utility network	<u>Undeveloped</u> 63,780 Acres (47%) Large tracts of unplatted, undeveloped land

Figure 1: Unalaska Land and Water Areas



METHODS

Land use inventory data was obtained using a windshield survey of the community in December of 2013. City staff drove around the city and visually evaluated every parcel of property in the city. Existing files, permits, and records were not reviewed or consulted in the evaluation or analysis process. The only exception is that the tidelands were assigned a value of *open space* based on their zoning as subsistence. The observed land use was recorded in GIS, using a copy of the existing parcel GIS file as the base, and processed, making this a parcel-based inventory. The categories were carefully designed in such a way to capture the unique distribution of uses in Unalaska. In particular, the industrial category was broken into several categories, two of which were *industrial storage* and *industrial company town* to reflect the large land areas used for storage and the unique company town-nature of the fish processing plants. The full land use category breakdown is as follows.

Table 2: Land Use Categories

General Land Use	Land Use	Description
Residential	Single-Family Residential	Contains one or more individual detached residential dwelling units or duplexes
	Multi-Family Residential	Contains one or more structures with three or more dwelling units each

	Mobile Home Residential	Contains one or more manufactured homes, built prior to 1976
Commercial	Commercial	Contains one or more commercial uses, including retail, services, professional services, offices, hotels, and other similar uses
	Commercial Storage	Contains primarily storage space for commercial uses
Industrial	Industrial Storage	Contains industrial uses primarily for storage of materials and equipment, including warehouses and container yards
	Industrial Manufacturing and Processing	Contains industrial uses primarily for the production or processing of materials, including factories, processing plants, heavy machinery repair, welding shops, refineries and other similar uses
	Industrial Company Town	Contains an industrial use with employee housing and supporting commercial, administrative, and professional activities on-site
	Mineral Extraction	Contains activities directly related to mining for coal, petroleum, natural gas or quarrying for stone, sand, or clay
	Marine Transportation	Contains activities directly related to marine transportation including docks, unloading areas, and marine vessel service areas
Institutional	Institutional	Contains institutional uses, including medical, governmental, educational, and religious facilities
Open Space	Open Space	Contains public green space primarily used for recreation, subsistence, or preservation
Utilities/ Transportation	Utilities/ Transportation	Contains public utility buildings or linear structures including pipelines, treatment plants, right of ways, and other similar uses
Mixed Use	Mixed Use	Contains a significant mix of any two or more land uses that are not substantially similar
Vacant	Vacant	Contains parcels in developed areas that do not have structures or that have abandoned or rubble structures
Undeveloped	Undeveloped	Contains large tracts of undeveloped and unsubdivided land. Used to describe the vast expanse of land outside of the developed part of the city.

These categories were applied to any tidelands and developed land areas within the community. Undeveloped areas were identified near the developed areas to help define the boundary between developed and undeveloped. Once that boundary was established, the breakdown shown in Table 1 was created. It's clear that the distinction between developed and

undeveloped land is important. 47% of Unalaska is undeveloped land, while only 1% is developed. It highlights the fact that the community’s growth has only encompassed a tiny portion of the actual city, meaning a land use analysis is most accurate by excluding the undeveloped areas from consideration. By contrast, individual vacant lots within the developed part of the community are called out as *vacant* in this analysis.

Data was collected by categories and the land area was aggregated for each to give the tables shown in the following results section. Land uses are only applied to tidelands and developed land areas. There are three parcels as exceptions where land use applied in the undeveloped part of the community. The Icy Creek corridor and Icy Lake are used as a utility and an open space, but stretch far out into the undeveloped part of Unalaska. The WWII historical area on top of Ballyhoo is shown as open space, but is best understood as part of the undeveloped expanse of Ballyhoo. These three parcels are not included in the results or analysis of the developed area despite showing up with a land use on the maps.

RESULTS

The four categories shown in Map 1, Table 1, and Figure 1 – developed land, undeveloped land, tidelands, and unplatted waters – are all considered separately.

Undeveloped Land

Undeveloped land is a vast expanse of land, covering about 47% of Unalaska. Other than recreation, its only significant land uses are the three mentioned above, Icy Creek/Lake and the WWII area of Ballyhoo. Everywhere else, the undeveloped land coincides precisely with the areas not assigned a land use.

Unplatted Waters

The remainder of the water area that is not platted tidelands is simply unplatted waters, which accounts for half the acreage of the City limits. No development is permitted in these areas.

Developed Land

Looking at the developed part of the community, the table below indicates the acreage of each land use category and its percentage of the total developed area, which is 1,421 acres.

Table 3: Land Use Acreages and Percentages on Land in Developed Part of Unalaska (Tidelands Excluded)

General Land Use	Land Use	Acres	Percent	Percent
Residential	Single-Family Residential	140.6	9.9%	12.5%
	Mobile Home Residential	5.2	0.4%	
	Multi-Family Residential	32.4	2.3%	
Commercial	Commercial	30.0	2.1%	2.4%

	Commercial Storage	4.7	0.3%	
Industrial	Industrial Manufacturing and Processing	9.6	0.7%	41.0%
	Industrial Storage	213.2	15.0%	
	Industrial Company Town	161.0	11.3%	
	Mineral Extraction	169.7	11.9%	
	Marine Transportation	28.7	2.0%	
Institutional	Institutional	194.6	13.7%	13.7%
Open Space	Open Space	40.5	2.9%	2.9%
Utilities/ Transportation	Utilities/Transportation	240.6	16.9%	16.9%
Mixed Use	Mixed Use	15.1	1.1%	1.1%
Vacant	Vacant	135.3	9.5%	9.5%
	Total	1,421.3	100.0%	100.0%

The graphic representations of this data are shown below.

