ZION
National Park

Natural Landform and Terrain Atlas

"Mountains are the beginning and the end of all natural scenery."

— John Ruskin

▼ Disclaimer

This map is produced as a portion of the requirements of the GIS: Cartography and Geovisualization program of the Centre of Geographic Sciences, NSCC, Lawrencetown, Nova Scotia.

The product is unedited, unverified and intended for educational purposes only.

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COGS | nscc

Introduction

Zion National Park is one of the most iconic landscapes of the American Southwest, known for its striking diversity of natural features, including towering Navajo Sandstone monoliths, deep and expansive canyons, and elevated mesas and plateaus.

The origins of the park's protection date back to 1909, when President William Howard Taft established the Mukuntuweap National Monument, an early federal effort to preserve the area's aesthetic, geological, and geographical significance. Growing interest in the region led Congress to redesignate the monument as Zion National Park in 1919, making it the oldest national park in Utah (National Park Service, 2025).

Over the past century, Zion National Park has become one of the most visited parks in the National Park System. In 2024, it ranked second among U.S. national parks, behind only Great Smoky Mountains National Park, with just under 5,000,000 recreational visits (NPS, 2025b).

The landscape of Zion is defined by dramatic verticality. The expanse of the Colorado Plateau abruptly gives way to a complex maze of deep, water-carved canyons. At the heart of this dramatic change in terrain is the North Fork of the Virgin River. Powered by continuous geological uplift, the river relentlessly carves through the soft sedimentary sandstone, creating lush riparian zones flanked by majestic rock towers.

Together, these elements create a landscape defined by immense scale and striking contrast.

▼ About This Zion National Park Atlas

This atlas is a topographical reference of Zion National Park and uses digital elevation models, hill shading, and contour mapping to illustrate the park's terrain. Its purpose is to provide readers with a detailed visual understanding of Zion's major landforms, elevation patterns, and spatial relationships.

The atlas is divided into 14 map plates, each representing a unique portion of the park. Every plate is identified by a grid designator (see How to Use This Atlas) and titled according to the most prominent features within its extent. Together, the plates present a complete, continuous picture of Zion's landscape.

While it is not possible to display all of the park's geographic features, this atlas includes a selection of major and well-known features, ensuring that the most significant elements of Zion's natural environment are represented.

ZION
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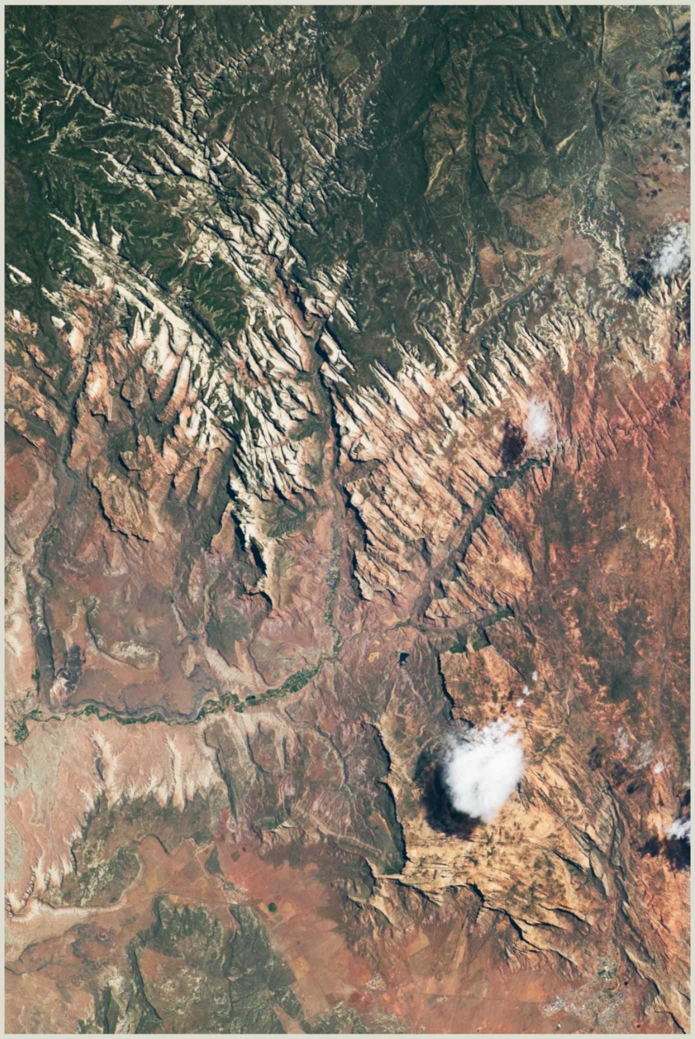


Zion National Park — NASA

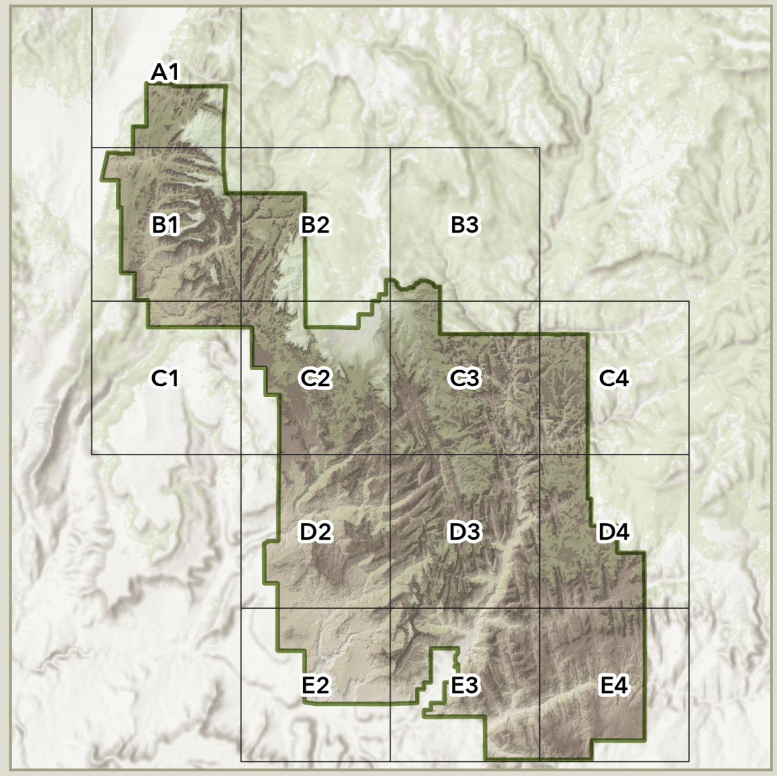
How to Use This Atlas

This atlas illustrates the key landforms of Zion National Park using a tiled map series. Each plate depicts the named peaks, mesas, buttes, canyons, and drainages within its tile. Use the Table of Contents below to navigate through the atlas, and refer to the Keymap on the right to understand each plate's location within the park.

