# VRM and Land Use Planning

# VRM and Land Use Planning

Visual Resource Management Classes are developed through the RMP process for all BLM lands

The approved VRM Classes shall result from, and conform with, the resource allocation decisions made in RMP's

BLM Manual 8400

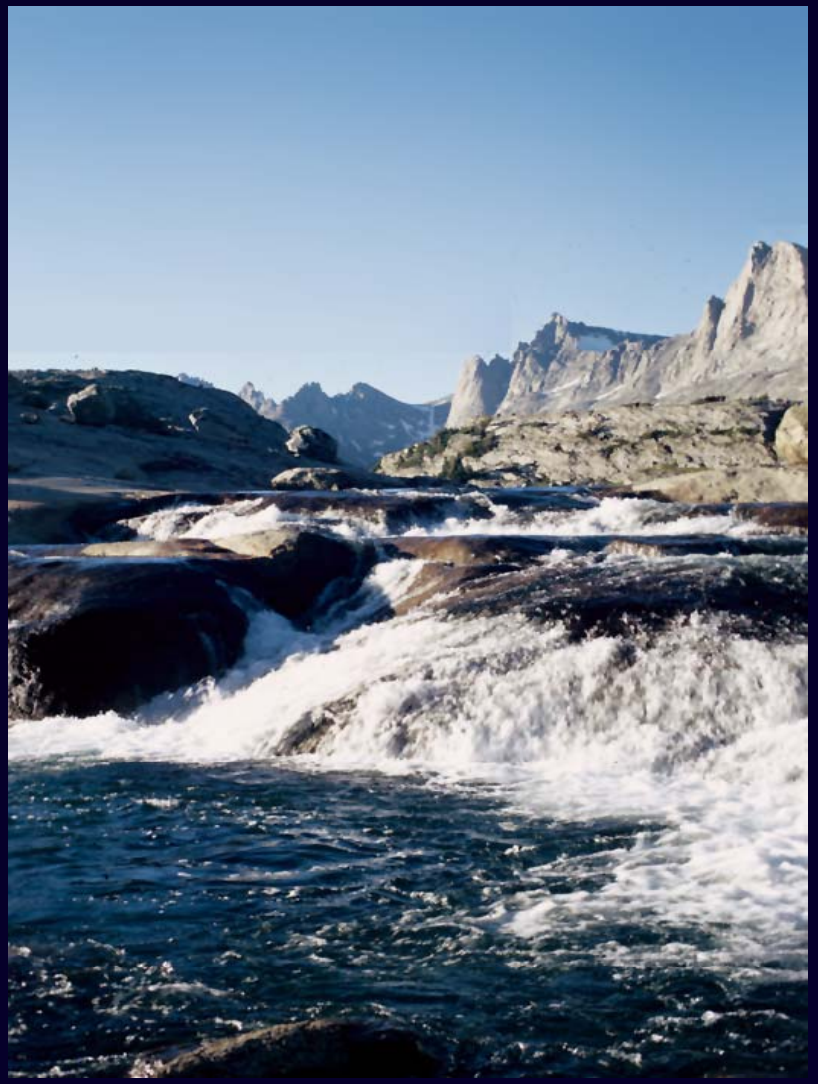
# Unit 3 Objective

Understand how to conduct a VRM Inventory and create Inventory Classes

# Visual Resource Inventory

# Visual Resource Inventory

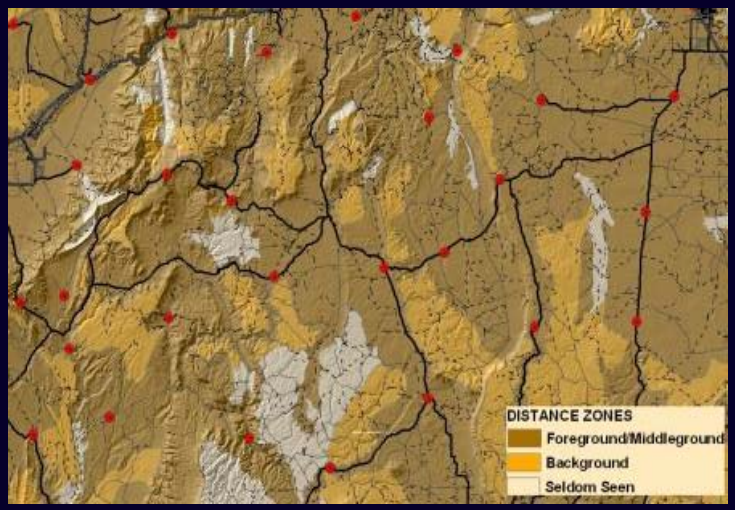
A systematic process designed to determine the extent and quality of visual resources in a given area



# VRM Inventory Process – 3 Parts

Scenic Quality

Distance Zones




Sensitivity

# VRM Inventory Process

**Based on Inventory of These Three Factors – BLM Lands Become:**

- Class I
- Class II
- Class III
- Class IV

*These are inventory classes,*
*not management classes!*

# Scenic Quality Evaluation

# Scenic Quality Evaluation

All lands have scenic value but areas with the most variety & the most harmonious composition have the greatest scenic value.

# Scenic Quality Evaluation

Evaluation of Scenic Quality is done in relation to the natural landscape.

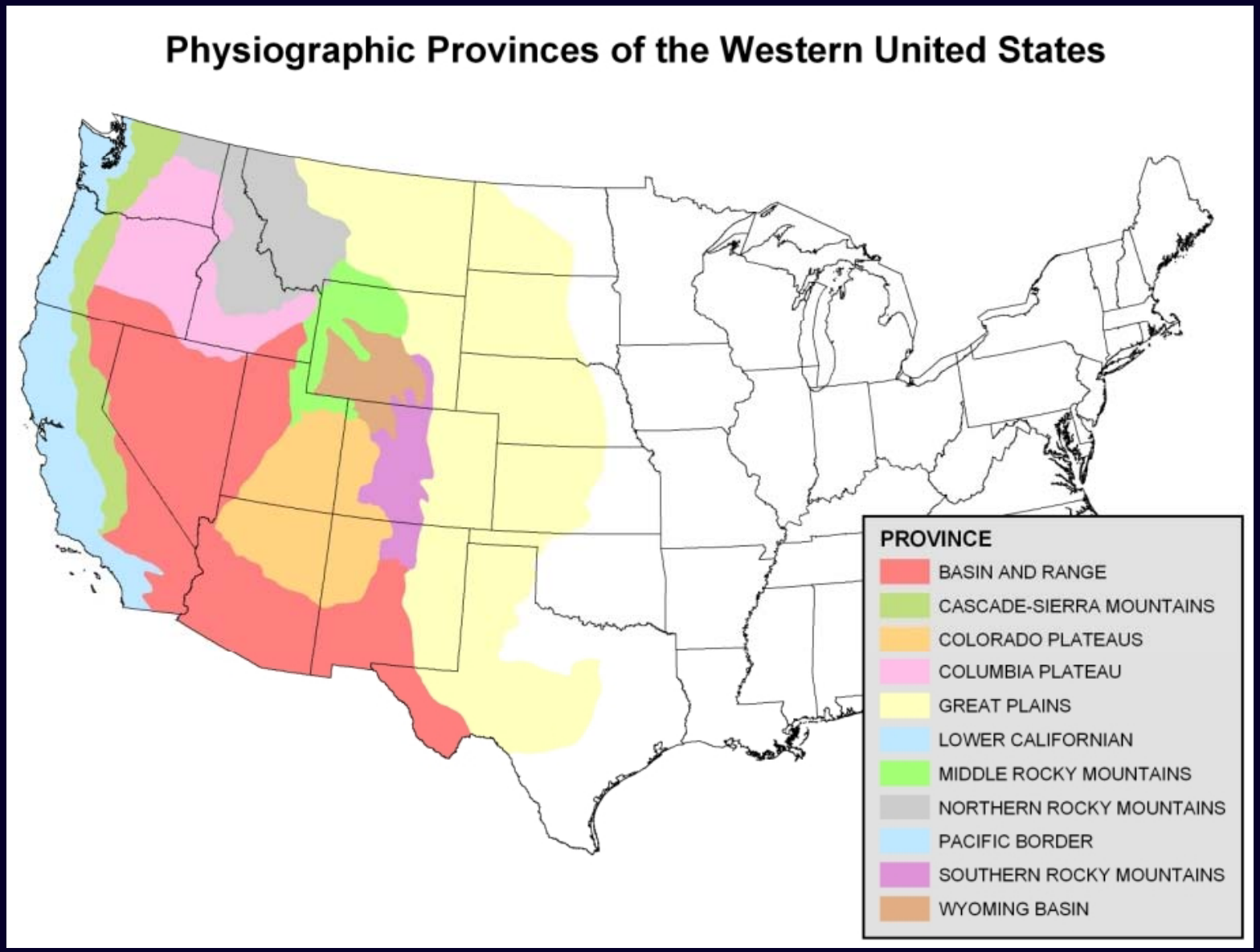
This does not mean man-made features necessarily detract!

# Scenic Quality Evaluation

Scenic Quality is a measure of the visual appeal of a tract of land.

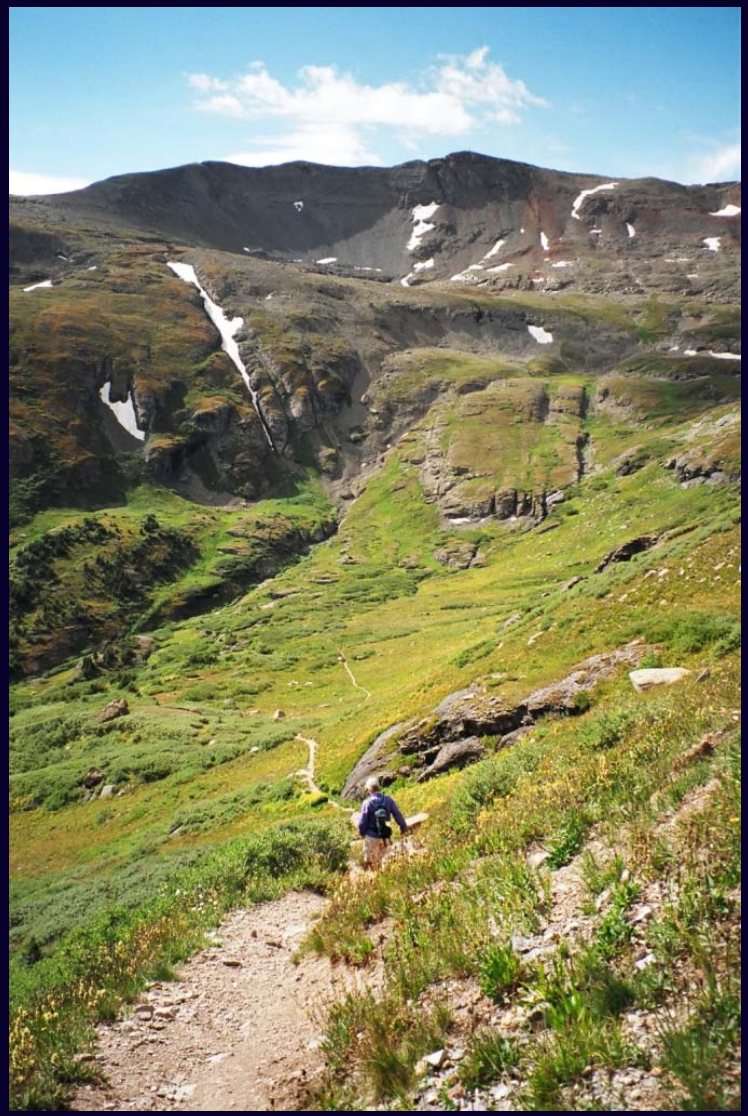
Public lands are given an A, B, or C rating based on apparent scenic quality.

# Scenic Quality Evaluation



# Scenic Quality Evaluation

Colorado Plateau



Southern Rocky Mountains

# Scenic Quality Evaluation

Colorado Plateau

Colorado Plateau

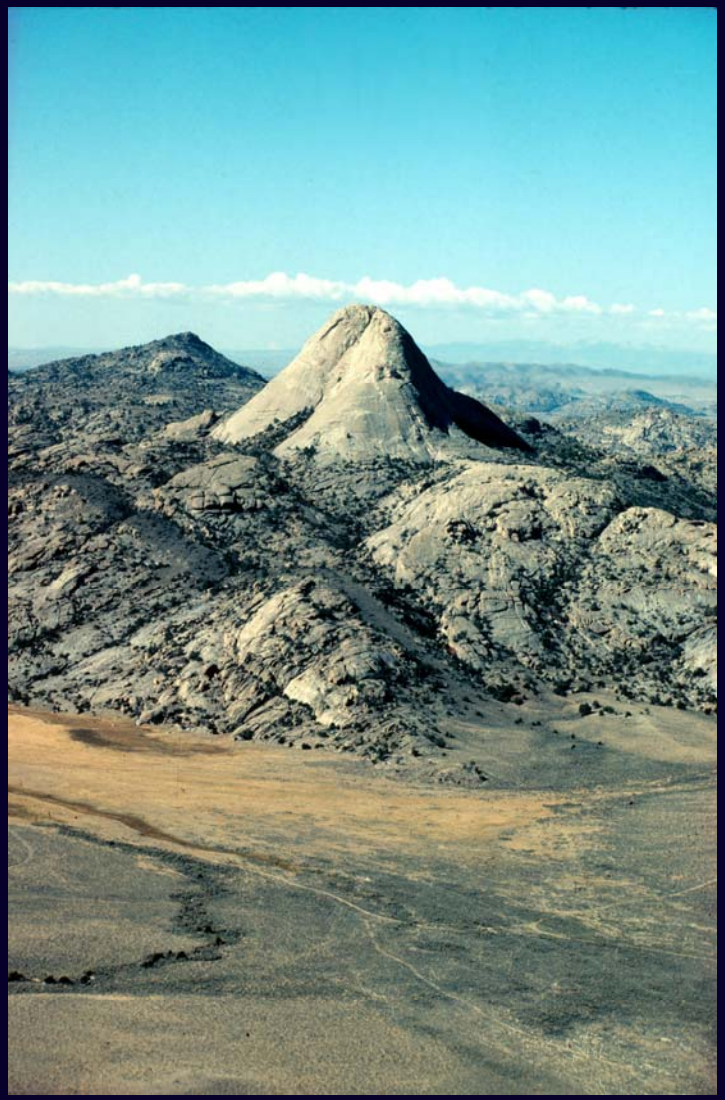
# Scenic Quality Evaluation

## Determined Using 7 Key Factors

- **Land Form** – Steep & massive - more interest
- **Vegetation** – Variety of pattern, form, texture
- **Water** – Adds movement, serenity
- **Color** – Season, high use period
- **Adjacent Scenery** – Enhances overall impression
- **Scarcity** – Relatively unique
- **Cultural Modifications** – Detract or compliment

# Landform

Topography gets more interesting as it gets steeper and more massive, or more severely sculpted



# Vegetation

Give primary consideration to the variety of patterns, forms, color, and texture created by plant life.

# Water

- Adds movement or serenity to a scene.
- The degree to which water dominates the scene affects the rating.

# Water adds movement

# Water adds serenity to a scene

# Color

- Consider the Overall Color in the Landscape
- Key Factors are Variety, Contrast, and Harmony

# Variety of Color

# Contrast in Color

# Harmony

# Adjacent Scenery

The degree to which scenery outside the unit being rated enhances the overall impression of the scenery within the rating unit.

# Lack of “Adjacent Scenery”

# Here’s the area being rated

# Here's the adjacent scenery

# Scarcity

This factor provides an opportunity to give added importance to one or all of the scenic features that may be relatively unique within a physiographic region.

# Scarcity

# Cultural Modifications

- May detract or compliment
- May improve scenic quality of an area

# Scenic Quality Evaluation

You Will Use 7 Key Factors to Rank Lands as A, B, or C

Comparative Basis – similar features in Physiographic Province

Form 8400-1
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# SCENIC QUALITY FIELD INVENTORY

| | |
|---|---|
| Date | |
| District | |
| Resource Area | |
| Scenic quality rating unit | |

1. Evaluators *(names)*

2. LANDSCAPE CHARACTER *(Feature)*

| | a. LANDFORM/WATER | b. VEGETATION | c. STRUCTURE *(General)* |
|---|---|---|---|
| FORM | | | |
| LINE | | | |
| COLOR | | | |
| TEXTURE | | | |

3. Narrative

4. SCORE *(Circle Appropriate Level)**

| | HIGH | MEDIUM | LOW | EXPLANATION OR RATIONALE |
|---|---|---|---|---|
| a. Landform | 5 | 3 | 1 | |
| b. Vegetation | 5 | 3 | 1 | |
| c. Water | 5 | 3 | 0 | |
| d. Color | 5 | 3 | 1 | |
| e. Adjacent Scenery | 5 | 3 | 0 | |
| f. Scarcity | 5 + | 3 | 1 | |
| g. Cultural Modification | 2 | 0 | - 4 | |
| TOTALS | + | + | = | |

SCENIC QUALITY CLASSIFICATION

☐ A — 19 or more

☐ B — 12-18

☐ C — 11 or less

*(Instructions on reverse)*

# Scenic Quality Evaluation

Form 8400–1
(September 1985)

UNITED STATES
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**SCENIC QUALITY FIELD INVENTORY**

Date

District

Resource Area

Scenic quality rating unit

1. Evaluators *(names)*

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| | a. LANDFORM/WATER | b. VEGETATION | c. STRUCTURE *(General)* |
|---|---|---|---|
| FORM | | | |
| LINE | | | |
| COLOR | | | |
| TEXTURE | | | |

# Scenic Quality Evaluation

3. Narrative

4. SCORE *(Circle Appropriate Level)* *

| | HIGH | MEDIUM | LOW | EXPLANATION OR RATIONALE |
|---|---|---|---|---|
| a. Landform | 5 | 3 | 1 | |
| b. Vegetation | 5 | 3 | 1 | |
| c. Water | 5 | 3 | 0 | |
| d. Color | 5 | 3 | 1 | |
| e. Adjacent Scenery | 5 | 3 | 0 | |
| f. Scarcity | 5+ | 3 | 1 | |
| g. Cultural Modification | 2 | 0 | -4 | |
| TOTALS | | + | + = | |

SCENIC QUALITY CLASSIFICATION

☐ A – 19 or more

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*(Instructions on reverse)*

# SCENIC QUALITY

## Inventory and Evaluation Chart

**SCENIC QUALITY**
**INVENTORY AND EVALUATION CHART**

| Key Factors | Rating Criteria and Score | | |
|---|---|---|---|
| **Landform** | High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops; or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing such as glaciers. 5 | Steep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in shape and size of landforms; or detail features which are interesting though not dominant or exceptional. 3 | Low rolling hills, foothills, or flat valley bottoms, or few or no interesting landscape features. 1 |
| **Vegetation** | Variety of vegetative types as expressed in interesting forms, textures, and patterns 5 | Some variety of vegetation but only one or two major types 3 | Little or no variety or contrast in vegetation. 1 |
| **Water** | Clear and clean appearing, still or cascading white water, any of which are a dominant factor in the landscape. 5 | Flowing or still, but not dominant in the landscape. 3 | Absent, or present but not noticeable. 0 |
| **Color** | Rich color combinations, variety or vivid color, or pleasing contrasts in the soil, rock, vegetation, water, or snowfields. 5 | Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element. 3 | Subtle color variations, contrast, or interest, generally mute tones. 1 |
| **Influence of Adjacent Scenery** | Adjacent scenery greatly enhances visual quality. 5 | Adjacent scenery moderately enhances overall visual quality. 3 | Adjacent scenery has little or no influence on overall visual quality. 0 |
| **Scarcity** | One of a kind, or unusually memorable, or very rare within the region. Consistent chance for exceptional wildlife or wildflower viewing. 5+ | Distinctive, though somewhat similar to others within region. 3 | Interesting within setting, but fairly common within the region. 1 |
| **Cultural Modifications** | ~~Modifications add favorably to visual~~ variety while promoting visual harmony 2 | ~~Modifications add little or no~~ visual variety to the area, and introduce no discordant elements. 0 | ~~Modifications add variety but are very~~ discordant and promote strong disharmony. -4 |



SCENIC QUALITY: A = 19 and more, B = 12 – 18, C = 11 or less

4. SCORE *(Circle Appropriate Level)**

| | HIGH | MEDIUM | LOW | EXPLANATION OR RATIONALE |
|---|---|---|---|---|
| a. Landform | 5 (4) | 3 | 1 | |
| b. Vegetation | 5 | 3 (2) | 1 | |
| c. Water | (5) | 3 | 0 | |
| d. Color | (5) | 3 | 1 | |
| e. Adjacent Scenery | 5 (4) | 3 | 0 | see explanation on reverse |
| f. Scarcity | 5 + | (3) | 1 | |
| g. Cultural Modification | 2 | 0 | (-3) -4 | |
| TOTALS | 18 + 5 +(-3) = 20 | | | |

SCENIC QUALITY CLASSIFICATION

- [x] A — 19 or more
- [ ] B — 12-18
- [ ] C — 11 or less

*(Instructions on reverse)*

# Scenic Quality Evaluations

- Use Interdisciplinary Team
- Evaluate – Several Viewpoints (KOPs)
- Score Based on Overall Impression
- Develop a Photographic (visual) Record
- File Evaluation Forms (keep a record of your work)

# Scenic Quality Evaluations

- Slides Showing Hypothetical Examples of All Three Classes
  - Class A
  - Class B
  - Class C