Figure 2: General Land Use Percentages of Land in Developed Part of Unalaska

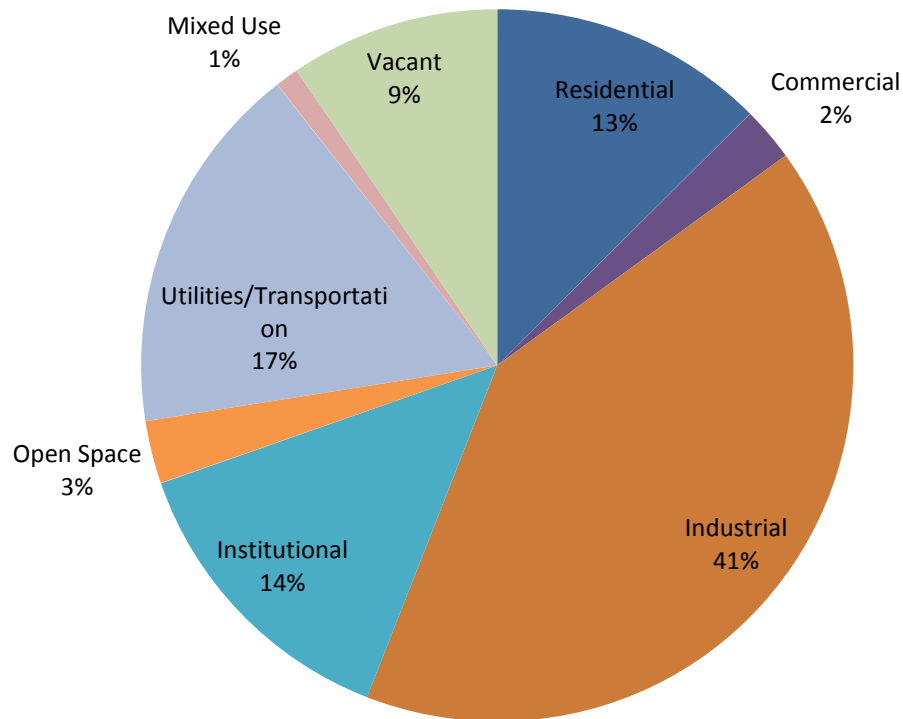
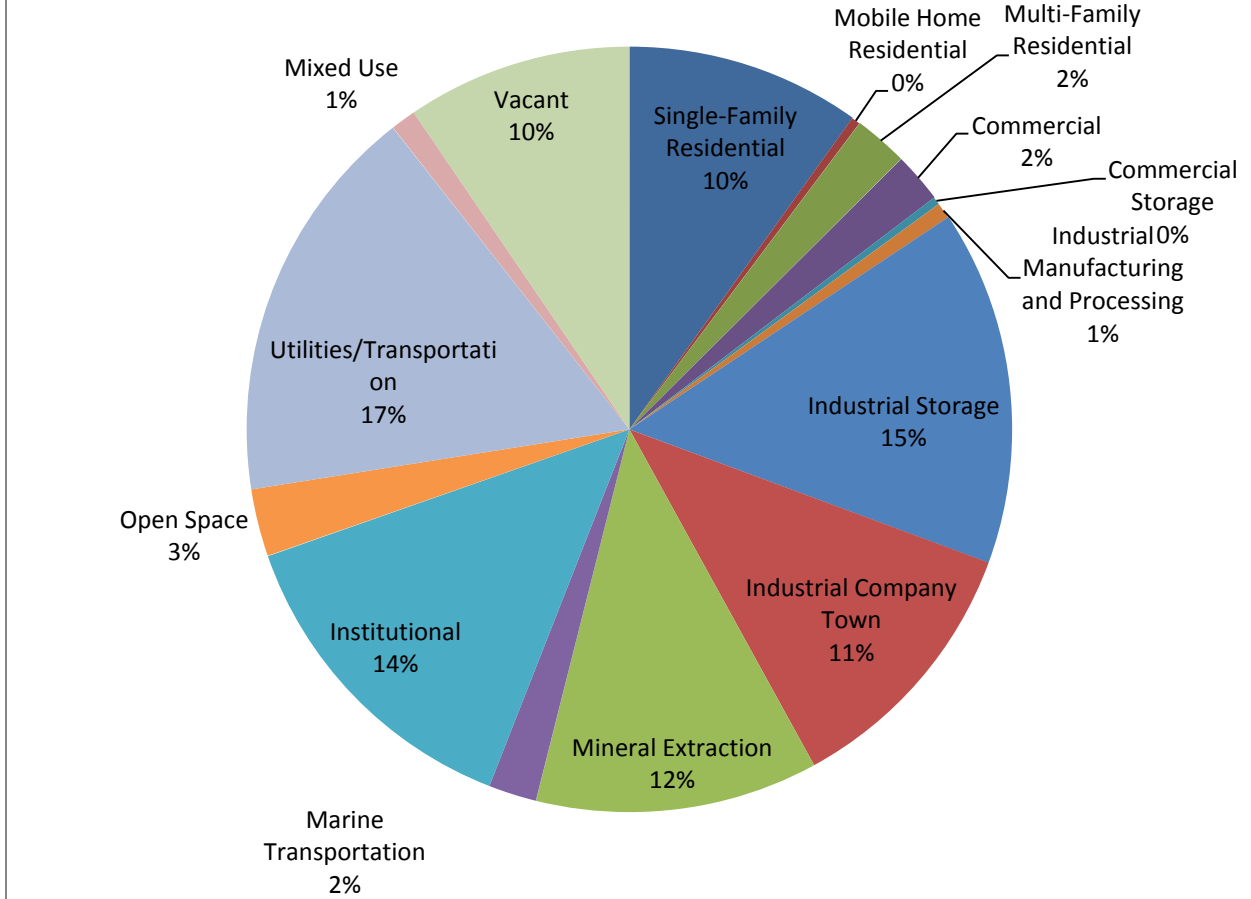