▼ Table of Contents

▼ Map Plates

▼ Supplementary Information



▲ Zion National Park Keymap

The keymap helps you navigate the atlas. The atlas divides Zion National Park into a grid, and each square–A1, B2, C3, and so on–matches a specific map plate in the pages that follow.

▼ Map Symbols

- City
- Town
- Village
- RangerStation
- Overlook
- Parking
- Restrooms
- Camping Area
- Trailheads
- Airport
- Mountain Peak
- Notable Features
- Fire Hall
- Hiking Trails
- Tunnels
- Interstate
- Principal Highway
- Minor Highway
- Local Road
- Railway
- Watercourse
- Index Contour
- Intermediate Contour
- Zion Park Boundary
- Waterbodies
- Woodland Area
- Native American Area
- 8744 ft
- 3661 ft
- County Boundary

▼ Technical Information

- Contour Intervals: Intermediate: 400 ft, Index: 1,000 ft
- Projection : Lambert Conformal Conic
- Projected Coordinate System: NAD 1983 StatePlane Utah South FIPS 4303
- All elevations are shown in feet (ft)
- Scale: 1:40,000

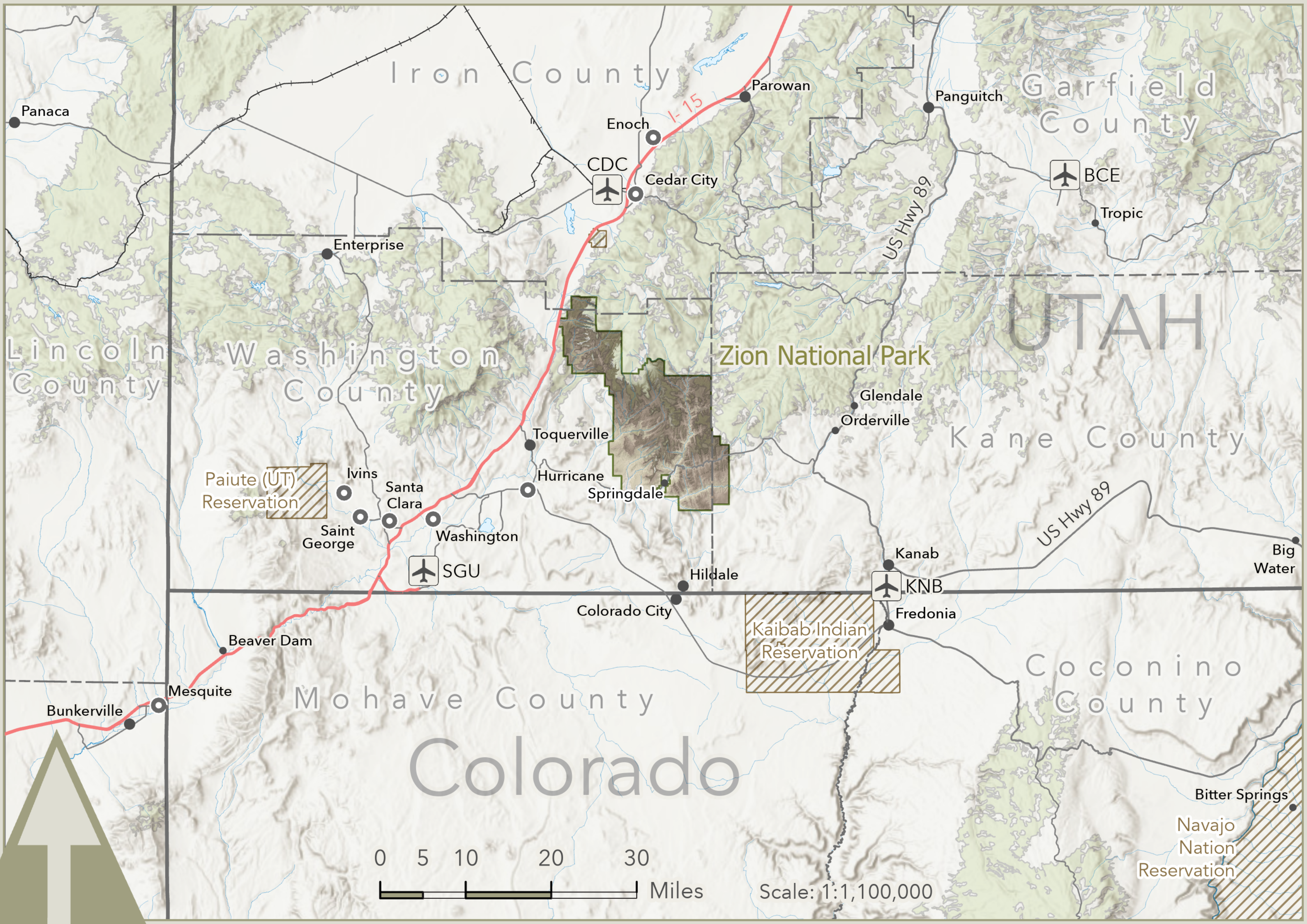
Location & Extent

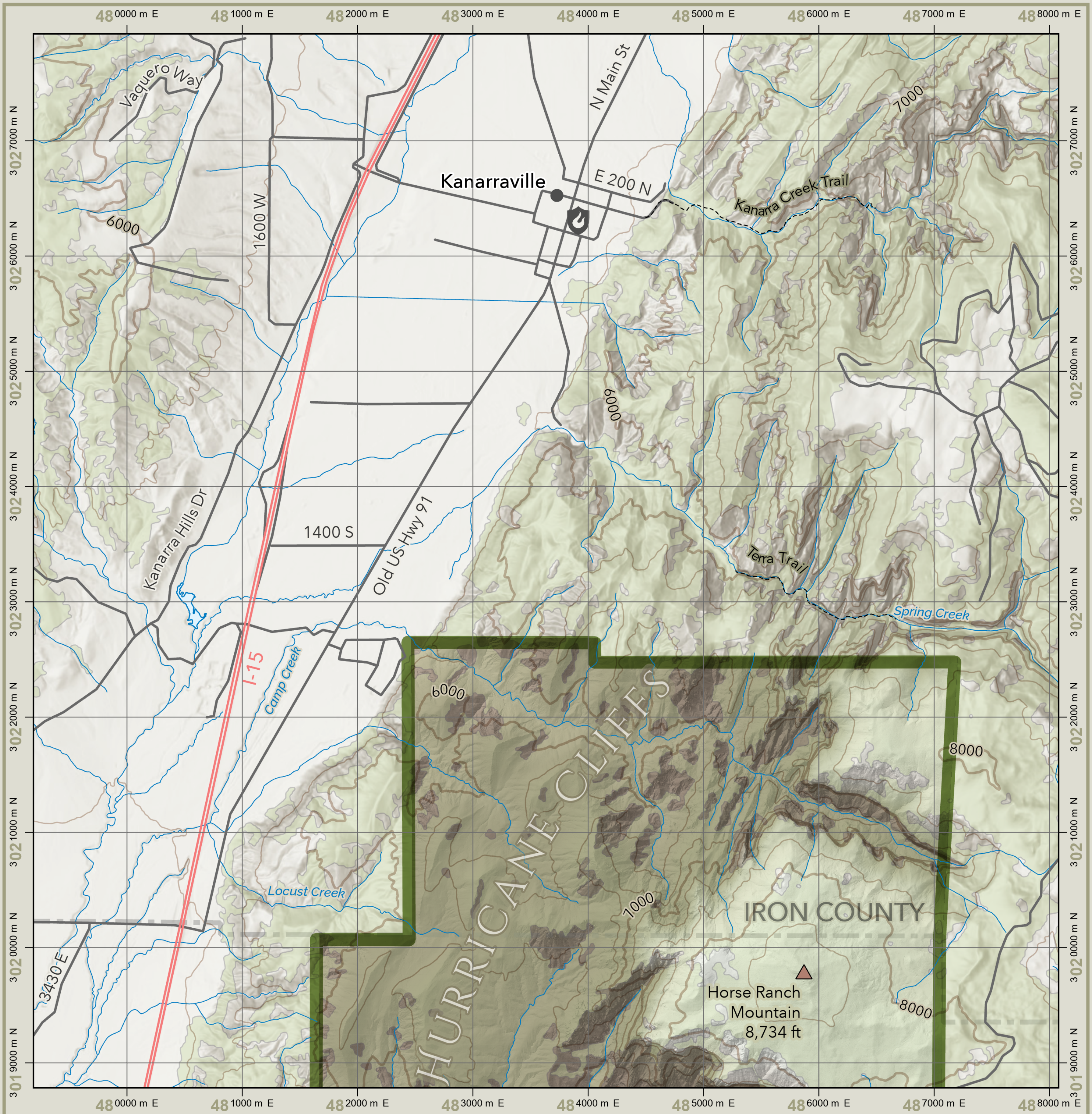