# Hypothetical Class A Scenery

# Hypothetical Class B Scenery

# Hypothetical Class C Scenery

# Scenic Quality Rating Example

# Scenic Quality Rating Exercise

# Exercise – Adjacent Scenery

# Scenic Quality Rating Units

Divide Planning Area into Scenic Quality Rating Units

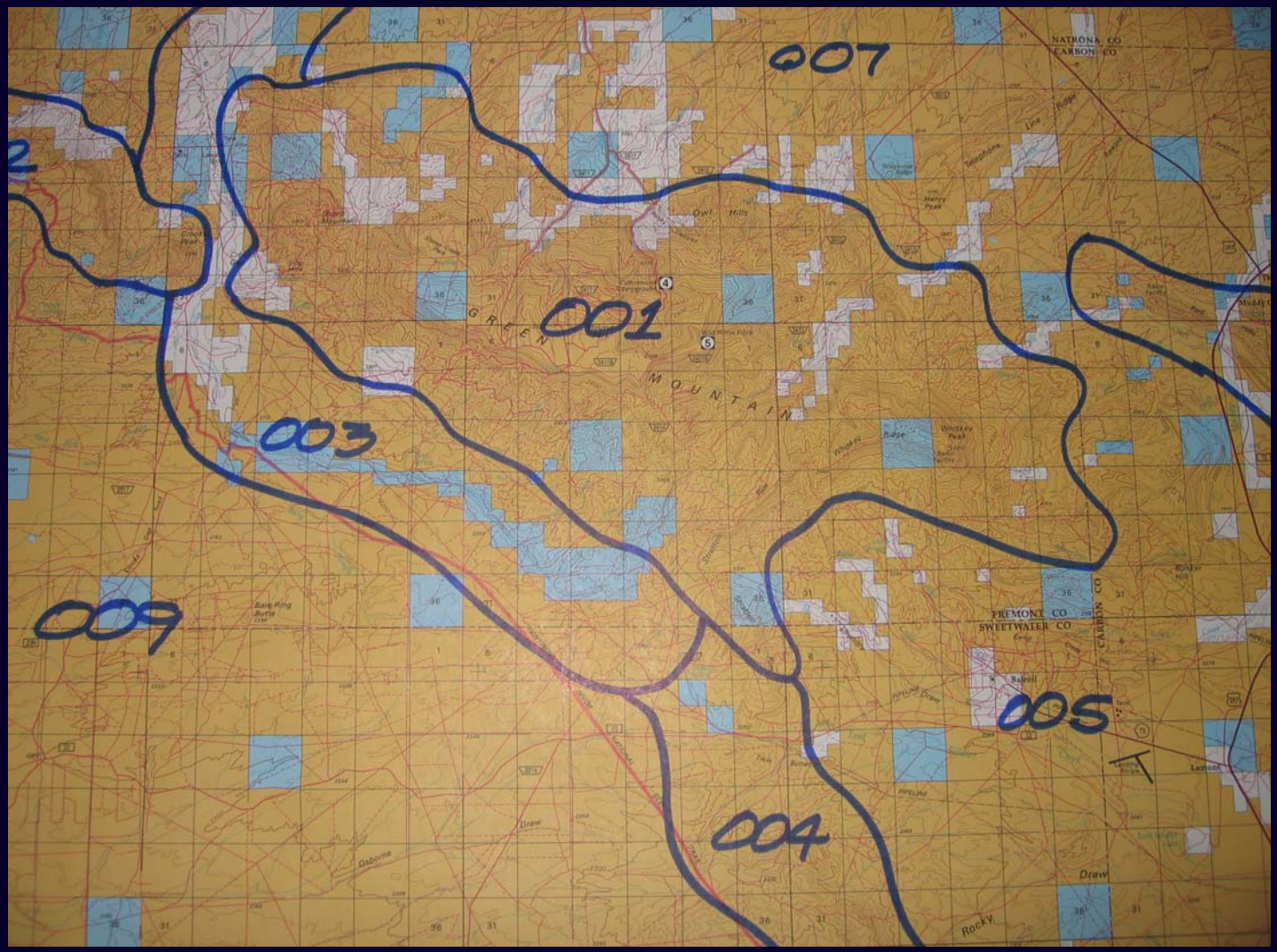
Based on Like Physiographic Characteristics

# Why Scenic Quality Rating Units?

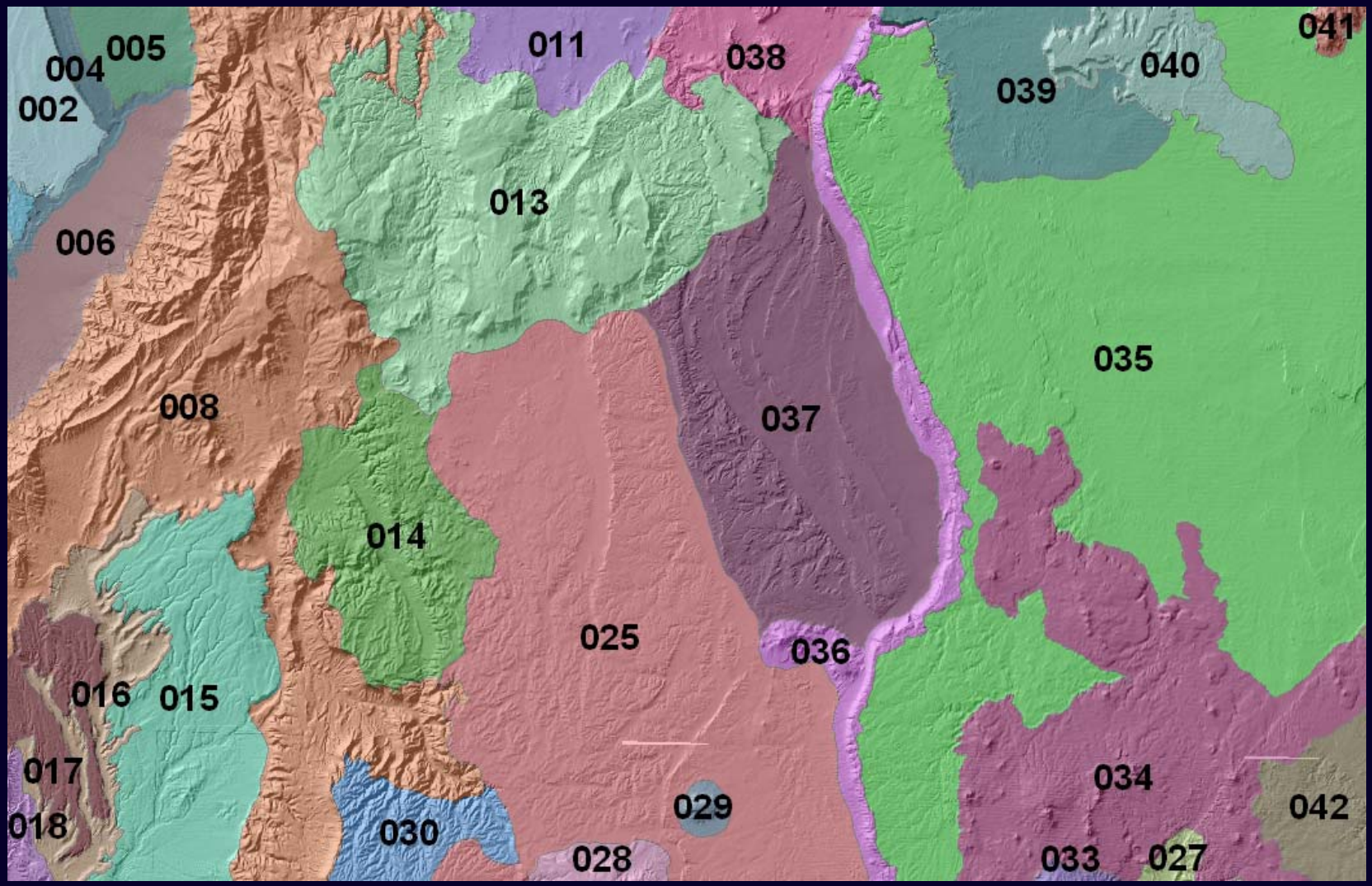
Breaks landscape down into units with similar characteristics so that management objectives remain applicable to entire area.

- Texture
- Color
- Variety
- Topography
- Visual Patterns

# Scenic Quality Rating Units on Paper



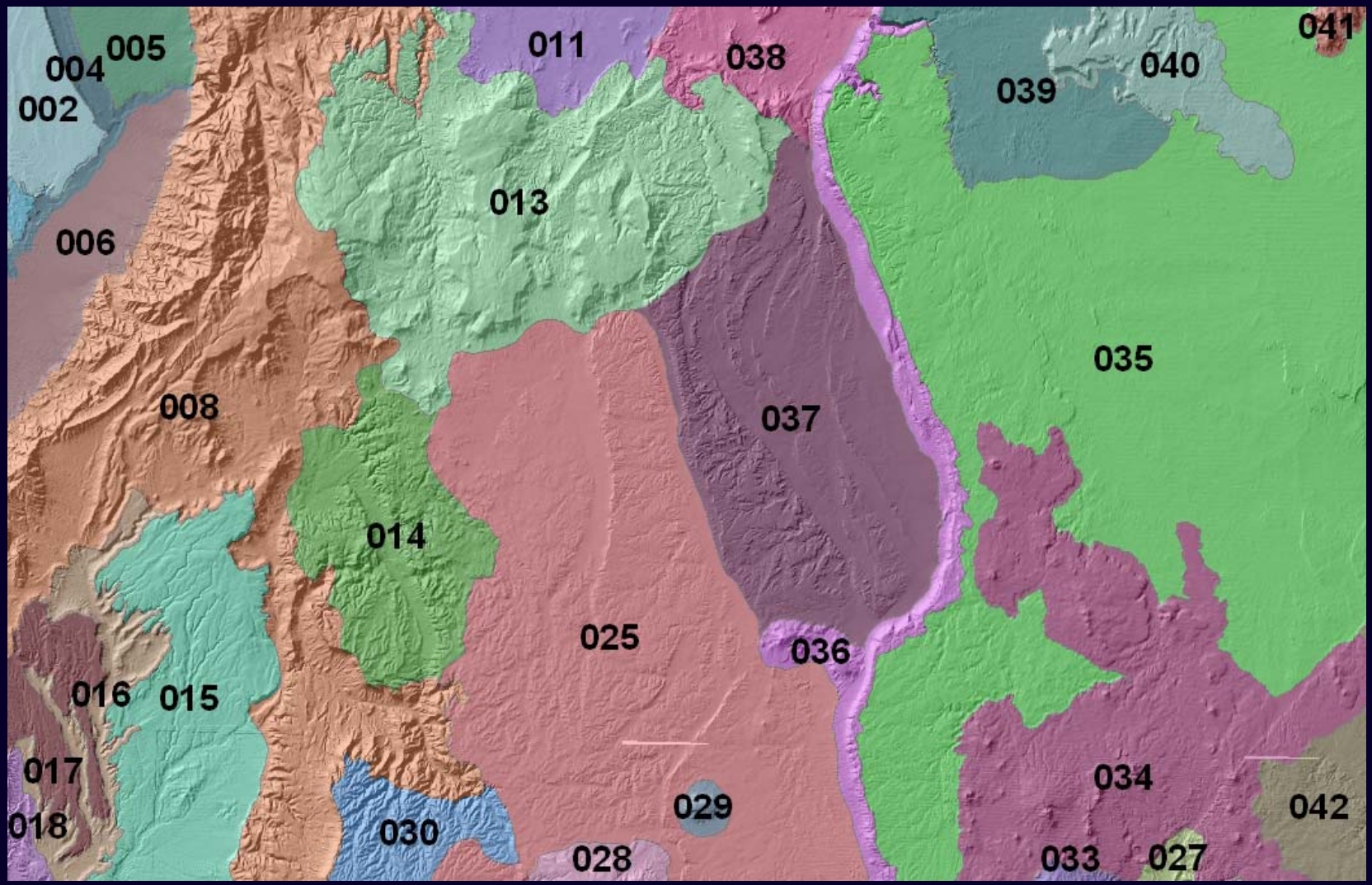
# Scenic Quality Rating Units in GIS



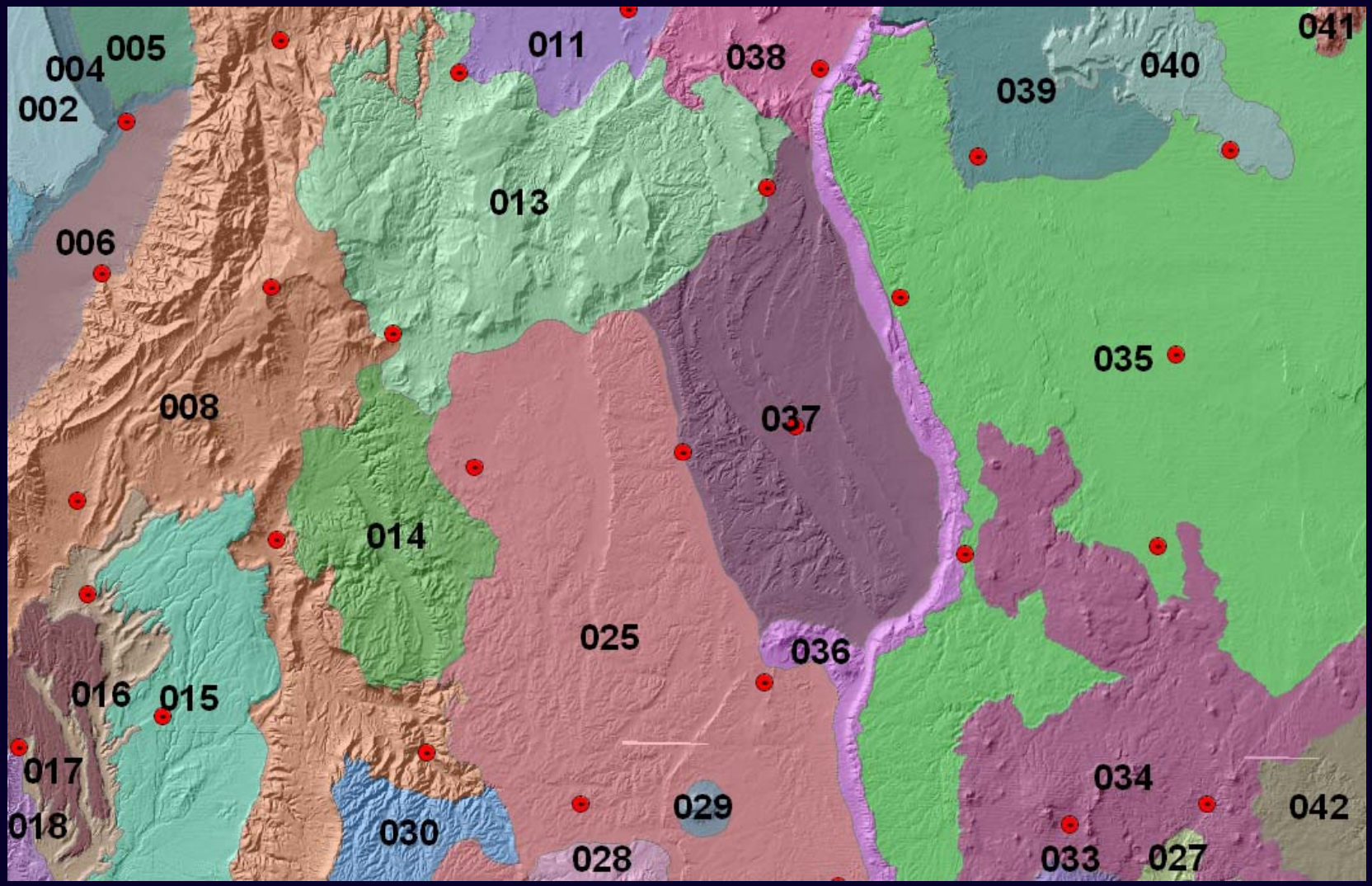
# Rating Unit Size

# Rating Unit Size

# Evaluating Rating Units



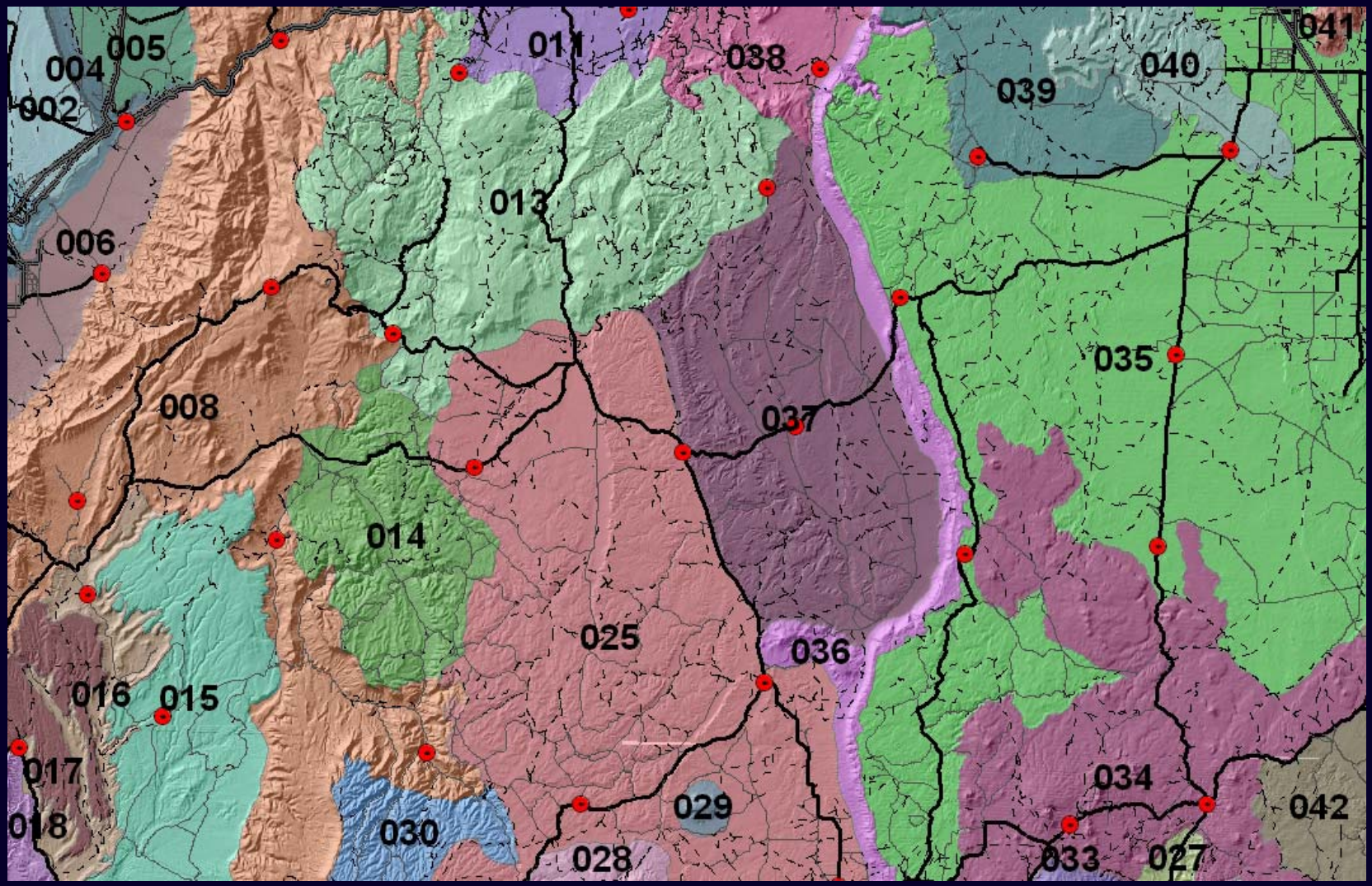
# Choosing KOP's



# Choosing KOP's

1) Traffic volume
2) Logical stopping places
3) Effectively evaluate the SQRU

# Choosing KOP's



# Scenic Quality Evaluation

Scenic Quality Inventory can be daunting

Volunteers/Field Staff can be invaluable

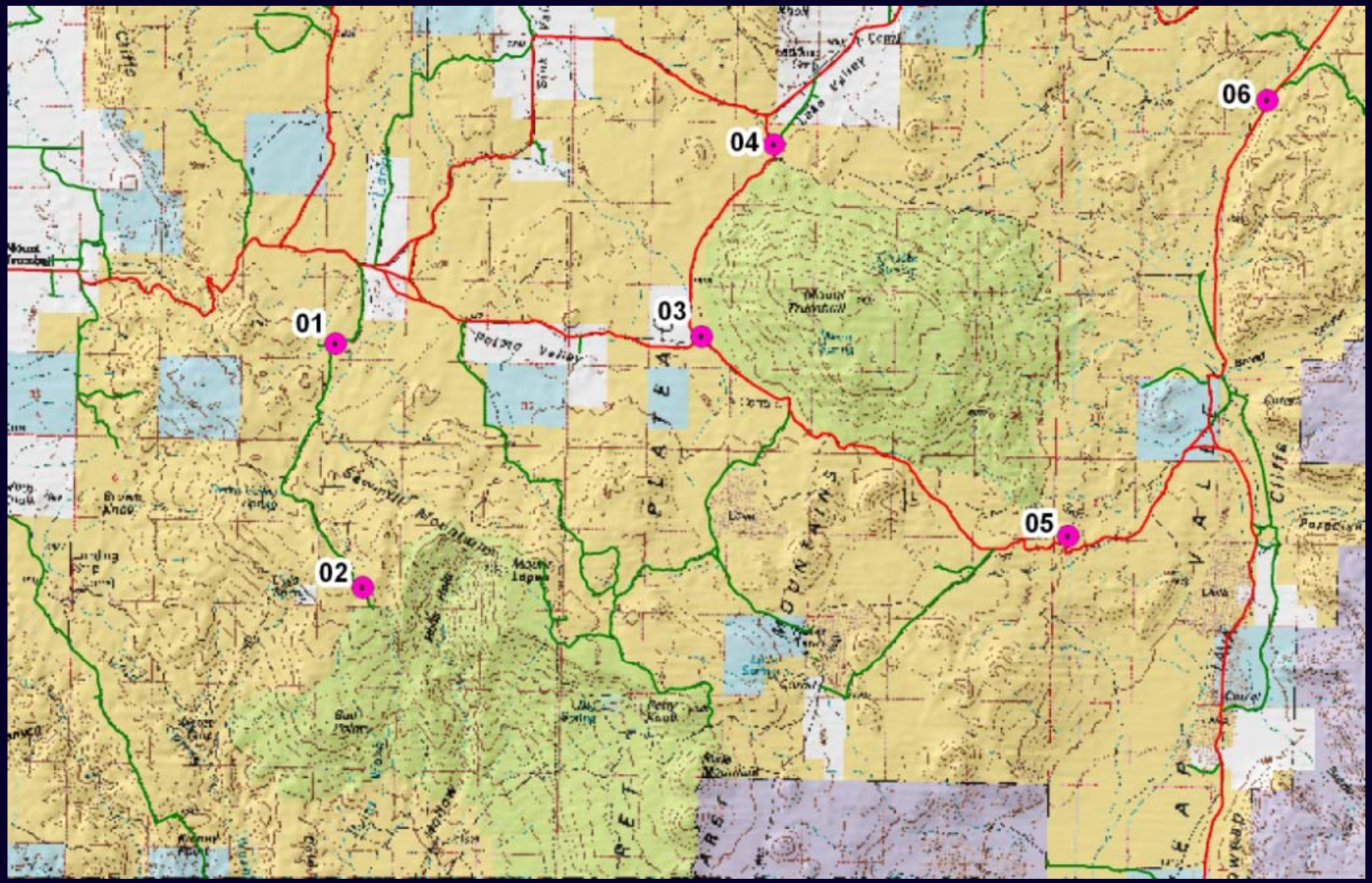
GIS is indispensable

# Scenic Quality Evaluation

## Using Volunteers

- Need to know how to drive
- Need to know how to use a GPS
- Need to know how to read a map
- Need to know how to use a digital camera
- Need to know how to use a compass

# Scenic Quality Evaluation



# Scenic Quality Evaluation

**VRM Inventory Record**

**_____Office**

| KOP ID | Photo ID | Date | Azimuth | Waypoint ID | GPS Coordinates |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

# Scenic Quality Evaluation

**VRM Inventory Record**

VRM Matters Field Office

| KOP ID | Photo ID | Date | Azimuth | Waypoint ID | GPS Coordinates |
|---|---|---|---|---|---|
| 01 | 153 | 4/3/06 | 290° | 001 | N 4143692<br>E 295000 |
| 01 | 154 | 4/3/06 | 15° | 002 | N 4154991<br>E 288765 |
| 01 | 155 | 4/3/06 | 185° | 003 | N 4180021<br>E 300029 |
| 02 | 156 | 4/4/06 | 90° | 004 | N 4142900<br>E 296000 |
| 02 | 157 | 4/4/06 | 270° | 005 | N 4131942<br>E 299054 |
| 03 | 158 | 4/5/06 | 100° | 006 | N 4191874<br>E 298004 |
| 03 | 159 | 4/5/06 | 200° | 007 | N 4171899<br>E 288755 |
| 03 | 160 | 4/5/06 | 300° | 008 | N 4162873<br>E 287642 |
| 04 | 161 | 4/6/06 | 25° | 009 | N 4143600<br>E 288764 |