Figure 3: Land Use Percentages of Land in Developed Part of Unalaska

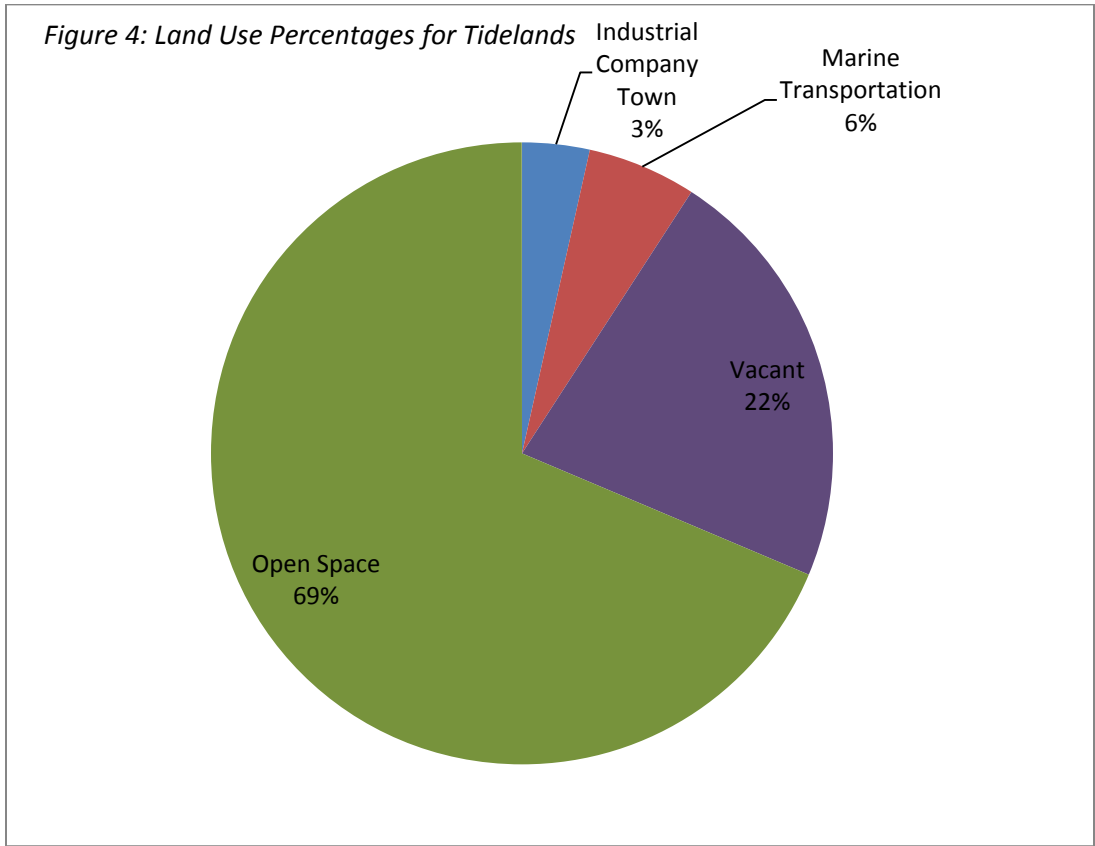


Tidelands

The land use inventory for tidelands further describes the landscape of Unalaska. The table below describes the results.

Table 4: Land Use Acreages and Percentages for Tidelands in Unalaska

Land Use	Acreage	Percent
Industrial Company Town	77.2	3.5%
Marine Transportation	124.7	5.7%
Vacant	490.4	22.2%
Open Space	1,515.0	68.6%
Total	2,207.4	100.0%



All of the data is further represented in map form in the Appendix Maps 2 through 5, showing general land use and specific land use from both a broad scale covering the entire City and a narrower scale covering mostly the developed area for more detail. A visual analysis of the land uses in Unalaska with these maps helps to understand the spatial arrangement of land uses in the community. For a more detailed look, larger maps are available from the Planning Department, allowing a parcel-by-parcel look at the community.

