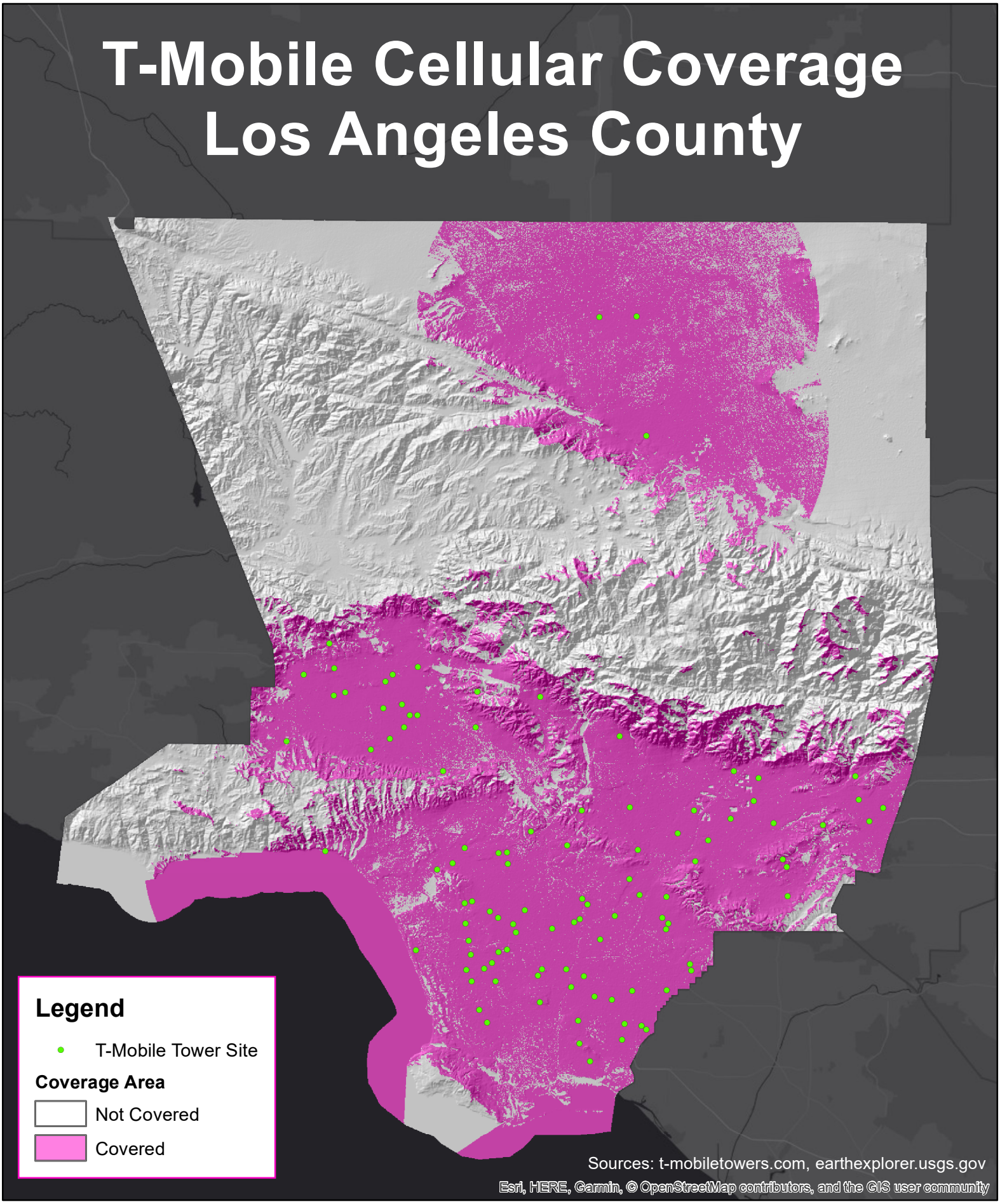
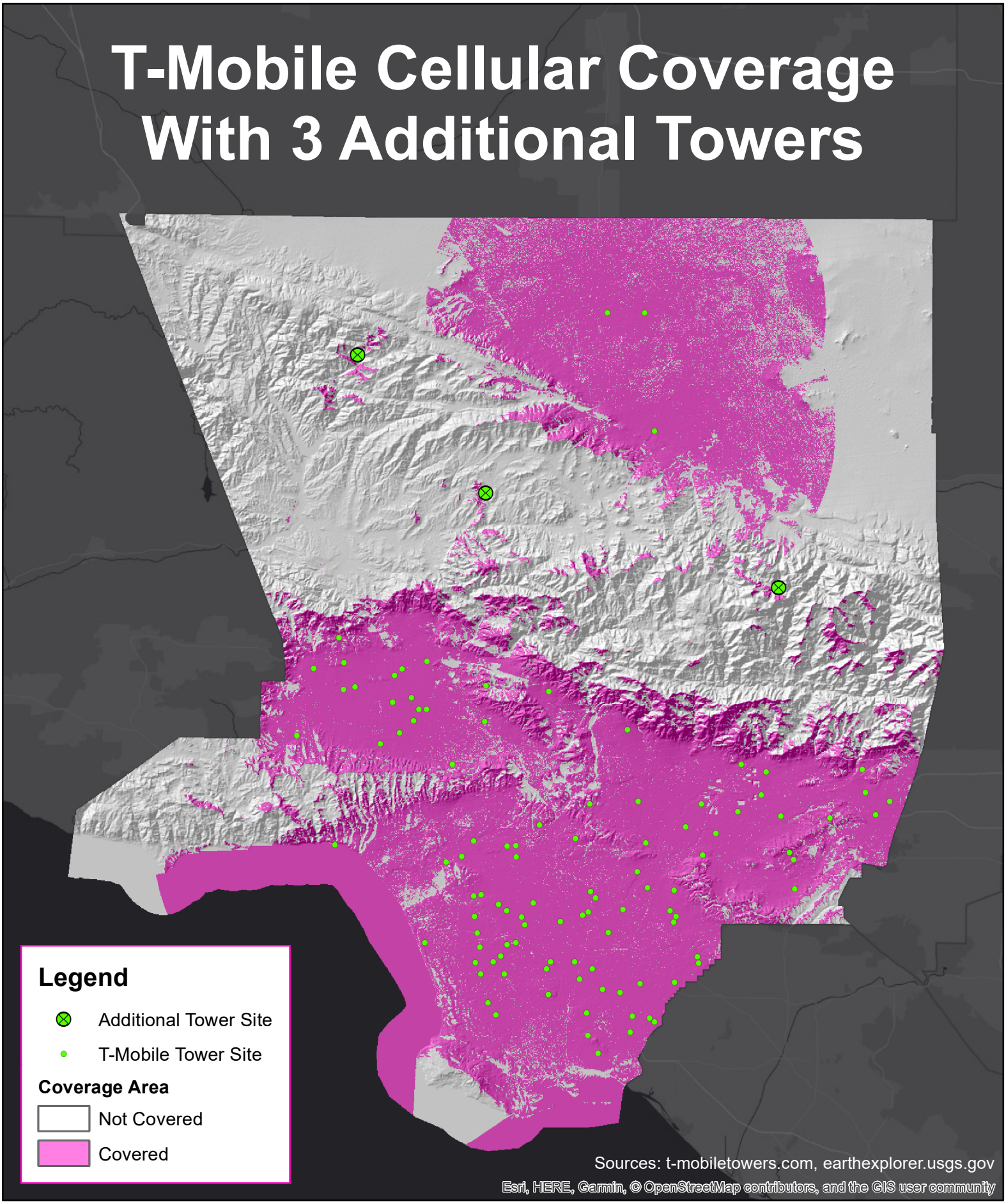
T-Mobile Cellular Coverage
Los Angeles County