4. SCORE *(Circle Appropriate Level)**

| | HIGH | MEDIUM | LOW | EXPLANATION OR RATIONALE |
|---|---|---|---|---|
| a. Landform | 5 (4) | 3 | 1 | |
| b. Vegetation | 5 | 3 (2) | 1 | |
| c. Water | (5) | 3 | 0 | |
| d. Color | (5) | 3 | 1 | |
| e. Adjacent Scenery | 5 (4) | 3 | 0 | see explanation on reverse |
| f. Scarcity | 5 + | (3) | 1 | |
| g. Cultural Modification | 2 | 0 | (-3) -4 | |
| TOTALS | 18 + 5 +(-3) = 20 | | | |

SCENIC QUALITY CLASSIFICATION

- [x] A — 19 or more
- [ ] B — 12-18
- [ ] C — 11 or less

*(Instructions on reverse)*

Form 8400-5
(May 1984)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

**SCENIC QUALITY RATING SUMMARY**

Date Aug. 16, 1985

District Moab

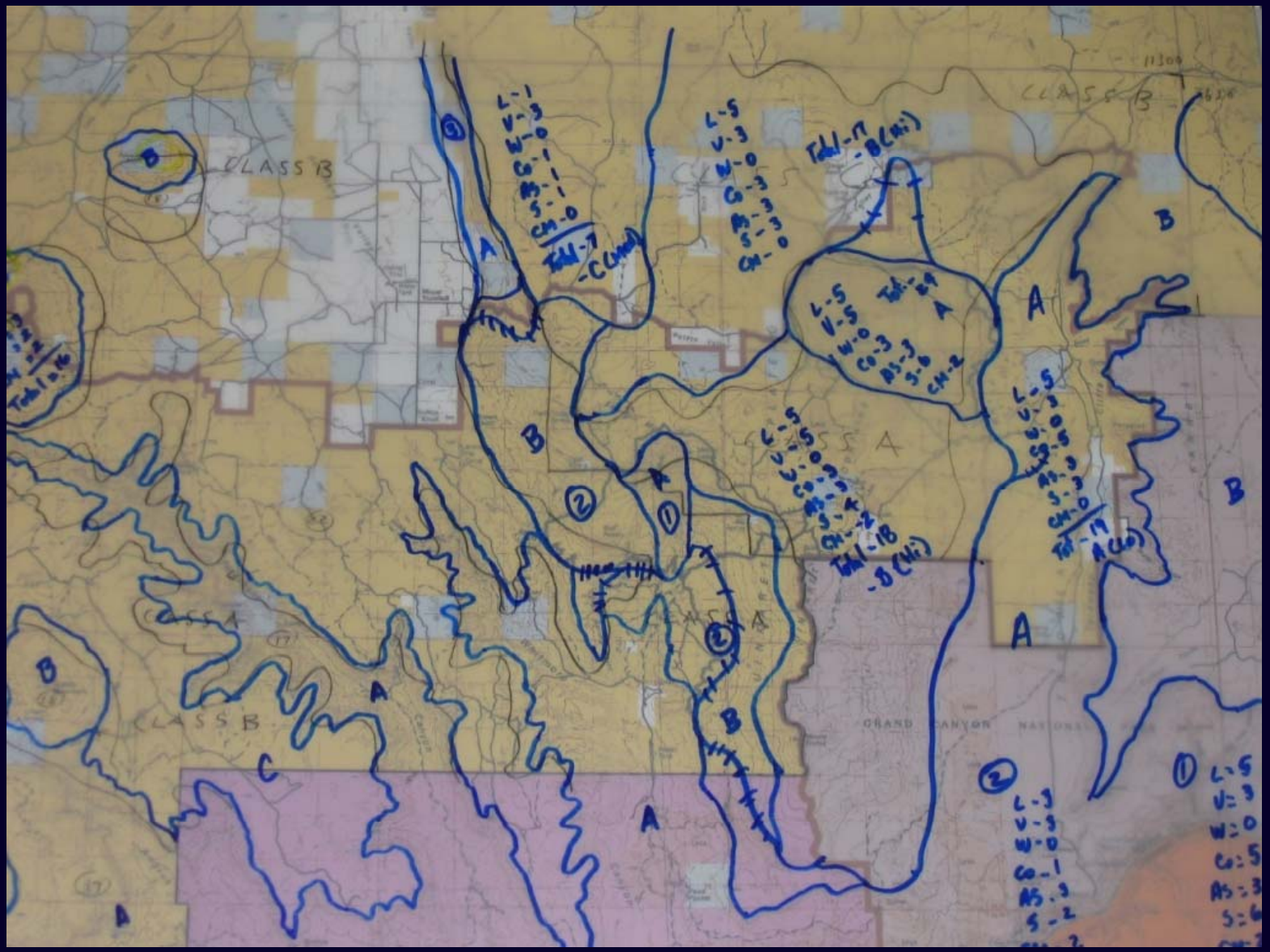
Resource Area Grand

1. Evaluators *(names)*

Bob Tumwater, Russ Grimes, Pete Jordan

| SCENIC QUALITY RATING UNITS (1) | Landform (2) | Vegetation (3) | Water (4) | Color (5) | Adjacent Scenery (6) | Scarcity (7) | Cultural Modification (8) | Total Score (9) | Scenic Quality Rating (10) | EXPLANATION (11) |
|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 3 | 4 | 5 | 4 | 2 | 2 | 0 | 20 | A | colorful waterway |
| 002 | 3 | 1 | 0 | 2 | 3 | 2 | 0 | 11 | C | rolling hills, colorless, little veg. |
| 003 | 2 | 1 | 0 | 2 | 3 | 2 | 0 | 10 | C | flat, colorless, barren |
| 004 | 4 | 3 | 4 | 4 | 3 | 1 | 0 | 19 | A | water, scenic cliffs, & interesting veg. |
| 005 | 4 | 3 | 0 | 4 | 4 | 3 | 0 | 18 | B | scenic cliffs |
| 006 | 1 | 1 | 0 | 2 | 2 | 2 | 0 | 8 | C | flat, colorless, barren |
| 007 | 4 | 4 | 5 | 4 | 3 | 2 | 0 | 22 | A | water, riverside veg., colorful cliffs. |
| 008 | 3 | 3 | 0 | 3 | 3 | 3 | 0 | 15 | B | good mixture of color, typo., & veg. |
| 009 | 3 | 2 | 0 | 2 | 2 | 2 | 0 | 11 | C | rugged but otherwise mountains |
| 010 | 1 | 2 | 0 | 2 | 3 | 2 | 0 | 10 | C | mountains but good view of N.P. |

# Scenic Quality Evaluation

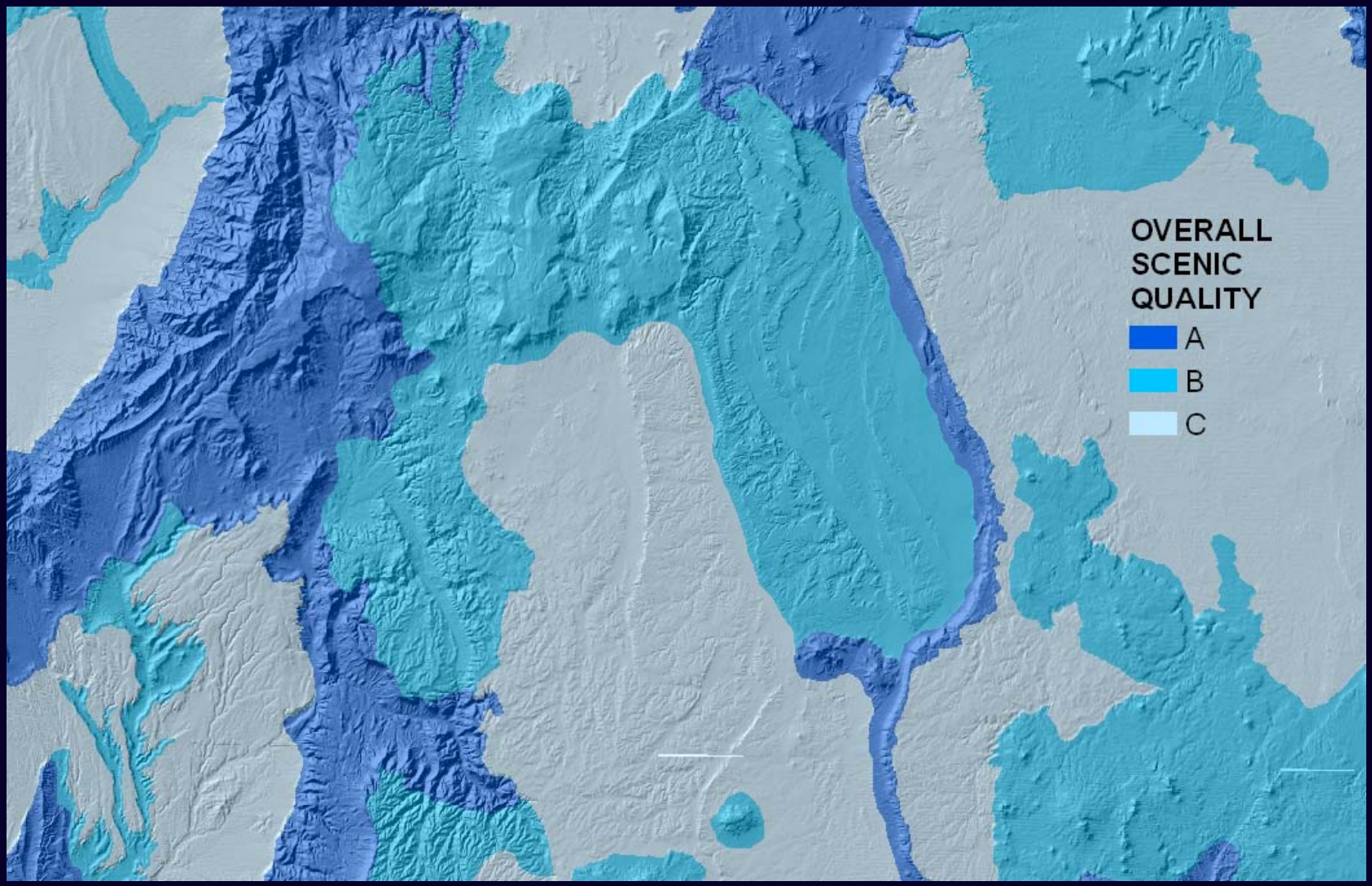


# Scenic Quality Evaluation

| SQ_UNIT | LANDFORM | VEGETATION | WATER | COLOR | ADJ_SCENERY | SCARCITY | CULTURALMOD | TOTAL_SCORE | SQ_RATING | GEN_SQ_RATING | ACRES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 3 | 3 | 0 | 3 | 2 | 1 | 0 | 12 | B (Lo) | B | 3922.569 |
| 002 | 1 | 3 | 0 | 2 | 0 | 1 | 0 | 7 | C (Med) | C | 30262.480 |
| 003 | 3 | 3 | 0 | 3 | 1 | 2 | 0 | 12 | B (Lo) | B | 1648.235 |
| 004 | 2 | 3 | 4 | 3 | 1 | 5 | -3 | 15 | B (Med) | B | 12140.752 |
| 005 | 3 | 3 | 0 | 1 | 4 | 2 | -2 | 11 | C (Hi) | C | 18958.617 |
| 006 | 3 | 3 | 0 | 1 | 4 | 2 | -2 | 11 | C (Hi) | C | 40177.891 |
| 007 | 5 | 5 | 3 | 5 | 0 | 4 | 0 | 22 | A (Lo) | A | 249.132 |
| 008 | 5 | 5 | 3 | 5 | 0 | 4 | 0 | 22 | A (Lo) | A | 341650.642 |
| 009 | 2 | 3 | 0 | 1 | 3 | 2 | 0 | 11 | C (Hi) | C | 1073.566 |
| 010 | 2 | 3 | 0 | 1 | 3 | 2 | 0 | 11 | C (Hi) | C | 3101.878 |
| 011 | 2 | 2 | 0 | 3 | 1 | 1 | -2 | 7 | C (Med) | C | 26948.720 |
| 012 | 5 | 3 | 0 | 5 | 3 | 3 | 1 | 20 | A (Lo) | A | 760.500 |
| 013 | 4 | 4 | 0 | 3 | 3 | 2 | -1 | 15 | B (Med) | B | 139524.236 |
| 014 | 3 | 3 | 0 | 1 | 3 | 2 | 0 | 12 | B (Lo) | B | 51374.602 |
| 015 | 3 | 3 | 0 | 1 | 3 | 1 | 0 | 11 | C (Hi) | C | 138797.410 |
| 016 | 3 | 4 | 0 | 3 | 0 | 3 | 1 | 14 | B (Med) | B | 25043.626 |
| 017 | 3 | 3 | 0 | 1 | 3 | 1 | 0 | 11 | C (Hi) | C | 32079.312 |
| 018 | 5 | 3 | 3 | 5 | 3 | 2 | 2 | 23 | A (Med) | A | 14015.895 |
| 019 | 3 | 3 | 0 | 3 | 2 | 2 | 2 | 15 | B (Med_ | B | 13717.023 |

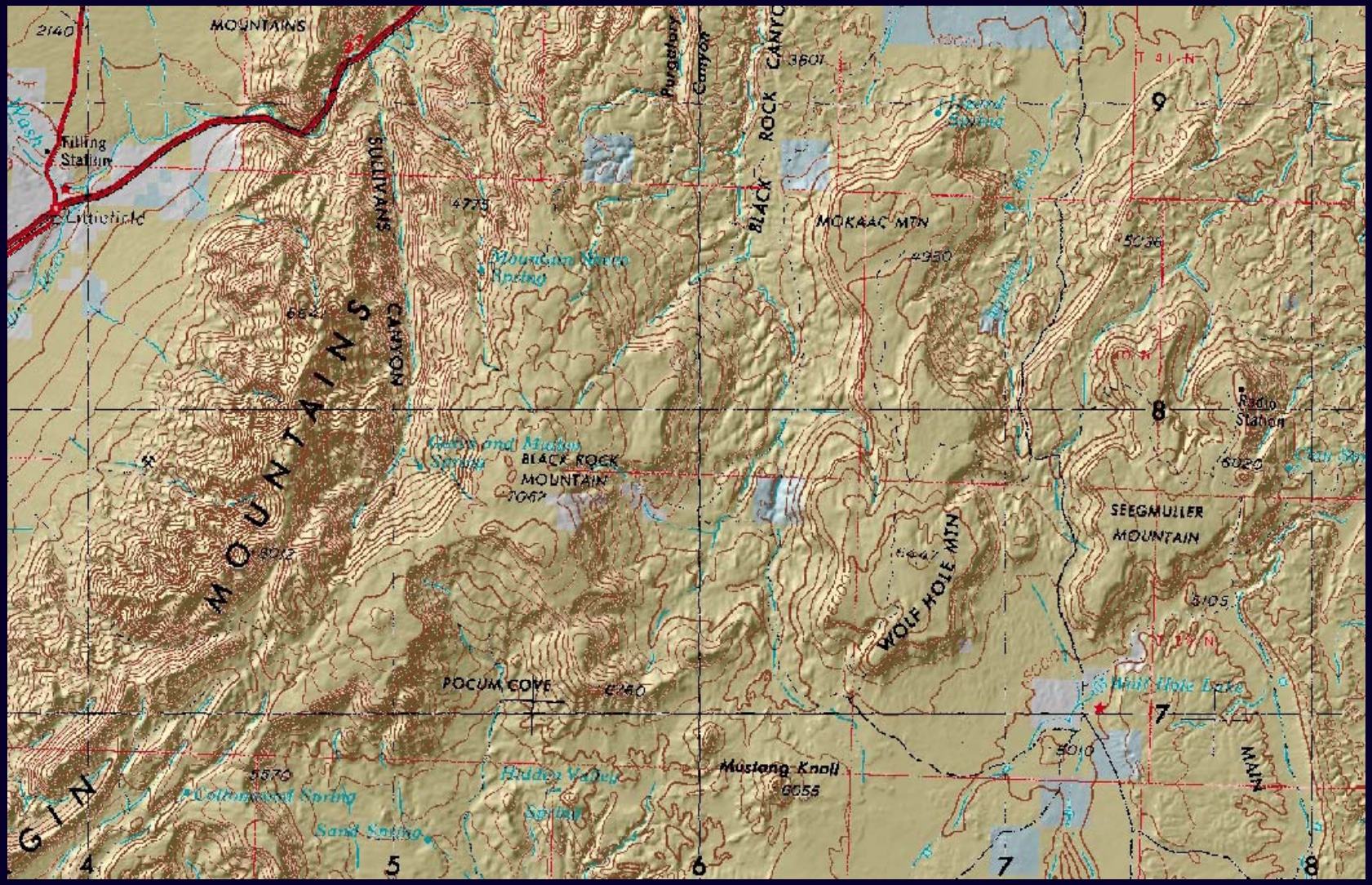
- **Scenic quality can all be included in the same data set**
- **Total scores are calculated across each row**
- **Scores are then used to determine the rating**

# Scenic Quality Evaluation



# Digital Raster Graphs

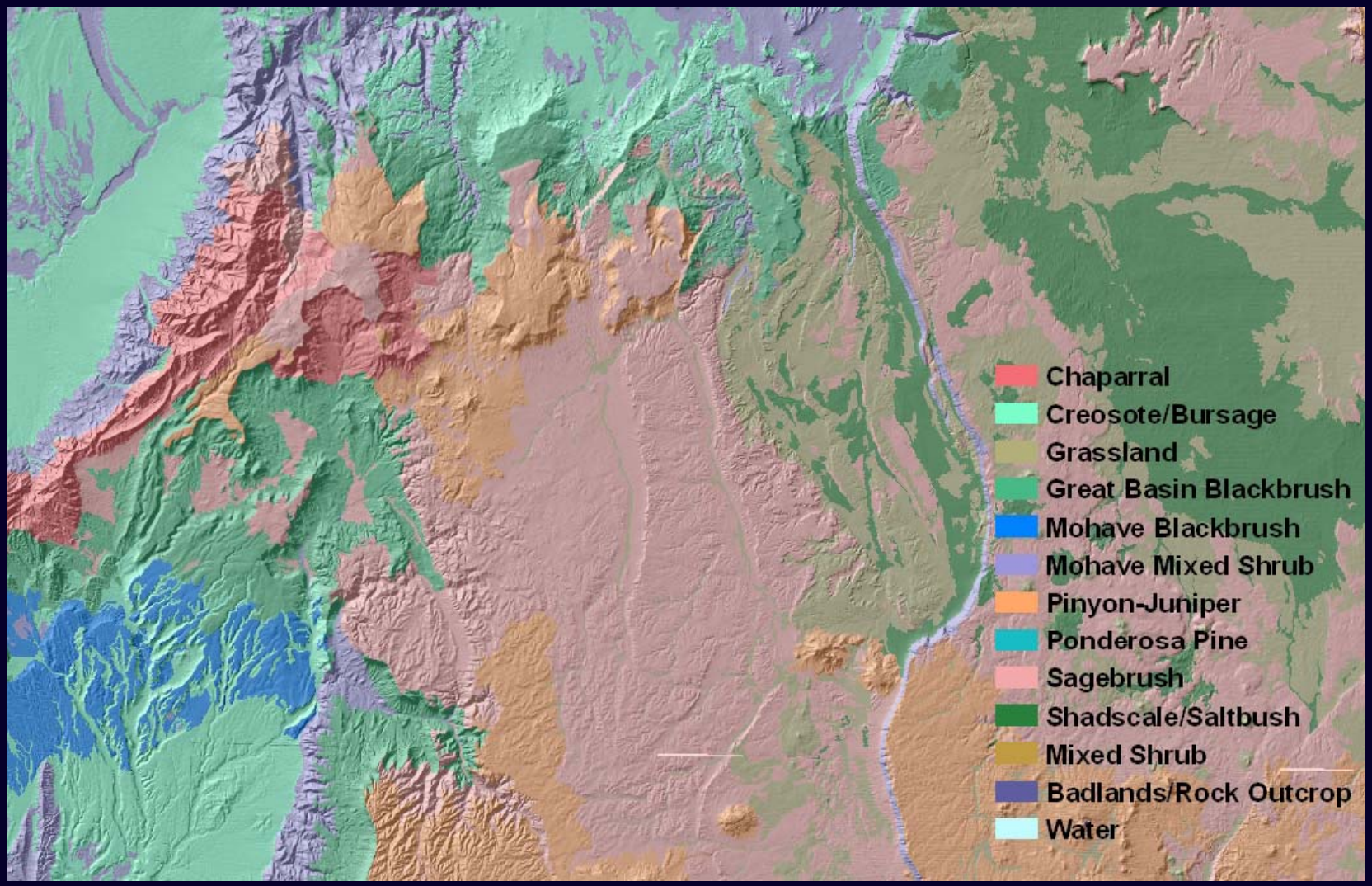
## Place Names and unique features



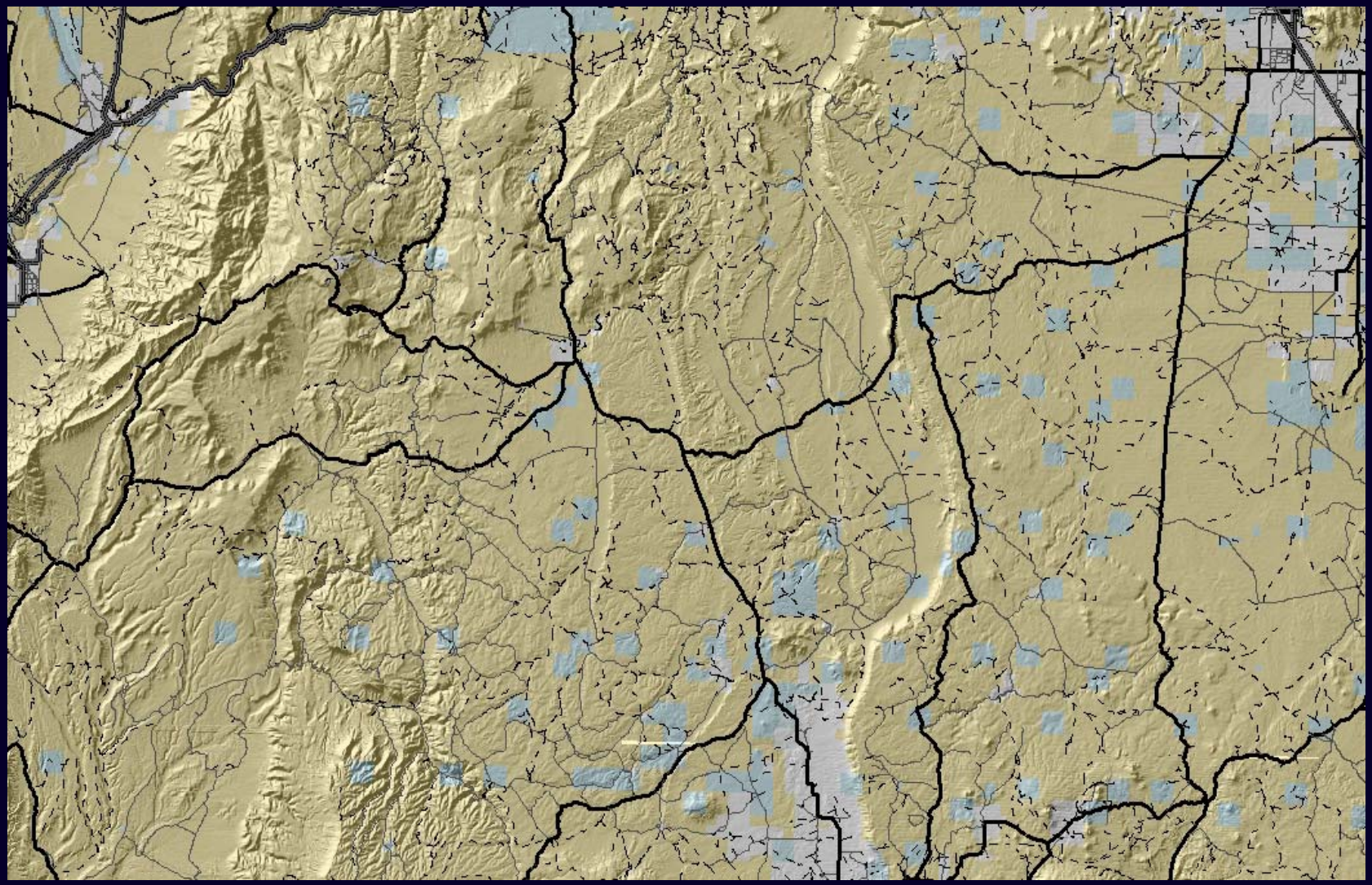
# Aerial Photography

## Landform features, vegetation, and color

# Vegetation


Chaparral
Creosote/Bursage
Grassland
Great Basin Blackbrush
Mohave Blackbrush
Mohave Mixed Shrub
Pinyon-Juniper
Ponderosa Pine
Sagebrush
Shadscale/Saltbush
Mixed Shrub
Badlands/Rock Outcrop
Water