ANALYSIS

The analysis will cover three separate areas: developed land, undeveloped land, and tidelands. Unplatted waters require no further analysis as they contain no development and little development potential.

Developed Land

The summary of land uses by land area in Table 3 and Figures 2 and 3 above provides an overview of the inventory for land. Industrial forms of land use dominate the landscape of the city, taking around 47% of the city’s developed land area collectively. Institutional uses also consume a large portion of the city’s land. Residential areas are minimal in land area, but near the total land area expected for the population. There is a significant land area, about 10%, in

the developed part of the city that is vacant, some of which contains abandoned buildings or is on rough terrain.

Industrial uses – in three primary forms – are predominant in the city’s developed land area. *Industrial storage* is the largest single category of any land use, which accounts for the prevalent container storage yards and warehouses. The other industrial category of notable size is the *industrial company town* category. This accounts for the extremely mixed use nature of the industrial compounds of the fish processors, mixing industrial operations with living quarters and support functions. *Mineral extraction* accounts for the two quarry operations in the city. These industrial uses are Unalaska’s primary base economy.

From Map 2, it is clear that most of the industrial area is concentrated in a few areas. On the Amaknak side, there are several container yards. The company town style of industry is seen at three major fish processing sites and two other sites further down Captains Bay. Very little industry of any kind is found on the Unalaska side past Alyeska, except down Captains Bay.

Institutional uses are another major category, using about 16% of the city’s developed land area. This accounts for the city government functions, including all government buildings, except utility buildings. Also included in this category are the clinic, airport, schools, churches, and post offices. *Open space* is a separate category used for parks, which includes a portion of City-owned land. There’s another category for *utilities*, which encompasses several City-owned buildings such as the landfill and powerhouse. The map shows that most of the institutional uses are on the Unalaska side of the city, but the airport on the Amaknak side is by far the largest institutional use.

Single-family residential uses account for 10% of the city’s developed land area. This is a notable amount, but far less than one would expect in a small community. In fact, the total residential area of the developed area of the city is only 13%. This is related to the fact that residents of Unalaska are not commuting to other places for work, as is typically seen in small towns. In fact, Unalaska is a thriving economic center on its own. Nonetheless, the amount of land used for residential indicates a reasonable density. The data shows 178 acres of residential area. This means an average density of 7.6 units/acre on residential properties to support the community’s current housing needs, based on the population.¹

Residential areas appear nearly everywhere on the map, but on the Amaknak side they are contained within the Standard Oil Hill area reflecting the commercial and industrial nature of that side of the city. It is also notable that the residential areas of the downtown Unalaska Townsite area are interspersed with commercial and mixed use parcels, reflecting this area of the community as a uniquely diverse, multi-use district.

Vacant land is prevalent in the city, accounting for 10% of the city’s developed land area. However, much of this land area is undevelopable due to physical features. A separate study will further produce a Buildable Land Inventory to identify which vacant land in the city is suitable for future development. The areas outside the developed part of the city are identified

¹Assumes a population of 4,737 (July 2013 estimate from the Alaska Department of Labor and Workforce Development, Research and Analysis Bureau) and an average household size of 3.5. Thus, we would expect 1,353 households (or units) in the community, fitting onto 178 acres of residential area.

as suitable for longer term development, and are not included in the vacant land shown in the table.

Undeveloped Land

Unlike the *vacant* sites identified in the developed land area, which are more readily developed in the short term, the undeveloped land represents areas not currently prepared for development. Much of this land is recreational and will never be developed. However, some of it is part of what is indicated in the Unalaska Housing Plan 2020 as mid-term and long-term housing development sites. While some population growth could be absorbed by infill development in vacant lots, future growth in the community's population would require an expansion of the developed area into some portion of the undeveloped area as identified in the Unalaska Housing Plan 2020. Refer to that document for more details.

Tidelands

Unalaska's tidelands account for a great deal of economic activity in the community and also have cultural significance from a subsistence use standpoint. As Table 4 and Figure 4 show, most of the tideland area is categorized as *open space*, which indicates that there is no development on the tideland and it is zoned for subsistence uses only. In other words, development is not permitted on 69% of Unalaska's tidelands. Most of this space, however, is located far outside of the main community area.

Two different types of development were identified, but for practical purposes, they are not significantly different. The *industrial company town* tidelands are simply marine transportation developments associated with one of the larger facilities. In all about 202 acres of tidelands are developed for dock/port facilities. This compares with the 490 acres of *vacant* tidelands that are zoned for development but have none.

Maps 2 through 5 help to understand the spatial relationships of the tideland uses in the community area. It is clear that a significant amount of the tideland development occurs on Amaknak Island and down Captains Bay. The primary subsistence activity is on the Unalaska side, particularly along Front Beach and the Summer Bay area, but there is some open space tidelands on Amaknak as well. Vacant tidelands could be developed in the future and are found along much of the shoreline of the Amaknak side, as well as some areas down Captains Bay.

