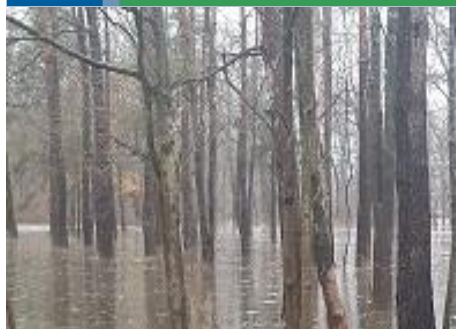


# Managing for Forest Resilience in a Changing Climate

## A Factsheet for Forest Landowners in the Western Allegheny Plateau Region



### Your Forest and Climate Change



*Climate Change is impacting our forests. The Bureau of Forestry recommends taking steps to establish forests resilient to a changing climate.*

### Current and Projected Climate Shifts

*Pennsylvania's climate has already warmed by 1.8°F since the early 1900s. Scientists know the rate of warming is accelerating and expect as much as a 5.9°F increase by 2050.*

*Average winter temperatures are increasing more than any other season, by 1.3°F per decade since 1970.*

*Our climate has also become wetter. Average annual rainfall has increased 10% over the last century and heavy downpours have increased by 71% in the northeastern US.*

*The following information identifies potential forest vulnerabilities to Climate Change and management strategies to encourage forest resilience.*

### Forest Vulnerabilities

- New forest pests and greater impact of existing forest pests
- More invasive plants
- More fungal outbreaks
- More windthrow
- More soil erosion



- Streambank destabilization
- Changing forest community
- Unpredictable seasonal temperatures and extremes

### Management Strategies

- Increase vigilance for forest pests, invasive species, and pathogens (with aggressive follow-up)
- Protect existing forests
- Reforest deforested lands
- Plant a diversity of native trees, including known climate resilient trees in your region
- Work with your county service forester and consulting forester to create a forest management plan

### Resilient Trees

**Oaks:** scrub, white, black, chinkapin, scarlet, pin, shingle

**Hickories:** mockernut, pignut, shagbark, bitternut

**Other:** black walnut, sycamore, slippery elm, black gum, eastern redbud, osage orange, cottonwood, hackberry, hophornbeam, hornbeam, sassafras, Virginia pine, pitch pine, boxelder, black/honey locust, yellow buckeye, persimmon, pawpaw, flowering dogwood, black willow

### Trees at Risk

**Maples:** mountain, striped, black

**Aspens:** big tooth, quaking

**Birches:** paper, yellow, gray

**Evergreens:** hemlock, red pine, balsam fir, jack pine, red/white spruce

**Other:** American mountain ash, fire cherry, balsam poplar, American beech, chokecherry, pin cherry, blue ash

### More Information

DCNR Bureau of Forestry  
[PaForester@pa.gov](mailto:PaForester@pa.gov)  
717-787-2703

DCNR's Climate Change Page  
<https://www.dcnr.pa.gov/Conservation/ClimateChange/Pages/default.aspx>

Service Forester Directory  
<https://maps.dcnr.pa.gov/landownerassist/>