Zion National Park sits in the southwestern corner of Utah, within a tri-county region that borders Washington, Iron, and Kane Counties, approximately 325 miles south of Salt Lake City, near the Colorado border. The park sits on the middle step of the geological Grand Staircase, an extensive sequence of colourful sedimentary rock layers between the Grand Canyon in Arizona and Bryce Canyon National Park in Utah, at a significant North American physiographic junction–the meeting of the Colorado Plateau, the Mojave Desert and the Great Basin. This convergence creates exceptional geological diversity and strong ecological contrasts.

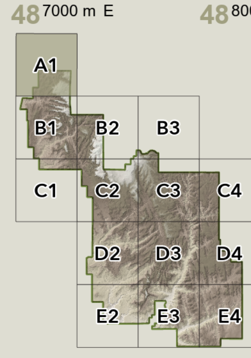
The park covers approximately 148,016 acres of canyons, mesas and high plateaus along the western edge of the Colorado Plateau, ranging in elevations from 1,128 metres (3,700 feet) in the southwestern corner to 2,660 metres (8,726 feet) at the summit of Horse Ranch Mountain to the northeast (NPS, 2004). Dominating the park's drainage is the North Fork of the Virgin River, which flows southwest through Zion Canyon.

All mapping in this atlas is produced using a custom version of the NAD83 Stateplane Utah South (FIPS 4303) coordinate system to minimize distortion across the extent of Zion National Park. The regional map below shows the park's broader spatial context, including counties, cities, transportation infrastructure, and Native American reservations.

