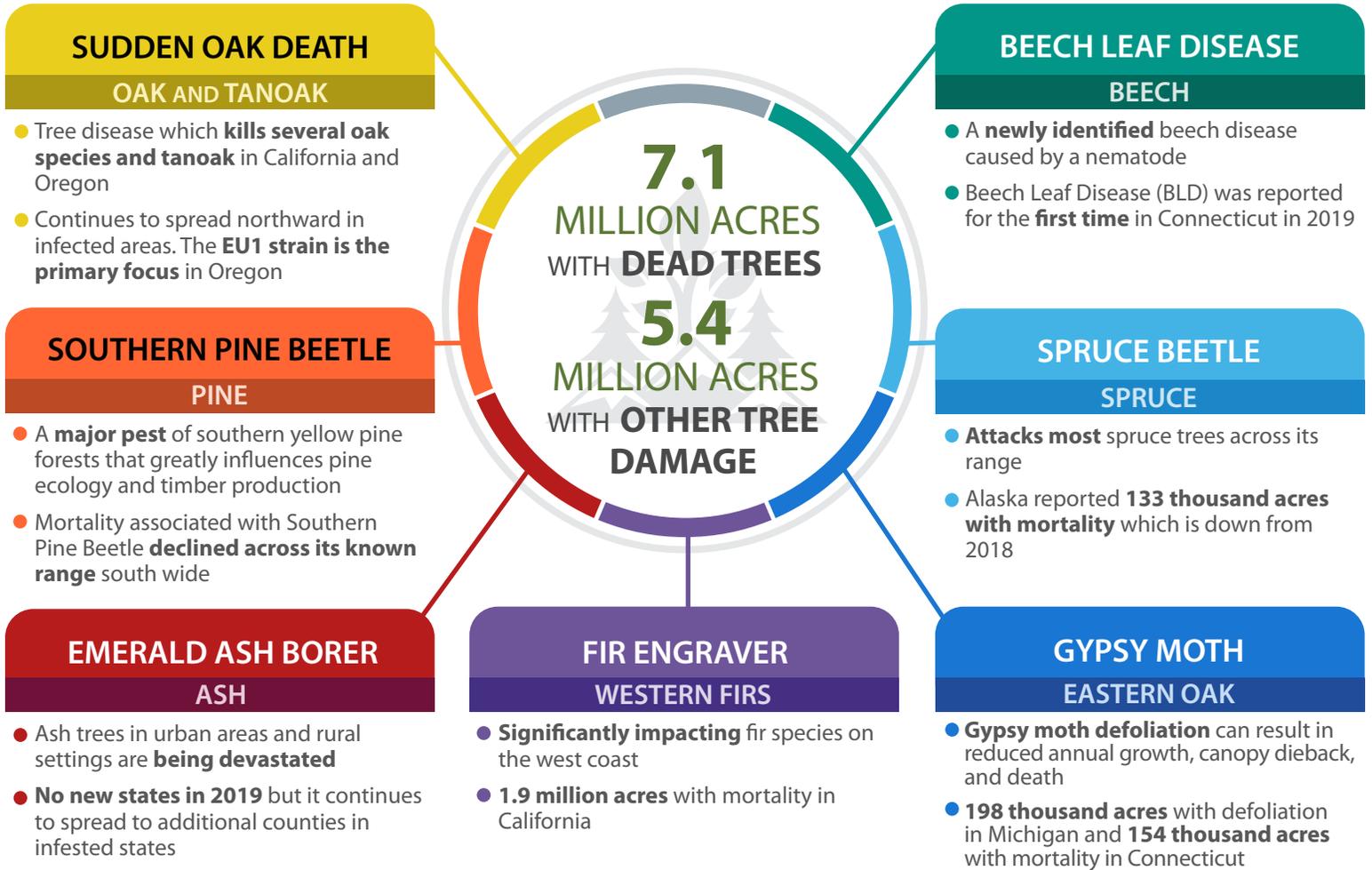


FOREST HEALTH PROTECTION 2019 HIGHLIGHTS OF TREE MORTALITY AND OTHER DAMAGE FROM INSECTS AND DISEASES

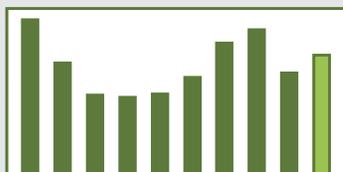
Approximately 500 million acres surveyed annually



ACTIVITIES FOREST HEALTH PROTECTION SUPPORTED

SUDDEN OAK DEATH	SOUTHERN PINE BEETLE	EMERALD ASH BORER	FIR ENGRAVER	GYPSY MOTH	SPRUCE BEETLE	BEECH LEAF DISEASE
Stream detection and treatments in targeted areas to slow-the-spread	Suppression of active infestations and thinning forest for prevention	Provide technical assistance and outreach	Surveying, suppression, and developing management options	Eradication, suppression, and slow-the-spread; (promote early intervention)	Pest suppression, detection, management, and treatments	Causal agent surveys were performed and are on-going in the east

