Questions and Answers from the Sept. 19, 2019 CTP Webinar: Floodways - The Original Intent

Please comment on how more restrictive floodways aren't considered as illegal "takings."

Property owners do not have the right to adversely impact others. A number of states adopted regulations related to floodways based on "no measurable rise" prior to the passage of the National Flood Insurance Act. There are no instances where the courts determined those regulations resulted in a "taking." Courts have broadly supported restrictive regulations for high-risk flood areas based on public safety, nuisance prevention, public trust and other concerns. It seems there is more potential for a takings claim by allowing new development to increase flooding on existing development without notification or compensation. This is a great resource for better understanding "No Adverse Impact Legal Issues."

Does a cut-fill balance requirement have the same net effect as a 0.00 rise requirement?

No. Conveyance will not be maintained and vegetation and sloughing result in a flood storage loss. Cut/fill addresses storage not conveyance.

Has limiting the velocity to a certain value for a given reach been considered as a regulatory standard vs. no increase? For example, velocities may be increased no more than x.

Yes. Ten percent has been used. By using the term "no increase," communities can define what they deem a measurable or significant amount.

Has there been any conversation around reconsidering the 0.00 foot no-rise criteria?

Not that we are aware.

Is there a link to the Wisconsin sample flowage easement?

Flooding Easement is available at this link.

What are the flood insurance impacts to homeowners if the floodways are shown as the full SFHA?

None - your premium is based on the Base Flood Elevation, which is calculated with no surcharge.

Development in the floodplain is not the only reason flood elevations increase. Depending on the level of development in the watershed, development outside of the floodplain may have a much bigger impact to flood elevations compared to development in the floodplain. Is there a concern implementing a zero-surcharge may be seen as treating new development in the floodplain differently than development upstream of the floodplain.

Development in uplands can certainly cause increased flooding downstream. However, this should not be deemed a justification for building in the floodplain. Development in the Special Flood Hazard Area blocks conveyance and reduces the storage capacity of the SFHA. Upstream development changes the timing of the floods and tends to increase the peak discharge and total volume of the downstream flood. They need to be treated differently and with different standards.

When preparing a no-rise certification, should the proposed conditions floodway model and elevations be compared to the corrected conditions model or the effective Flood Insurance Study data? If the corrected conditions show a rise from what is mapped, it is difficult for the proposed conditions to show no rise compared to the FIS information.

Post-project conditions should be compared to pre-project conditions (usually the same as corrected effective) to determine if the project causes a rise.

What if there is no floodplain on one side? Is no encroachment allowed on other side?

You apply the loss of conveyance as equally as possible. In a ravine there may be no overbank on one side.

How do you address a cumulative analysis? Do you provide applicants with a model which has the previous requests, or do you require applicants to seek out all requests?

You should always use the effective model as that should show all legal changes.

Do any states have a requirement to perform a floodway analysis on previously unmapped streams, like areas with no mapped floodplain, but adding a stream crossing?

Not aware of a state requirement, but many communities require a floodway analysis in unnumbered A Zones and some for unmapped streams.

Do you require flood analysis for greenways? Yes.

How do you deal with bridge replacement projects that reduce backwater elevations, but increase the water surface elevation at the structure itself because you have relaxed the squeeze through the bridge, reducing velocities?

Wisconsin evaluates increases at cross sections only.

For checking on developer's no rise/no surcharge studies and their calculations, are local governments able to submit those to state floodplain management offices for review?? Or do the local governments have to utilize their own staff or hire a firm to review the accuracy of these studies? (I guess this is more of a survey question). Georgia state office had stopped reviewing the studies and my city could not afford the software to review the calculations or hire a firm to review (this was back in 2010 or so).

You are correct. This would be a good survey question. Some states conduct reviews of proposed Letter of Map Revisions. Several states do review no-rise analyses for communities.

Earlier in the presentation, a storage area was designated as floodway. What is the process for making this designation? Is this considered model backed? Is the property owner consulted prior to this designation?

In the presentation, it was stated that the designation was based on a Storm Water Management Model. Since this designation is part of the Flood Insurance Rate Map, landowners would be notified as part of the FIRM public notice and adoption process.

Examples of ordinances with compensatory storage requirements?

The Wisconsin Model Ordinance is available at this link. Also, King and Pierce Counties in Washington, and many in Florida and Georgia communities.

Is the floodway calculated based on equal amounts of fill on both sides of the channel, or are both sides set equal distance from the center of the channel?

Actually neither. It is based on conveyance, or more simply, a similar loss of flow capacity.

Comment on challenge of 0.01 foot criteria, particularly when wanting to lower stream velocities (e.g., water surface rise, but lower energy grade).

Not sure what is meant. But a rise is allowed, if impacted property owners agree to the rise.

Modeling floodway techniques are still stuck in the 1980s. When will we see a true practical modeling approach using modern modeling techniques using 2D perhaps?

When regulations are developed in conjunction with 2D modeling. Most regulations were developed based upon 1D modeling principles.

Why is zero rise 0.00 and not 0.0 when floodway data table is accurate to 0.0?

0.00 is in Wisconsin code and is the value FEMA uses to determine rises as confirmed by the MT-2 reviewers.

Officials in my community are interested in adapting a compensatory storage requirement for developments in the SFHA. Your thoughts on the pros/cons?

