

**COULD URBANIZATION OF THE YAHARA
WATERSHED CAUSE BOTH INCREASED
FLOODING AND MORE BOAT
GROUNDINGS?**

Kenneth W. Potter
Department of Civil & Environmental
Engineering
University of Wisconsin

SUMMARY

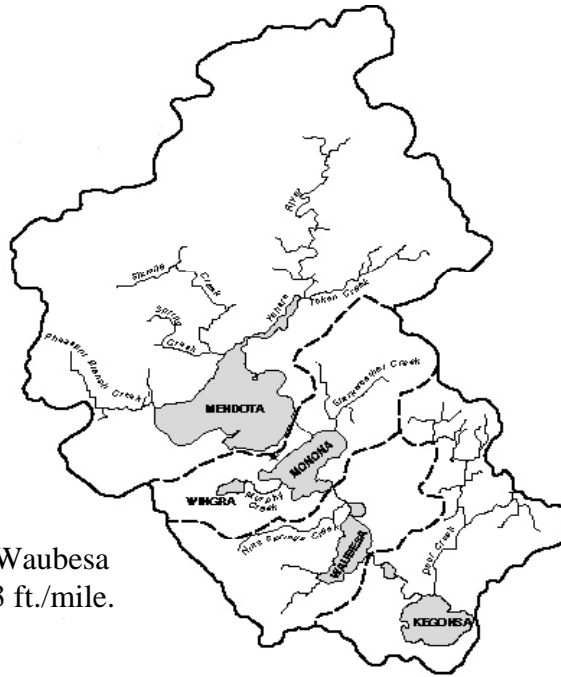
- The Yahara lakes are subject to flooding because of the small elevation drops between lakes.
- The lakes are also subject to low levels during droughts.
- Both high and low levels will worsen with development unless aggressive stormwater infiltration practices are adopted.

YAHARA LAKES AND WATERSHED

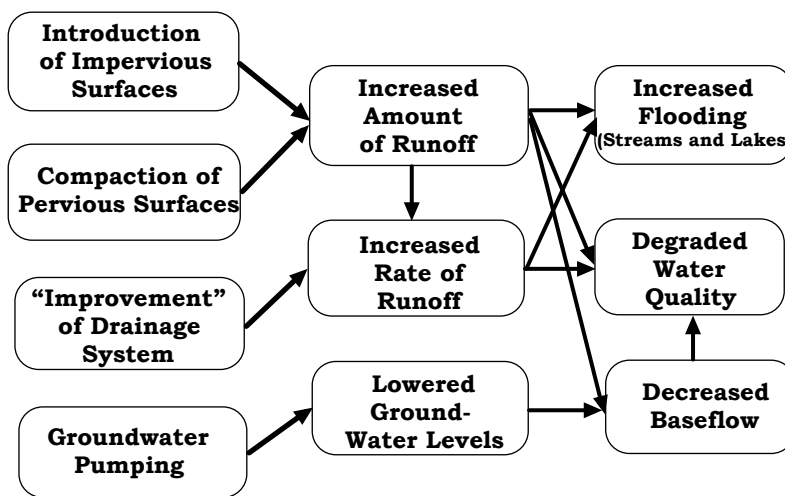
Max. summer elevations:

- Mendota: 850.1 ft.
- Monona: 845.2 ft.
- Waubesa: 845.0 ft.
- Kegonsa: 843.5 ft.

Slope between dams on Waubesa and Kegonsa is only 0.23 ft./mile.



