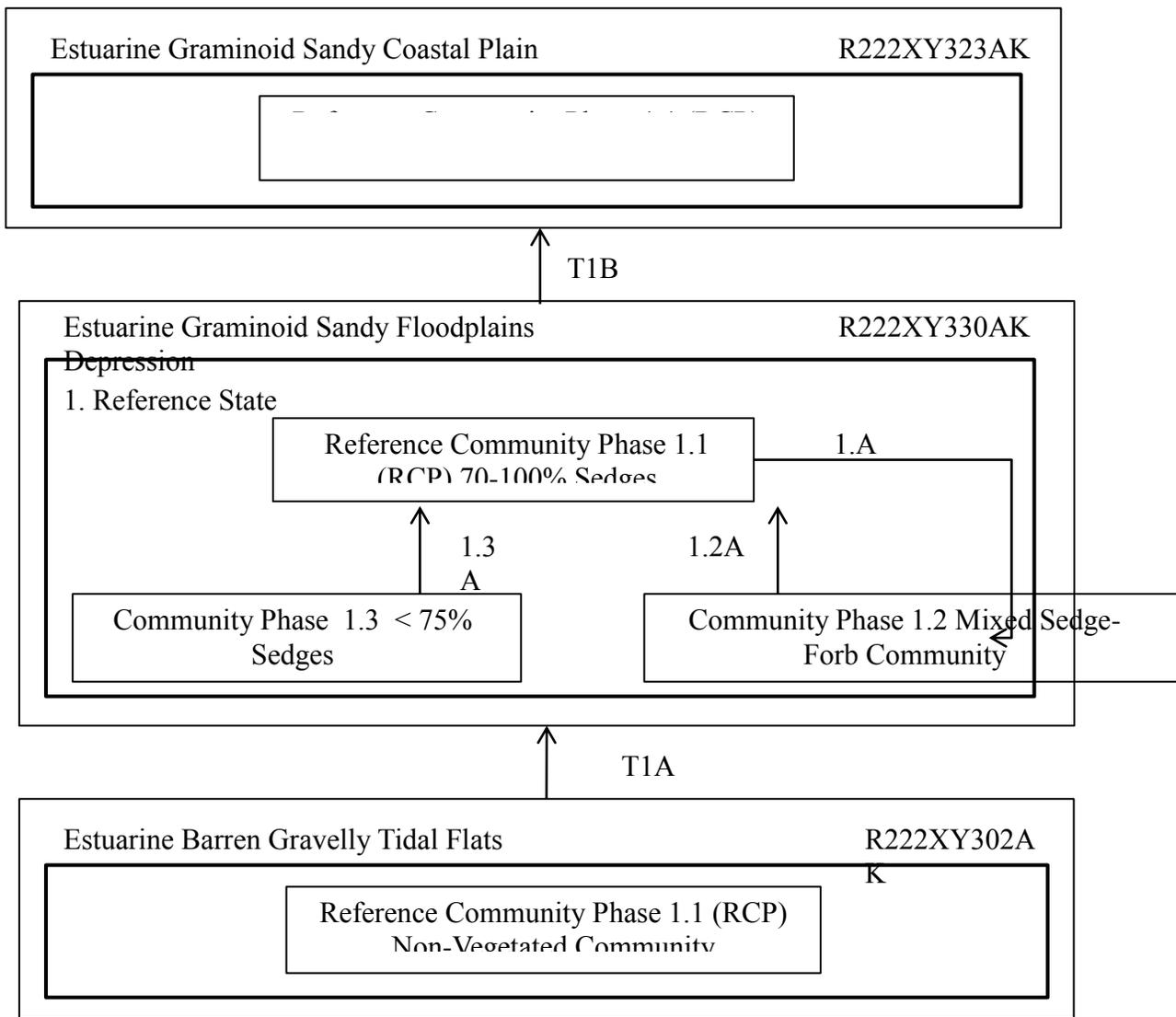


Ecological Site Description ID:	R222XY330AK
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Ecological Dynamics of the Site:

This ecological site is in depressions of estuarine loamy flood plains. The climax plant community is a nearly continuous cover of sedges. The mineral soil is subject to daily tidal influences. The ecological dynamics of this site are driven by post-glacial isostatic rebound and rare, high-velocity flooding. Following post-glacial rebound, the barren tidal flats transition into a flood plain ecological site with sparse sedges. As the flood plain continues to rebound, the community gradually shifts toward the climax community of a nearly continuous cover of sedges. Isostatic rebound will continue to elevate the flood plain until it no longer floods. This marks the transition from a flood plain ecological site to a coastal flood plain site.

State and Transition Model:



State ID Number:	1	State Name:	Reference state
Phase 1.1			
Community Phase Number:	1.1	Community Phase Name:	70 to 100 percent sedges
Community Phase Narrative:			
<p>This is the reference community phase for depressions of estuarine graminoid floodplains. This community is characterized by a 70 to 100 percent cover of <i>Carex lyngbyei</i> as the site recovers after post-glacial rebound or river flooding. <i>Carex lyngbyei</i> is a salt-tolerant sedge that grows in areas that are subject to daily tidal events.</p>			
Community Pathways			
Pathway Number	Pathway Name & Description		
1.1A	<p>Low frequency, short duration, high-velocity flooding along river channels shape the community structure. Although it has not been documented, it is likely that rare, extreme tidal events may also wash away the established plants.</p>		

Phase 1.2			
Community Phase Number:	1.2	Community Phase Name:	Mixed Sedge-Forb Community
Community Phase Narrative:			
<p>Low frequency, short duration, high-velocity flooding may erode the climax sedge community. Following flooding, a community phase characterized by a mixture of sedges and forbs with as much as 80 percent cover will become established. <i>Carex lyngbyei</i> is the dominant sedge. Smaller proportions of rushes such as <i>Juncus arcticus</i> and forbs such as <i>Dodecatheon pulchellum</i> are mixed in this sedge-dominant community.</p>			
Community Pathways			
Pathway Number	Pathway Name & Description		
1.2A	Time since a flood		
Phase 1.3	Photograph not available		
Community Phase Number:	1.3	Community Phase Name:	Less than 75 percent sedges
Community Phase Narrative:			
<p>This community phase was not documented in the field. Following post-glacial rebound, salt-tolerant sedges such as <i>Carex lyngbyei</i> may begin to emerge, producing a sparsely vegetated early successional community.</p>			

Community Pathways	
Pathway Number	1.3
1.3A	Post-glacial rebound
State Transition Pathways	
Transition Number	Transition Narrative
T1A	T1A represents an irreversible transition from the Estuarine Barren Gravelly Tidal Flats ecological site (R222XY302AK) to the Estuarine Graminoid Loamy Floodplains Depression site (R222XY330AK) as a result of isostatic rebound. During the glacial period, the weight of the ice bowed the earth's crust. When the glacier retreated, the earth began to rebound at a rate of 0.76 inch per year. As the earth continued to lift out of the nonvegetated tidal flats, plants began to establish, marking the transition from the tidal flat ecological site to the graminoid-dominant coastal plain site. Over time, the earth will continue to rebound and the Estuarine Graminoid Sandy Floodplains Depression ecological site will transition to a graminoid coastal plain site (see T1B narrative).
T1B	Isostatic rebound is a continuous process that shapes the ecological dynamics of an ecosystem. T1A represents the early stages of isostatic rebound, and T1B represents the later stage of isostatic rebound. As the Estuarine Graminoid Sandy Floodplain Depression site continues to rebound, riverine flooding and tidal influence diminish and the ecological site transitions from a flood plain system to a coastal plain system. Absence of low frequency, short duration, high-velocity flooding triggers the transition between ecological sites. The Estuarine Graminoid Sandy Floodplain Depression site transitions to the Estuarine Graminoid Sandy Coastal Plain site (R222XY323AK) as the composition of the plant community changes from sedges to mixed graminoids and forbs.