▼ Zion National Park–Regional Overview



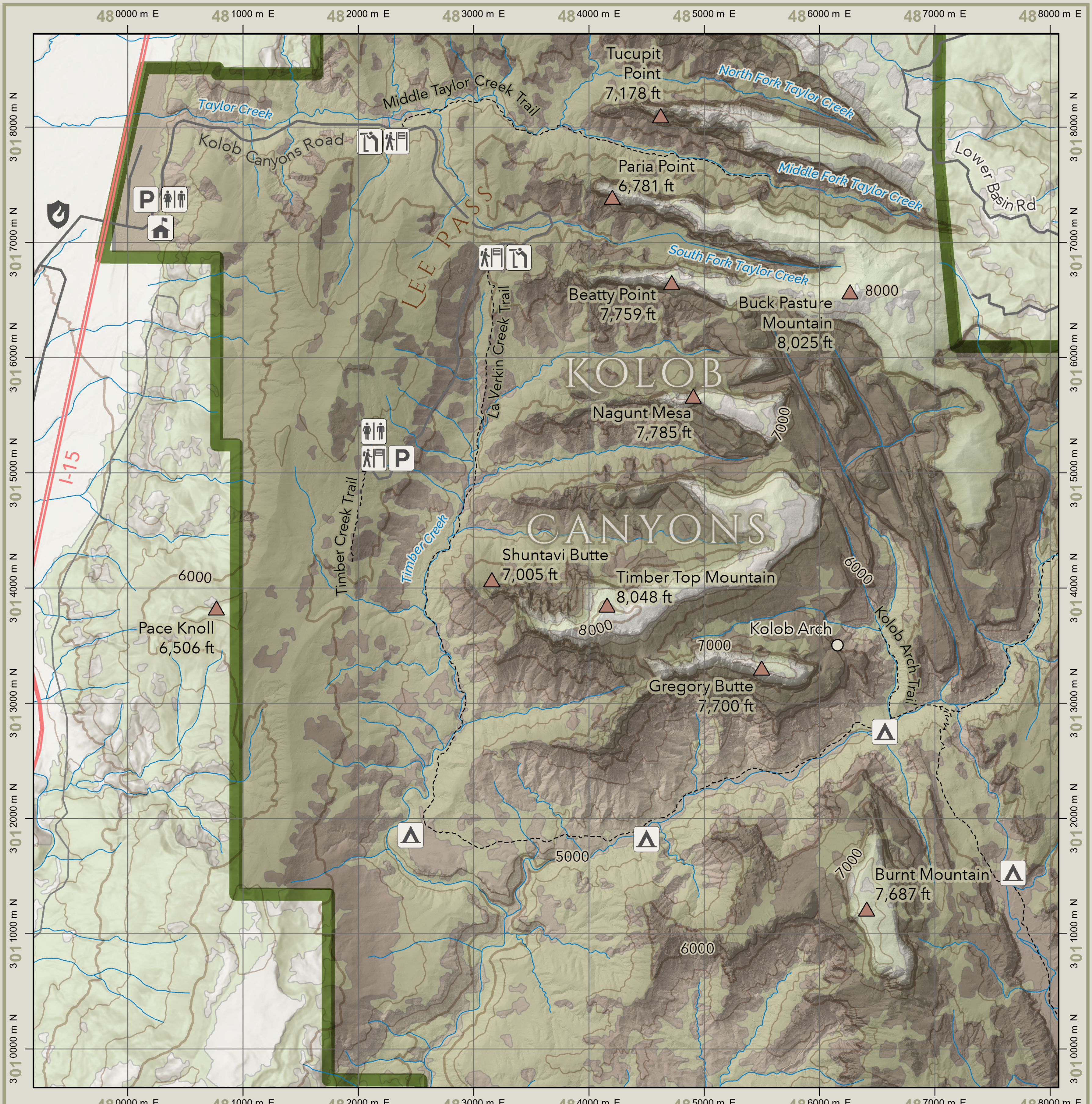




A1 Horse Ranch Mountain

0 0.25 0.5 1 1.5 2 Miles

Scale: 1:40,000



B1 Kolob Canyons

0 0.25 0.5 1 1.5 2 Miles

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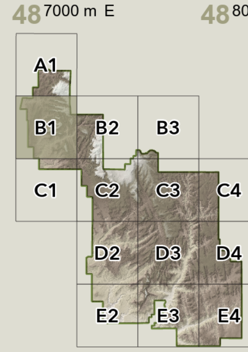

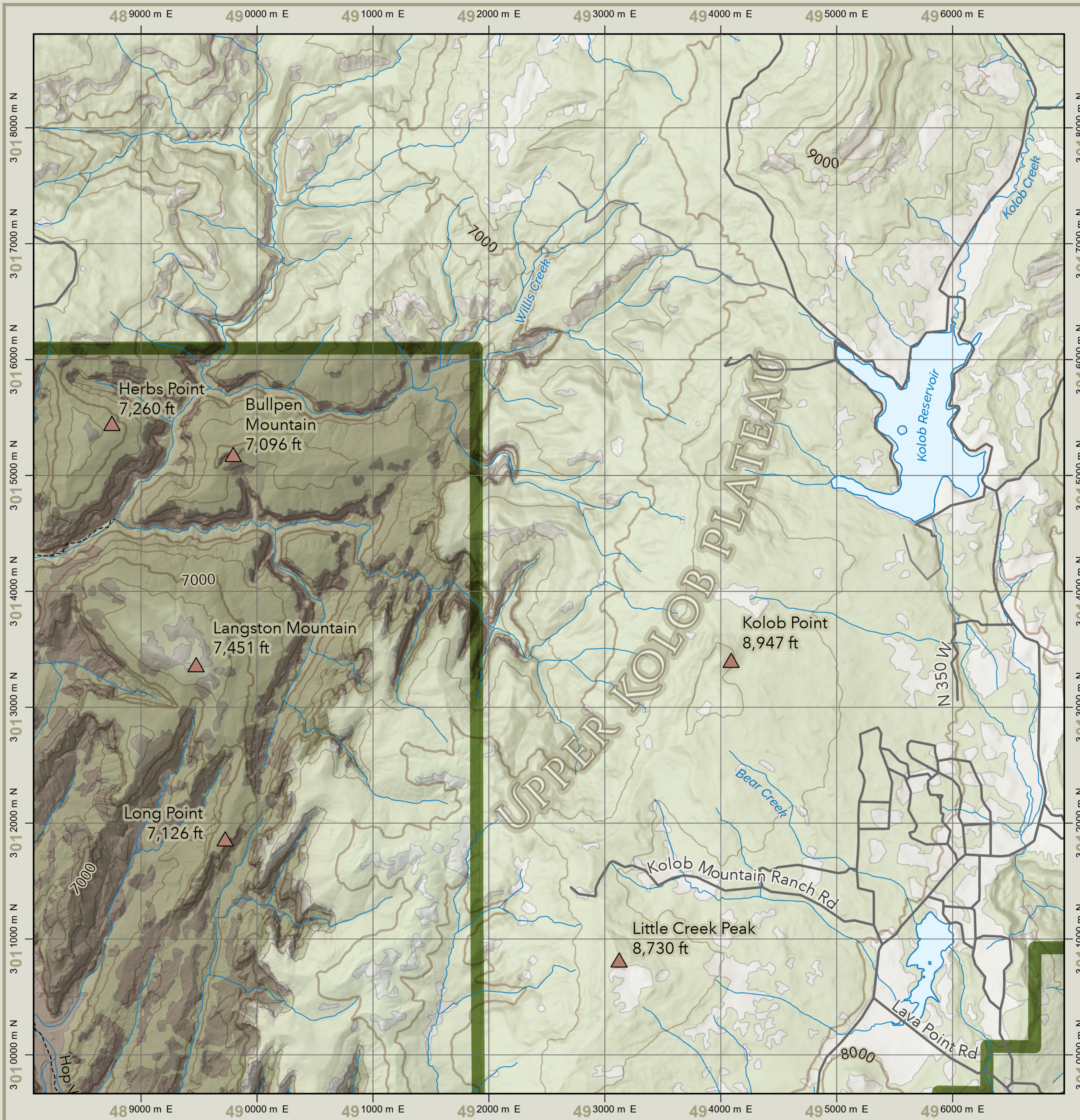

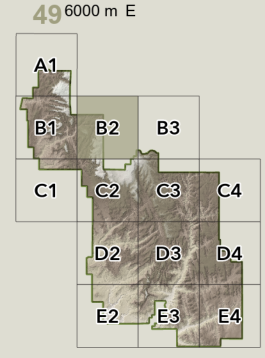

B2 Upper Kolob Plateau

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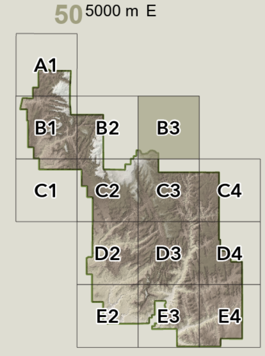
Scale: 1:40,000



