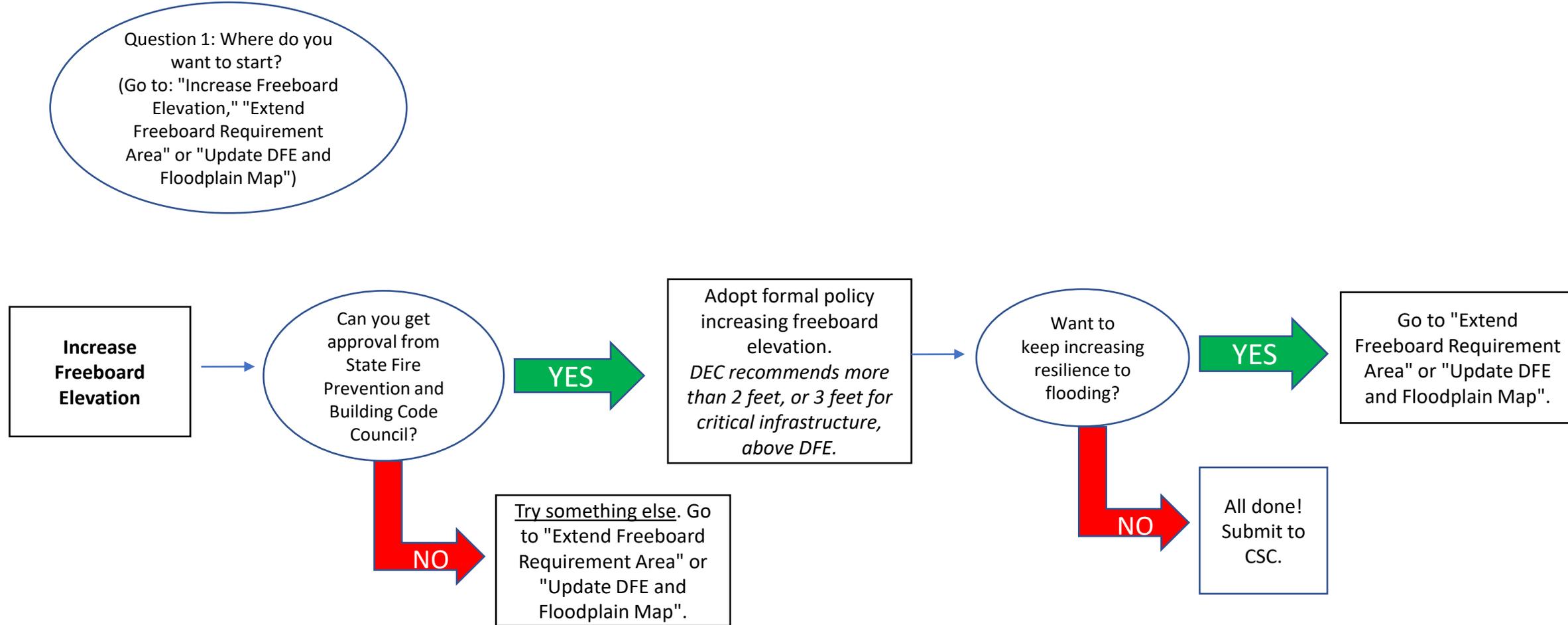
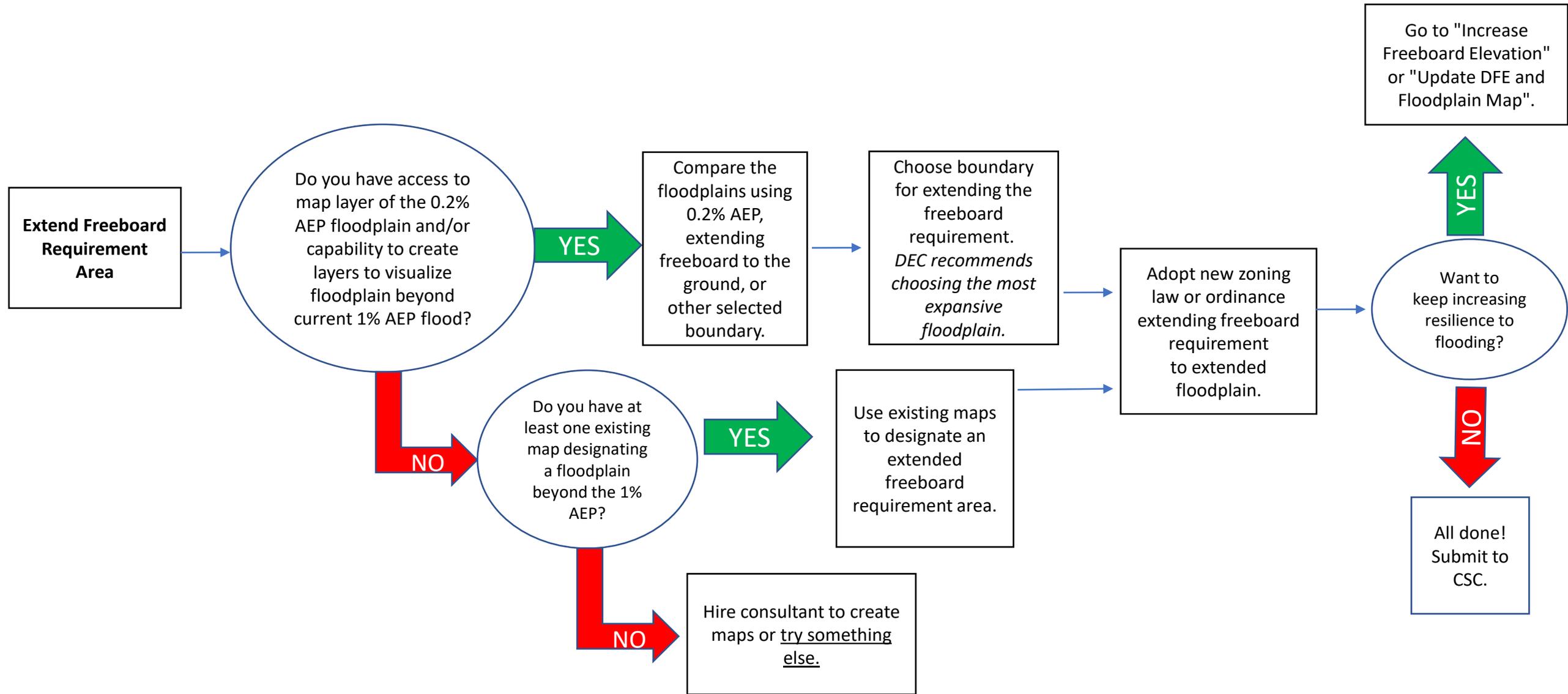