# Transportation



# Scenic Quality Evaluation

| SQ_UNIT | LANDFORM | VEGETATION | WATER | COLOR | ADJ_SCENERY | SCARCITY | CULTURALMOD | TOTAL_SCORE | SQ_RATING | GEN_SQ_RATING | ACRES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 3 | 3 | 0 | 3 | 2 | 1 | 0 | 12 | B (Lo) | B | 3922.569 |
| 002 | 1 | 3 | 0 | 2 | 0 | 1 | 0 | 7 | C (Med) | C | 30262.480 |
| 003 | 3 | 3 | 0 | 3 | 1 | 2 | 0 | 12 | B (Lo) | B | 1648.235 |
| 004 | 2 | 3 | 4 | 3 | 1 | 5 | -3 | 15 | B (Med) | B | 12140.752 |
| 005 | 3 | 3 | 0 | 1 | 4 | 2 | -2 | 11 | C (Hi) | C | 18958.617 |
| 006 | 3 | 3 | 0 | 1 | 4 | 2 | -2 | 11 | C (Hi) | C | 40177.891 |
| 007 | 5 | 5 | 3 | 5 | 0 | 4 | 0 | 22 | A (Lo) | A | 249.132 |
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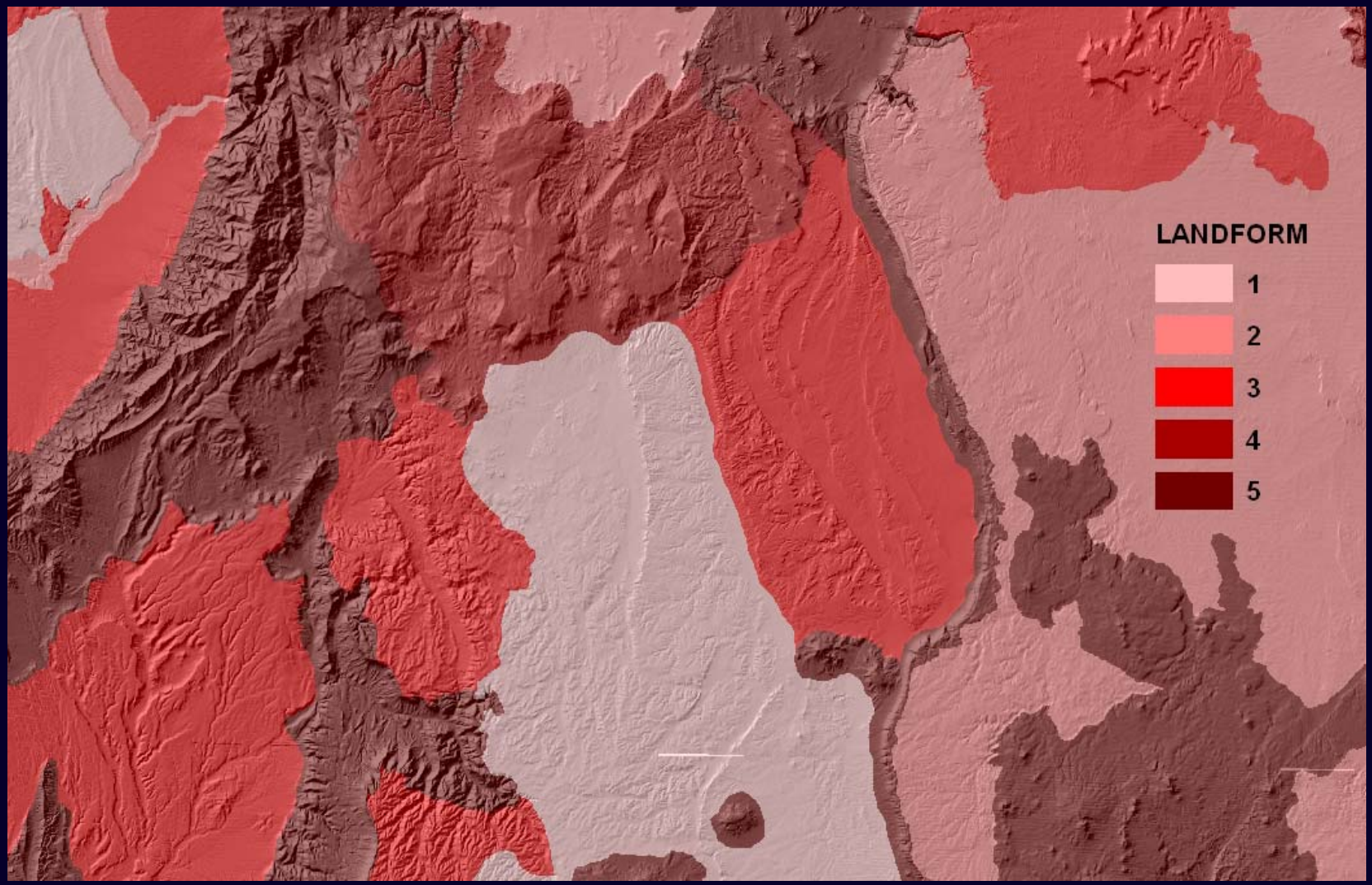
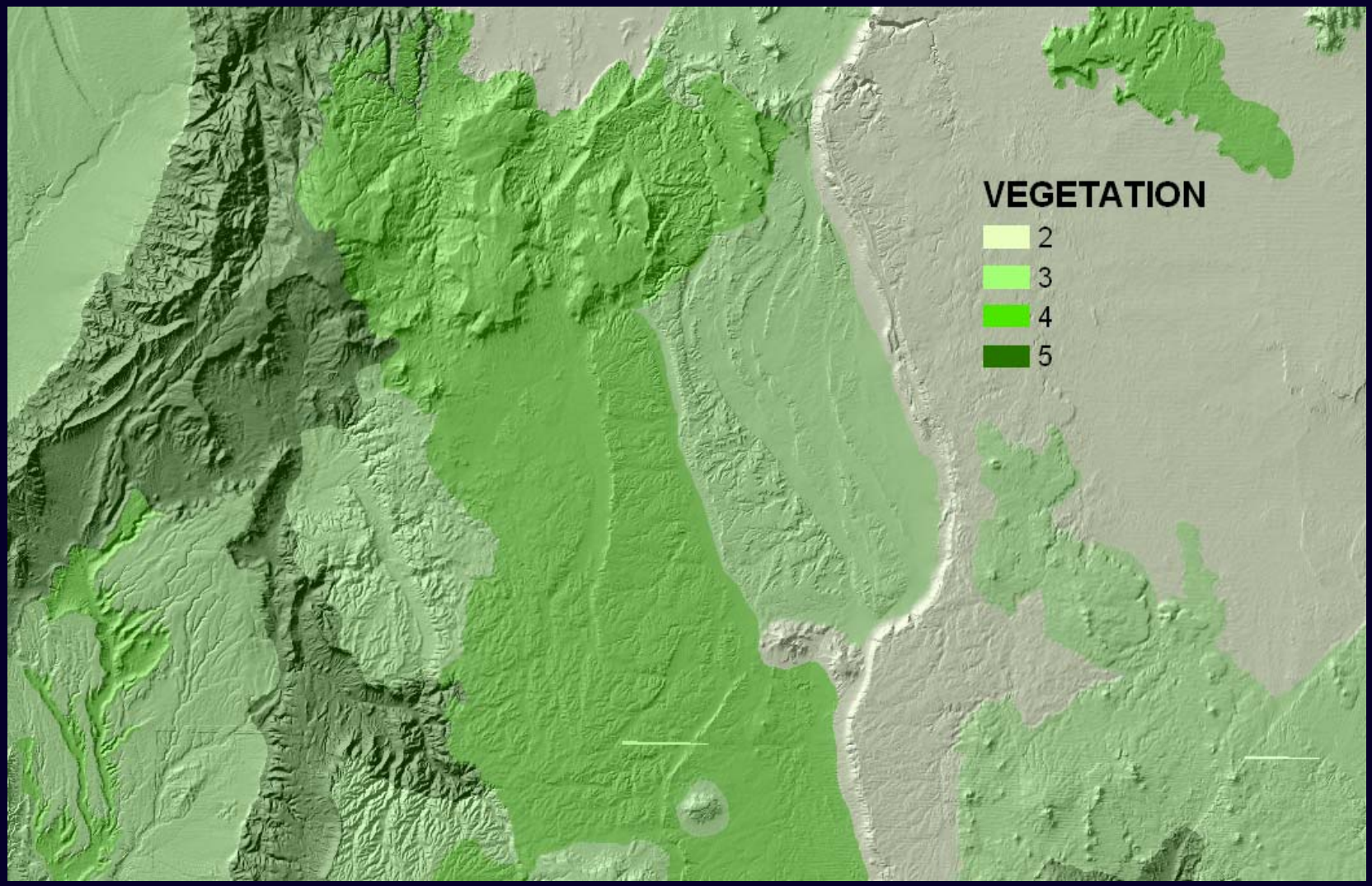
| 009 | 2 | 3 | 0 | 1 | 3 | 2 | 0 | 11 | C (Hi) | C | 1073.566 |
| 010 | 2 | 3 | 0 | 1 | 3 | 2 | 0 | 11 | C (Hi) | C | 3101.878 |
| 011 | 2 | 2 | 0 | 3 | 1 | 1 | -2 | 7 | C (Med) | C | 26948.720 |
| 012 | 5 | 3 | 0 | 5 | 3 | 3 | 1 | 20 | A (Lo) | A | 760.500 |
| 013 | 4 | 4 | 0 | 3 | 3 | 2 | -1 | 15 | B (Med) | B | 139524.236 |
| 014 | 3 | 3 | 0 | 1 | 3 | 2 | 0 | 12 | B (Lo) | B | 51374.602 |
| 015 | 3 | 3 | 0 | 1 | 3 | 1 | 0 | 11 | C (Hi) | C | 138797.410 |
| 016 | 3 | 4 | 0 | 3 | 0 | 3 | 1 | 14 | B (Med) | B | 25043.626 |
| 017 | 3 | 3 | 0 | 1 | 3 | 1 | 0 | 11 | C (Hi) | C | 32079.312 |
| 018 | 5 | 3 | 3 | 5 | 3 | 2 | 2 | 23 | A (Med) | A | 14015.895 |
| 019 | 3 | 3 | 0 | 3 | 2 | 2 | 2 | 15 | B (Med_ | B | 13717.023 |

- **Scenic quality can all be included in the same data set**
- **Total scores are calculated across each row**
- **Scores are then used to determine the rating**

