

USING ZONING TO REDUCE FLOOD DAMAGES

A Presentation by
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Since Justice Sutherland delivered the Supreme Court's decision it has been widely accepted that one test of a jurisdiction's zoning power is whether it protects the public health, safety, morals and general welfare of a community. This gives communities the power to take actions to reduce damages.

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Flood Damages Have Continued To Rise Despite

Congress passing and the President signing:

- National Flood Insurance Act of 1968
- Flood Disaster Protection Act of 1993
- Disaster Mitigation Act of 2000

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What's Next?

- Raising insurance rates for high risk homes to discourage development and cover costs **Being Done**
- Requiring flood insurance coverage in more areas of the country to subsidize high risk areas
- Producing better maps **Being Done**
- Enforcing tougher building codes and land-use laws meeting requirements set by the Federal government

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**By Linking Your Communities
Floodplain Ordinance with Your
Zoning Ordinance, You Can Make
Your Floodplain Ordinance More
Versatile.**

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You already have the People and Tools to Help Reduce Damages

- Local Planners, Corporate Attorneys, Zoning Officers
- Comprehensive Plans & Hazard Mitigation Plans
- Zoning Ordinances

Comprehensive Plans and Hazard Mitigation Plans

- Most Comprehensive Plans include, at least:
 - Land-use sections
 - Environmental Sections
 - Open space or recreation sections
 - Housing sections
 - Transportation sections

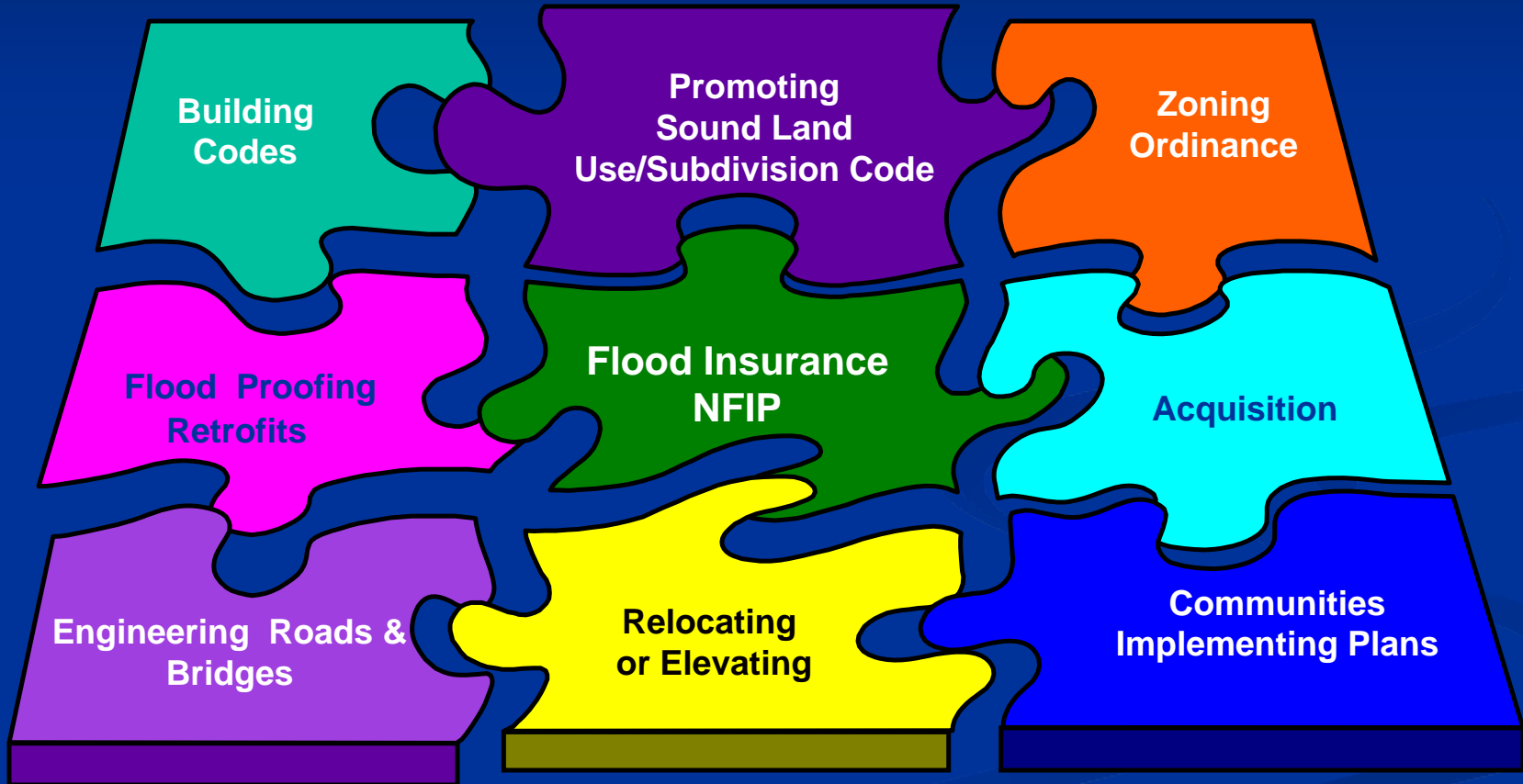
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Comprehensive Plans and Hazard Mitigation Plans