HYDROLOGICAL IMPACTS OF URBANIZATION



STORM WATER DETENTION POND

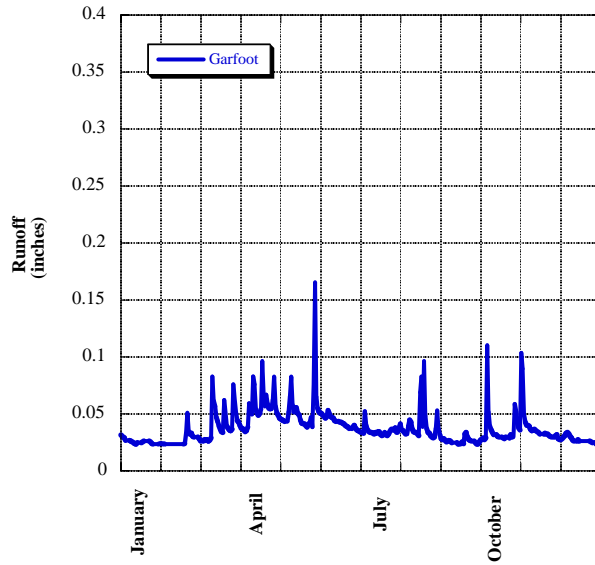


LIMITATIONS OF DETENTION

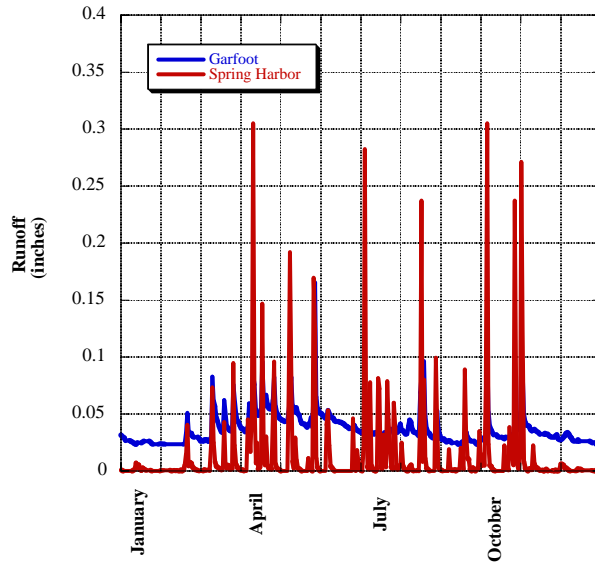
Detention basins

do not mitigate increases in the amount of storm water runoff, nor do they compensate for groundwater pumping.