Cons: If the storage is outside of your community but helps inside your community, getting the adjacent community on board can be difficult. Also, if you take into account storage due to an undersized road opening, it discourages the act of properly sizing culverts because that would increase BFEs downstream.

Pros: Your flood study represents what is actually occurring in the watershed. It should be on the same parcel as the fill in order to function properly. Also, it prevents downstream increases in flood elevations.

Does that 23% include mold damage?

Not likely but not sure. The source of that info is in this document.

Older FEMA maps originally had A "numbered" zones that determined potential flood hazard based on depth between the 10-year and 100-year floods. Wouldn't it be beneficial to go back to that criteria?

Doubtful. They were used strictly for establishing insurance rates. With the impending implementation of Risk Rating 2.0, we are beyond a need to do this.

Administrative floodway question: Our 2D model with floodway has been tied up in review since 2013. County engineer decided to do administrative floodway. Does administrative floodway mean the entire floodplain will be mapped as floodway when maps become effective?

Not completely sure, would need more detail. It typically means anything the community wants, as long as it is more stringent than the FEMA minimum.

What are your comments on FEMA's draft "2D Models and Floodways: Challenges, Benefits and Considerations" document? Maybe defining floodways more by depth and velocity as a "hazardous" area and a bit less than only conveyance being required to avoid a surcharge?

We have some concerns that an averaging process could be manipulated. Regarding the depth and velocity issue: Depth and velocity identifies the hazard to a structure or person at that location, but it ignores the potential to increase impacts on others as the flood fringe is filled.

If a developer performs actual site topography and determines a difference between SFHA boundaries and how it would lay out on their site, are they required to submit a LOMR to correct for their site?

Wisconsin answer: Zone AE: no LOMR required for permit (elevation rules), but insurance still required until LOMR removes it. Zone A: map rules since no detailed elevations published. A flood engineering study would be needed to establish a BFE that could be matched against the topographic data.

How do you regulate easement requirements in an urban environment when a significant number of property owners may be impacted?

Easements would need to be obtained from all impacted.

As part of the 59.1 definition, "…increase at any point." Can the presenters share some thoughts what it (at any point) means and how states/communities interpret and implement that? At any point along the cross sections?

Wisconsin answer: any point refers to distance parallel to the stream centerline. Typically seen, the impacts only measured at cross-sections, unless there is a 2D model. For a 2D model, this would mean any point perpendicular to flow.

Do the easements only specify the increased stage at the 1% chance flood or lateral extent thereof? Or do they also speak to increase stages (on more frequent storms) or the resulting increased frequency of experiencing the same stage (i.e., a my yard used to get flooded in a 25-year storm and now is experienced in a 10-year storm) resulting from filling a floodway closer to the channel bed?

Template references 1% chance only, but we see no reason a community couldn't require it for a more frequent event also.

When a flood study table indicates at a cross section that the BFE has a 1-foot increase, what does that mean? The line on the map accounts for the 1-foot surcharge?

No. Neither the BFE nor the SFHA boundary reflect the 1-foot surcharge. It has been FEMA's policy to reflect existing conditions (without the surcharge).

How difficult is to enforce the compensatory fill requirement?

Wisconsin answer - easy for Wisconsin. We require a study to be approved at a state level and would not issue an approval letter for the project unless compensatory storage is included for filling in a flood storage district.

Since many communities require this, I don't believe it is difficult.

How much of a surcharge is allowable if easements are obtained?

Theoretically, the increase is unlimited provided a Conditional Letter of Map Revision and then a LOMR are obtained. For instance, the construction of a new dam may well cause a much higher increase.

Is FEMA still using that bulletin? (Re: The Floodway: A Guide for Community Permit Officials. Community Assistance Series No. 4)

No. However, CAS4 is an excellent FEMA publication that ASFPM recommends communities make use of. No document has been developed to replace it.

How do you regulate a school district if it does not follow agency regulations? (DSA)

Depends on state law. In most states, school districts are required to get permits from the local community and the community would enforce. In a very few states, the schools are exempt from local requirements and locals would need to convince them of the need to be good neighbors.

Does it make sense to maintain a regulatory floodway on the FIRM when it becomes fully contained within the confines of an engineered channel?

Yes, a floodway is still appropriate as there might be private property in the channel.

Are any jurisdictions charging any fees for floodway development, even with the zero surcharge, to help mitigate future development or any changes in upstream flow regimes?

Wisconsin answer: no state fees are required for any flood study. Not sure about fee structure for community permits. Communities routinely charge fees to cover review costs, and there are often requirements for new development projects to maintain pre-development hydrology.

To Chris: Do easements between property owners who allow adverse flood impacts protect future property owners in some way, or are they typically carried with the property in the event of ownership transfer?

The easements stay with the property, not the individual.

Regarding no-rise analysis using 2D modeling, shouldn't there be some common sense that prevails and assess rise across a section as opposed to in a single cell?

Seems that the No Adverse Impact concept should apply. Depends on how adverse the impact is on that cell and whether that is acceptable to the owner of the land represented by that cell.

Are any U.S. communities considering a base flood higher than the 1% Annual Exceedance Probability? (Saskatchewan has begun using the 500-year)

Not to our knowledge. California requires a 200-year standard for all urban levees. New Jersey requires a standard 25% increase in the base flood.