

# Flood

Information on weather-ready landscapes



## WHAT IS IT?

**Extremes in rain events increase the chance of localized flooding**, like in low lying areas and streets, as well as more devastating events like river flooding.



## Nebraska

- Increasing trend April-June precipitation of +0.40"/decade (1982-2010) and +1.76"/decade (2000-2018)
- 2000-2018 average is 1.0" higher than 1901-2000 average.

## Great Plains

- Increase of 29% of precipitation falling in top 1% of all events.(1958-2016)
- A 100-year, 24 hour rainfall event ranges from 7" in SE Nebraska to 4" in NW Nebraska.

**Typical Damage:** Plant roots need air (oxygen) just as much as they need water. When the pore space between the soil particles is filled with water for extended periods of time, plants will become stressed and start showing symptoms of too much water like yellowing of the leaves with a drooping appearance.

Source: National Center for Environmental Information

## PREVENTATIVE ACTIONS

Site selection is key to flood prevention.



1

**Pick the right plant for the right place.** Select plants that are tolerant to wet sites in areas that have a tendency to remain wet. Avoid planting plants who don't like 'wet feet' in low lying or flood prone areas.



2

**Remove any dead, damaged, or diseased tree branches** as you see them.



3

**Plant trees, shrubs, groundcovers, perennials and ornamental grasses** that are adapted to USDA hardiness zone 5 in eastern Nebraska; Zone 4 in western Nebraska.



4

To reduce runoff from landscapes during heavy rain events (mainly to help reduce localized street flooding and to reduce stormwater runoff, **slow it down and soak it in with landscape features** such as rain gardens, bioswales, low berms that direct rainwater where it is wanted and will reduce flooding risk.

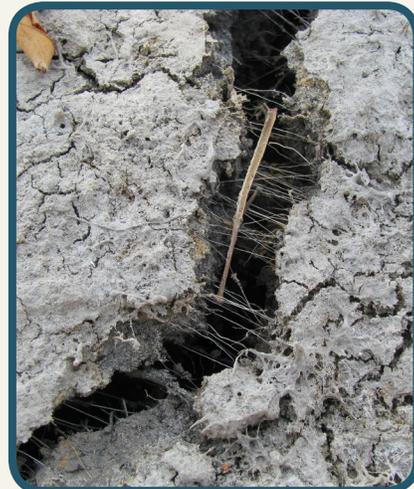


5

**Encourage rainwater to soak in** rather than run-off with good soil management by increasing organic matter content of soils and reducing soil compaction, such as core aeration or tillage where feasible.

## MORE TYPICAL DAMAGE

Flooding can cause trees to grow additional roots, cause trunk damage and increase susceptibility to insect and disease pest problems. Flooded vegetable gardens may also be contaminated leading to food safety concerns.



## CORRECTIVE ACTIONS

Correcting flood damage will take continued effort.



**Remove and dispose of all garden produce that has come into contact with flood waters.** It is unknown what the water contained, and the produce should be considered contaminated.



**Remove any dead or damaged branches** if you can do so safely. Consult an arborist for more extensive pruning or tree removal.



**Watch for secondary pest problems** like insects or fungi on stressed plant material.



**Keep soils around the plant evenly moist**, not soggy or dry.



**Mulch with wood chips** to avoid weed competition and to moderate soil temperature and moisture.



**Avoid fertilization** until the plant recovers.



Little is known about the long-term effects of flood on plant material. Realize that **it could take several years before some plant species show signs of damage.**



**Pull back mulch** after flooding or extreme precipitation events to speed soil drying if saturated; then replace mulch.

For more information, visit [weather-ready.unl.edu/landscapes](http://weather-ready.unl.edu/landscapes)