

Helping Flooded Trees and Shrubs

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In North Dakota, some trees and shrubs have died and others are declining because of flood-related problems. However, you can help trees and shrubs recover.

Symptoms of flood damage

- Leaves – discoloration (yellowing), wilting, scorched appearance, early fall color or leaf drop (Flood symptoms are very similar to drought symptoms.)
- Branches – dieback of existing branches, sprouting of new branches from the trunk

Determining amount of damage

- Water – If the entire tree crown is or was covered with water for any amount of time, the tree likely will die. However, a high amount of oxygen in the water can reduce the damage:
 - Fast-moving water contains more oxygen than slow-moving water.
 - Shallow water warms quicker and loses more oxygen.
- Health of the tree – Very young and very old trees are unlikely to survive; previously healthy trees have a better chance at survival.
- Inspection – Use your thumbnail to scratch the bark from a young limb; if you find green tissue underneath, the plant is alive though there is no guarantee that it will recover.
- Season of flooding – Floods that occur in the dormant season will not harm trees.

Recovery of flood-damaged trees – reduce future stress

- Remove sediment that has accumulated on the soil surface.
- Fertilization – Lightly fertilize with up to 1 pound of nitrogen per 1,000 square feet of soil surface.
- Pests – Scout for insects and diseases and treat as necessary.
- Damaged bark – Remove loose bark and carefully trace around wounds with a sharp knife to remove loose bark; do not use pruning paints or wound sealers.
- Remove only dead branches and limbs. Do not top trees.
- Recovery – Trees or shrubs may take up to five years to recover.



David Haasser, NDSU

Tree removal

- Flood-damaged trees may fall over in high winds because of weakened root systems and/or saturated soils.
- Hire a professional arborist for removing large branches and trees.

Tolerance to Soil Saturation or Surface Ponding During Growing Season

Trees

Often able to withstand more than three weeks

Ash – green, black, Manchurian
 Boxelder
 Cottonwood
 Common hackberry
 Willows

Able to withstand one to three weeks

Silver maple
 Freeman maples ('Autumn Blaze,' 'Sienna Glen,' and others)
 River birch
 Russian-olive
 Honeylocust
 Quaking aspen
 Bur oak
 American and hybrid elms
 American linden (basswood)
 Arborvitae

Unable to withstand more than seven days

Norway maple
 Sugar maple
 Ohio buckeye
 Paper birch
 Hawthorns
 Black walnut
 Apples and crabapples
 Mountain-ash
 Siberian elm
 Siberian larch
 Junipers
 (including Eastern redcedar)
 Pines
 Spruces

Shrubs

Able to withstand more than three weeks

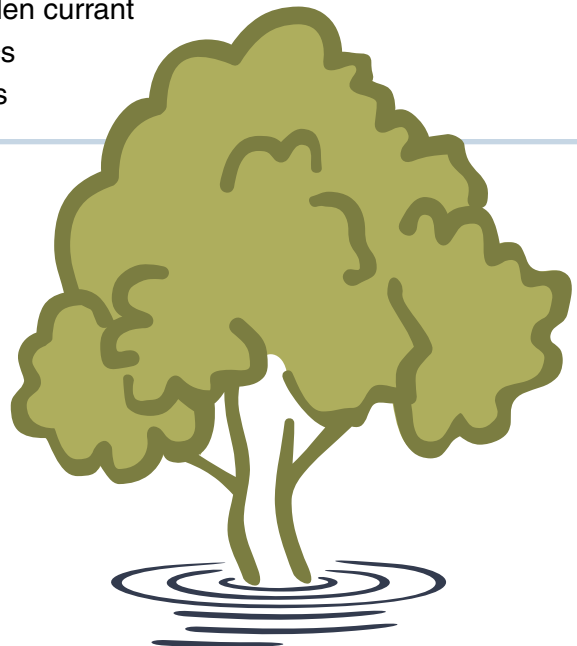
Redosier dogwood
 Willows
 Nannyberry
 American cranberrybush

Able to withstand one to three weeks

Black chokeberry
 Silky dogwood
 Honeysuckles
 American black currant
 Arborvitae

Unable to withstand more than seven days

Juneberry
 Cotoneasters
 Euonymus
 Forsythia
 Cherries, plums, apricots,
 peaches (genus *Prunus*)
 Golden currant
 Lilacs
 Yews



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