NEXT STEPS

This study will be repeated every year by the Department of Planning. The purpose is to assess evolution of land use in our community over time. Future land use inventories should focus on the measured change in land use from one year to the next. In the second half of 2014, the Planning Department will be continuing in a land use planning process, and this inventory will serve as a starting point to understand the observed existing land use conditions. Furthermore, future land use inventories will use the land use plan as a lens through which the change in land use over time can be viewed. Ideally, existing land uses would begin to mirror those identified in the land use plan over time.

APPENDIX

Map 1: Overview of Unalaska Land and Water Area

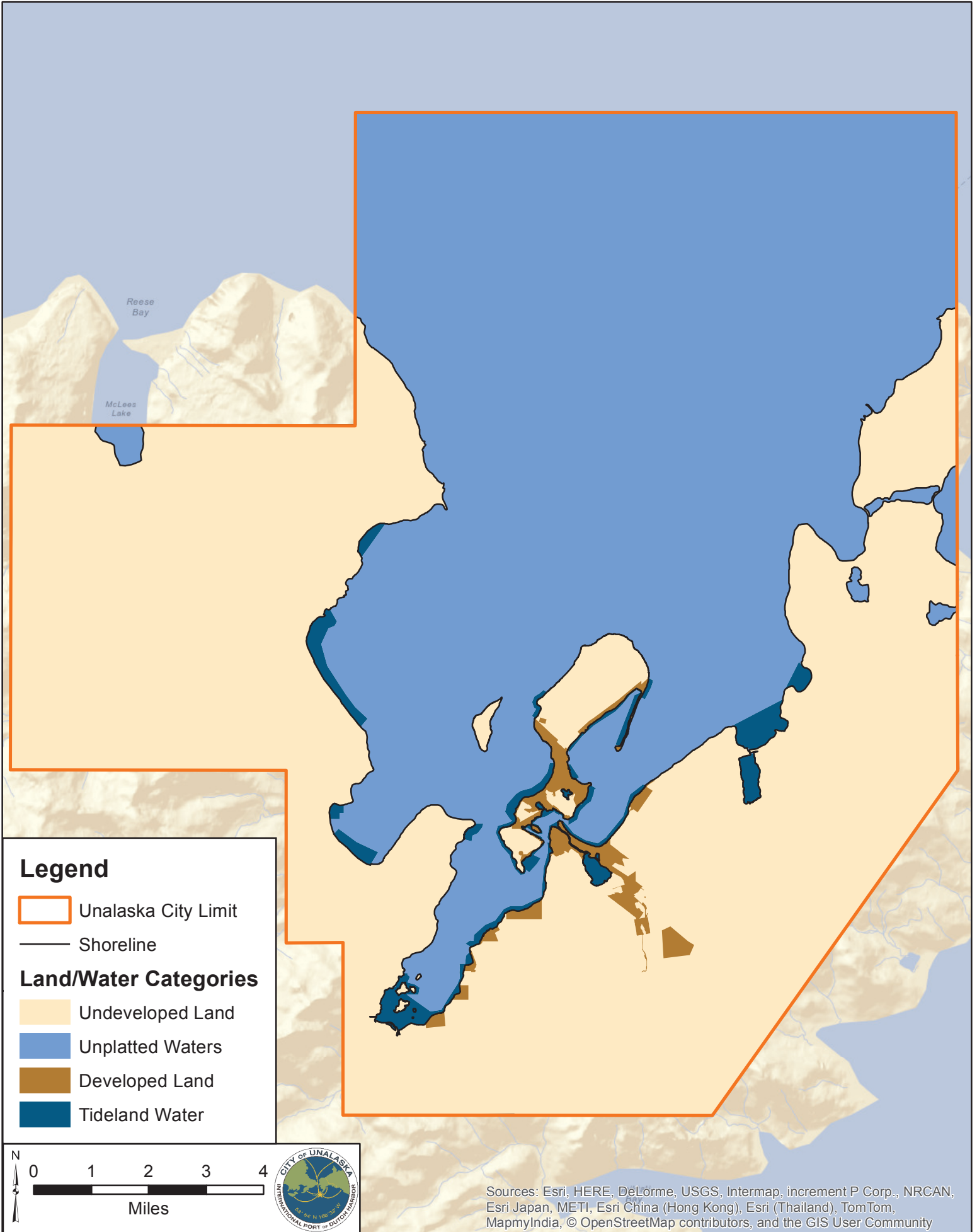
Map 2: Unalaska General Land Use

Map 3: Unalaska Land Use

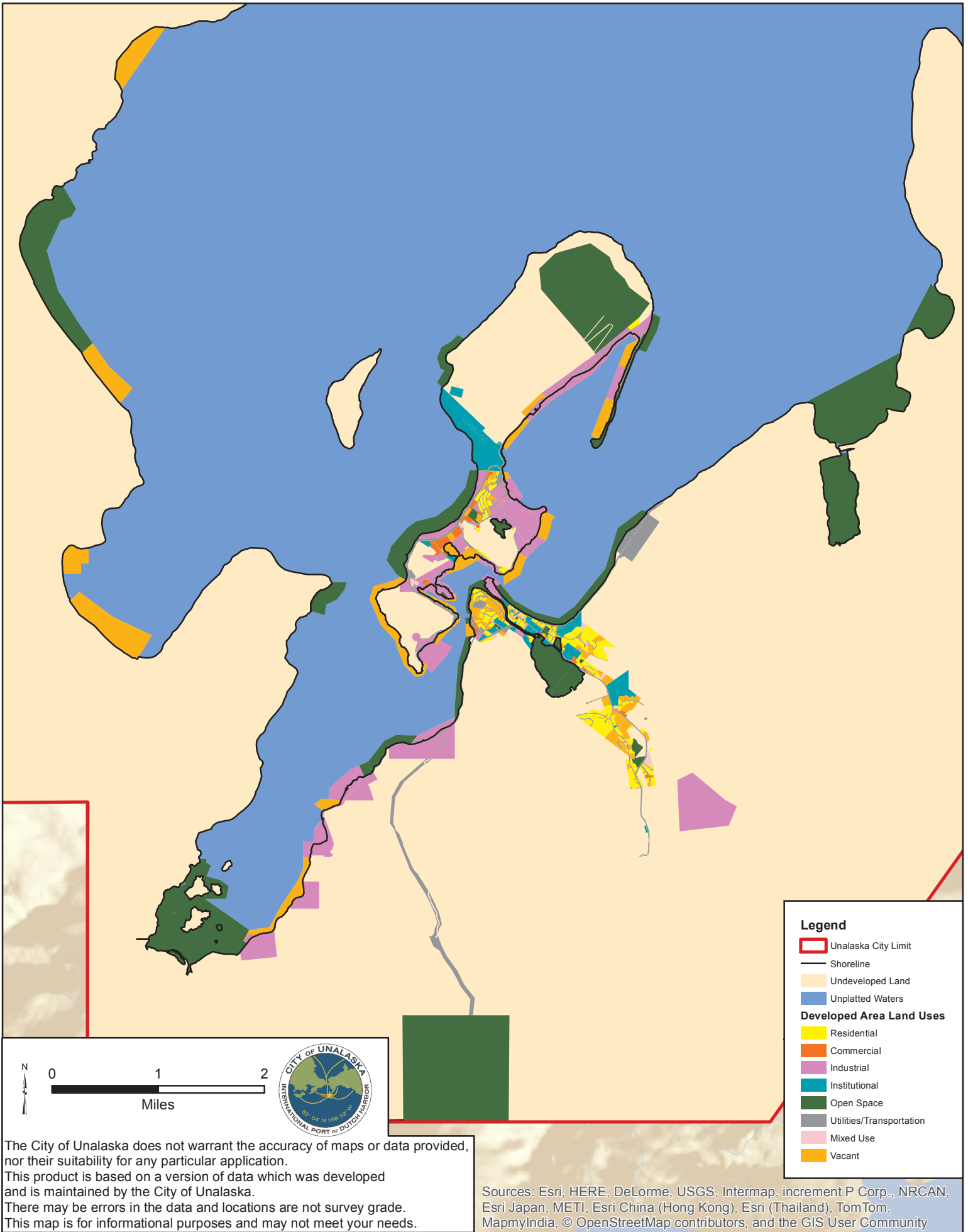
Map 4: Unalaska General Land Use – Community Detail