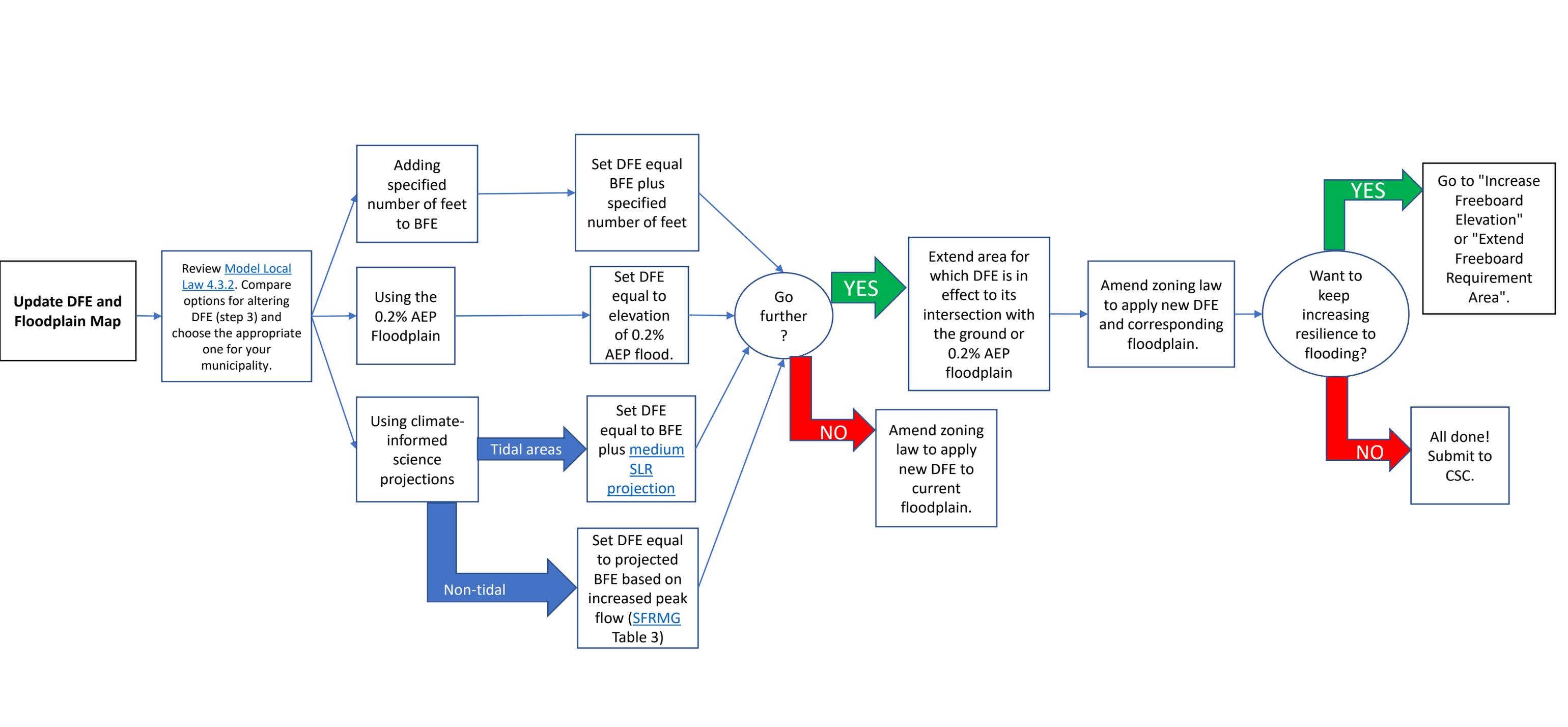