58.92% of county NOT COVERED under current conditions

Cartography by Sara Diercks

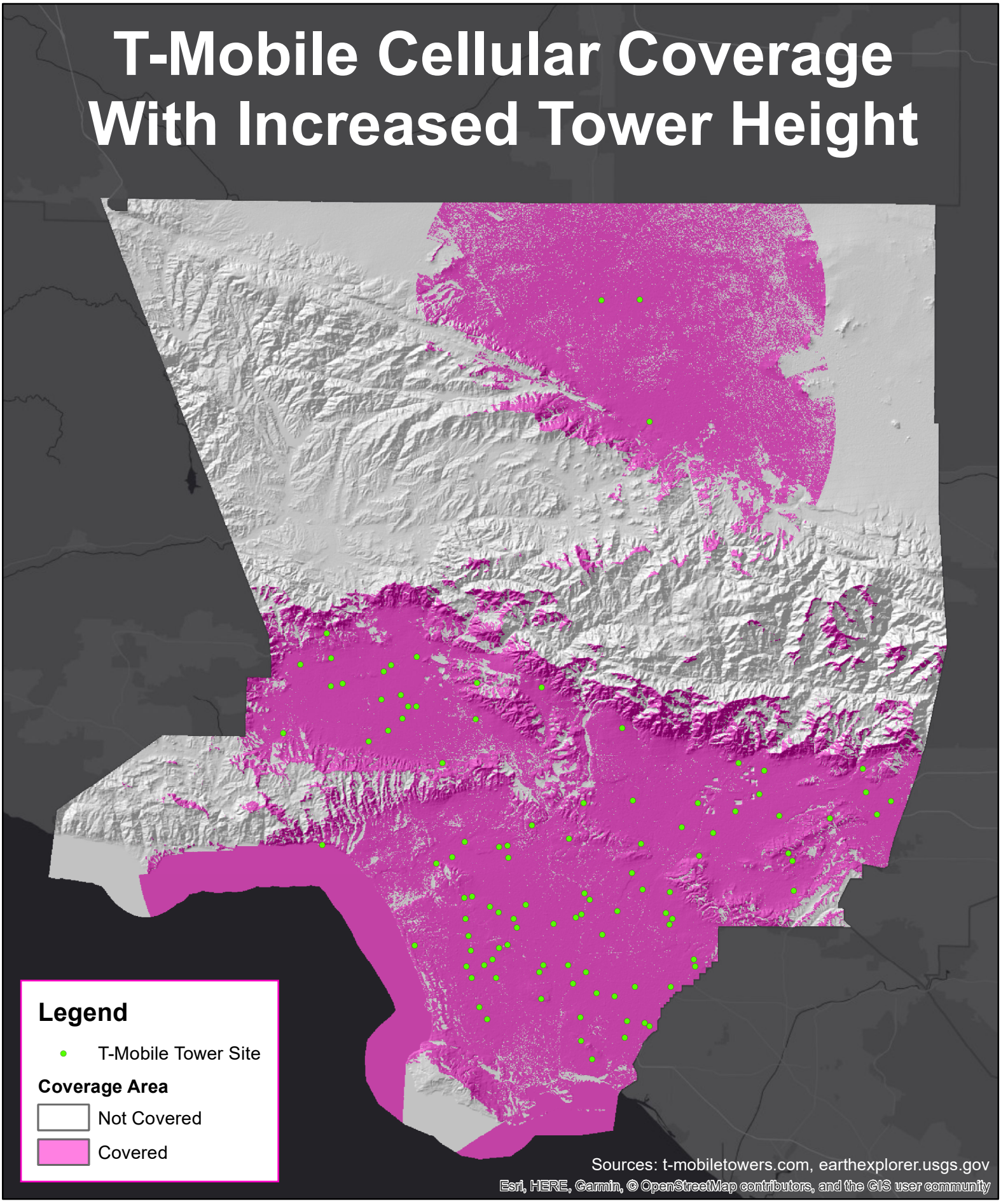
T-Mobile Cellular Coverage With 3 Additional Towers