Map 5: Unalaska Land Use – Community Detail

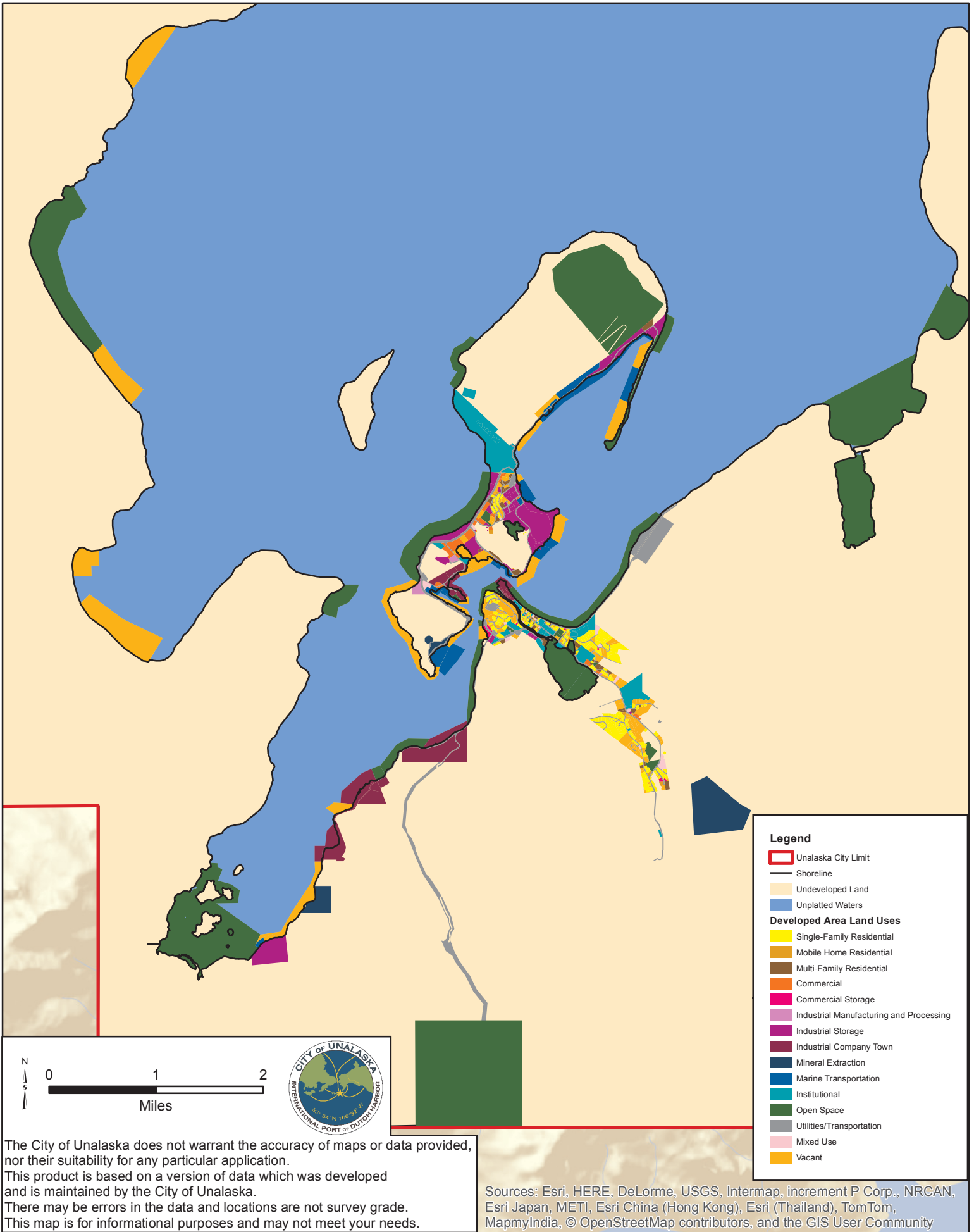
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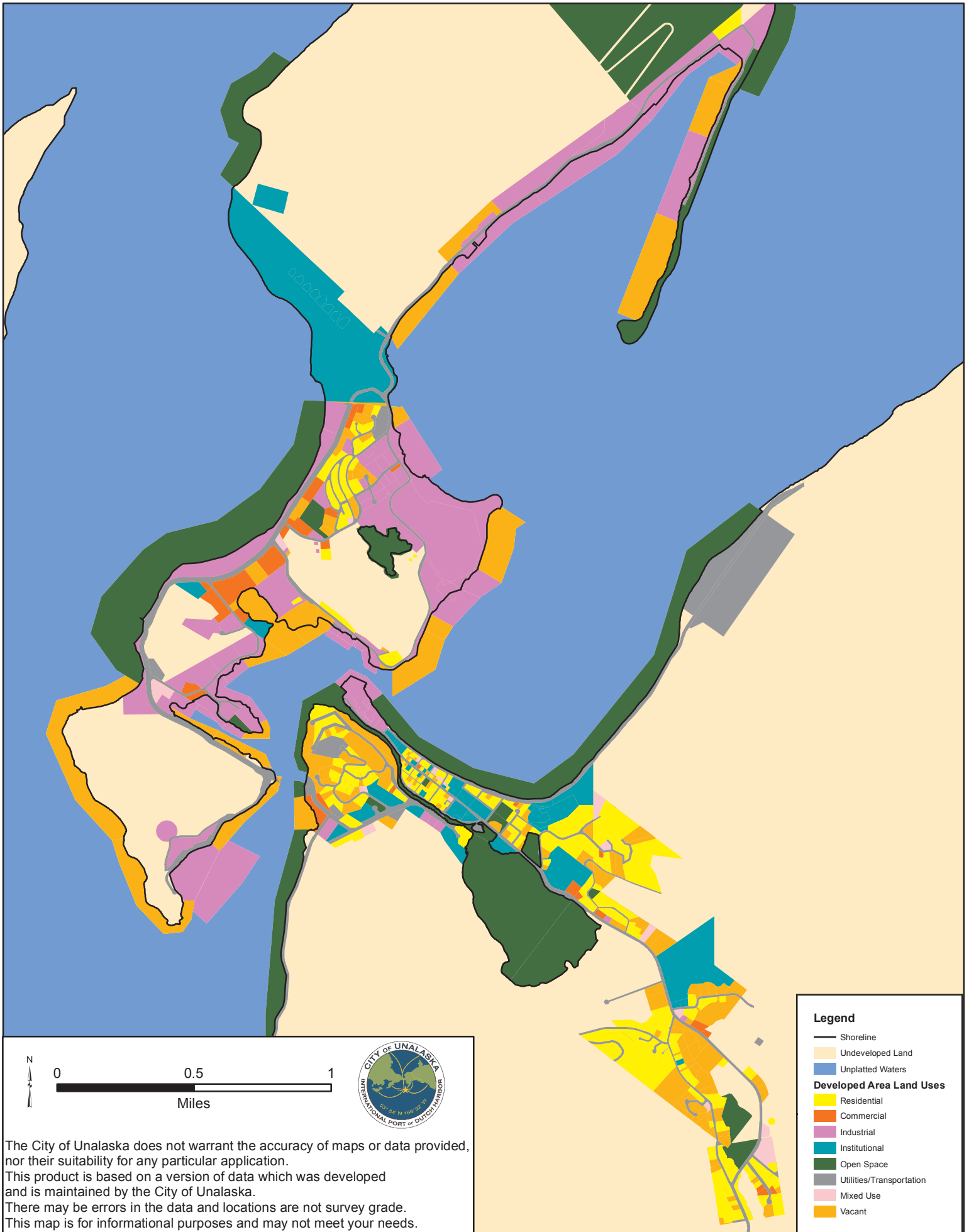
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Map 3: Unalaska Land Use