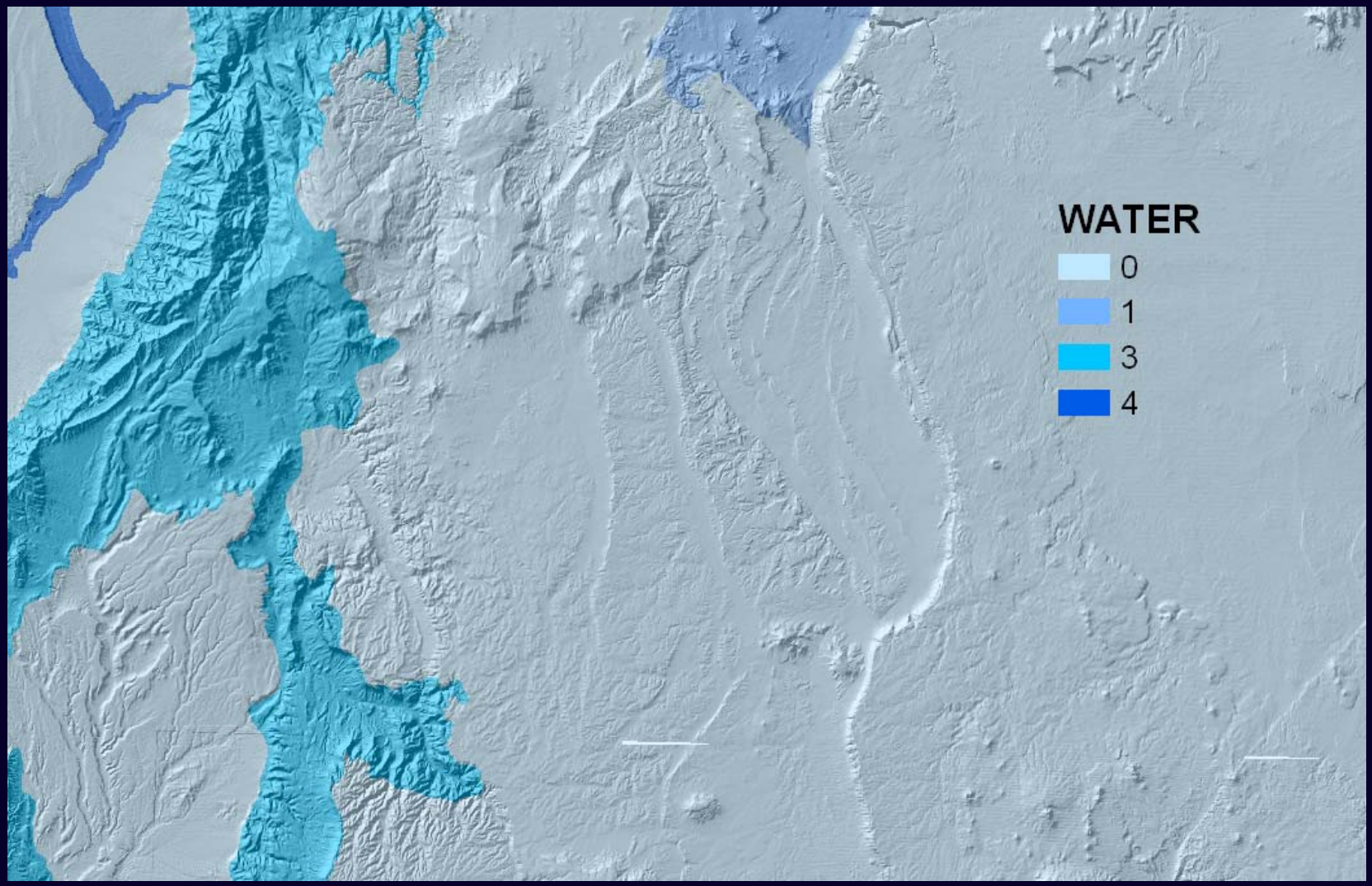
# Landform



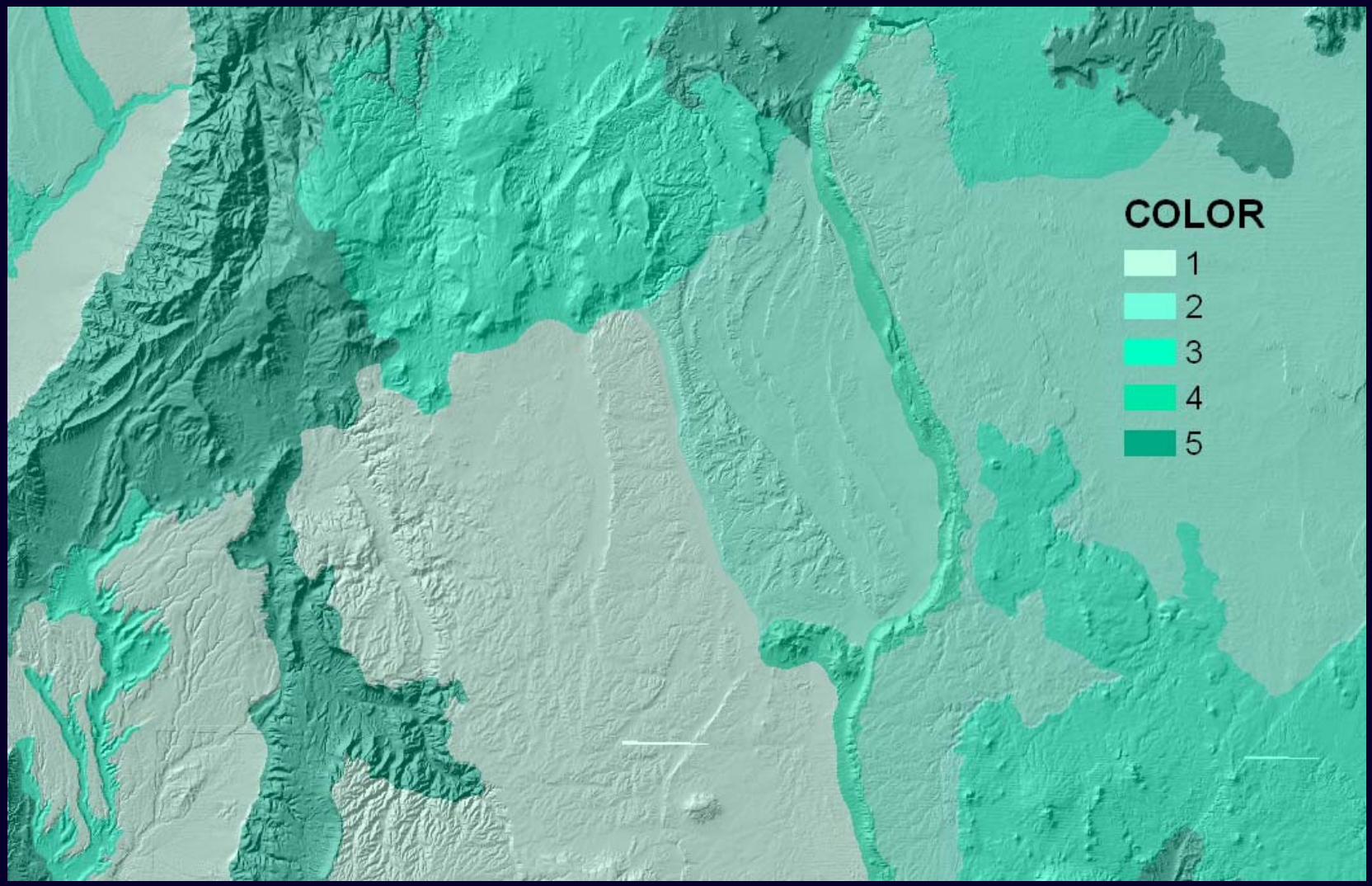
# Vegetation



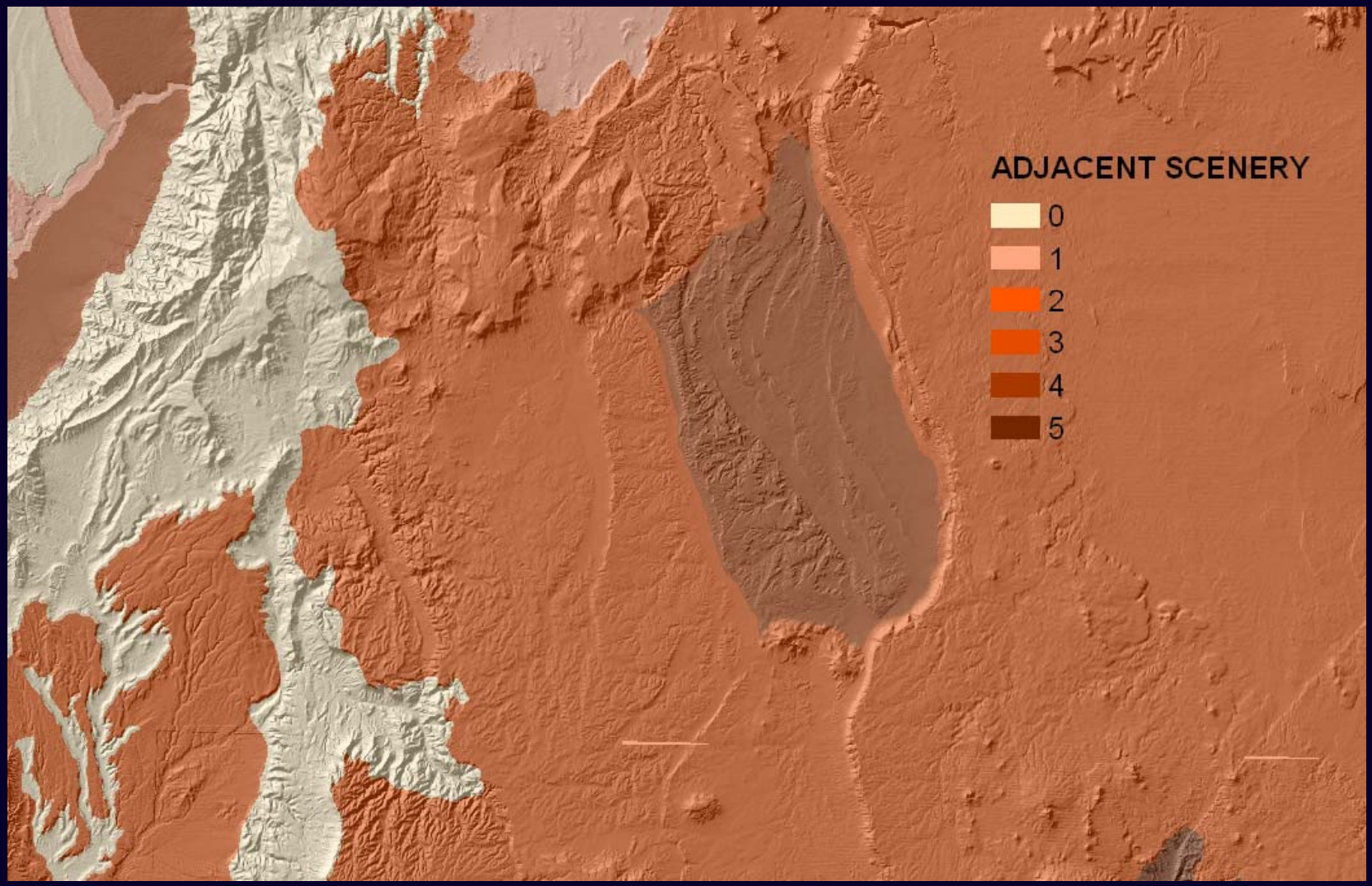
# Water



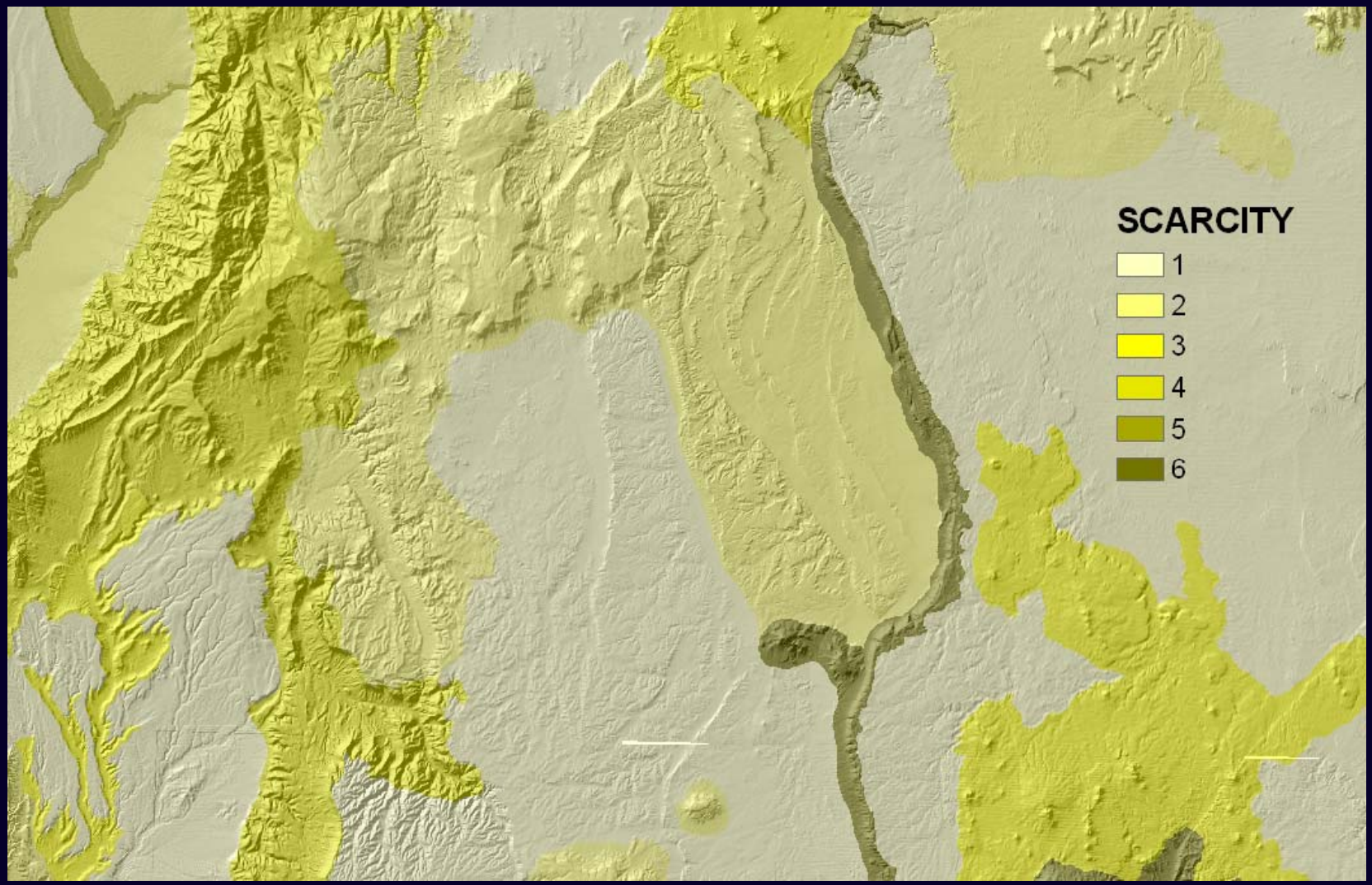
# Color



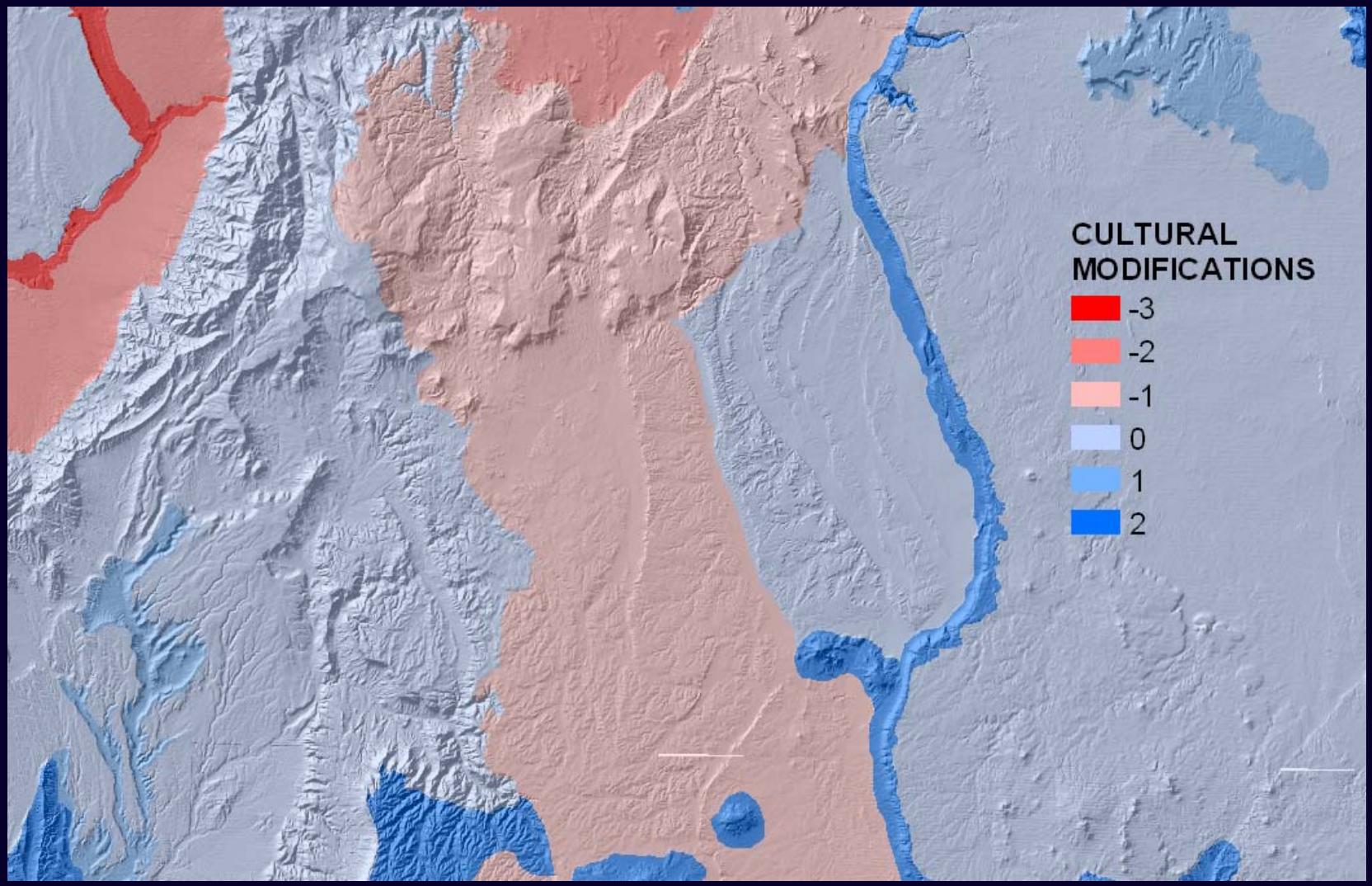
# Adjacent Scenery



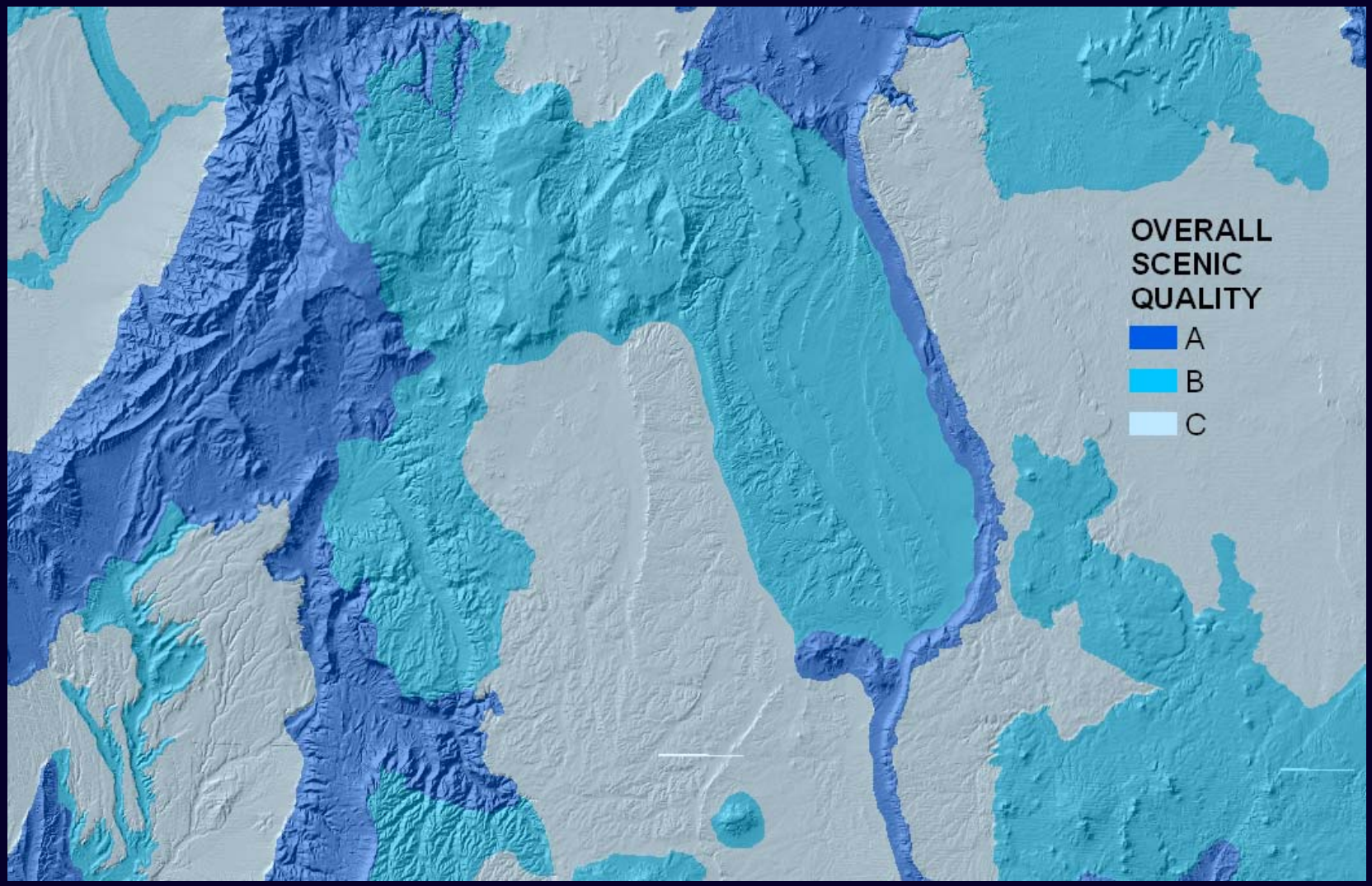
# Scarcity



# Cultural Modifications



# Scenic Quality Evaluation



# Sensitivity Level Analysis

- A measure of public concern for Scenic Quality

- Public Lands assigned:
  - High Sensitivity
  - Medium Sensitivity
  - Low Sensitivity

# Sensitivity Level Analysis

Factors to Consider

- Types of Users
- Amount of Use
- Public Interest
- Adjacent Land Uses
- Special Areas

# Types of Uses

Sensitivity level varies by use

Oil/Gas Production

Recreation

# Low Visual Sensitivity

# High Visual Sensitivity

# Amount of Use

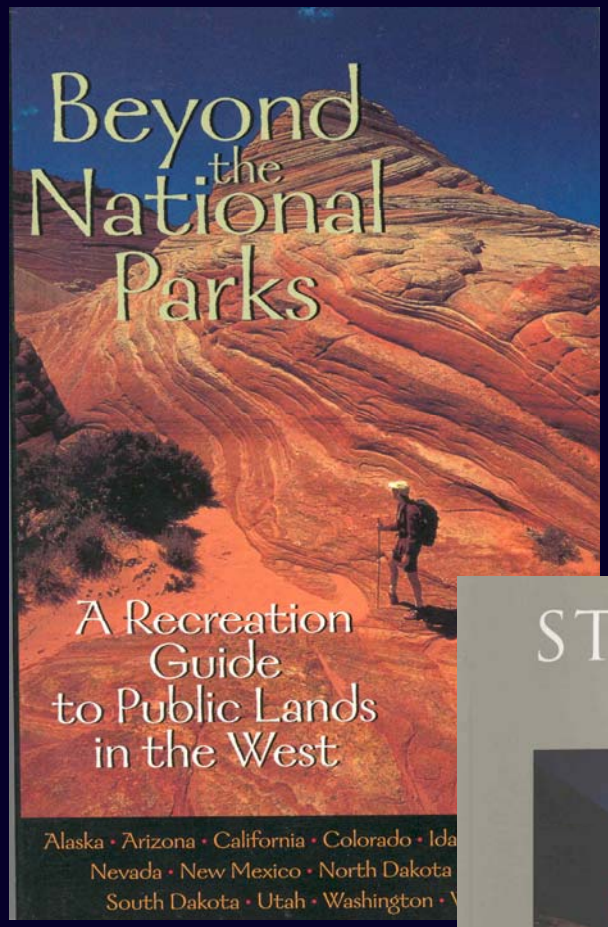
# Amount of Use

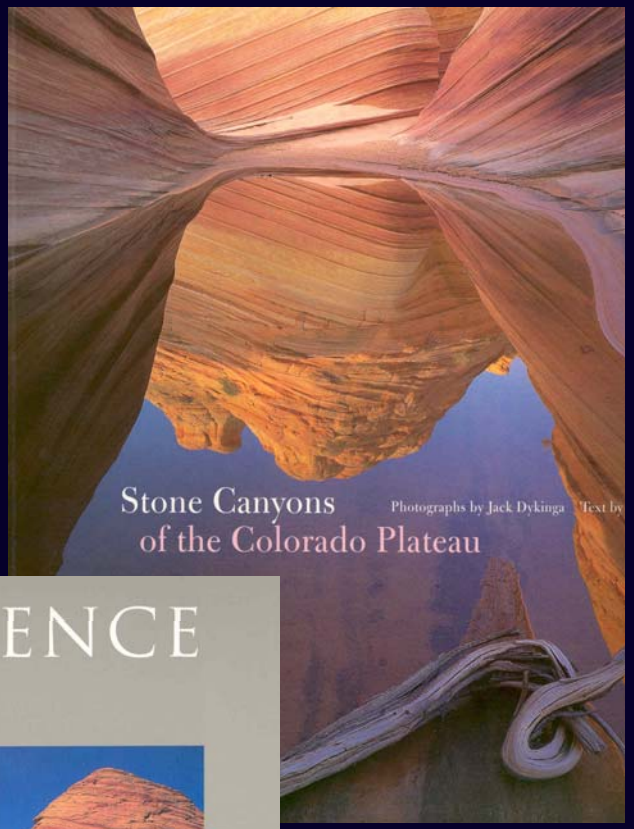
Areas seen by large numbers of people are often more sensitive.

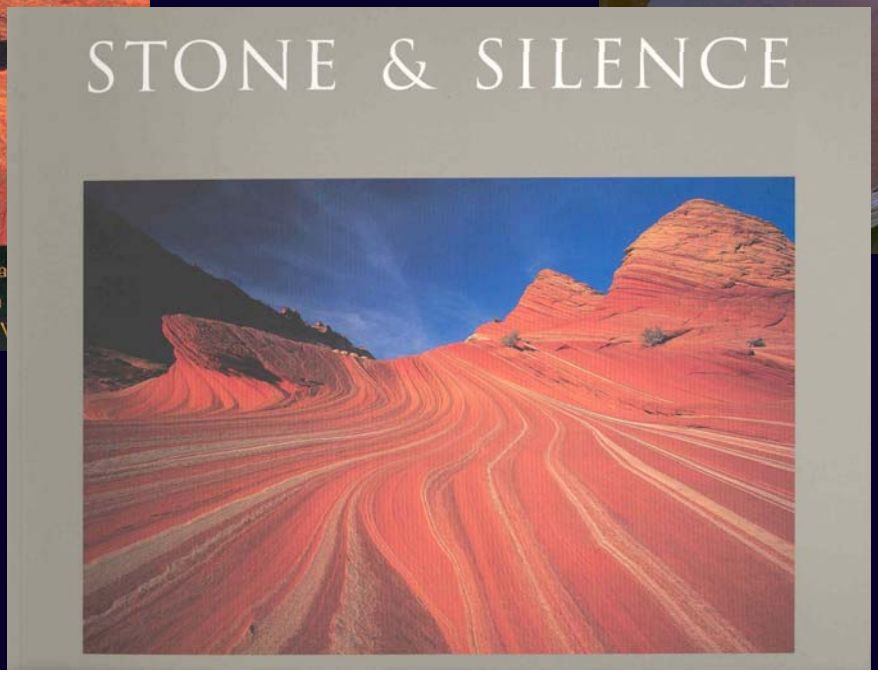
# Public Interest

Visual Quality may be of concern to Local, State, or National groups.

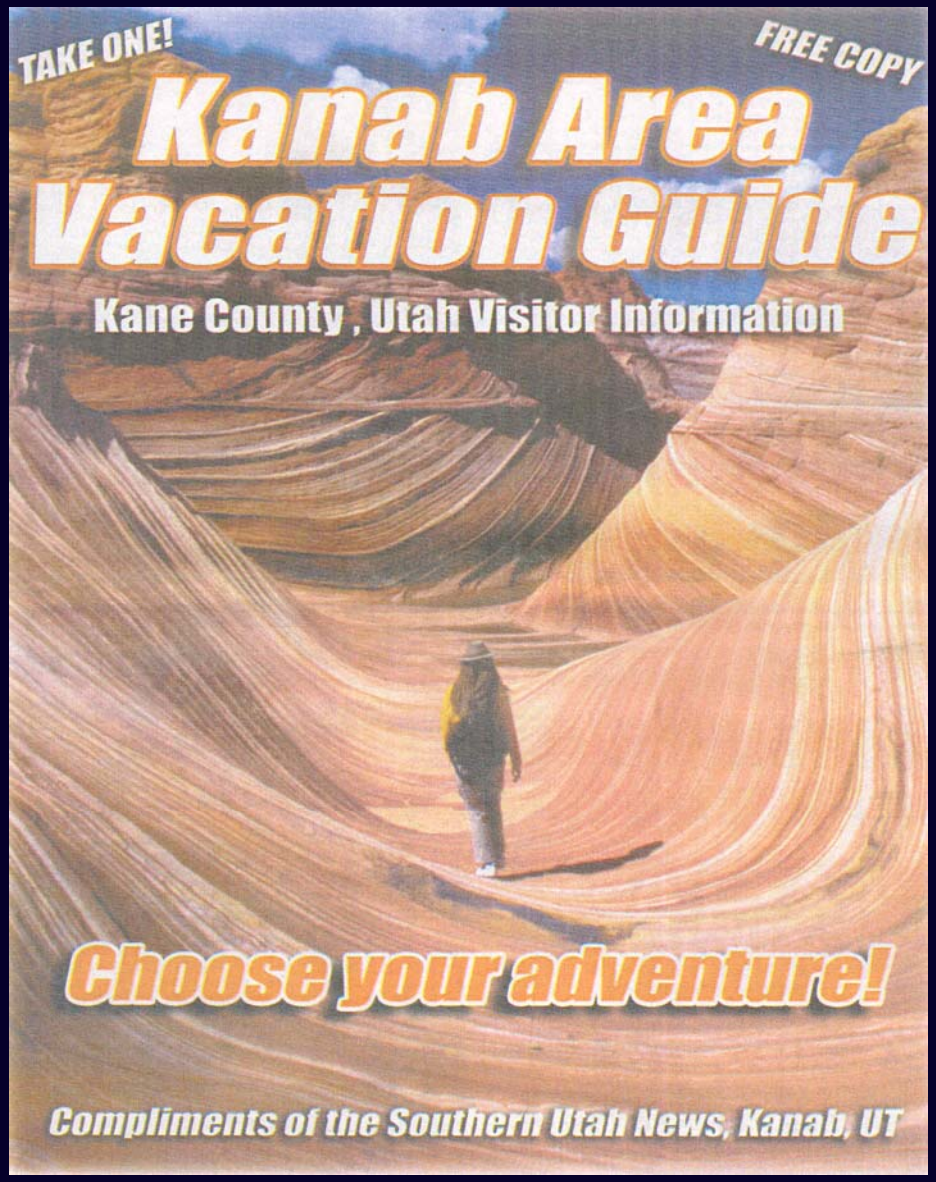
# Public Interest



# Public Interest



# Adjacent Land Uses

Interrelationships with adjacent land uses can affect Visual Sensitivity of an area.

# Special Areas

Management objectives for special areas frequently require special consideration.