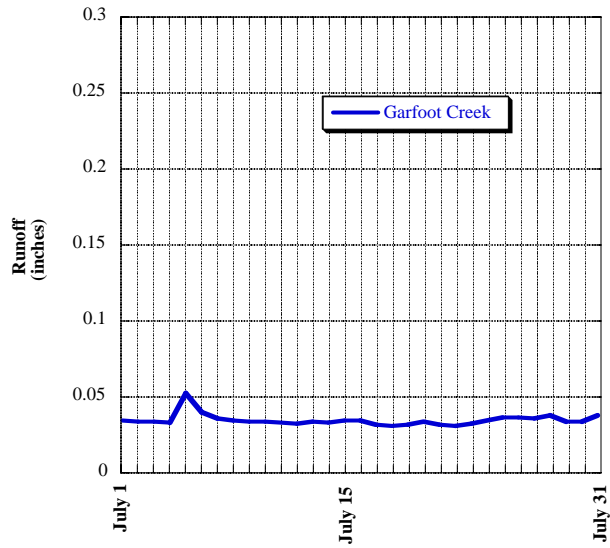
1995 RUNOFF GARFOOT CREEK



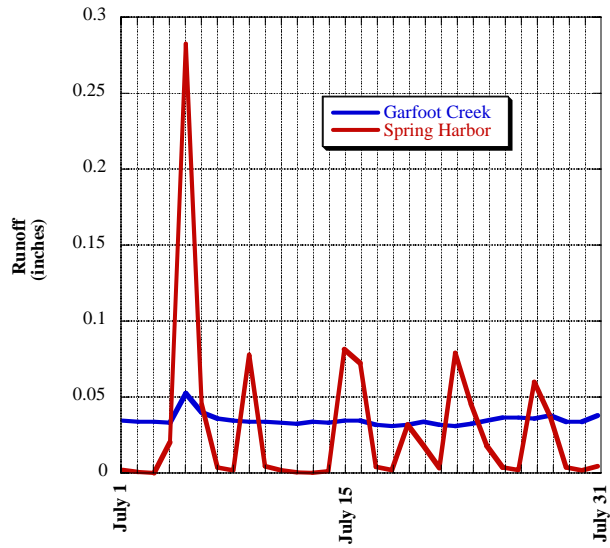
1995 RUNOFF GARFOOT CREEK AND SPRING HARBOR STORMSEWER

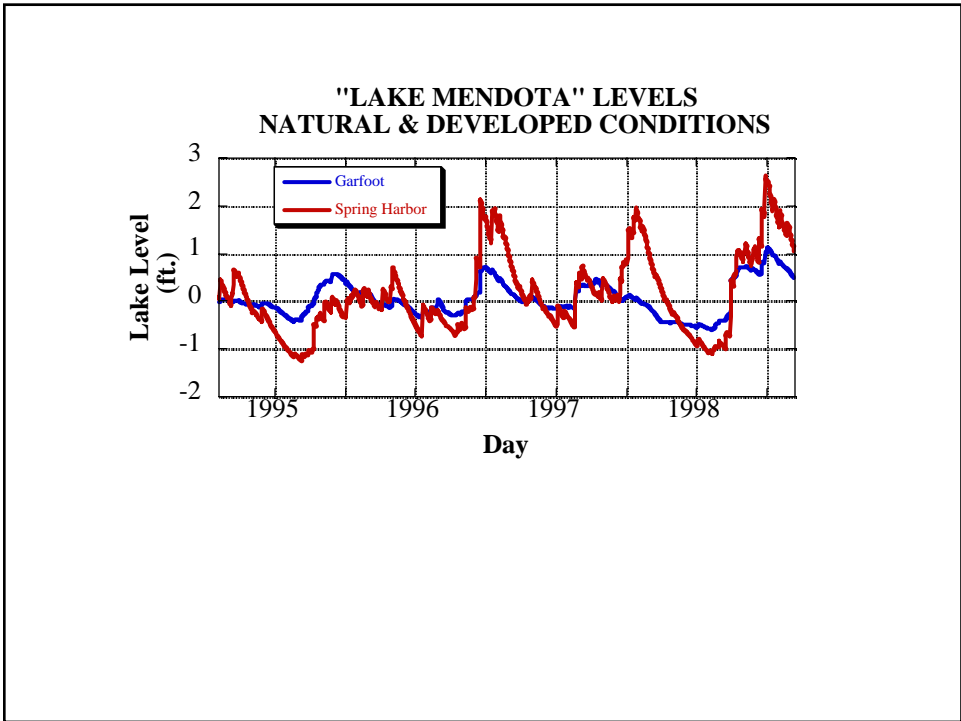
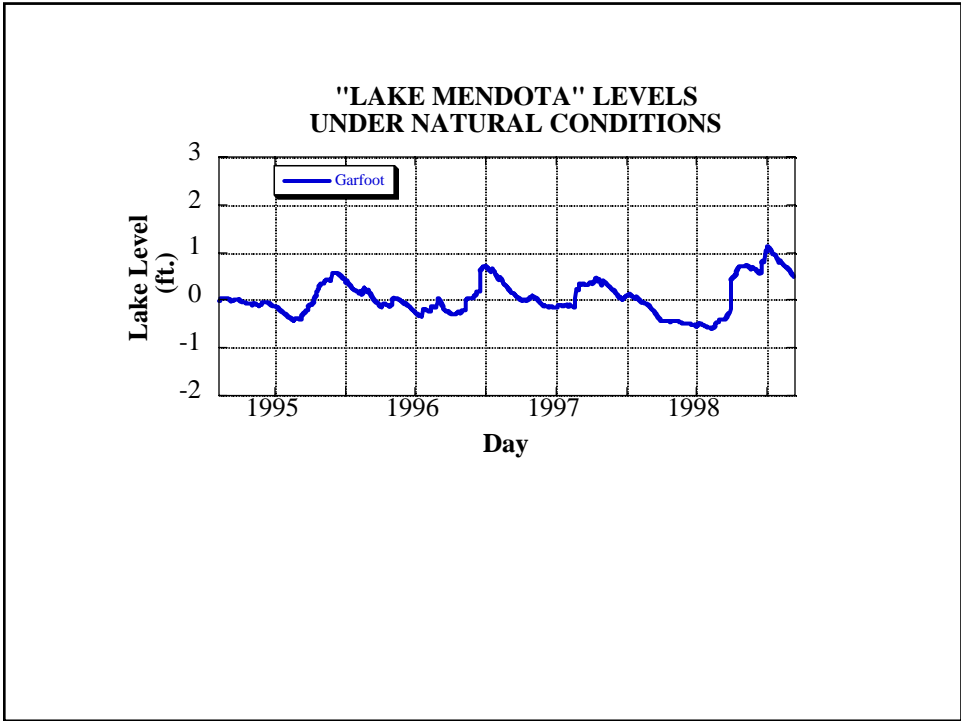