B3 Horse Point

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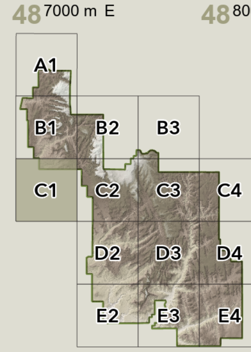
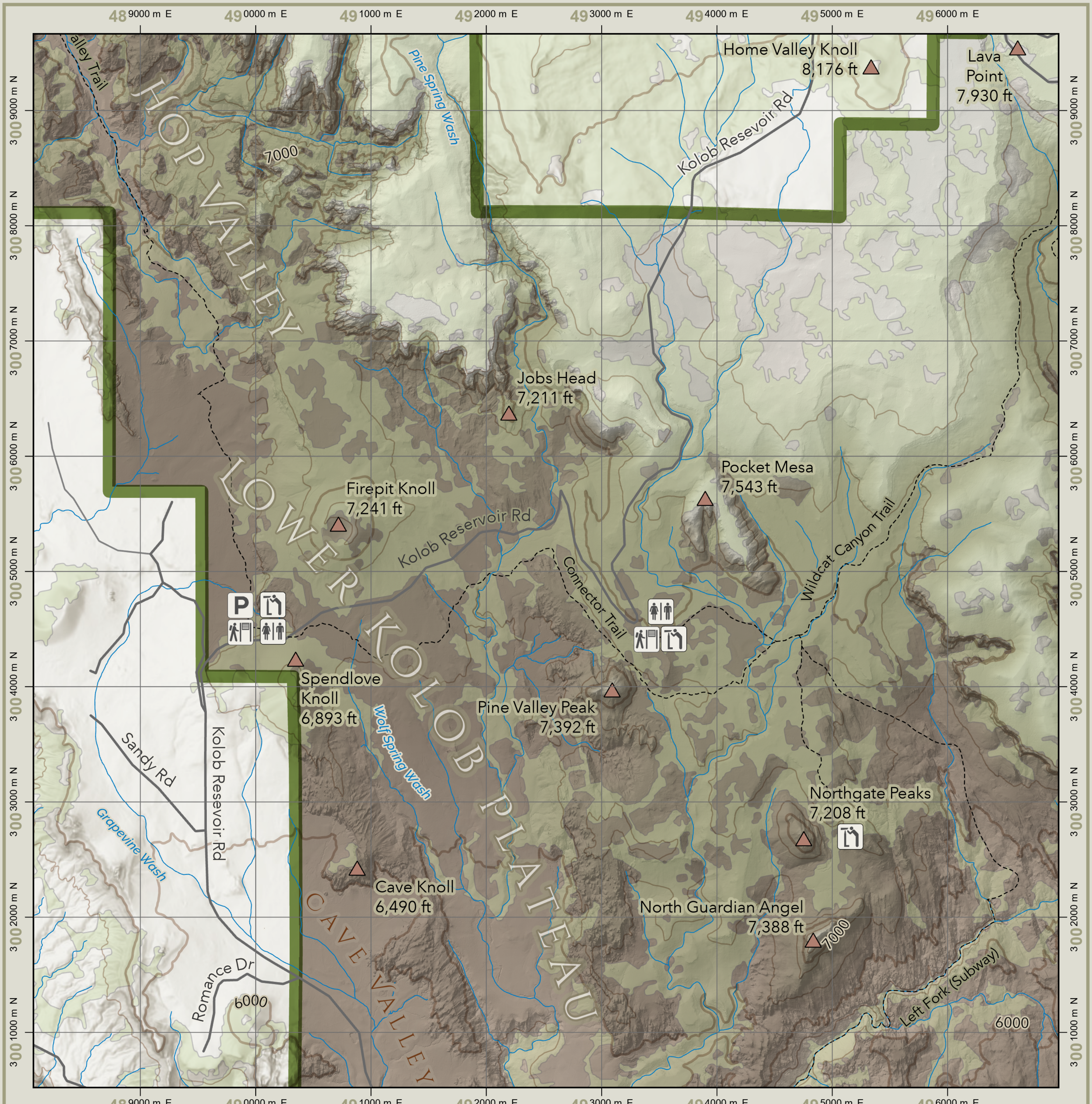
Scale: 1:40,000

C1 Smith Mesa



0 0.25 0.5 1 1.5 2 Miles

Scale: 1:40,000



C2 Lower Kolob Plateau

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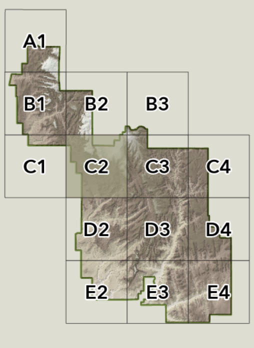

