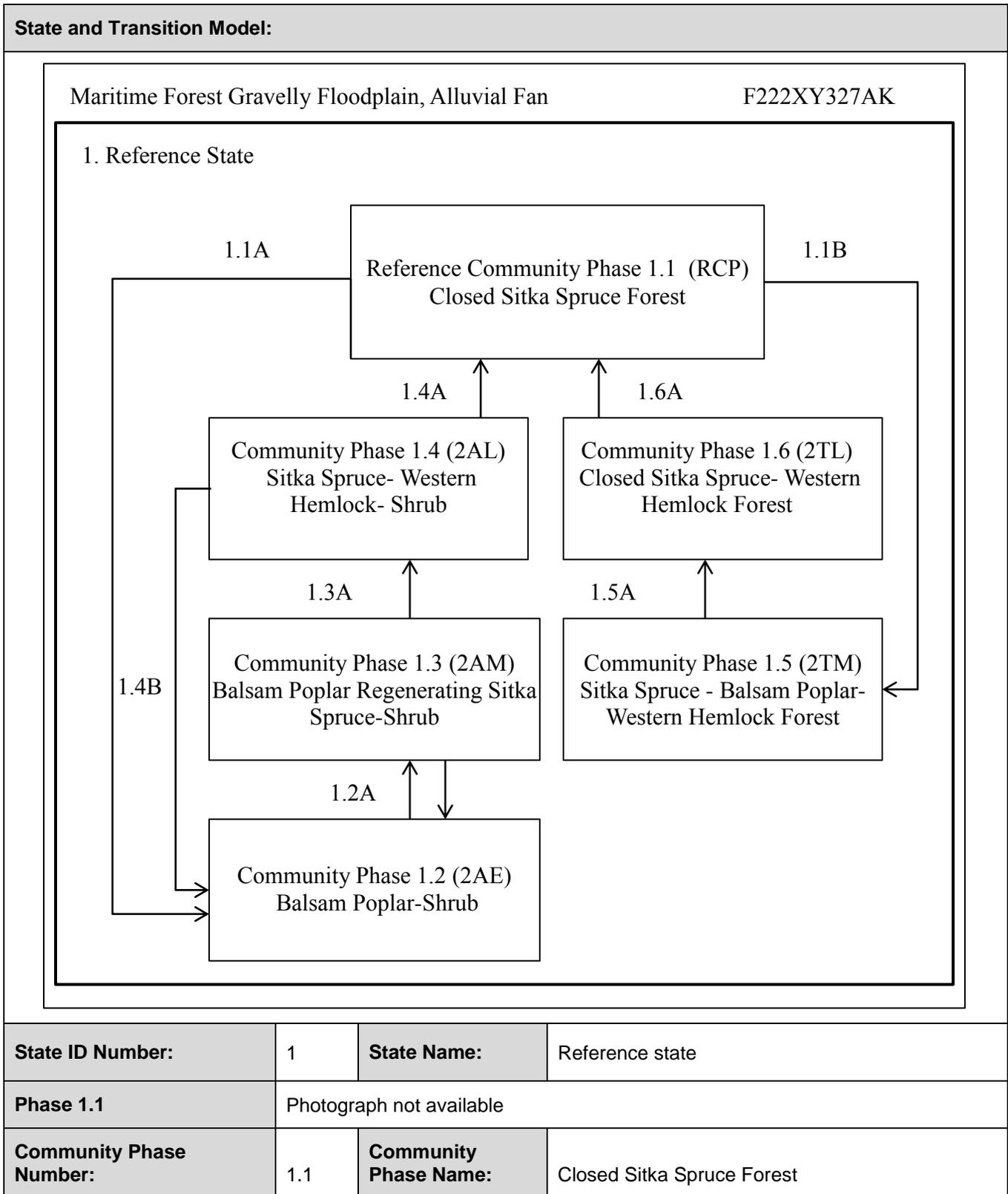


Ecological Site Description ID:	F222XY327AK
Ecological Dynamics of the Site:	
<p>This ecological site is a high-gradient flood plain on alluvial fans. Alluvial fans typically are in areas where steep mountain drainageways emerge onto flatter plains. As the stream gradient decreases, coarse-grained sediment is deposited. This reduces the capacity of the channel to transmit water and forces the stream to change direction, referred to as channel avulsion. As the channel moves back and forth across the fan depositing sediment, a mounded, shallow conical fan is created.</p> <p>Three different landform segments have been identified on this ecological site, including the active channel, the adjacent flood plain, and the fan terrace. The active channel is the current conduit for the stream to flow down the fan. During periods of high rainfall or snowmelt, some localized flooding may occur, which affects the flood plain. The fan terrace makes up the majority of the spatial extent of the alluvial fan. The climax plant community on the fan terrace is a closed Sitka spruce forest with an understory of moss and forbs. Anthropogenic disturbance from forest management practices may also influence the successional dynamics on this site.</p> <p>Fan terraces are relatively free of flooding unless channel deposition or flow results in avulsion. A new active channel and adjacent flood plain will develop, depending on the size and velocity of the flood. A balsam poplar forest with little understory cover will become established in the recently abandoned channel. Over time, Sitka spruce and western hemlock will also become established in the abandoned channel.</p> <p>The soils on the alluvial fans are coarse grained and gravelly and exhibit little development on the flood plains or burring older pedogenic horizons that formed on the terrace. The soils on the terraces are also gravelly but commonly have been stable for a long enough period of time for podzolization to occur, which is a process resulting from the mobilization and precipitation of dissolved organic matter, iron, and aluminum.</p>	