58.61% of county NOT COVERED if 3 new towers were added

Cartography by Sara Diercks

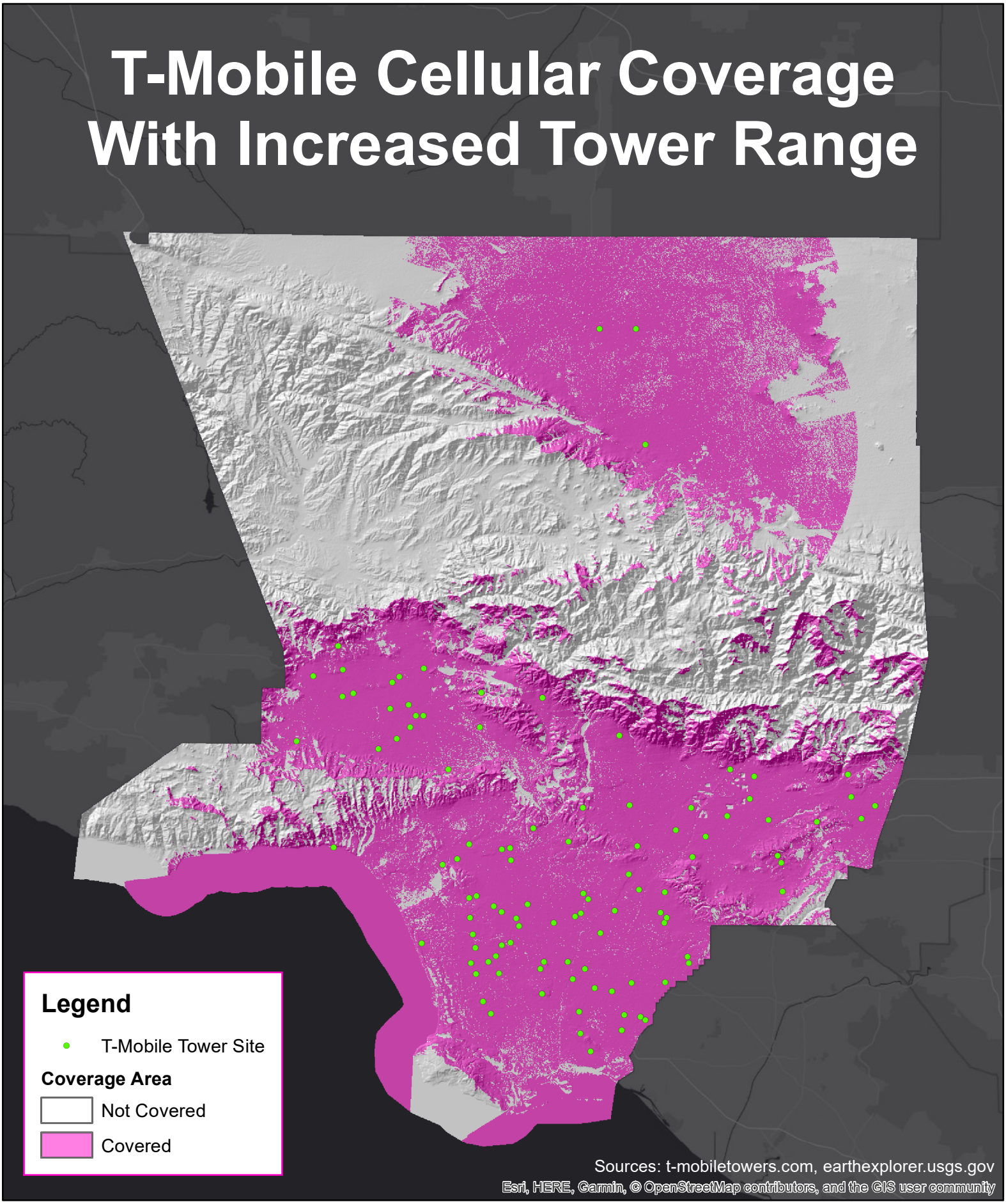
T-Mobile Cellular Coverage With Increased Tower Height