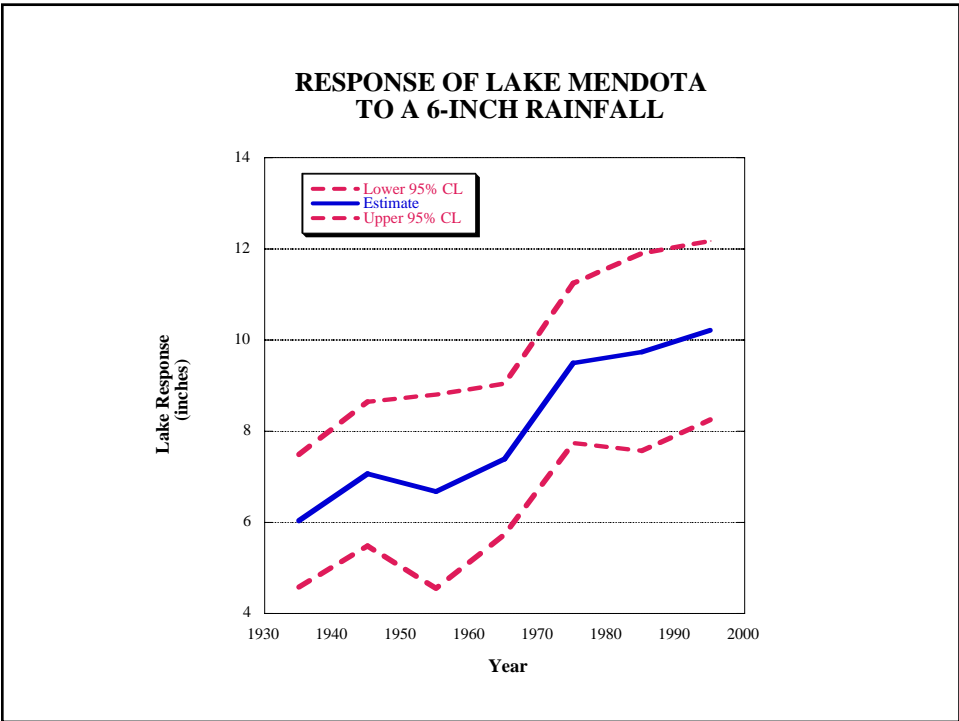
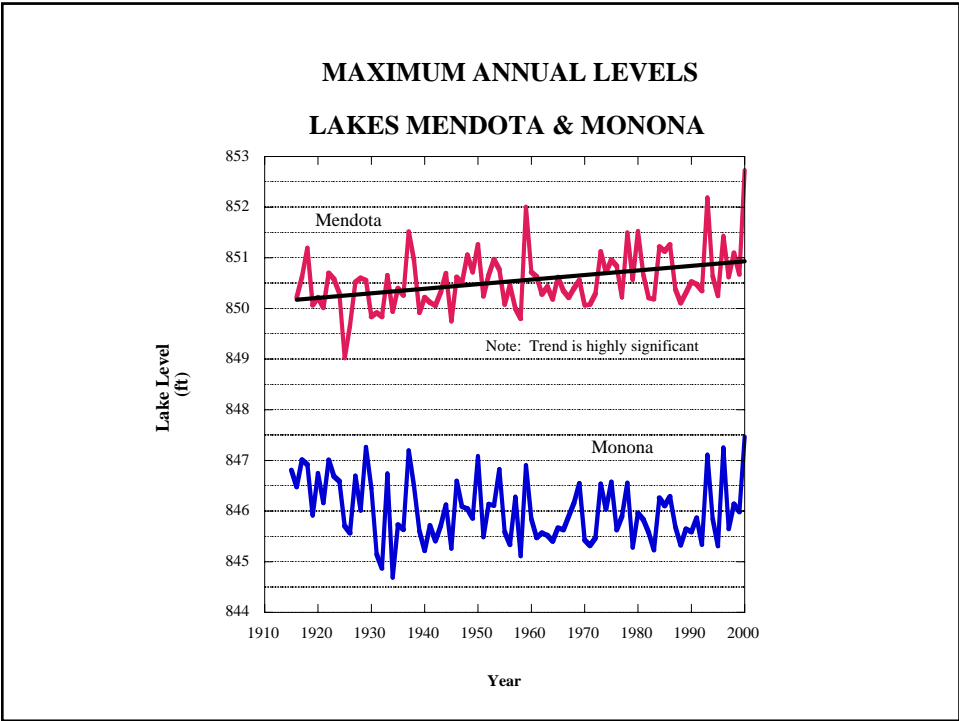
**JULY, 1995 RUNOFF
GARFOOT CREEK**