Community Phase Narrative:			
<p>The majority of this alluvial fan ecological site is characterized by a fan terrace. The reference plant community is a closed Sitka spruce (<i>Picea sitchensis</i>) forest. The canopy cover is dominantly tall Sitka spruce (<i>Picea sitchensis</i>) with a smaller proportion of medium to tall western hemlock (<i>Tsuga heterophylla</i>) and tall balsam poplar (<i>Populus balsamifera</i>). The understory is approximately 40 percent moss cover and 40 percent forb cover. Forb species may include <i>Osmorhiza berteroi</i>, <i>Athyrium filix-femina</i>, <i>Gymnocarpium dryopteris</i>, and <i>Dryopteris expansa</i>.</p>			
Community Pathways			
Pathway Number	Pathway Name & Description		
1.1A	Occasional, brief flooding on a high-gradient flood plain. When the water flows over the flood plain channel, a new channel may form on the alluvial fan. This removes the understory vegetation in the climax plant community, and the tree canopy structure shifts from a Sitka spruce forest to mostly bare ground with some balsam poplar (<i>Populus balsamifera</i>) and Sitka alder (<i>Alnus viridis ssp. sinuata</i>).		
1.1B	Brush management and tree removal		
Phase 1.2			
Community Phase Number:	1.2	Community Phase Name:	Balsam Poplar-Shrub Community
Community Phase Narrative:			
<p>This is an early sere flood plant community. Following a flood, a <i>Populus balsamifera</i> forest establishes with minimal understory vegetation. The forest canopy may have as much as 40 percent tall <i>Populus balsamifera</i> with regenerating to medium-sized western hemlock (<i>Tsuga heterophylla</i>), subalpine fir (<i>Abies lasiocarpa</i>), and Sitka spruce (<i>Picea sitchensis</i>). Sitka alder (<i>Alnus viridis ssp. sinuata</i>) is the dominant shrub species.</p>			

Community Pathways			
Pathway Number	Pathway Name & Description		
1.2A	Time since a flood		
Phase 1.3			
Community Phase Number:	1.3	Community Phase Name:	Balsam Poplar-Regenerating Sitka Spruce-Shrub Community
Community Phase Narrative:			
<p>This mid succession community phase is characterized by 25 to 50 percent forest cover. Tree species include mature <i>Populus balsamifera</i> and regenerating to medium-sized Sitka spruce (<i>Picea sitchensis</i>). Below the canopy, a shrub-graminoid layer with as much as 70 percent cover is comprised of <i>Gymnocarpium dryopteris</i>, devilsclub (<i>Oplopanax horridus</i>), <i>Aruncus dioicus</i>, and a small proportion of Sitka alder (<i>Alnus viridis</i> ssp. <i>sinuata</i>).</p>			
Community Pathways			
Pathway Number	1.3		
1.3A	Time since a flood		
1.3B	Occasional, brief flooding. Flowing water may remove regenerating tree and understory cover. If the waterflow or deposition event is significant enough, the flow will breach the channel and create a new channel. See community pathway 1.1A.		

Phase 1.4			
Community Phase Number:	1.4	Community Phase Name:	Sitka Spruce-Western Hemlock-Shrub
Community Phase Narrative:			
<p>This late succession community phase is characterized by 40 percent forest cover or more. Tree species include tall western hemlock (<i>Tsuga heterophylla</i>) and Sitka spruce (<i>Picea sitchensis</i>) with a smaller proportion of medium-sized western hemlock (<i>Tsuga heterophylla</i>) and Sitka spruce (<i>Picea sitchensis</i>). The shrub cover consists of <i>Menziesia ferruginea</i>, <i>Vaccinium ovalifolium</i>, <i>Viburnum edule</i>, devilsclub (<i>Oplopanax horridus</i>), and <i>Cornus Canadensis</i>. Moss cover may be as much as 80 percent.</p>			
Community Pathways			
Pathway Number	1.4		
1.4A	Time since a flood		
1.4B	Occasional, brief flooding on a high-gradient flood plain		

Phase 1.5			
Community Phase Number:	1.5	Community Phase Name:	Sitka spruce-balsam poplar-western hemlock forest
Community Phase Narrative:			
<p>This mid succession community phase is recovering from forest management. The plant community is characterized by approximately 50 percent forest cover. Tree cover is dominantly tall Sitka spruce (<i>Picea sitchensis</i>), a few tall <i>Populus balsamifera</i>, and regenerating to medium-sized Sitka spruce (<i>Picea sitchensis</i>). Below the canopy, a shrub-graminoid layer with as much as 70 percent cover is comprised of shrubs such as devilsclub (<i>Oplopanax horridus</i>) and <i>Viburnum edule</i> and forbs such as <i>Gymnocarpium dryopteris</i>. Moss cover is approximately 30 percent.</p>			
Community Pathways			
Pathway Number	1.5		
1.5A	Time since brush management or tree removal		

<p>Phase 1.6</p>			
<p>Community Phase Number:</p>	<p>1.6</p>	<p>Community Phase Name:</p>	<p>Closed Sitka Spruce-Western Hemlock Forest</p>
<p>Community Phase Narrative:</p>			
<p>This late succession community phase is recovering from timber management and is characterized by a closed canopy of Sitka spruce (<i>Picea sitchensis</i>) and western hemlock (<i>Tsuga heterophylla</i>). Tree species include mature <i>Populus balsamifera</i> and regenerating to medium-sized Sitka spruce (<i>Picea sitchensis</i>). The understory is comprised of 60 to 70 percent moss cover with trace lichen and forbs such as <i>Polypodium glycyrrhiza</i> and <i>Orthilia secunda</i>.</p>			
<p>Community Pathways</p>			
<p>Pathway Number</p>	<p>1.6</p>		
<p>1.6A</p>	<p>Time since brush or tree removal</p>		