# Sensitivity Level Analysis

- Break area into Sensitivity Level Rating Units (SLRU)
- Based on physical characteristics
- May coincide with SQRUs
- Score using Form 8400-6
- Scores are High, Medium, and Low
- Score high sensitivity areas first
- GIS can be used exclusively

# Sensitivity Level Analysis

## High Sensitivity Examples

- National Monuments
- Wilderness / WSA
- Scenic Byways and Backways
- Major Transportation Corridors
- Areas of Critical Environmental Concern

## Low Sensitivity Examples

- OHV Open Areas
- Mineral Development
- Oil and Gas

# Sensitivity Level Analysis

Using GIS data for sensitivity level rating

- Buffer transportation corridors (viewsheds)
- Use existing polygon data to identify other high sensitivity areas
- Divide remaining area into medium and low sensitivity
- Record rationale on Form 8400-6

Form 8400-6
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

**SENSITIVITY LEVEL RATING SHEET**

Date Aug. 15, 1985

District Moab

Resource Area Grand

1. Evaluators *(names)*

Bob Tumwater, Russ Grimes, Pete Jordan

| SENSITIVITY LEVEL RATING UNIT (1) | Type of User (2) | Amount of Use (3) | Public Interest (4) | Adjacent Land Uses (5) | Special Areas (6) | Other Factors (7) | Overall Rating (8) | EXPLANATION (9) |
|---|---|---|---|---|---|---|---|---|
| 001 | H | H | H | H | H | – | H | within f/m zone of i-70 & u163 |
| 002 | H | L | M | L | H | – | H | visible from river & floatboat users. |
| 003 | L | L | L | L | L | – | L | isolated area with low scenic values |
| 004 | H | M | H | M | M | – | H | f/m zone for state park entrance road. |

# Sensitivity Level Analysis

| Area | Perimeter | VRM_SENS_# | VRM_SENS_ID | Sensitivity | Acres |
|---|---|---|---|---|---|
| 101405766.46713 | 61746.62449 | 2 | 1 | Low | 25057.912 |
| 4344709.44585 | 13210.33774 | 3 | 3 | Medium | 1073.601 |
| 6485879.11900 | 18107.02315 | 4 | 4 | Medium | 1602.696 |
| 1107084411.98499 | 428313.34835 | 5 | 33 | Medium | 273566.536 |
| 82245846.84604 | 77227.05475 | 6 | 15 | Low | 20323.393 |
| 1261860573.89215 | 445523.75351 | 7 | 20 | Medium | 311812.562 |
| 6141307.40991 | 11440.57608 | 8 | 10 | High | 1517.550 |
| 92741510.29288 | 49014.37186 | 9 | 26 | Low | 22916.928 |
| 407231938.93712 | 133974.67762 | 10 | 34 | High | 100629.211 |
| 28111362.12154 | 35491.20211 | 11 | 28 | Medium | 6946.469 |
| 4403774.46450 | 11149.12471 | 12 | 16 | Low | 1088.196 |
| 207555071.97906 | 82130.90353 | 13 | 38 | High | 51287.979 |

**Sensitivity can all be included in the same data set**

# Distance Zones

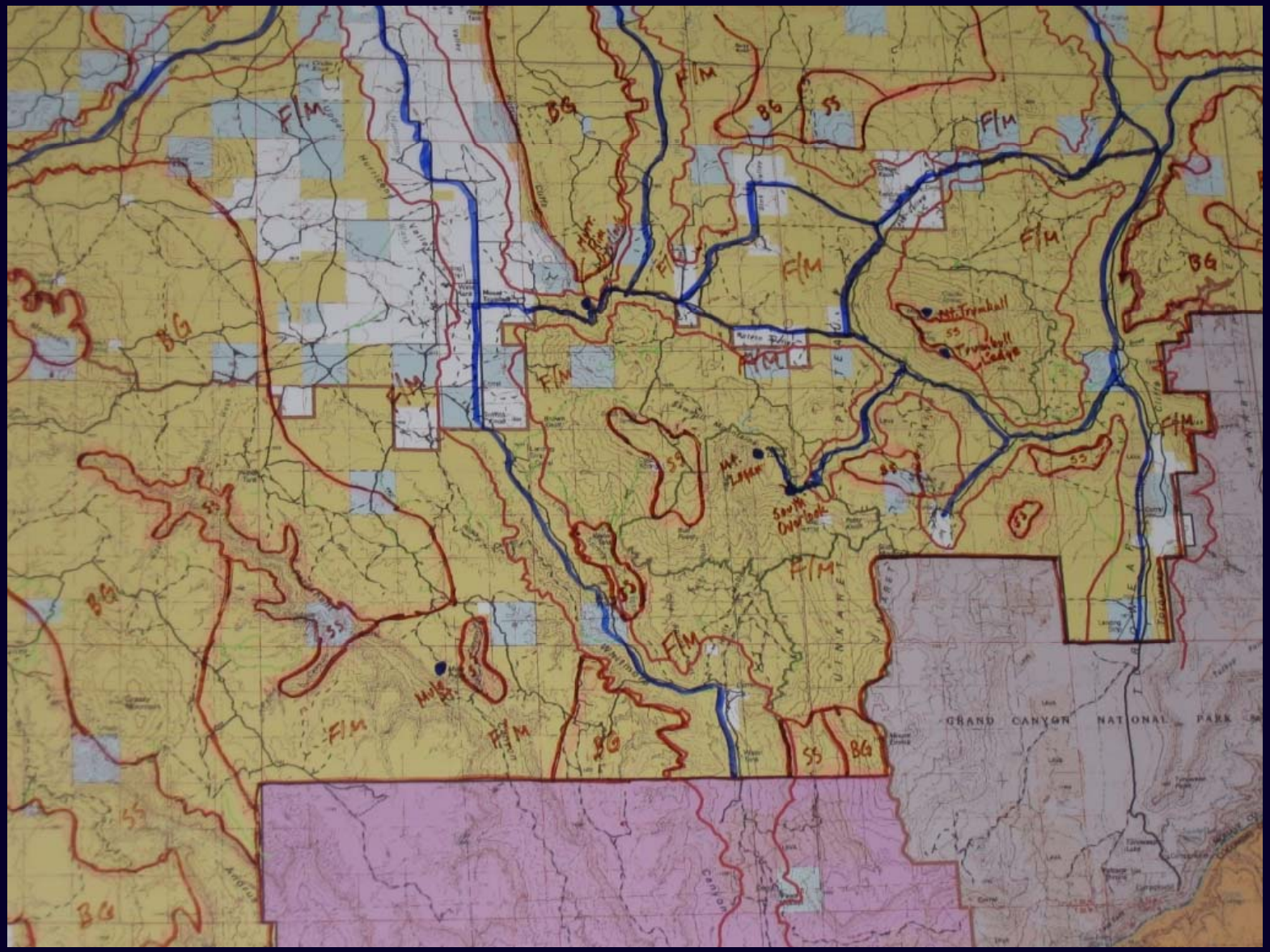
## Three Distance Zones

- Foreground/Middleground: 0 – 5 miles
- Background: 5 – 15 miles
- Seldom Seen: beyond background or can't see

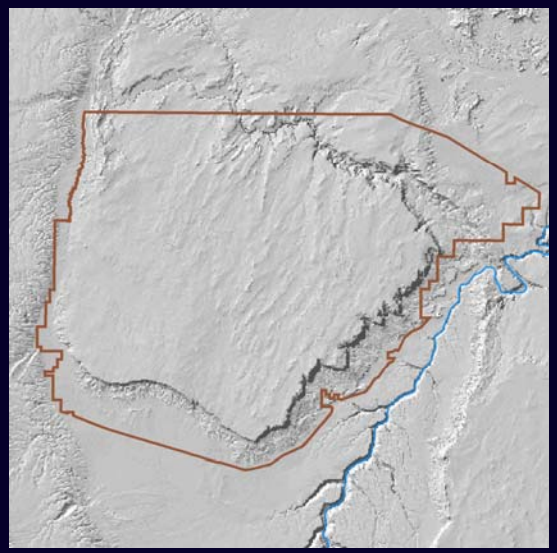
# Distance Zones

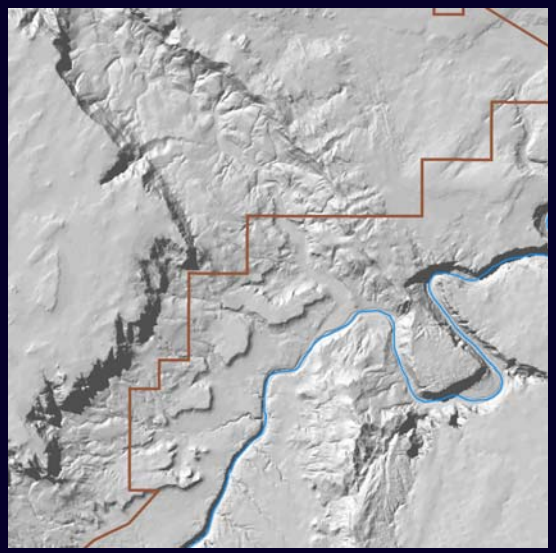
- Relative Visibility – from Travel Routes & Key Observation Points
- Closer to Viewer – More Details are Visible

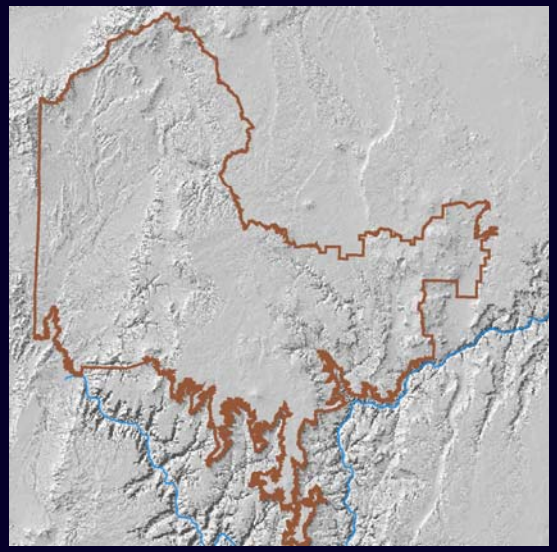
# Distance Zones – Manual Method

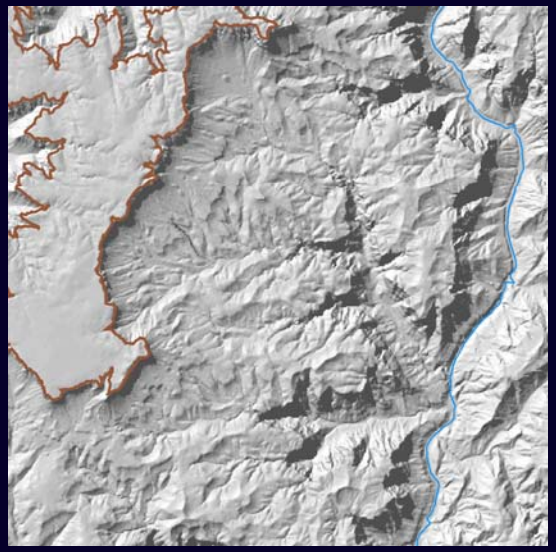


# Using Digital Elevation Models





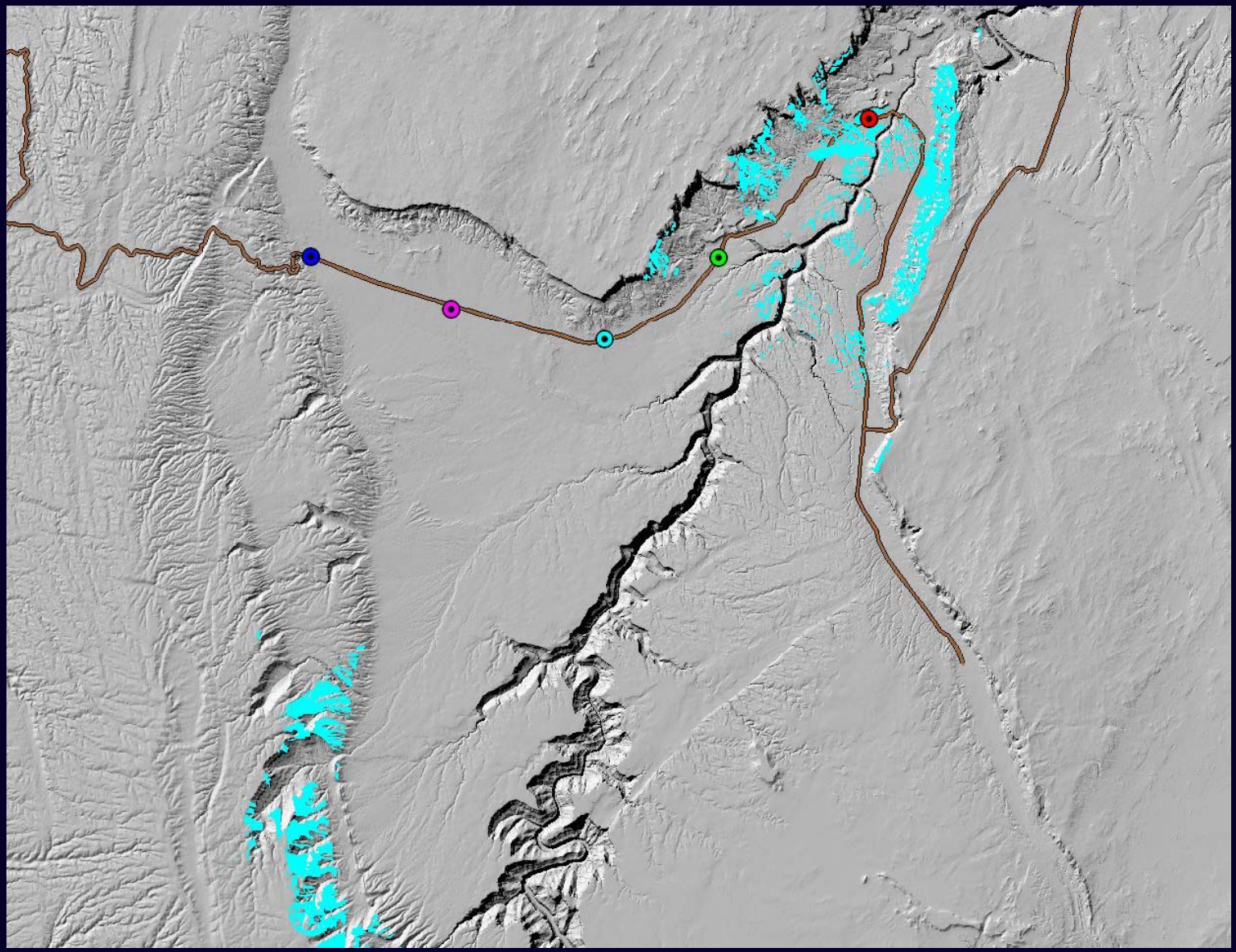




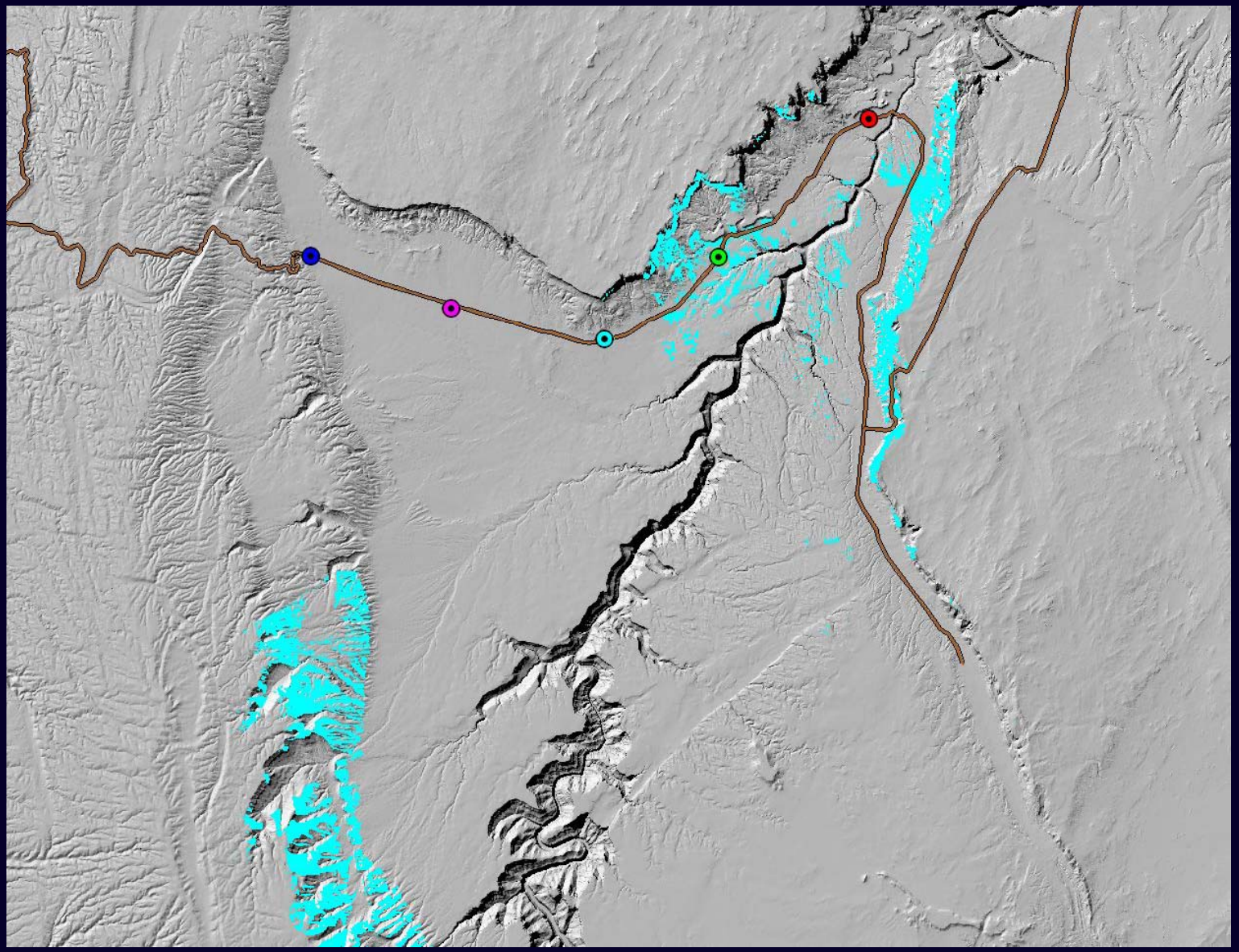
**DEM's are for more than just pretty maps**