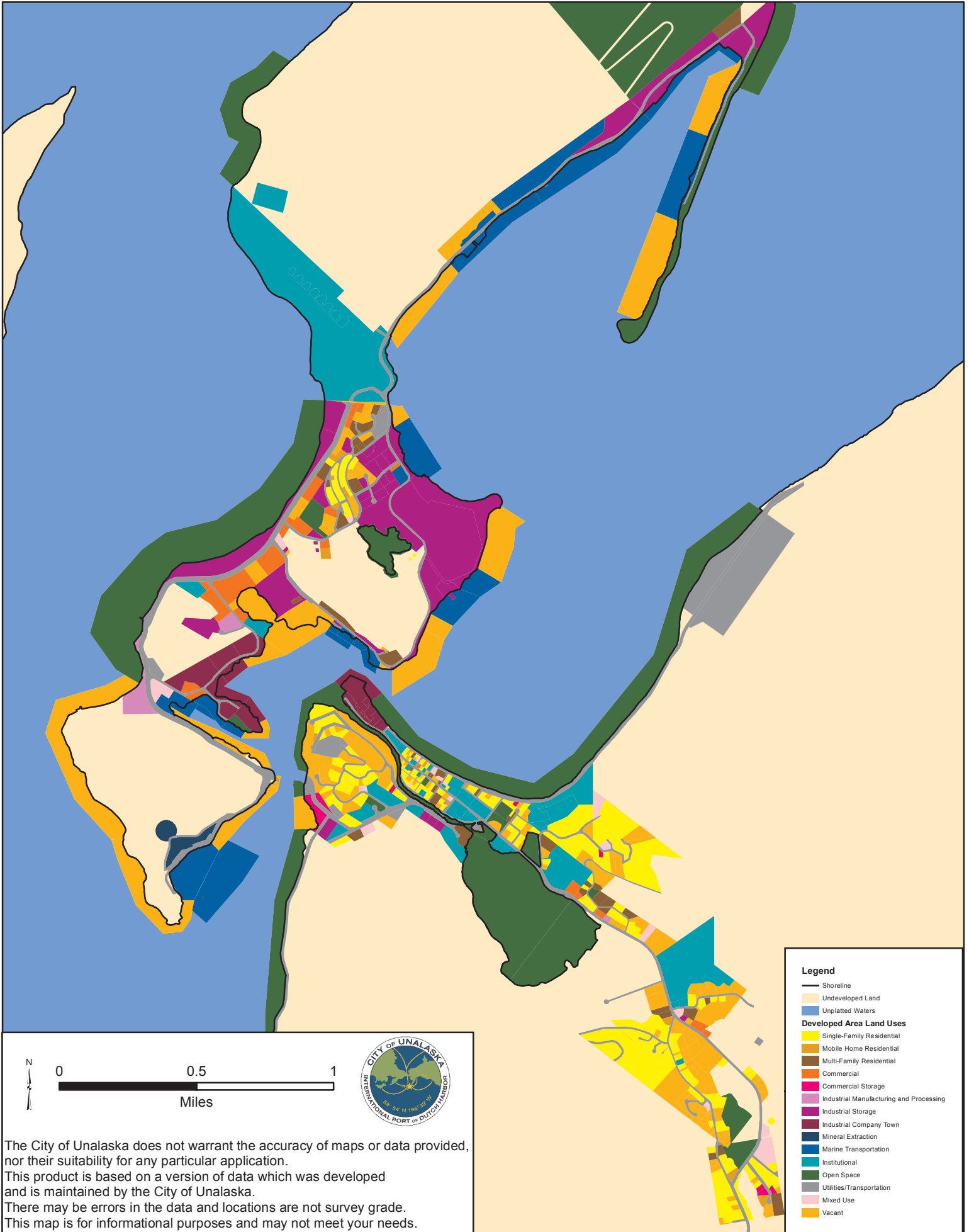


Map 4: Unalaska General Land Use - Community Detail




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Map 5: Unalaska Land Use - Community Detail



- Legend**
- Shoreline
 - Undeveloped Land
 - Unplatted Waters
 - Developed Area Land Uses**
 - Single-Family Residential
 - Mobile Home Residential
 - Multi-Family Residential
 - Commercial
 - Commercial Storage
 - Industrial Manufacturing and Processing
 - Industrial Storage
 - Industrial Company Town
 - Mineral Extraction
 - Marine Transportation
 - Institutional
 - Open Space
 - Utilities/Transportation
 - Mixed Use
 - Vacant

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Miles



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