58.31% of county NOT COVERED if existing tower heights are raised by 10 meters

Cartography by Sara Diercks

T-Mobile Cellular Coverage With Increased Tower Range



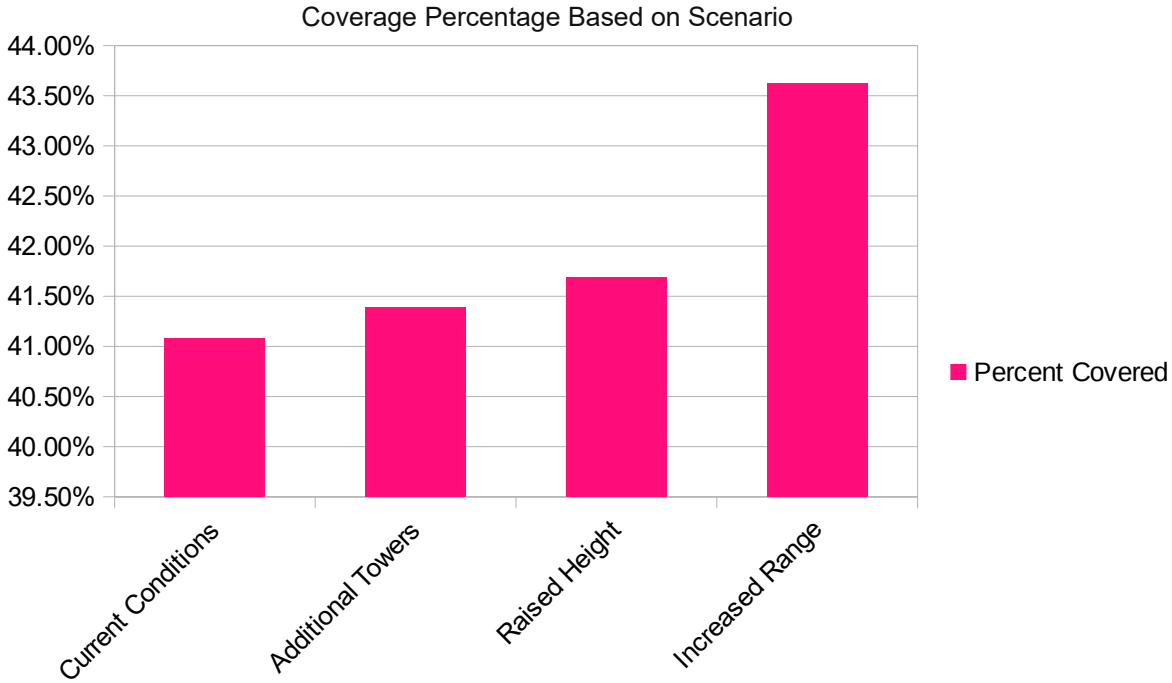
56.38% of county NOT COVERED if existing tower range increased by 5km

Cartography by Sara Diercks

Sara Diercks

Supplemental Chart and Data Table

Scenario	Percent Not Covered	Percent Covered	Percent in Coverage Change from Current Conditions
Current Conditions	58.92%	41.08%	N/A
Additional Towers	58.61%	41.39%	0.31%
Raised Height	58.31%	41.69%	0.61%
Increased Range	56.38%	43.62%	2.54%



Sara Diercks

T-Mobile Coverage Analysis

In my analysis of T-Mobile cellular coverage of Los Angeles County, I have discovered what percentage of the land has coverage, and more importantly, which does not have coverage. After analyzing current conditions against 3 different coverage scenarios, it is my recommendation to increase the maximum range of all existing T-Mobile cellular towers by 5 kilometers. Following is an analysis of each scenario.

Current Tower Conditions

Currently, T-Mobile has a non-coverage area of about 58.92%.

Add three new cellular towers in underserved areas

This scenario would decrease non coverage from 58.92% to 58.61%, an increase of .31% coverage area. This scenario is highly dependent on where the 3 towers can and should be placed. In my analysis, I chose three points along the mountain range where coverage was lacking, in hopes it would provide more coverage. However, these additional towers did not do much, likely due to the high mountain ranges. By looking into more specific data, such as mountain height and population, more precise decision making could be made into where to place new towers, causing the scenario to play out differently.

Increase the height of all existing cellular towers by 10 meters

This scenario would decrease non coverage from 58.92% to 58.31%, an increase of .61% coverage area. The scenario proved better than adding new towers, but not as beneficial as increasing the maximum range.

Increase the maximum range of all existing cellular towers by 5 kilometers

This scenario would decrease non coverage from 58.92% to 56.38%, an increase of 2.54% coverage area. This situation is by far the best option of the three for increasing cellular coverage in the county.