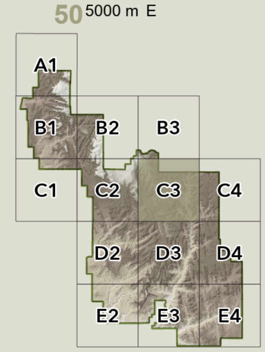

C3 Wildcat Canyon

0 0.25 0.5 1 1.5 2 Miles

Scale: 1:40,000

C4 Orderville Canyon

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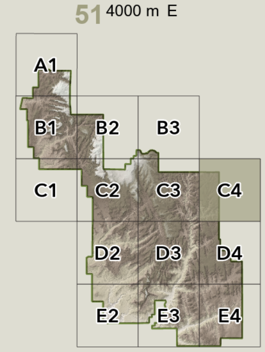
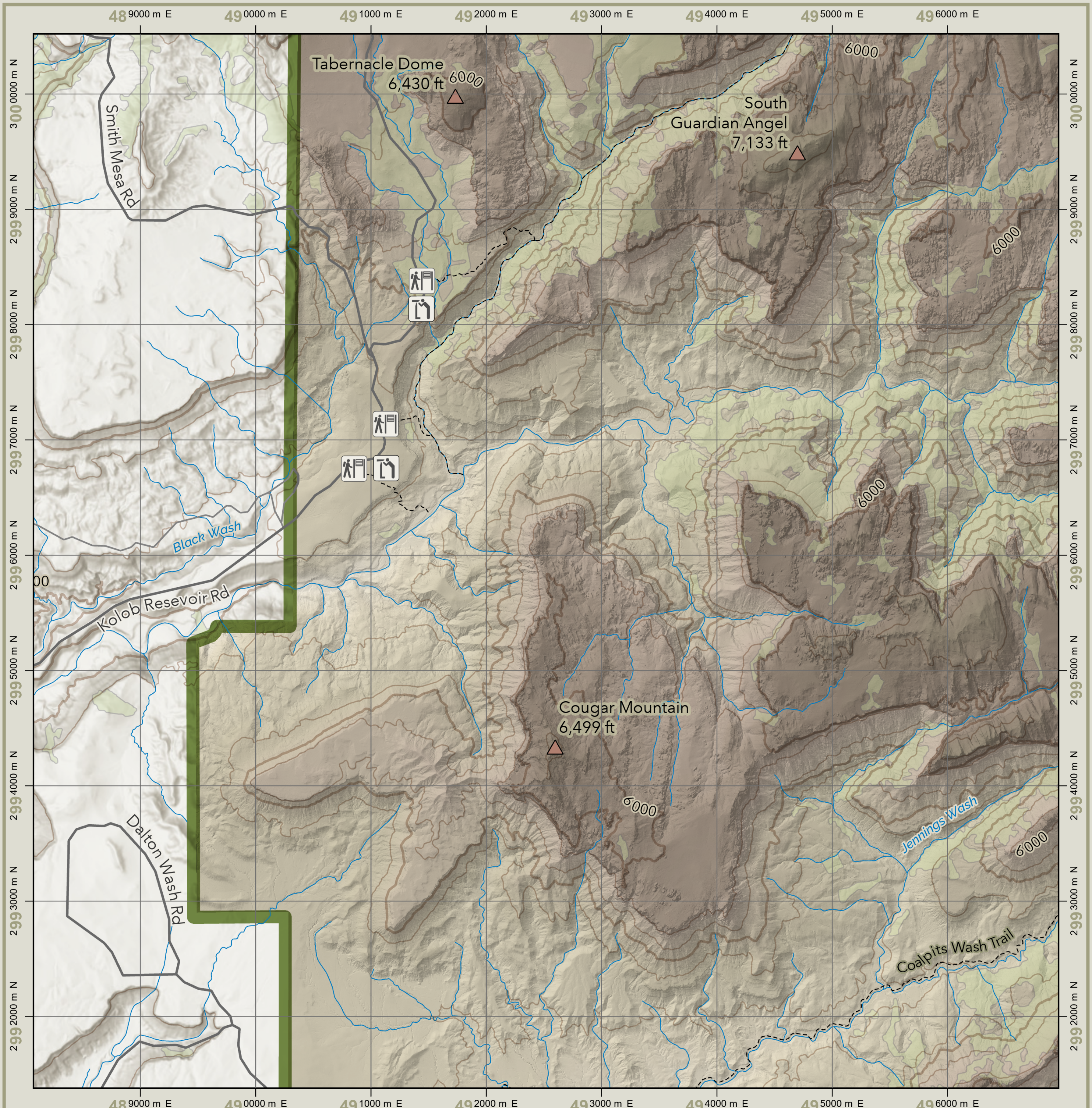
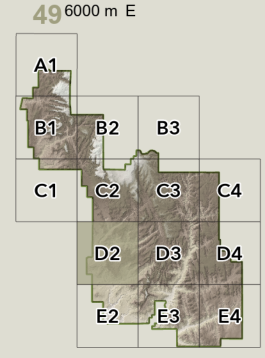
Scale: 1:40,000







D2 Cougar Mountain

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Scale: 1:40,000

D3 Zion Canyon

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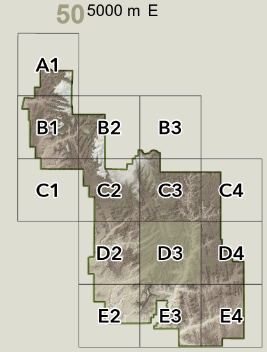
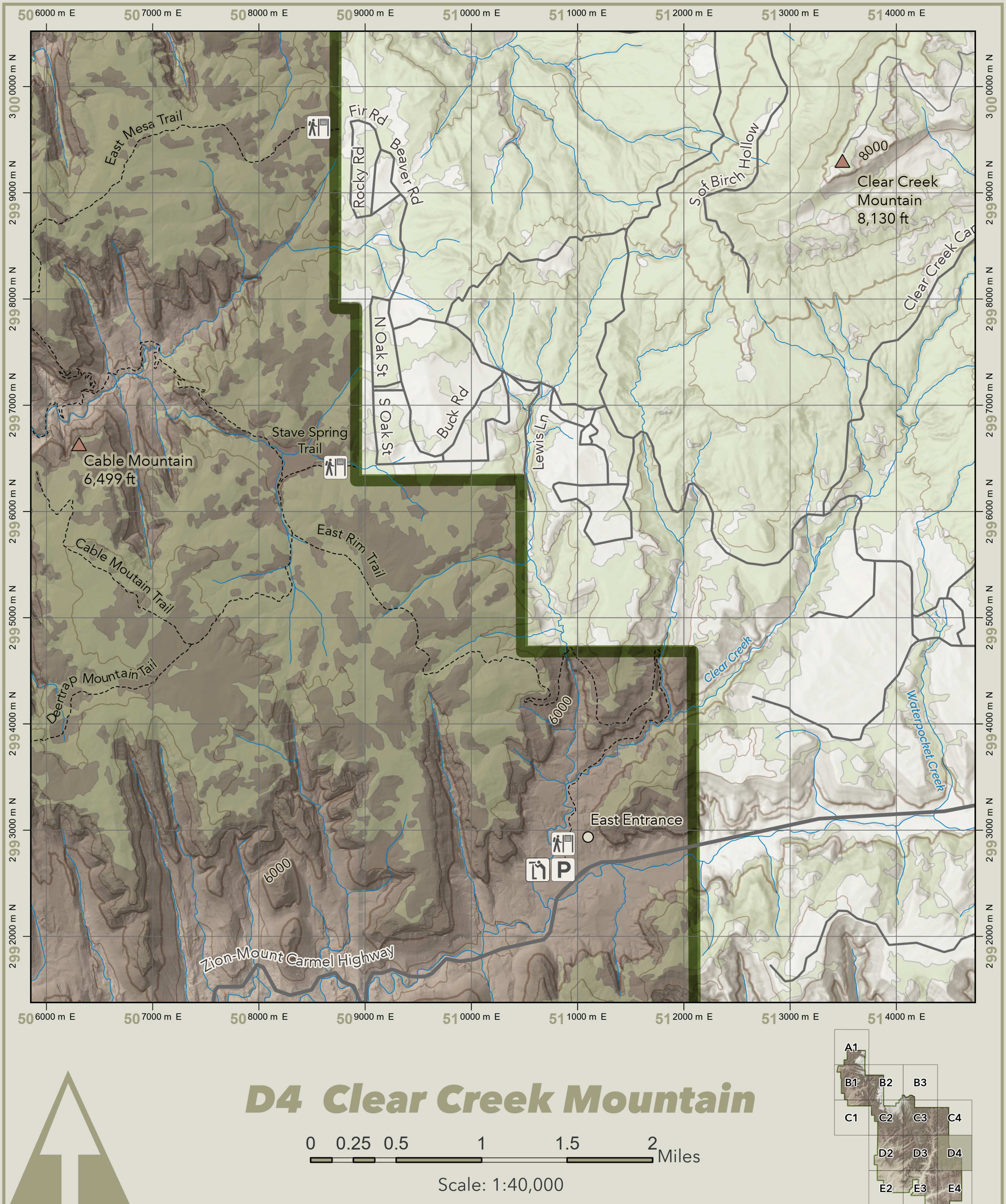
Scale: 1:40,000





