**ES407 Senior Seminar Academic Showcase 2019 Presentation Titles and Outlines**

**Palmer Baldwin, “Hydrologic Response to Timber Harvest and Forest Management Practices in Western Oregon”**

**Key Concepts / Outline:**

1. Introduction / Introductory Statement – why is this topic important?
2. Timber Harvest and Forest Management Practice
   1. Methods: treated vs. untreated (control)
   2. Locations: Western Cascades, Coast Range, PNW
3. Effects / response on Soil Moisture SHOW DATA
4. Effects / response on Streamflow and Peak Discharge SHOW DATA
5. Effects / response on Stream Temperature SHOW DATA
6. Conclusion - Punchline with implications for Ecosystem Services / Forest Management

**Tim Hagen, “Sediment Dynamics and Erosion Response to Forest Management Practice in Western Oregon”**

**Key Concepts / Outline**

1. Introduction / Introductory Statement – why is this topic important?
2. Timber Harvest and Forest Management Practice
   1. Methods: treated vs. untreated (control)
   2. Locations: Western Cascades, Coast Range, PNW
3. Effects / response on Erosion Rates and Sediment Transport in Streams SHOW DATA
4. Conclusion – Punchline with implications for Ecosystem Services / Forest Management

**Austin Wegner, “Forest Road Construction and Sediment Production in Western Oregon”**

**Key Concepts / Outline**

1. Introduction / Introductory Statement – why is this topic important?
2. Forest Road Construction and Forest Management Practice
   1. Methods: treated vs. untreated (control)
   2. Locations: Western Cascades, Coast Range
3. Effects / response on discharge and peak flow SHOW DATA
4. Effects / response on Erosion Rates SHOW DATA
5. Conclusion – Punchline with implications for Ecosystem Services / Forest Management

**Hunter Collins, “Landslide and Debris Flow Occurrence in Forested Landscapes of Western Oregon**

**Key Concepts / Outline**

1. Introduction / Introductory Statement – why is this topic important?
2. Timber Harvest and Forest Management Practice
   1. Methods: treated vs. untreated (control)
      1. Tree Stand Age
   2. Locations: Western Cascades, Coast Range
3. Styles of Mass Wasting / Controlling Factors of Mass Wasting
   1. Slump, slide, flow
4. Effects / response of Forest Management on Mass Wasting
   1. Deep Seated Landslides SHOW DATA
   2. Shallow Landslides / Debris Flow SHOW DATA
5. Conclusion – Punchline with implications for Ecosystem Services / Forest Management

**Samantha Abel, “Perspectives on Climate Change and Forest Hydrology in the Oregon Cascades”**

**Key Concepts / Outline**

1. Introduction / Introductory Statement – why is this topic important?
2. Climate and Climate Change Models for Western Oregon-Pacific Northwest
   1. Historic / Present-Day Climate Patterns
      1. Precipitation SHOW DATA
      2. Snowpack
      3. Evapotranspiration
   2. Predicted Future Effects / response on Seasonal Snowpack-Precipitation Patterns SHOW MODELS
      1. Climate Models and Predictions
3. Climate Change Implications on Forest Management Practice
   1. Fire Management
   2. Timber Harvest SHOW MODEL RESULTS
   3. Water Resource Management
4. Conclusion – Punchline with implications for Water Resources, Forest Management, and Public Policy