**LTA/LFA DATA MINING ELEMENTS**

**Highest Priority**

1. **Watershed and Aquatic Expression**
	1. *Hydrologic regime*
		1. Climatic Regimes –
			1. PRISM (average annual precipitation/temperature) (ask Chris Ringo for OSU data
			2. NRCS SnoTel? snow depth (source: NRCS website?)
		2. Water storage and routing
			1. Surface runoff (Hydrologic Group) (from SRI or NRCS soil layers)
		3. Groundwater inputs / aquifer recharge
			1. Flow duration
		4. Flooding potential (stream flow amounts) potential flooded area (terrain analysis?)
	2. Physical Expression
		1. Channel density - GIS
			1. Stream type
				1. Rosgen classification – Stream survey data (not comprehensive)
				2. Stream reach response (source, transport, deposition) see Buffington paper 0-3%= deposition, 3-8%=transport, >8%=source
		2. *Disturbance Regimes (needed or embedded above and below?)*
			1. *Floods*
			2. *Wind?*
			3. *Fire response*
		3. *Erosional Processes*
			1. Surface Erosion (disturbed, undisturbed) (need to discuss how to get at this)
			2. Mass Wasting -Jays LTA classification (needs refinement)
			3. Scarps, Avalanche tracks, landslide tracks from SRI point layer and DOGAMI SLIDO
			4. Slope (mean for LFA)
		4. *Sediment Regime*
			1. Production
				1. Source – Base Geology (use Landslide Risk categorization of rock-type erodibility (see Chart at back of doc.)
				2. Size – base on erodibility
			2. *Delivery*
			3. *Aquatic Special Habitats*
				1. Seeps – springs point layer NHD and NWI, SRI point layer?
				2. Ponds - NHD
				3. Streams NHD, perennial, intermittent, ephemeral, any tools to get at pattern?
				4. *Riparian Vegetation??? (here or in veg) – use plant association mapping if available (GNN?),*
			4. *Fish habitat* (The info below only available for areas where fish habitat exists)
				1. Fish Distribution / Maybe have a layer? (Karen to ask Jim)
				2. Spawning Substrate Quality – Stream Survey –
				3. Rearing potential - pools?(source: stream survey- )
			5. *Management Interpretations*
				1. Road construction / limitations - SRI
				2. Recreation opportunities / considerations

Streams, meadows, wetlands, cirques, etc.

1. **Terrestrial Expression**
	* + 1. *Overview of vegetation types (Linkages with Sect. a. above*.g., moraines 🡪 most productive veg., conversely veg type 🡪 landform / MU
				1. climate, elevation, aspect
				2. PNV (% of each in LFA) – includes non-forest areas - DONE
				3. Inherent soil productivity
				4. ?
				5. Understory recovery
				6. Overstory recovery
			2. *Disturbance regime*
				1. Fire – Landfire Fire Regime Groups (Ecoshare
				2. Insects/ Disease – Regional coverage % area with xx basal area loss.
				3. Invasives – see if there are any particular species by LTA?
				4. Windthrow
			3. *Terrestrial Special Habitats – SRI point Data*
				1. Cliffs – escarpments – LTA itself
				2. Caves – special habitat point layer?
				3. Talus
				4. Avalanche chutes SRI point layer
				5. Wet meadow - NWI, special habitat (forest by forest)
				6. Dry meadow - GNN
				7. Grassland – This will come from LTA (Chris)
				8. Hardwoods (e.g. oaks, aspen, chinquapin) – FIA/GNN current species
			4. *Management Interpretations*
				1. Forest Productivity (Timber)
				2. Veg management Considerations – logging system suitability (compactions)
				3. Range Productivity (cattle/sheep) -Range Considerations ???
				4. Restoration considerations (e.g. Juniper encroachment, veg density) – expert opinion



1. Channel density - GIS
2. PRISM (average annual precipitation/temperature) (ask Chris Ringo for OSU data
3. Stream reach response (source, transport, deposition) see Buffington paper 0-3%= deposition, 3-8%=transport, >8%=source
4. Surface runoff (Hydrologic Group) (from SRI or NRCS soil layers)
5. elevation,
6. aspect
7. Slope (mean for LFA)
8. Fish Distribution / Maybe have a layer? (Karen to ask Jim)
9. Scarps, Avalanche tracks, landslide tracks from SRI point layer and DOGAMI SLIDO
10. Seeps – springs point layer NHD and NWI, SRI point layer?
11. Ponds - NHD
12. Spawning Substrate Quality – Stream Survey –
13. Rearing potential - pools?(source: stream survey- )
14. Wet meadow - NWI, special habitat (forest by forest)

These are impt layers but still need work. I’ll let you know when they are ready.

1. Mass Wasting -Jays LTA classification (needs refinement)
2. Sediment Regime Source – Base Geology (use Landslide Risk categorization of rock-type erodibility (see Chart at back of doc – working with Carrie Gordon to edit.)
3. Size – base on erodibility (above)
4. Surface Erosion (disturbed, undisturbed) (need to discuss how to get at this)
5. Rosgen classification – Stream survey data (not comprehensive)