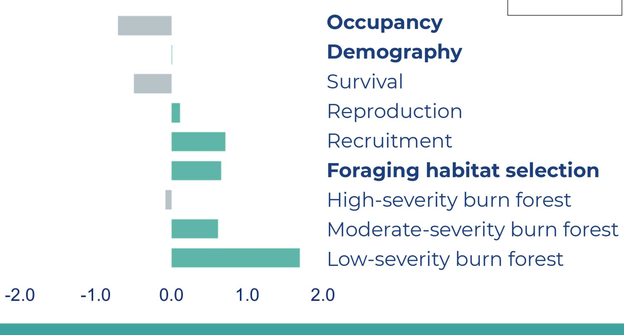
PennState
Eberly College of Science

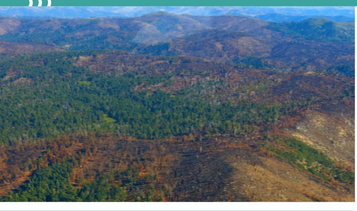
Spotted Owls & Forest Fires

An overview of spotted owls response to forest fire

Mixed-severity forest fires with large patches of high-severity burn create more benefits than costs for spotted owls



- Decreasing occupancy with time since fire
- Increased recruitment immediately after fire
- Reproduction increased as greater proportion of the breeding territory burned at high severity
- Increased foraging in low- and moderate-severity burned patches after mixed-severity fire
- High-severity burned patches are also used for foraging, not avoided

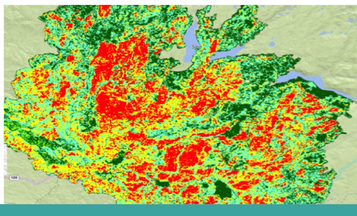


Mixed-Severity Forest Fire

includes a mix of low-, moderate-, and high-severity burn

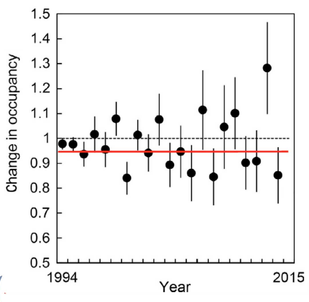
Mixed-Severity Forest Fire

naturally creates a diverse mosaic of habitats



10 out of 1,000

Spotted Owl breeding sites are affected annually by forest fires



Change in Occupancy

Occupancy reduction from forest fires (red line) is less than normal annual changes in occupancy in the absence of fire (dashed line)

Source: Lee DE. 2018. Spotted Owls and forest fire: A systematic review and meta-analysis of the evidence. Ecosphere.