

Management Alert 21-01

Southern Forest Nursery Management Cooperative

LA NIÑA WEATHER CONDITIONS PREDICTED FOR THE SECOND CONSECUTIVE YEAR

The National Weather Service (NWS) has made predications that there is an 87% chance of La Nina weather pattern this winter. This is the second consecutive year that the La Niña weather pattern has been predicted. Throughout the years, the Southern Forest Nursery Management Cooperative (SFNMC) has conducted research aimed at evaluating and understanding the factors that influence seedling mortality. Timing is one of the most crucial factors. Specifically, late planting can decrease seedling survival rates.

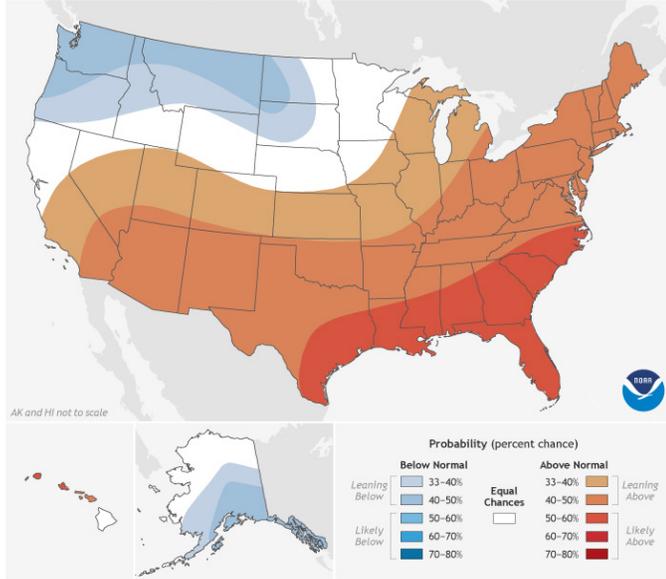
What is La Niña?

El Niño and La Niña are warm and cool phases of a climate pattern, El Niño-Southern Oscillation (ENSO), in the Pacific Ocean. These patterns are irregular and can affect weather worldwide. Although they are irregular, the disruptions to temperature and precipitation that they cause are quite predictable. El Niño causes the ocean surface to rise above average temperatures in the central and eastern tropical Pacific Ocean. La Niña on the other hand, causes the ocean surface to cool to below average temperatures. In the US, La Niña usually causes cooler than average conditions in the pacific northwest and warmer than average conditions along the gulf coast and southeastern United States.

What does La Niña mean for planting efforts?

The southern tier of the United States is expected to be warmer and drier than normal during La Niña winters. Therefore, if seedlings are planted too late in the season, survival rates may decrease. The SFNMC is again recommending limited storage time of seedlings and earlier planting dates than those traditionally followed.

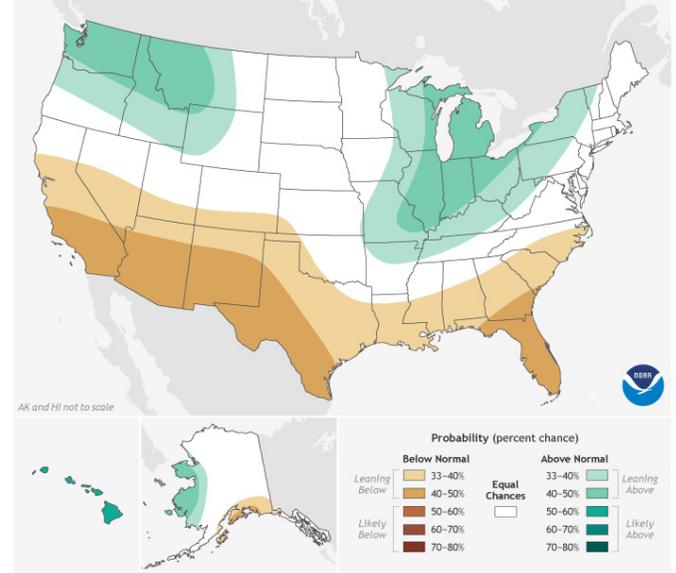
Winter 2021: U.S. Temperature Outlook



Temperature Outlook for December 2021 - February 2022
 Issued 21 October 2021
 NWS Climate Prediction Center
 Map by NOAA Climate.gov

This U.S. Winter Outlook 2021-2022 map for temperature shows warmer-than-average conditions across the South and most of the eastern U.S., while below average temperatures are favored for southeast Alaska and the Pacific Northwest eastward to the Northern Plains. (NOAA Climate.gov, using NWS CPC data)

Winter 2021: U.S. Precipitation Outlook



Precipitation Outlook for December 2021 - February 2022
 Issued 21 October 2021
 NWS Climate Prediction Center
 Map by NOAA Climate.gov

This 2021-2022 U.S. Winter Outlook map for precipitation shows wetter-than-average conditions are most likely in parts of the North, primarily in the Pacific Northwest, northern Rockies, Great Lakes, Ohio Valley and western Alaska. Drier-than-average conditions are favored in south-central Alaska, southern California, the Southwest, and the Southeast. (NOAA Climate.gov based on NWS CPC data)

Other recommendations for effective stand establishment and seedling survival:

FACTOR	RECOMMENDATIONS
Timing	<ul style="list-style-type: none"> • Lift seedlings from the nursery when they are dormant. • Plant bareroot seedlings from November to mid-February (Southern US) and December to mid-March (Atlantic Coast). • Plant when weather conditions are favorable. Extreme temperatures (high or low), rainfall (too much or too little), low relative humidity, and high wind speeds can negatively impact seedling health and increase mortality. • increased seedling nutrition, and adequate freeze tolerance. • Plant at the appropriate time after timber harvest or chemical site preparation
Soil	<ul style="list-style-type: none"> • Plant when the soil is moist to decrease seedling mortality. • Delay planting when the water table is high or perched until the soil dries and water table recedes.
Cultural practice	<ul style="list-style-type: none"> • Handle seedlings with care during harvesting and transportation to limit injuries. Injury to seedlings can increase the risk of pests and diseases during storage or after planting. • Ensure proper storage of seedlings. Improper storage temperatures can cause desiccation or promote the growth of storage molds. • Ensure proper site preparation before planting to improve stand establishment. • Create a good planting hole for loblolly, slash, and shortleaf pine and ensure that seedlings are properly aligned in the hole. • Pack the soil around the seedling to ensure contact of the soil and roots and gently pull at the top to check planting quality.