- Identify the hazards affecting your community
- Complete a risk assessment
- Identify possible mitigation actions to reduce hazards
- Implement the hazard mitigation plan as part of your comprehensive or land-use plan to ensure that new development does not create vulnerability

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How Does Zoning Fit into the Picture?



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Zoning Regulations

Most communities adopt the State Model Floodplain Ordinance.

Only a small portion adopt regulations over and above the State standards.

Zoning Regulations

Include a hazard identification and risk assessment in the comprehensive plan to provide scientific data to support requiring modification of floodplain proposals or rejecting development proposals.

Zoning Regulations

Possible actions to create more restrictive ordinances:

- ✓ Include the floodplain regulations as an overlay of the zoning ordinance.
- ✓ Add Freeboard(s) to the ordinance.
- ✓ Restrict the amount of rise that that development can cause.
- ✓ Require stream setbacks.
- ✓ Limit floodway uses.
- ✓ Include incentives.

Floodplain Regulations as an Overlay of Zoning Ordinance

- Limits uses allowed in at risk areas.
- Limits densities in at risk areas.
- Allows you to require set backs
- If mixed with zoning tools such as planned unit developments, can help to design development to reduce risk.

Add Additional Freeboard(s) to Ordinance

- Is the Flood of Record higher than the BFE?
- Is upstream development creating greater run-off?
- What is the margin of error if the maps are wrong?
- Freeboard should consider amount of risk for the flood exceeding the BFE and amount of risk to life/health/safety/economic well-being.

Add Additional Freeboard(s) to Ordinance

Communities that require additional freeboards:

- Roseville, California +2
- Auburn, Maine +1
- Maricopa County, Arizona +1
- Mecklenburg County, North Carolina +1 to +2
- Central Point, Oregon +1
- Northeastern Illinois (6 Counties) +1 and several counties go to +2 or +3 depending on use

Require Setbacks from the Stream

- When streams are at or above flood stage:
 - Does the flood follow the area described on the map as the floodway and/or floodplain?
 - Are there existing structures which block flows and cause increased damage?
 - Is access to structures blocked by flooding?

Require Setbacks from the Stream

- Maricopa County , Arizona, requires a setback as an erosion buffer based on either State standards or “Erosion Hazard Zone Delineation and Development Guidelines.”
- Mecklenburg County, North Carolina setback(buffer zones) are based on the size of the drainage basin. Can vary from 35 feet to 100+ feet on each side of stream.

