

# Lidar Forestry Applications in the Upper Trinity Watershed

# Site

# Tree Canopy

- CHM
- TTOPS
- Crowns

# Tree Canopy - CHM

- Shown here over slope

# Tree Canopy - CHM

- Same image
- Larger scale

# Tree Canopy - Normalized Height

# Tree Canopy - ZQ95

# Tree Canopy - other

## ZQ95



# Canopy -KNN

# Topography

- Slope
- Shaded relief
- Openness
- Red Relief
- High Pass Filter
- Geomorphons

# Topography - Slope

- Slope of DEM

# Topography - Shaded relief

- A Classic visualization

# Topography - Openness

- Integration of relative horizontal elevation in 16 directions within 15 pixel search window on DEM
- i.e., Is there stuff around this pixel?

# Topography - Red Relief

- Nice for visualization
- Based on slope and openness

## Topography - High Pass Filter

- Sharpens local features
- Here with 7.5m focal  
mean and 0.5 m pixels

## Topography - High Pass Filter

- Sharpens local features
- Here with 7.5m focal mean and 0.5 m pixels...
- leaving out vertical changes  $< |0.2 \text{ m}|$



## Topography - Another Compound visualization

- Nice visualization based on openness, slope and high pass filter

# Topography - Geomorphons

- Here showing high frequency spatial data
- i.e. small features

 legend{ width=50% }

# Topography - Geomorphons

```
style: |
footer {
height: 330px;
margin-bottom: 0 px;

}
footer img {
```

```
float: center;
width: 40%;
```