Increasing Resilience to Flooding Flowchart







Example Flowchart Non-Tidal Area Walkthrough:

Municipal officials from Anytown, NY decide to pursue the CSC Action: Increase Resilience to Flooding by Updating Flood Maps and Freeboard Requirements because they are concerned about increasing damages from flooding in their community. The officials think that adopting a formal policy to increase the freeboard elevation requirement may be the easiest way to increase a buffer between infrastructure and the floodwaters of the Anytown River, which has produced stage heights higher than the base flood elevation of the 1% AEP flood in recent years.

They refer to the "Increasing Resilience to Flooding Flowchart" and realize that they've had trouble getting approval from the Code Council in the past, so they decide to explore other options. Simply expanding the freeboard requirement area doesn't seem like it will address the increasing flood stages of their river, so they decide to focus on increasing their design flood elevation. Referring to model local law 4.3.2, they see that this can easily be done by amending the municipality's flood damage protection law, but they still must determine an acceptable new height for the DFE.

Municipal officials who have been trained in mapping future flooding remember learning inundation from future peak flows may exceed even the 500-year floodplain, so they choose to base their BFE on climate-informed science projections. Since they experience non-tidal flooding, they use the multiplier in Table 3 of the SFRMG to calculate future peak flow elevation. The officials then double check that this projected elevation is higher than the elevation of the 500-year flood, and then set DFE equal to this elevation. They also want to protect against the increasing horizontal inundation of this potential flood, so they use a digital elevation model in GIS to visualize the horizontal extent of this flooding by extending the new DFE to the ground. Once they check that this floodplain is more expansive than the 500-year floodplain on their FEMA map, they amend their Flood Damage Protection Law to include the updated design flood elevation and expanded flood hazard area.

They consider the need to extend the freeboard requirement area, but since they amended the flood damage protection law to define a more expansive flood hazard area (freeboard requirement will automatically apply to this area), they do not take any steps to extend it further.

Example Flowchart Tidal Area Walkthrough:

Municipal officials from Anywhere, NY decide to pursue the CSC Action: Increase Resilience to Flooding by Updating Flood Maps and Freeboard Requirements because they are concerned about increasing damages from flooding in their community. In recent decades, the water level of the nearby Hudson Estuary has increased, and the tides reach further riverfront land. The officials think updating the design flood elevation (DFE) is the best way to protect the town from changes in the estuary.

They refer to the "Increasing Resilience to Flooding Flowchart" and look at the updating DFE and Floodplain Map section for how to increase their DFE. Referring to model local law 4.3.2, they see that this can easily be done by amending the municipality's flood damage protection law, but they still must determine an acceptable new height for the DFE. The municipal officials know changes in the Hudson Estuary are impacted by sea-level rise, so they choose to base their BFE on climate-informed science projections. Since they experience tidal flooding, they use the sea-level rise projections provided in 6 NYCRR Part 490 and choose to use the medium projection recommended by the NY DEC. The officials then verify this projected elevation is higher than the elevation of the 0.2% AEP floodplain and set the DFE equal to this elevation. They also want to protect against the increasing horizontal inundation of this potential flood, so they use a digital elevation model in GIS to visualize the horizontal extent of this flooding (extending the new DFE to the ground). After verifying this floodplain is more expansive than the 0.2% AEP floodplain on their FEMA map, they amend their flood damage protection law to include the updated DFE and expanded flood hazard area.