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# 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  
 Arborvitae

### Unable to withstand more than seven days

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

## Shrubs

### Able to withstand more than three weeks

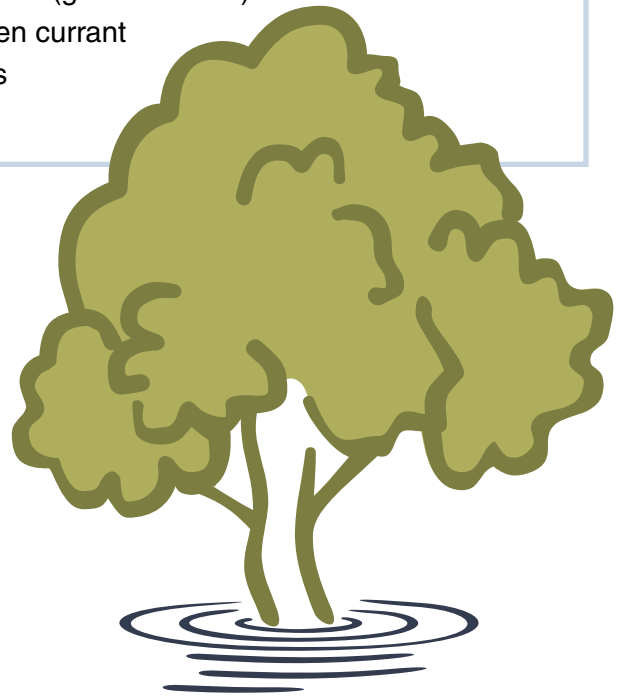
Redosier dogwood  
 Willows  
 Nannyberry  
 American cranberrybush

### 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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