- **Viewsheds**
- **Slope**
- **Aspect**
- **Line of Sight**

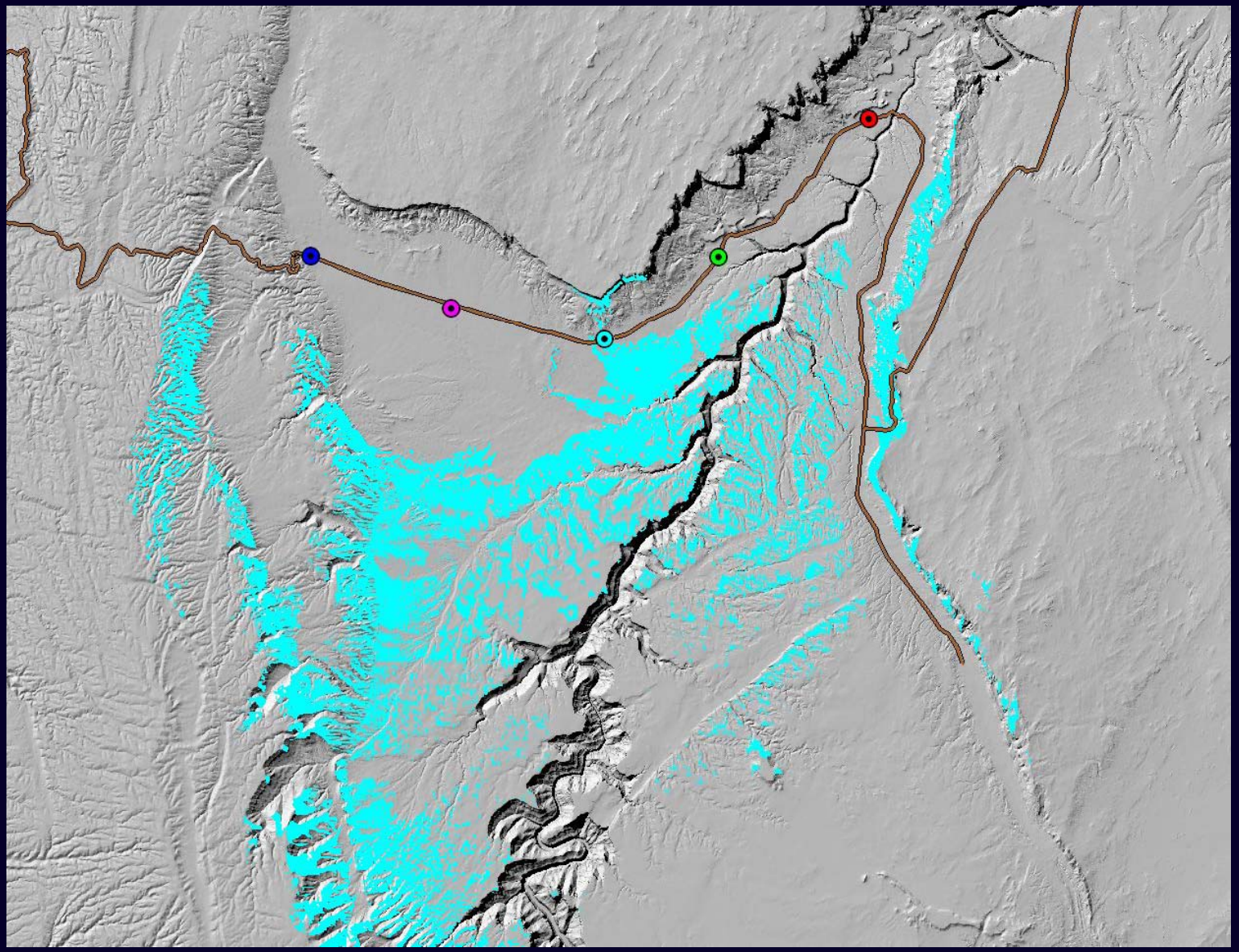
# Viewsheds



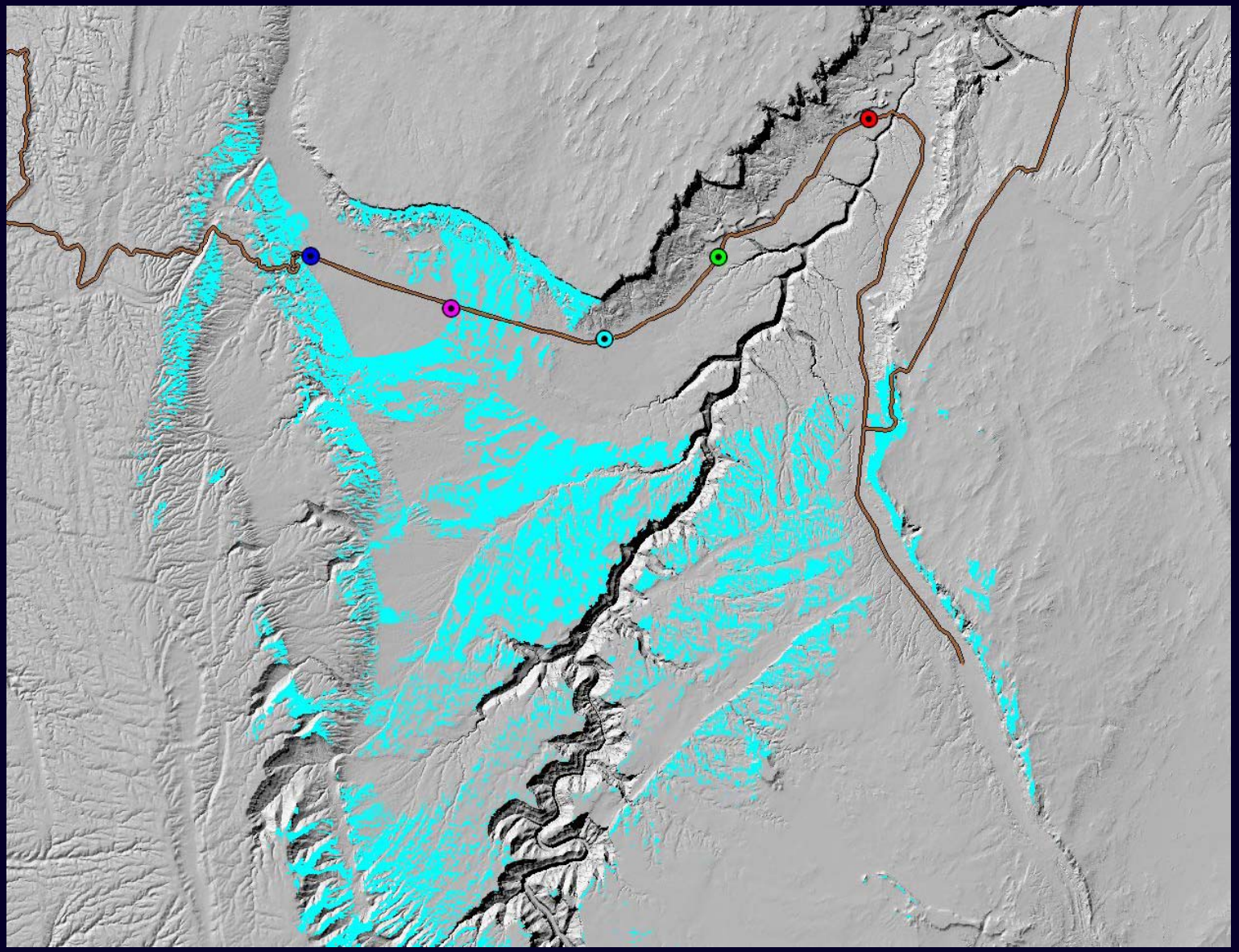
# Viewsheds



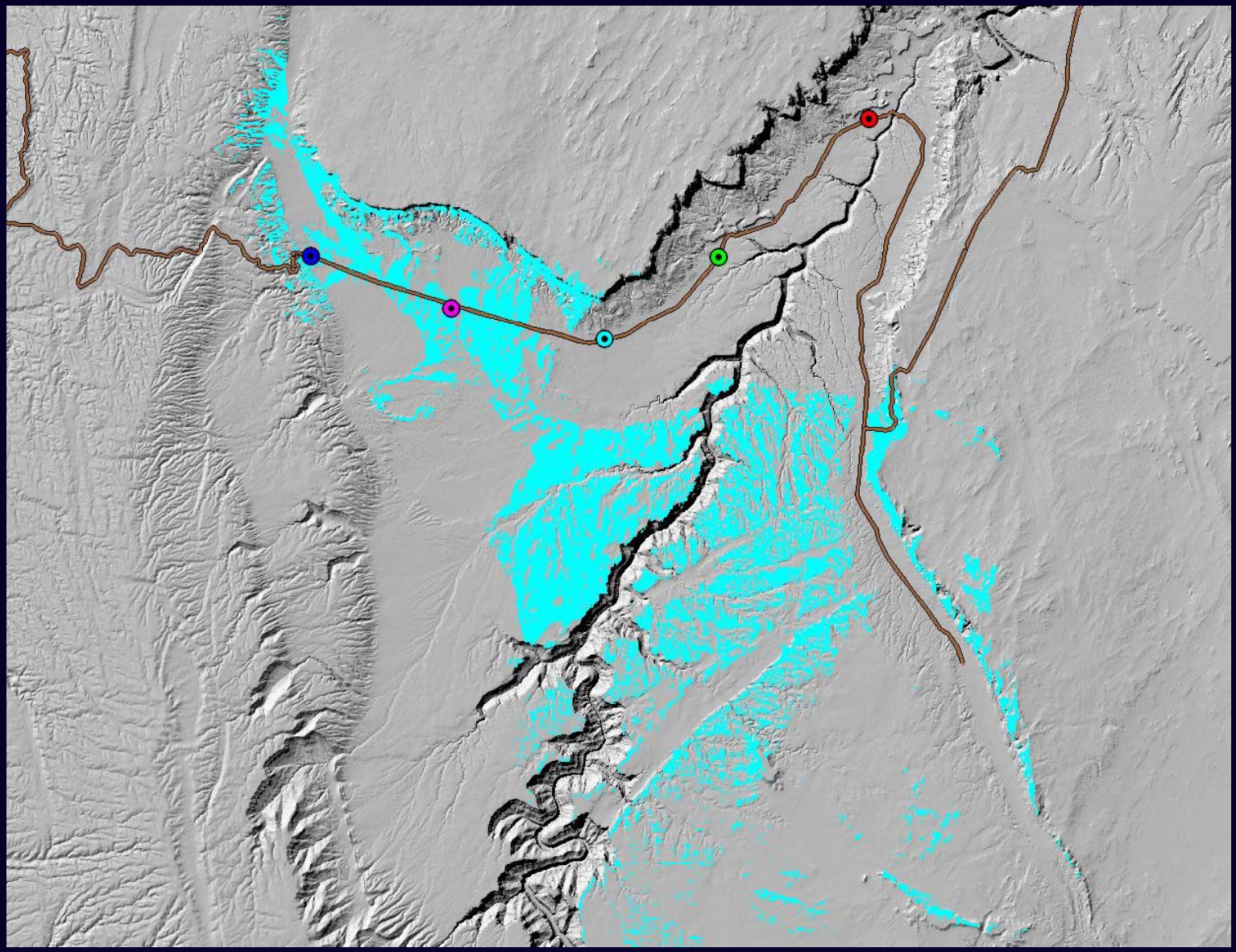
# Viewsheds



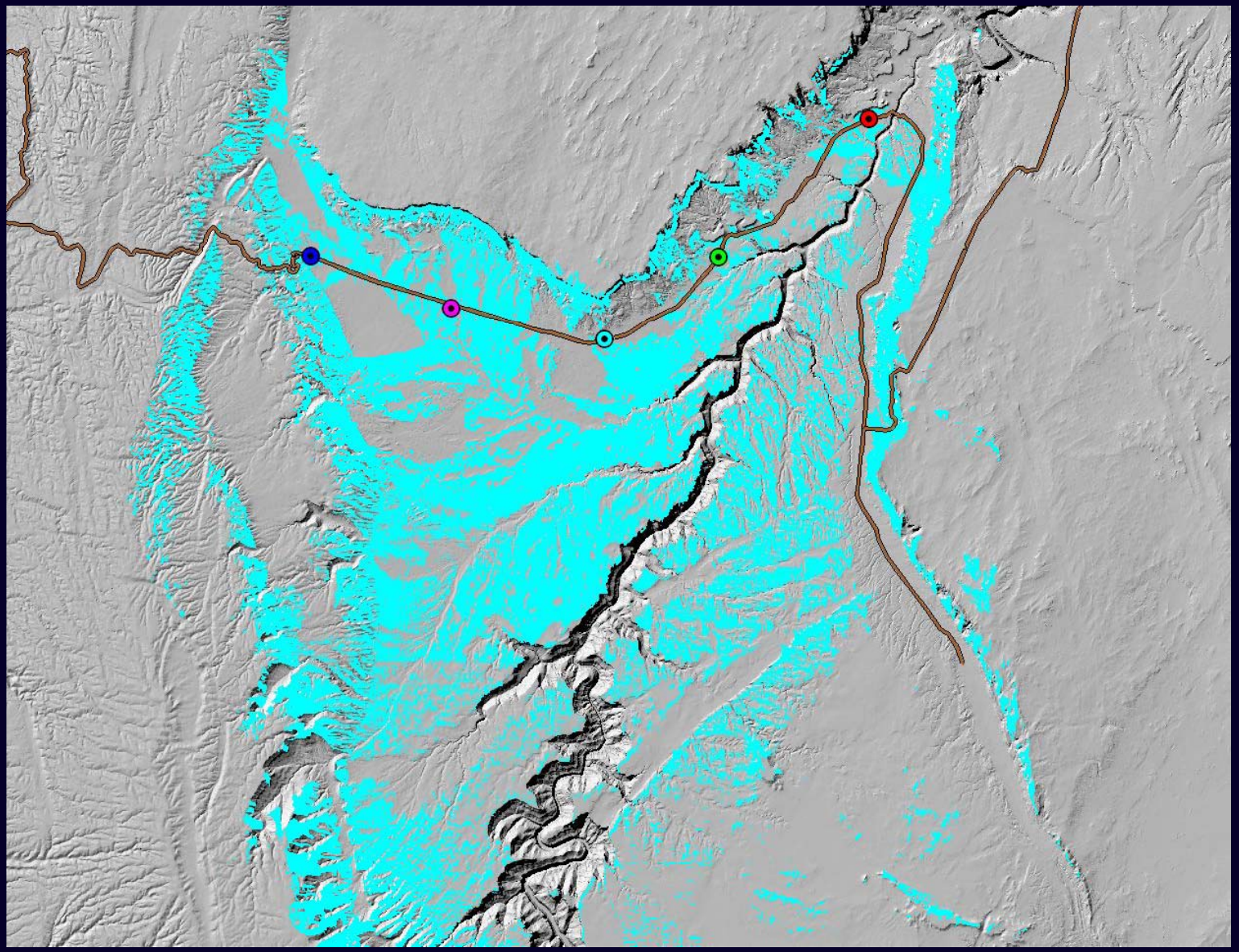
# Viewsheds



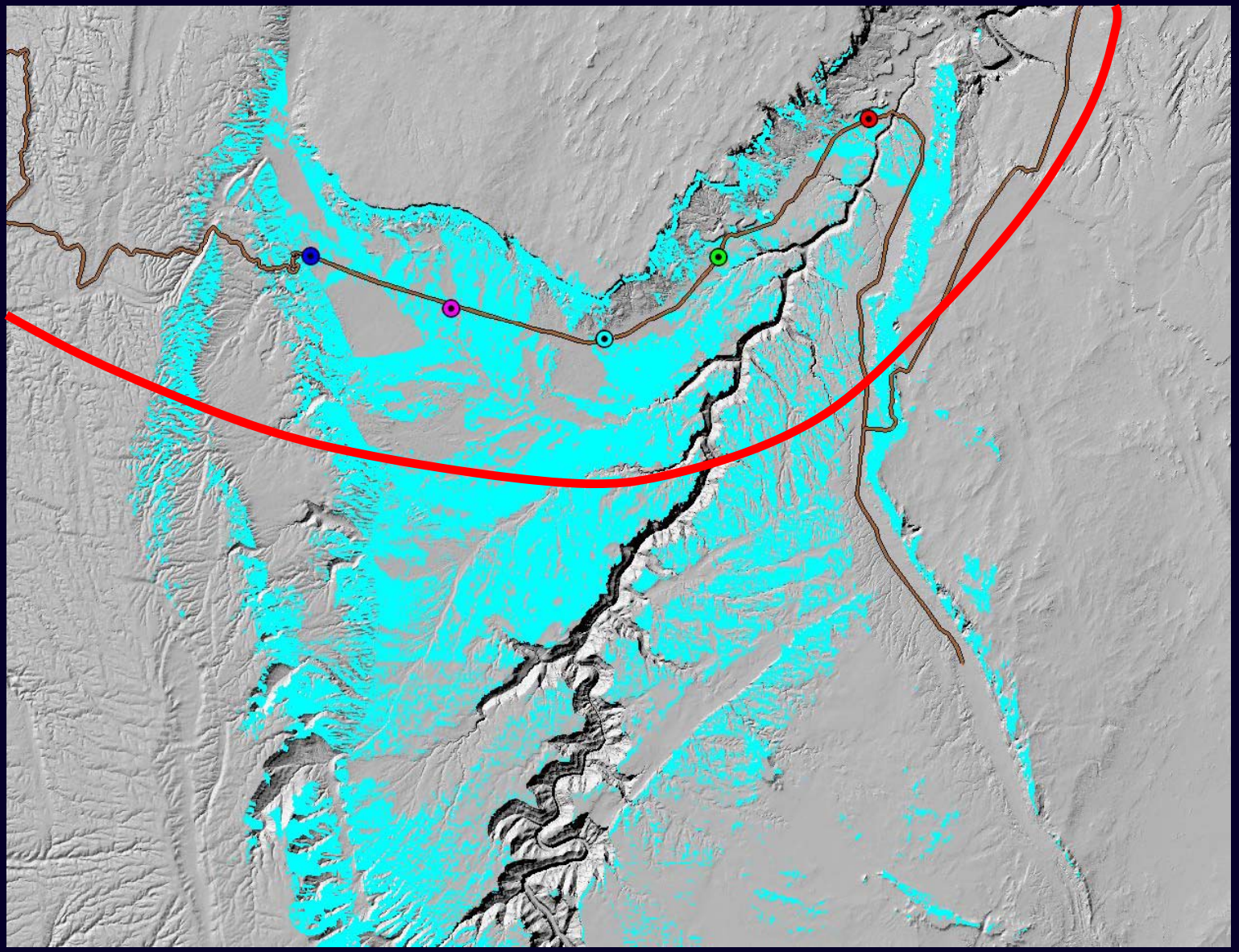
# Viewsheds



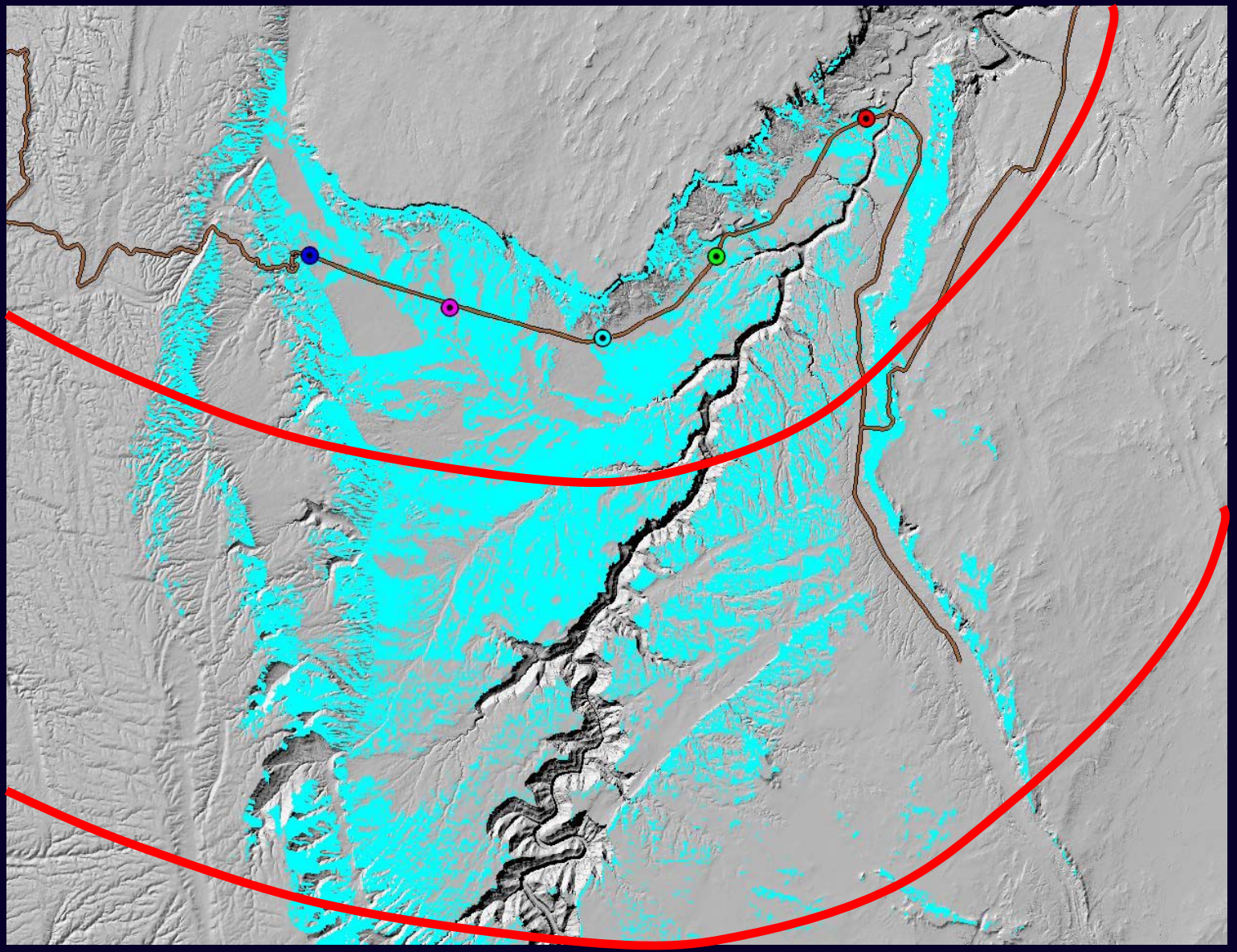
# Viewsheds



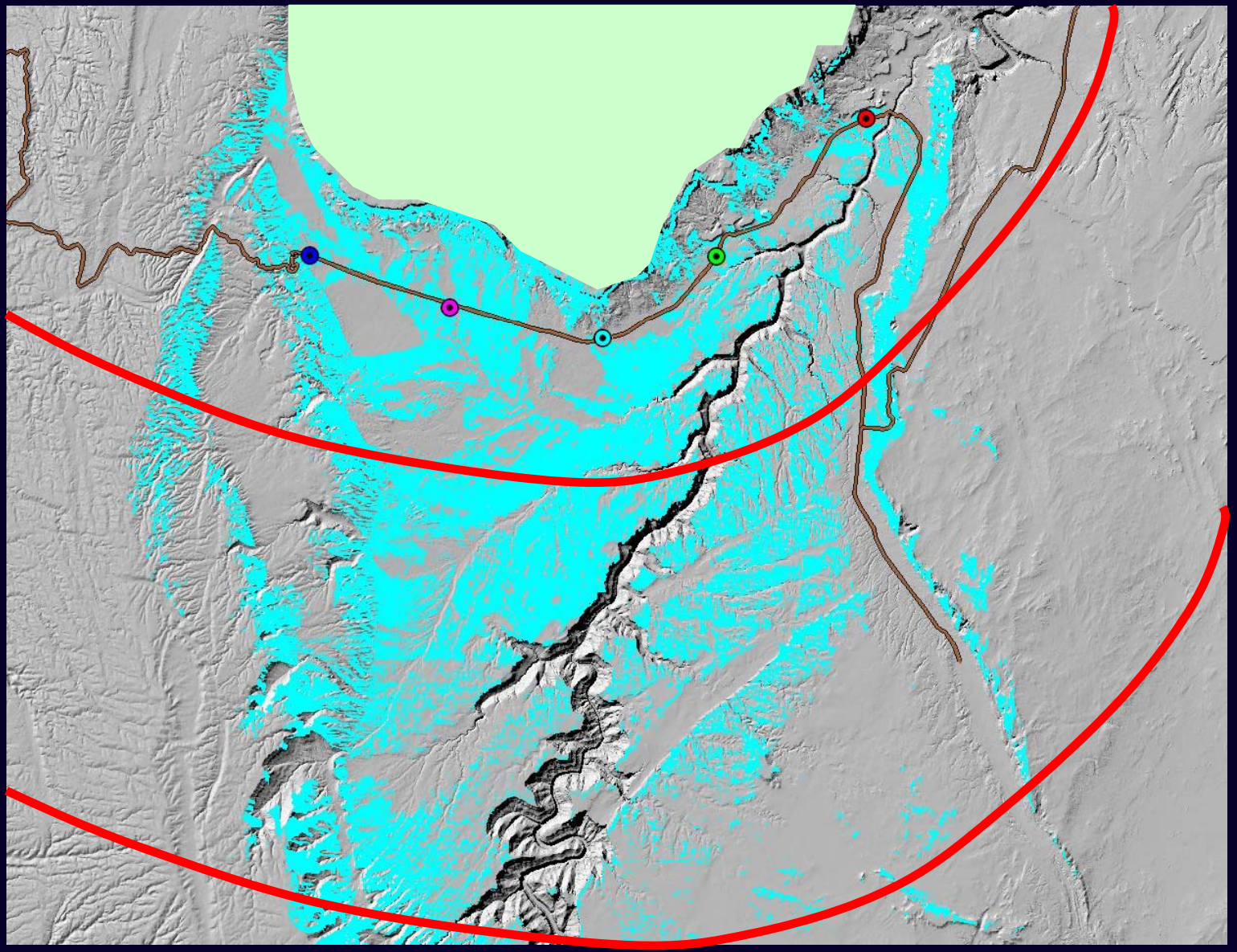
# Viewsheds – Distance Zones



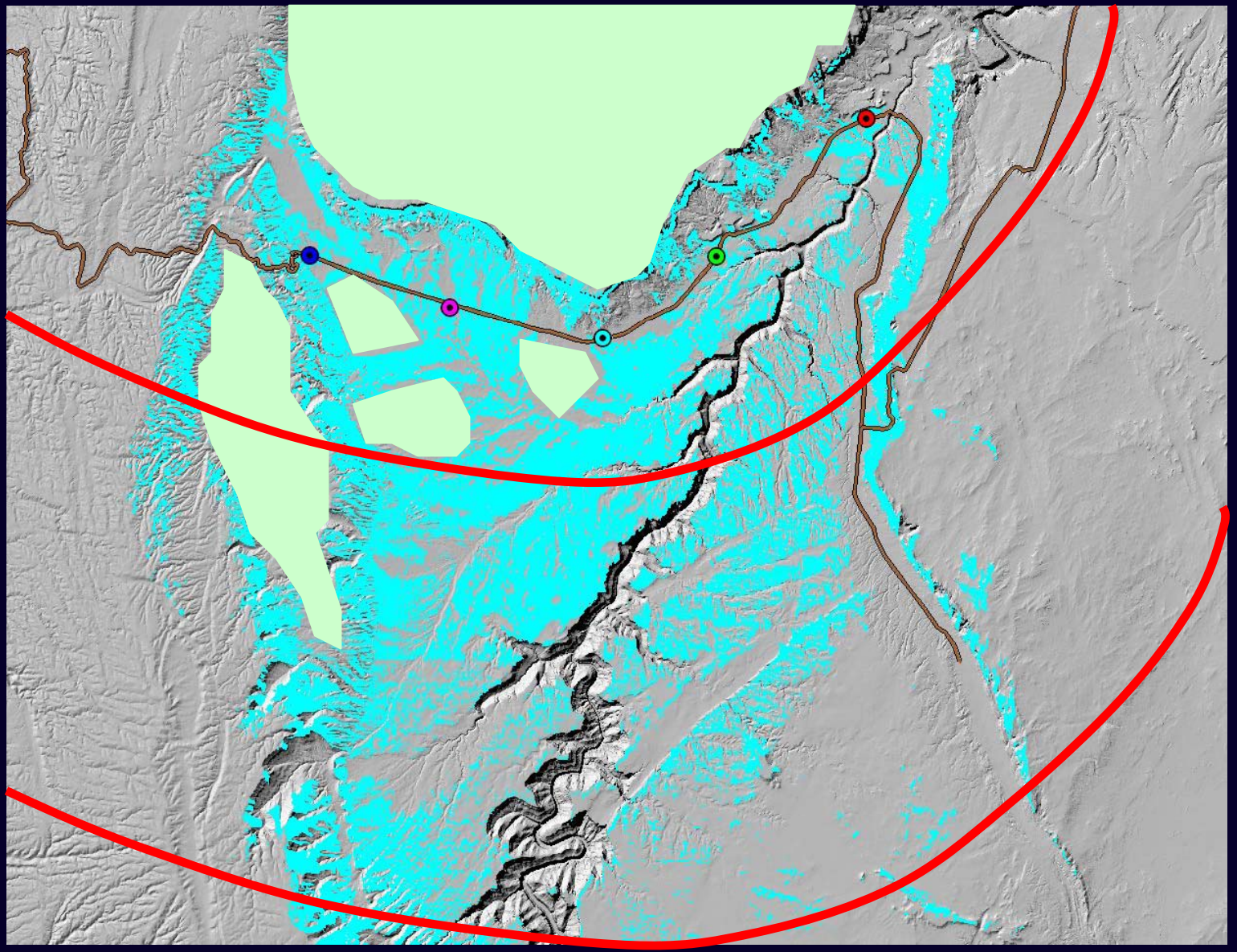
# Viewsheds – Distance Zones



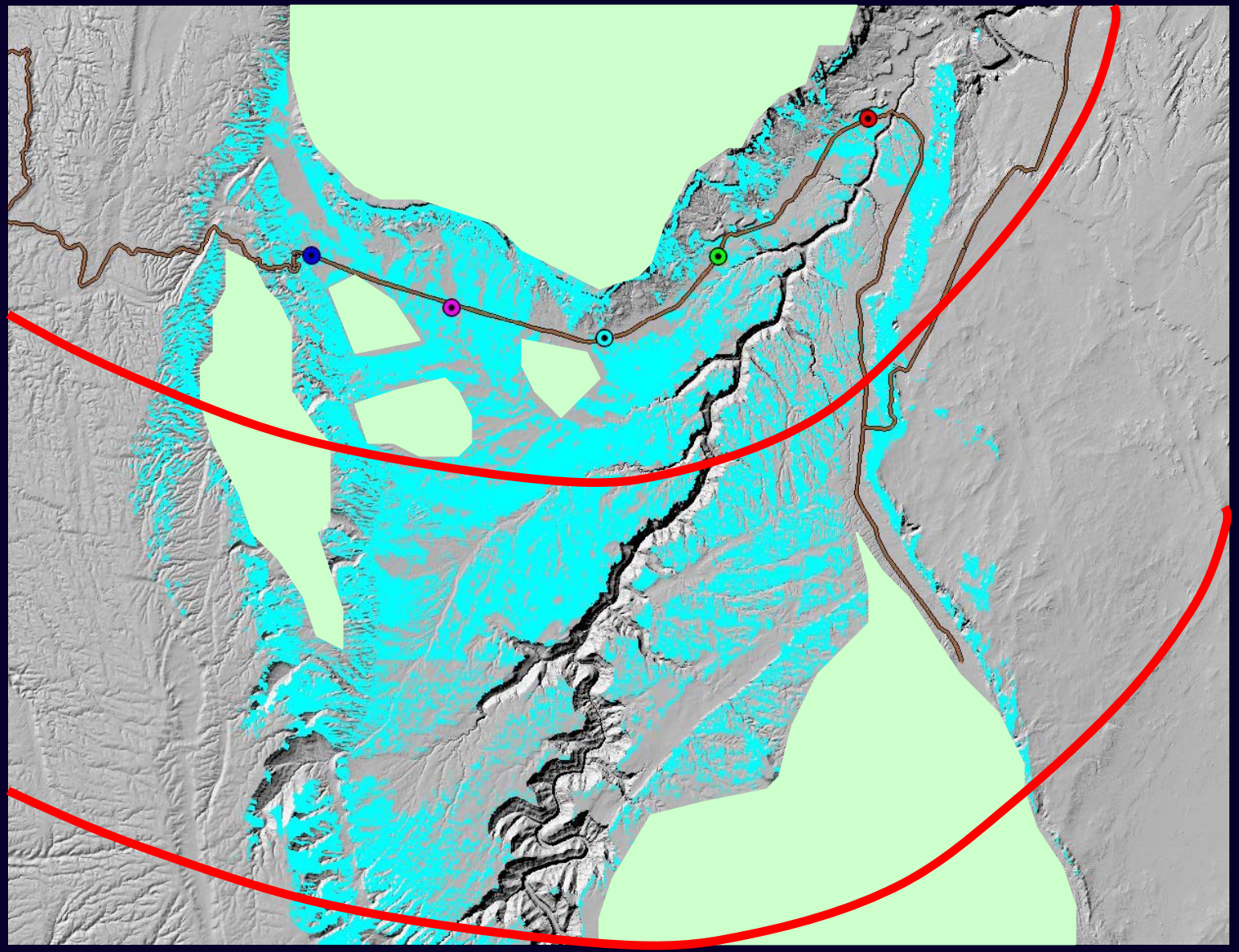
# Viewsheds – Seldom Seen



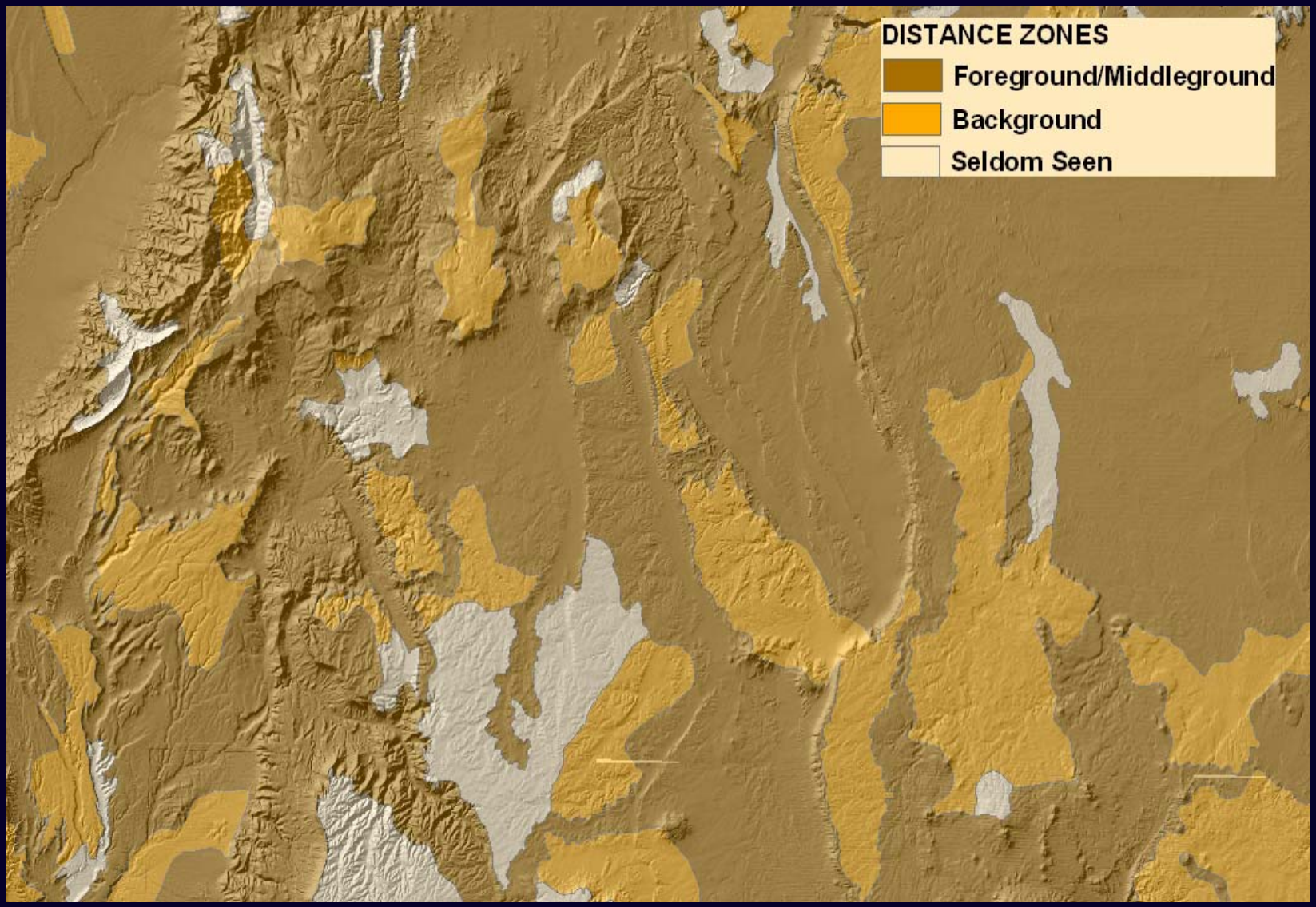
# Viewsheds – Seldom Seen



# Viewsheds – Seldom Seen



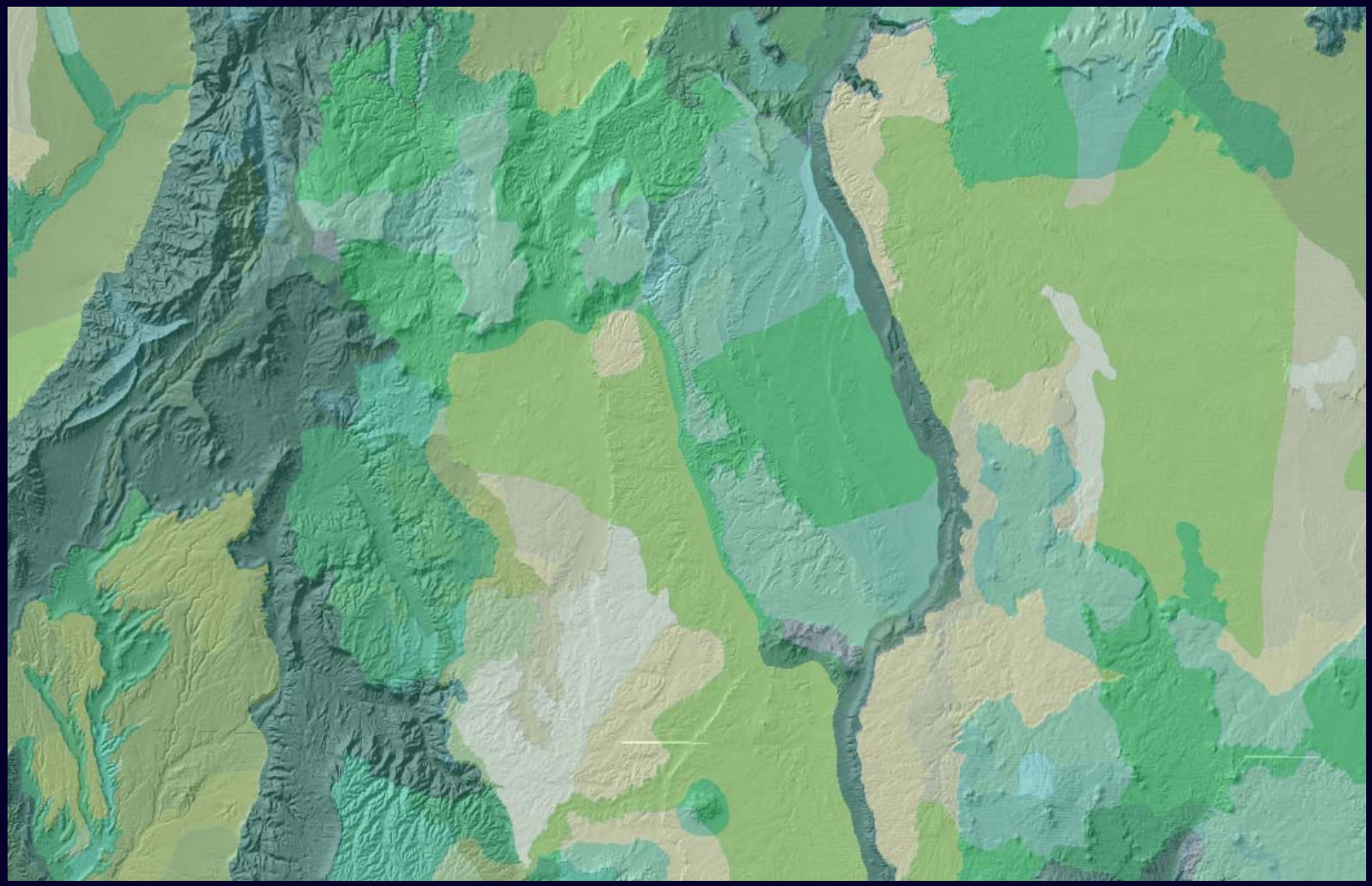
# Distance Zones in GIS



# Determining Inventory Classes

- Combine Overlays for:
  - Scenic Quality
  - Sensitivity Levels
  - Distance Zones
- Use Matrix (H-8410-1) to Determine Inventory Classes
- Use GIS to overlay data

# Final GIS Overlay



# Determining Inventory Classes

**Class I** – Assigned to those areas in which a management decision has been made to maintain a natural landscape.

**Class II, III,** & **IV** – Assigned based on combinations of Scenic Quality, Sensitivity Levels, and Distance Zones as shown in the following matrix.

# Basis for Determining Visual Resource Inventory Classes

| | | Visual Sensitivity Levels | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | High | | | Medium | | | Low |
| Special Areas | | I | I | I | I | I | I | I |
| Scenic Quality | A | II | II | II | II | II | II | II |
| | B | II | III | III / IV* | III | IV | IV | IV |
| | C | III | IV | IV | IV | IV | IV | IV |
| | | f/m | b | s/s | f/m | b | s/s | s/s |
| | | Distance Zones | | | | | | |

* if adjacent area is Class III or lower, (ie - Class II) assign Class III, if higher, (ie. Class IV) Class IV

# Basis for Determining Visual Resource Inventory Classes

| | | Visual Sensitivity Levels | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | High | | | Medium | | | Low |
| Special Areas | | I | I | I | I | I | I | I |
| Scenic Quality | A | II | II | II | II | II | II | II |
| | B | II | III | III / IV * | III | IV | IV | IV |
| | C | III | IV | IV | IV | IV | IV | IV |
| | | f/m | b | s/s | f/m | b | s/s | s/s |
| | | Distance Zones | | | | | | |

* if adjacent area is Class III or lower, (ie - Class II) assign Class III, if higher, (ie. Class IV) Class IV

# Basis for Determining Visual Resource Inventory Classes

| | | Visual Sensitivity Levels | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | High | | | Medium | | | Low |
| Special Areas | | I | I | I | I | I | I | I |
| Scenic Quality | A | II | II | II | II | II | II | II |
| | B | II | III | III / IV * | III | IV | IV | IV |
| | C | III | IV | IV | IV | IV | IV | IV |
| | | f/m | b | s/s | f/m | b | s/s | s/s |
| | | Distance Zones | | | | | | |

* if adjacent area is Class III or lower, (ie - Class II) assign Class III, if higher, (ie. Class IV) Class IV

# Basis for Determining Visual Resource Inventory Classes

| | | Visual Sensitivity Levels | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | High | | | Medium | | | Low |
| Special Areas | | I | I | I | I | I | I | I |
| Scenic Quality | A | II | II | II | II | II | II | II |
| | B | II | III | III / IV * | III | IV | IV | IV |
| | C | III | IV | IV | IV | IV | IV | IV |
| | | f/m | b | s/s | f/m | b | s/s | s/s |
| | | Distance Zones | | | | | | |

* if adjacent area is Class III or lower, (ie - Class II) assign Class III, if higher, (ie. Class IV) Class IV