Require Setbacks from the Stream

- If your answer to any of the questions is yes, you may wish to add a setback requirement to your ordinance.
- Setbacks can be from the center of the stream, the natural channel or the floodway boundary.
- The extent of the setback should be determined by what you want to accomplish.

Open Space Zones

- Some communities require developers to dedicate high-risk zones as open space for parks.
- Some communities work with environmental groups to buy and preserve open space.
- If FEMA purchases flood damaged properties they must be kept in perpetual open space and can be linked with parks and preserves.

Open Space Zones

- If a community has a recreation section on the comprehensive plan, they can designate areas that should be kept as open space and use their zoning ordinance to guide development away from open space areas.

Density Controls

When lots are in the floodway fringe, this does not mean that they cannot flood. Density Controls limit the number of structures susceptible to flooding or allows innovative ways to elevate the structures above the base flood elevation.

Density Controls

- With Density Controls, the community can:
 - Reduce the number of structures at risk.
 - Allow increased use of the placement of fill around individual structures in the flood fringe.

Density Controls

- With Density Controls, the community can:
 - Require dry-land access for individual structures that would otherwise be protected.
 - Reduce or eliminate the number of structures constructed in the floodplain, while increasing the density outside of the floodplain (on or off site).
 - Is best used with other regulations (PUD/Subdivision design standards).

Density Controls

Mecklenburg County, North Carolina, offers reduction in lot size, reduced setbacks, relaxation of open space requirements and density bonuses in return for stream buffers.

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Non-Conforming Use Regulations and Substantial Improvement Regulations

- Floodplain ordinances have substantial damage/substantial improvement regulations.
- Zoning ordinances have non-conforming use regulations.

Non-Conforming Use Regulations and Substantial Improvement Regulations

- Non-conforming uses may be structures that aren't used for the intended uses (Ex. a house used as a doctor's office), structures that don't meet current zoning requirements such as lot size, lot coverage requirements, etc.
- When the owner seeks to make changes to the structure, the structure has to be brought into conformance with the zoning ordinance.
- You can use it to reduce risk

Limit Floodway Uses

- NFIP regulations limit development in the floodway, but does not ban development if structure is elevated and does not cause a rise in the base flood elevation. By limiting uses of the floodway, only uses are allowed that either don't include structures or allow structures that will only suffer limited damage.

Limit Floodway Uses

- Racine, Wisconsin – trails, scenic areas, fish hatcheries, farms, orchards, bait shops, marina sales, resorts
- Roseville, California – non habitable structures, kennels and stables, storage yards, railroads, streets, bridges, marinas and wharves, extraction sites, car lots, transient amusement enterprises.

Limit Floodway Uses

- Maricopa County, Arizona – recreational uses, stockyards and corrals, marinas, extraction uses (sand and gravel), drive-in theaters.
- Northeastern Illinois Model – flood control structures, structures requiring access to water, underground and overhead utilities, outfalls, recreation facilities, detached garages, storage sheds, and other non-habitable structures.

Restrict the Amount of Rise that Development Can Cause

- Racine, WI; Roseville, CA; Exeter, NH;
Auburn, ME; Maricopa County, AZ;
Mecklenburg County, NC; Central Point, OR;
and Northeastern Illinois all have essentially no
rise ordinances.

Add Incentives for Developers

- When areas are at a higher risk to be flooded or at a high risk for devastating floods, Incentives can be used to encourage developers not to develop those areas and to develop other locations. Incentives the same as density bonuses, but off-site.

Add Incentives for Developers

- Use incentives to reduce risk:
 - Reducing the required lot sizes on the parcel outside of the floodplain
 - Increasing the densities that are allowed in the lots outside of the floodplain
 - Reduce required setbacks for the lots outside of the floodplain
 - Give the developer credit for the land left undeveloped against open space requirements.

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When Considering Modifying Your Zoning Ordinance

- Check your State Enabling Legislation for Zoning to see what is allowed.
- Use your jurisdictions attorney.

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For those communities participating in CRS

These zoning ordinances can
qualify you for extra credits.



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