**JULY, 1995 RUNOFF
GARFOOT CREEK AND
SPRING HARBOR STORMSEWER**





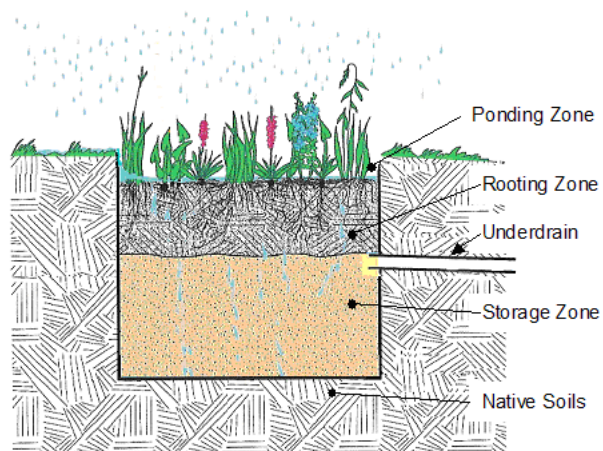


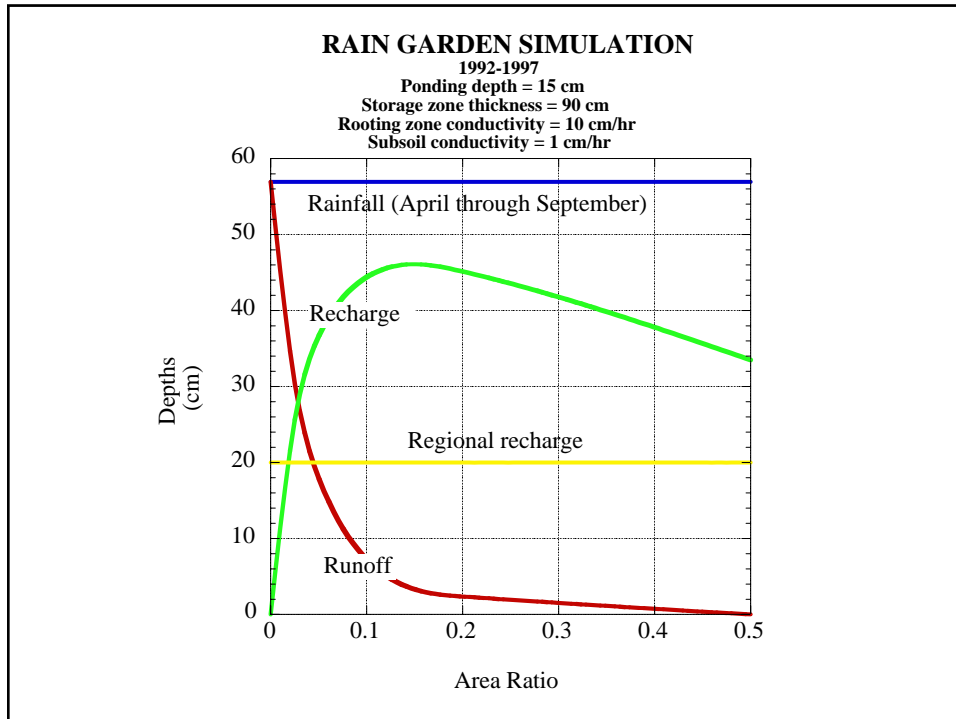
LOW-IMPACT DEVELOPMENT PRACTICES

- Preserve natural areas with highly permeable soils (cluster development).
- Minimize soil compaction during development.
- Restore permeability of disturbed soils.
- Use permeable hardscapes.
- Route runoff from impervious surfaces to infiltration practices.

BIORETENTION FACILITIES

- Capture surface runoff for concentrated infiltration
- Contaminant removal by soil and plants





RECENT INFILTRATION LEGISLATION

- Wisconsin DNR- NR-151
- Dane County - New infiltration requirements

These are a start, but may allow too many exceptions to prevent increased flooding and increased boat groundings.