TREE MORTALITY SURVEY TRENDS 2010-2019



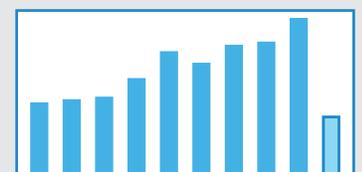
ALL TREE MORTALITY
7.1 MILLION ACRES
IN 2019



FIR ENGRAVER
2.7 MILLION ACRES
IN 2019

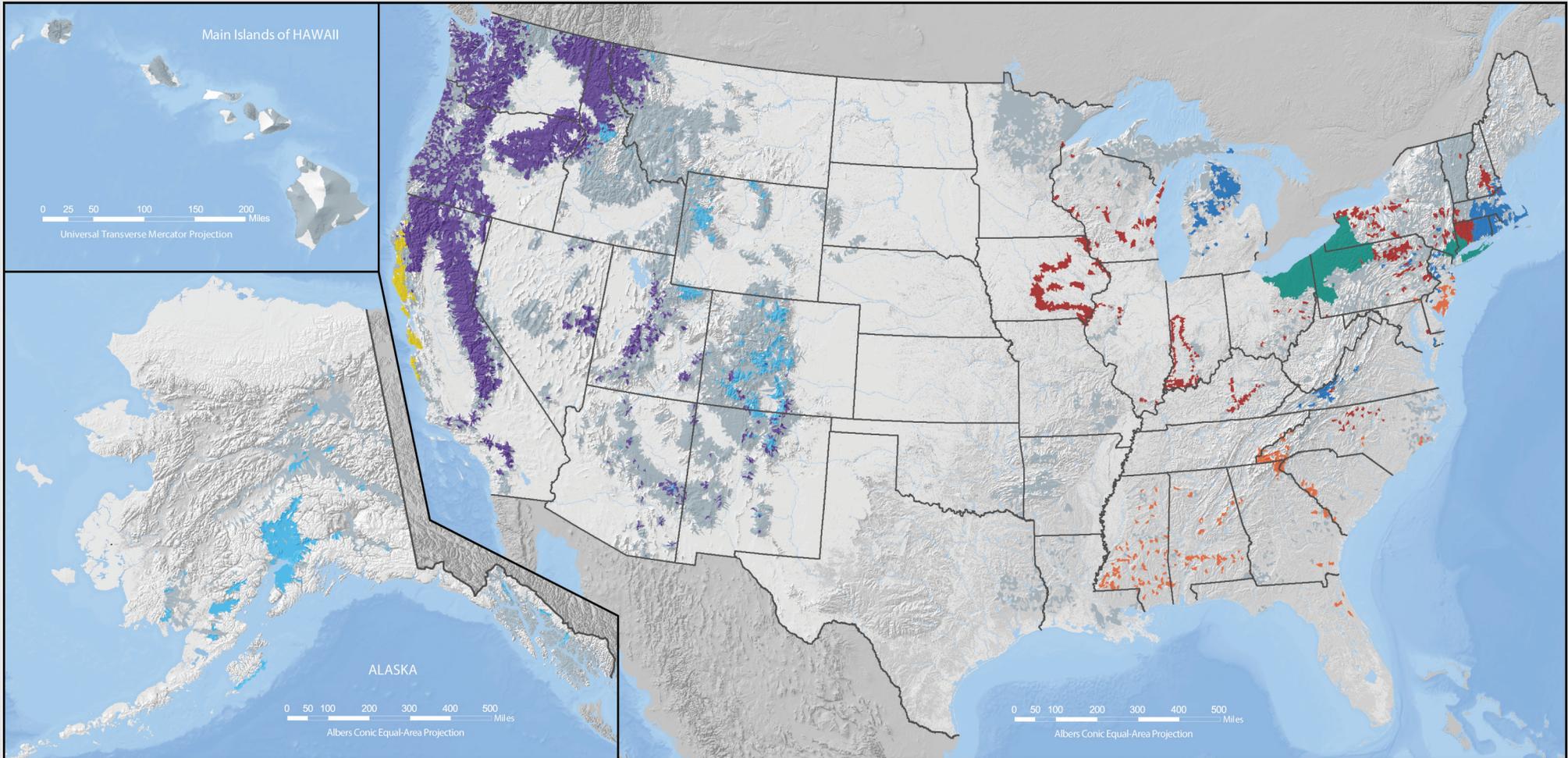


EMERALD ASH BORER
1.3 MILLION ACRES
IN 2019



SPRUCE BEETLE
325 THOUSAND ACRES
IN 2019

2019 INSECT AND DISEASE SURVEY WATERSHEDS WITH TREE DAMAGE



Sudden oak death	Southern pine beetle	Emerald ash borer	Fir engraver	Gypsy moth	Spruce beetle	*Beech leaf disease	** Other damage

*Displayed as watersheds in counties reported to have beech leaf disease.
**Includes damage from western spruce budworm, hemlock looper, hemlock sawfly, pinyon ips, mountain pine beetle and many other less significant pests.