



REFORESTATION SERVICES PROGRAM AT A GLANCE (2023)

Who We Are

CAL FIRE's Reforestation Services Program (RSP) has been based out of the L.A. Moran Reforestation Center since 1921. The program serves all California forestlands by providing resources to protect and restore disturbed and degraded forests, maximizing their values, enhancing ecosystem functions, and increasing resiliency from climatic impacts. The RSP provides seeds and seedlings genetically suited and climate-adapted to growing sites for landowners and forest managers, while also offering technical and financial assistance.

Challenges

The challenges for the program include:

- Shortage of trained personnel in all aspects of reforestation.
- A lack of quality seed for many forest types.
- Access to productive seed sources.
- Limited long-term storage capacity.
- Inadequate nursery growing space.

With the growing need for seeds and seedlings brought on by catastrophic wildfires, climate change, insects, disease, and other impacts to forests, the demand for reforestation services is unprecedented.



Increasing Workforce and Partnerships

One of the issues in continuing reforestation has been a lack of training, staff, and communication between affected stakeholders.

The program has undergone a massive reorganization and expansion, creating new positions in the Seed Bank and Nursery. The RSP has established new entry and mid-level classifications for Environmental Science and Forestry positions for operations at the Reforestation Center as well as in the field.

Outside partners and projects include agreements to assist with:

- Cone surveying, collection, and practical on-site training.
- Nursery establishment in new locations.
- Land access and information sharing on cone productivity.
- Strategic long-term planning to address persistent problems in reforestation.

Processing Wild and Orchard-Raised Seeds

To obtain the highest quality conifer seed, CAL FIRE foresters and cooperators, using a recently developed cross-jurisdictional [application](#), conduct cone surveys across California, typically from spring to summer, to identify locations for future cone collection. CAL FIRE works closely with highly trained climbers to

Cone Statistics for 2023

Bushels of cones collected	210
Pounds of seed processed from cones	148

Species most collected: Sugar Pine, Douglas Fir, Incense Cedar, Jeffrey Pine, Western White Pine

harvest cones produced in the top of the tree canopy. In addition, the RSP invests in seed orchards for production of top-quality cones through collaborations with private and government entities. Once harvested, the cones return to the Center where they are processed to extract seed and are laboratory tested. Finished seeds are housed in the State Seed Bank for long term storage.

Banking on the Future

The State Seed Bank is a long-term repository of quality tree seed stored in zero-degree freezers. RSP inventory can produce up to 100 million seedlings. Using the results of the RSP's first ever [Assessment of Seed Needs](#) it was concluded that to reforest just 25% of California's private forestlands, the State Seed Bank will need to expand its capacity by over 300%.

This allowed the RSP to reevaluate its stored seed lots to identify appropriate amounts to maintain current and future reforestation needs.



Seed Statistics for 2023	
Pounds of available seed in storage	20,571
Pounds of private seed in storage	21,586
Number of species in inventory	60
Pounds of seed distributed	102



Seedling Statistics for 2023	
Seedling net production	258,724
Number of orders	23
Percentage to private landowners	100%
Seedling production for post-fire	95.4%
Acreage capable for planting	1,430

Supplying Seedlings for Restoration

The capacity of state and private nurseries to offer seedlings for reforestation is insufficient to provide for urgent restoration efforts. CAL FIRE's nursery can grow up to 250,000 seedlings year. Based on requests to CAL FIRE from landowners for seedlings, the RSP estimates 75% of requests go unfilled. The RSP plans to increase production to 1 million annually by 2025 to meet the growing demand, which could plant up to 8,000 acres of forest land at an average density of 180 trees per acre.



Growing in 2024

The Reforestation Center is in the early stages of a multi-year infrastructure upgrade to expand Seed Bank capacity, build new greenhouses, and acquire state-of-the-art processing equipment.

CAL FIRE is working as part of the burgeoning [Reforestation Cooperative](#), where industry professionals are sharing information and resources to overcome challenges and build on success.

Supporting research and innovative designs, strengthening partnerships, and educating constituents – CAL FIRE looks forward to 2024 as we build forward from our historical legacy.

For more information, to provide feedback, to arrange center tours, or to solicit assistance, please reach out to our staff and explore our services. For a more in-depth look at the RSP in 2023, view the full annual report on our webpage. You may call us at our direct line at (530) 753-2441, visit [our website](#), or email us at reforestation@fire.ca.gov.