D4 Clear Creek Mountain

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Scale: 1:40,000

E2 Grafton Bench

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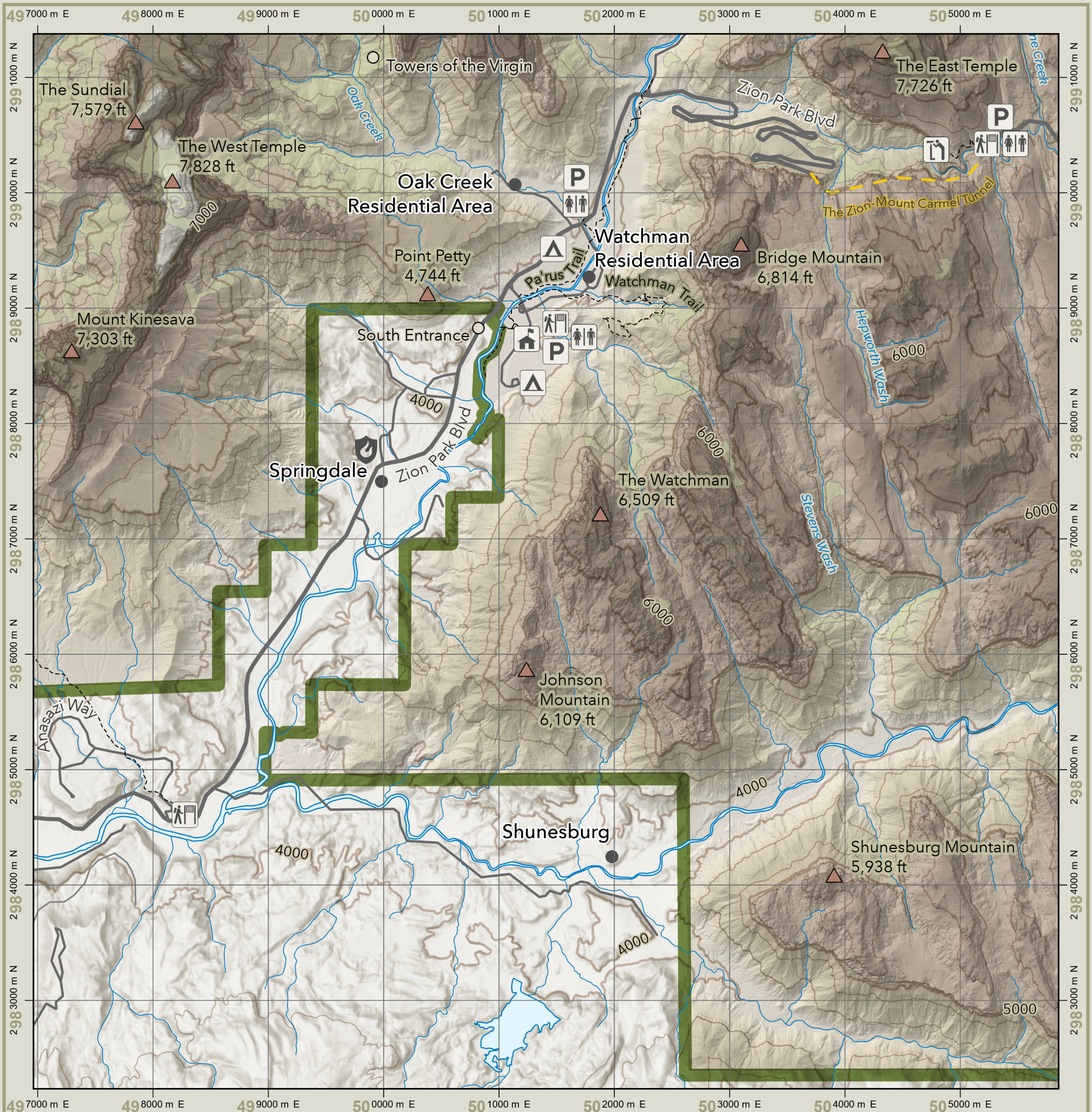
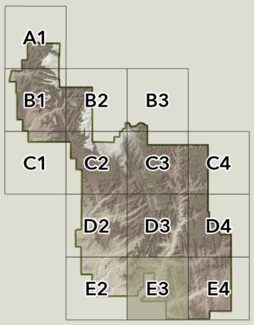
Scale: 1:40,000