# Basis for Determining Visual Resource Inventory Classes

| | | Visual Sensitivity Levels | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | High | | | Medium | | | Low |
| Special Areas | | I | I | I | I | I | I | I |
| Scenic Quality | A | II | II | II | II | II | II | II |
| | B | II | III | III / IV * | III | IV | IV | IV |
| | C | III | IV | IV | IV | IV | IV | IV |
| | | f/m | b | s/s | f/m | b | s/s | s/s |
| | | Distance Zones | | | | | | |

* if adjacent area is Class III or lower, (ie - Class II) assign Class III, if higher, (ie. Class IV) Class IV

# Basis for Determining Visual Resource Inventory Classes

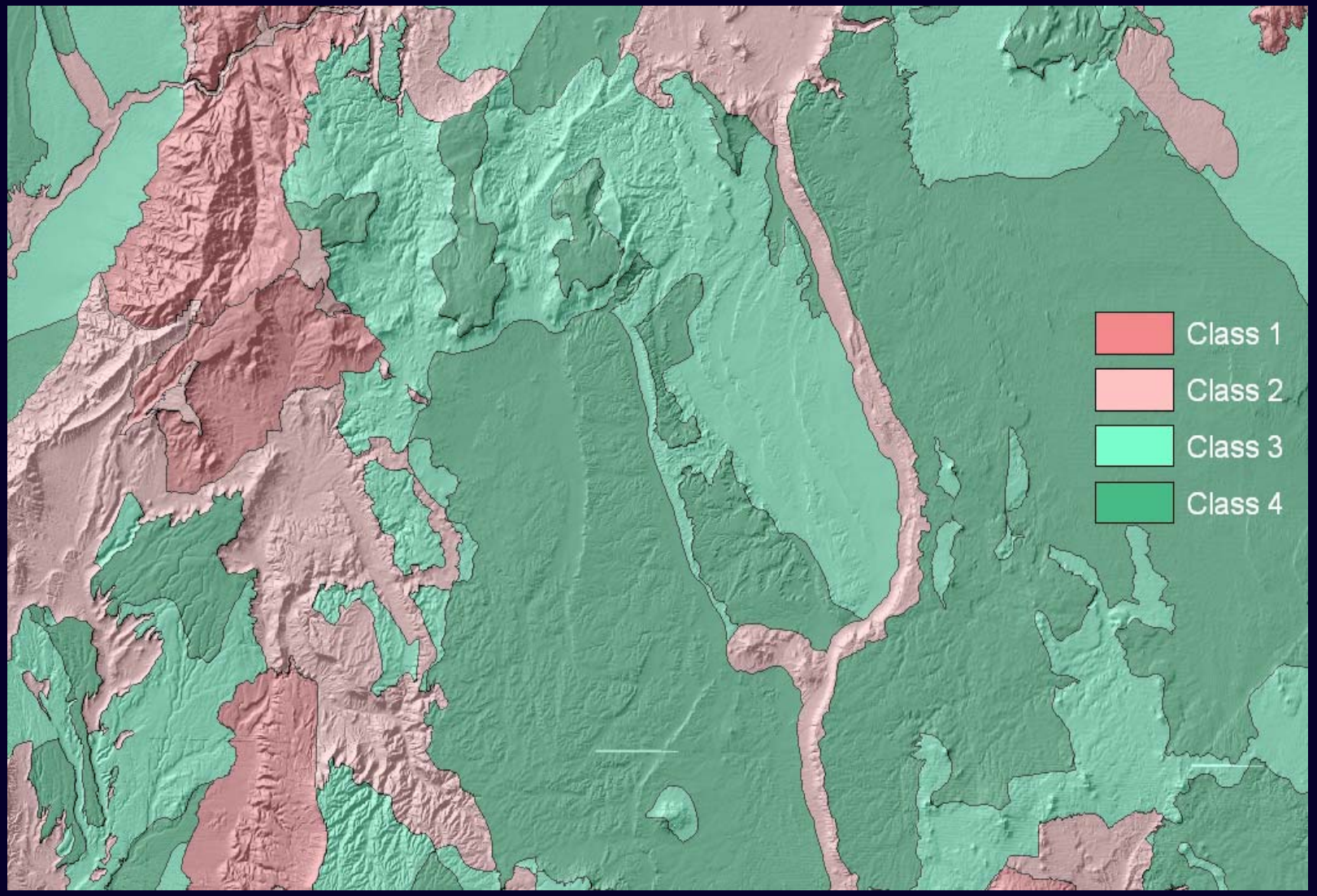
| | | Visual Sensitivity Levels | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | High | | | Medium | | | Low |
| Special Areas | | I | I | I | I | I | I | I |
| Scenic Quality | A | II | II | II | II | II | II | II |
| | B | II | III | III / IV * | III | IV | IV | IV |
| | C | III | IV | IV | IV | IV | IV | IV |
| | | f/m | b | s/s | f/m | b | s/s | s/s |
| | | Distance Zones | | | | | | |

* if adjacent area is Class III or lower, (ie - Class II) assign Class III, if higher, (ie. Class IV) Class IV

# Final VRM Inventory – GIS Table

| AREA | PERIMETER | VRM_INV05 | VRM_INV05 | VRM_NAME | ACRES |
|---|---|---|---|---|---|
| 88598812.21474 | 56907.13644 | 2 | 1 | Class 4 | 21893.245 |
| 43732802.34093 | 52254.17771 | 3 | 2 | Class 3 | 10806.612 |
| 4243199.82351 | 11536.45695 | 4 | 3 | Class 2 | 1048.518 |
| 76723607.46113 | 41017.22384 | 5 | 4 | Class 3 | 18958.818 |
| 1008211.51999 | 5144.08075 | 6 | 5 | Class 2 | 249.135 |
| 106104170.36201 | 216425.21003 | 7 | 251 | Class 2 | 26218.913 |
| 34809139.75616 | 41672.56790 | 8 | 249 | Class 1 | 8601.526 |
| 4382785.08206 | 14160.52293 | 9 | 7 | Class 4 | 1083.010 |
| 6593938.02355 | 19006.44048 | 10 | 8 | Class 4 | 1629.398 |
| 58607383.69920 | 39791.54533 | 11 | 9 | Class 3 | 14482.201 |
| 56522195.44263 | 39449.96829 | 12 | 10 | Class 4 | 13966.940 |
| 3077729.64477 | 6737.16150 | 13 | 11 | Class 2 | 760.524 |
| 973070615.63662 | 941958.77150 | 14 | 259 | Class 2 | 240451.004 |
| 1862835921.44000 | 633358.77510 | 15 | 13 | Class 4 | 460316.816 |
| 180040485.14687 | 95664.71467 | 16 | 14 | Class 3 | 44488.976 |
| 41256207.47116 | 42410.57193 | 17 | 15 | Class 4 | 10194.632 |
| 5986607.50004 | 10672.26227 | 18 | 16 | Class 3 | 1479.323 |
| 44669764.22444 | 45649.58569 | 19 | 17 | Class 2 | 11038.140 |
| 305253347.53849 | 186287.27056 | 20 | 18 | Class 3 | 75429.751 |
| 25489133.49121 | 27094.95388 | 21 | 250 | Class 1 | 6298.503 |
| 14378448.33972 | 24317.44410 | 22 | 260 | Class 1 | 3552.992 |
| 7203169.39654 | 11836.73336 | 23 | 20 | Class 4 | 1779.942 |
| 12228790.87990 | 24437.86736 | 24 | 261 | Class 1 | 3021.800 |
| 58774367.02859 | 64160.13622 | 25 | 19 | Class 2 | 14523.463 |
| 4403774.46450 | 11149.12471 | 26 | 21 | Class 4 | 1088.196 |
| 178762484.77902 | 99878.27453 | 27 | 22 | Class 3 | 44173.175 |
| 3734127.12952 | 12589.03456 | 28 | 23 | Class 2 | 922.723 |

# Final VRM Inventory – GIS Data



# Land Use Planning and VRM

- **Updating VRM Inventories**
  - Maintain an updated inventory for every acre
  - Priorities for new inventory work (8410-1)
    - Issue Resolution
    - Projects with no inventory
  - Goal - complete inventory with each RMP revision
  - During plan revision, consider;
    - areas that have experienced most change
    - population growth, recreation use
    - new land use status, trails, byways, corridors