Statewide Objectives

Geomorphology

- Examine status of geomorphic processes within the system
General Zones of a River

Headwaters
Transfer
Deposition

- Increase
- bed material grain size
- slope
- characteristic stream discharge
- relative volume of stored alluvium
- channel width
- channel depth
- mean flow velocity

Drainage Area (∼downstream distance^2)
Geomorphologic Classification

Engel & Curran, 2008
### Geomorphic Classification

**Engel & Curran, 2008**

<table>
<thead>
<tr>
<th>ID</th>
<th>Reach Name</th>
<th>Geomorphic Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Cibolo Creek Active Sand</td>
<td>The substrate transitions into sand, and the channel is actively migrating. Several meander scars and chutes are present. The valley widens considerably with the transition into the coastal plain region. Heavily undercut banks and gullies occur in every tight bend. There are two oxbow lakes and a stream capture is likely as the reach migrates towards Ecelto Creek.</td>
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<tr>
<td>22</td>
<td>Refugio Clay</td>
<td>This reach is marked by a tortuous meander pattern and low channel slope. The river transitions to bayou and swamp as it approaches the coast. Mass wasting processes are visible, but very thick brushy vegetation make identification difficult. Several meander scars are present, and most are heavily vegetated swamps or lakes.</td>
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</tbody>
</table>
The Importance of Scale
Determine and balance the geomorphic effects of different flows, including:

- channel migration
- positive and negative effects of overbank flows
- woody-debris dynamics