E3 The Watchman

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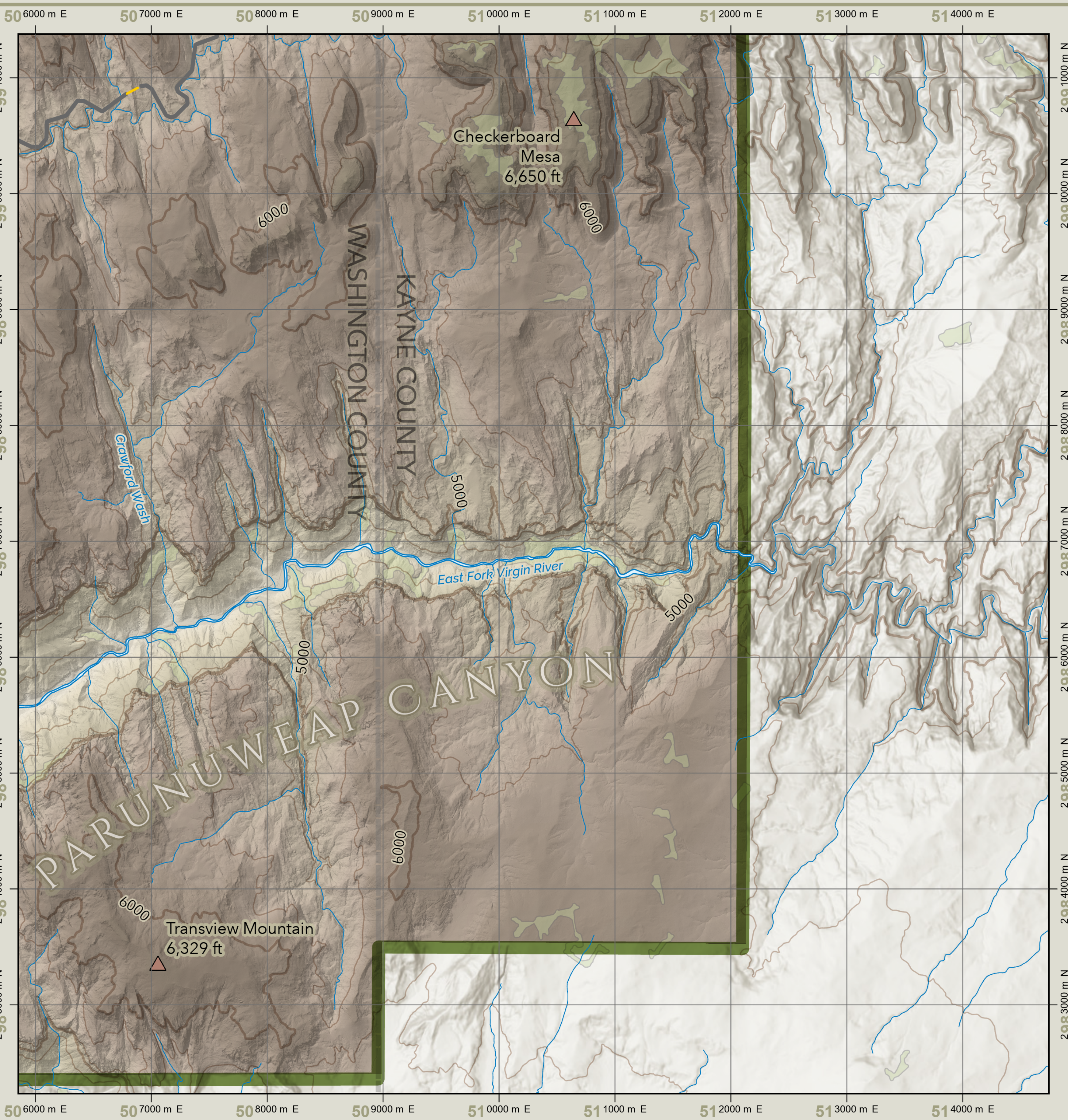

E4 Checkerboard Mesa

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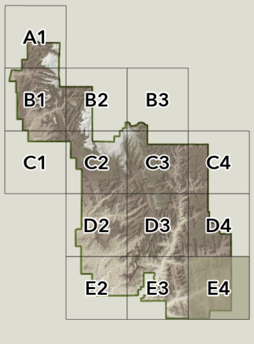

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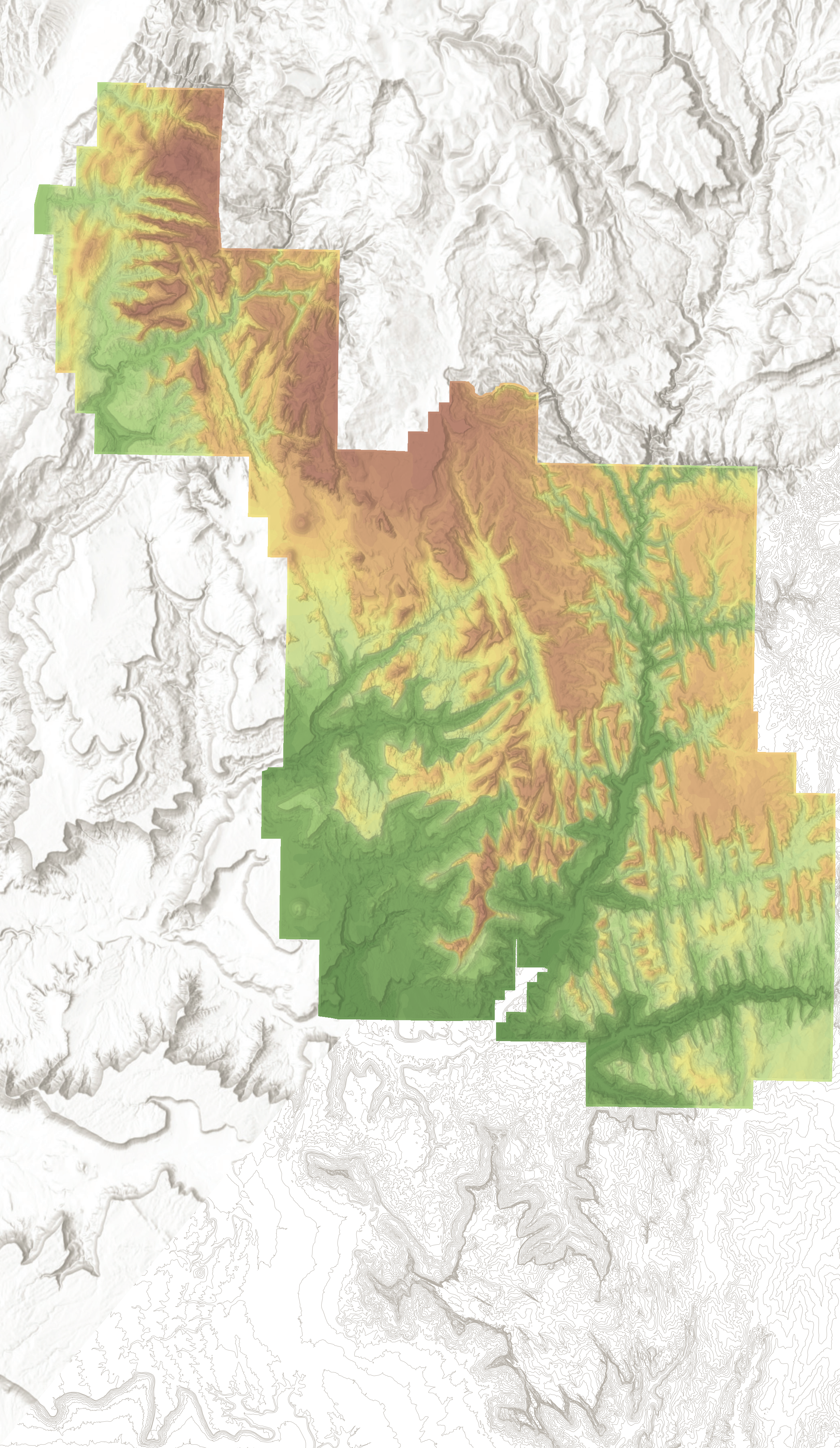

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Attribution

Front Cover Photo: Jamie Hagan, Unsplash

Basemap: Esri, Vantor, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community.

Zion National Park Colourized DEM: LiDAR elevation data from the Utah Geospatial Resource Center.

Cartography & Geospatial Analysis: Alex Hordal

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Atlas Data Sources

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DATA

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