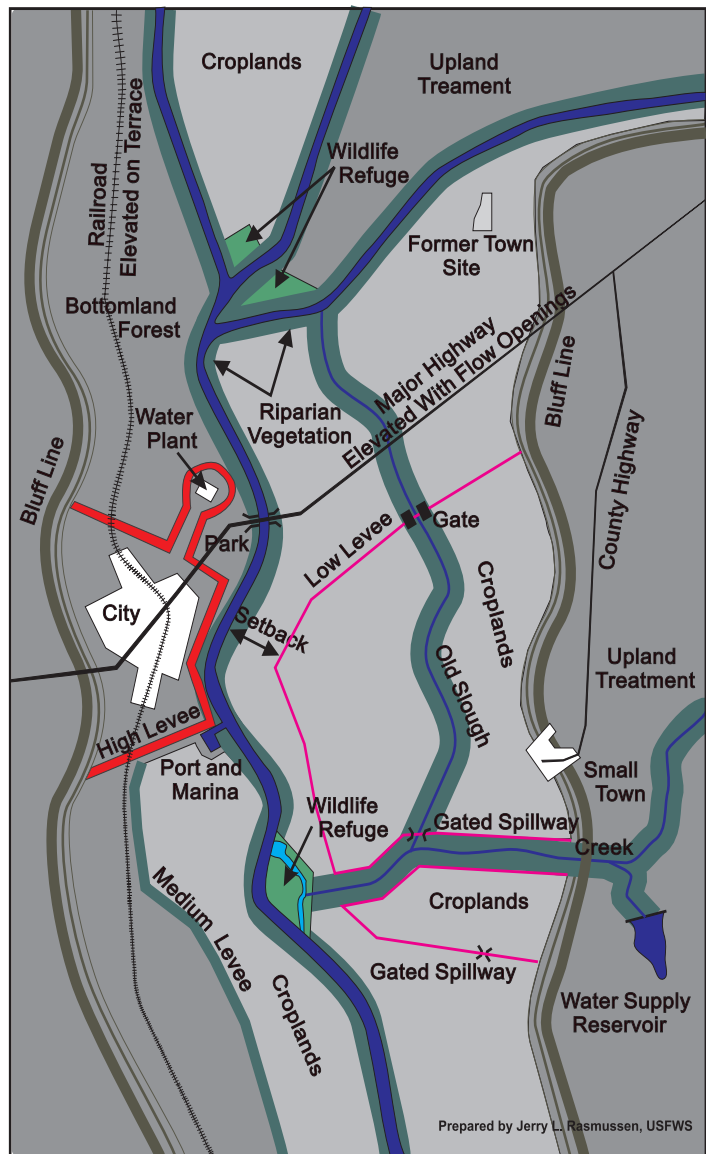


# 21st Century Floodplain

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Scientists and resource managers worked with the White House Floodplain Management Review Committee in 1994 (in response to the 1993 Midwest floods) evaluating existing floodplain management procedures and making recommendations for the future that would reduce disaster payments, while restoring ecological integrity to our Nation's rivers (Interagency Floodplain Management Review Committee 1994). Collectively, physical and biological scientists developed the vision shown in Figure 1, which incorporates a balance between artificial and natural means of flood control. This vision would include:

- High elevation (100 year) levees to protect metropolitan areas and critical infrastructure,
- Medium elevation (50 year) levees to protect other prime development zones, and
- Low elevation (10 year) levees to protect farmlands,
- Many levees would be:
  - setback away from the river to provide for flood water storage and conveyance, as well as for wildlife habitats,
  - provided with gates to allow freshwater to enter old sloughs during dry periods, and
  - provided with spillways at the lower ends to prevent upstream breaching during extreme high water events, and to avoid the tremendous floodplain scour seen in the aftermath of the 1993 flood,
- Floodplain wildlife refuges or "habitat beads" would be strategically placed at tributary confluences and in low lying areas of the floodplain,
- Highways and railroads crossing floodplains would be elevated to encourage flood water conveyance by avoiding any floodplain obstructions,
- Small towns would be relocated out of



*Figure 1. Vision for 21st Century Floodplain Management.*

the floodplains,

- Parks and bottomland forests would be encouraged in some open space areas,
- Upland land treatments would be improved to slow runoff, and
- Wetlands would be restored to the landscape wherever possible.

While this 21st Century floodplain vision is based on science as well as common sense, it will take time and political will to implement. Attitudes and old paradigms are difficult to change.

Some features of the vision were implemented in the aftermath of the 1993 flood, but the public memory of such disasters is short, and its easy for unscrupulous politicians and greedy landowners to persistently push new flood control projects through Congress, once the memory of flooding and the cost of recovery is dim in the public mind.

Resource managers and scientists will have to remain equally persistent to continue implementation of this new floodplain vision. The American Fisheries Society (AFS) is developing its own floodplain management policy for just this purpose (Rasmussen 1996). It was largely based on the vision shown in Figure 1.

As scientists, citizens, taxpayers, responsible adults, parents and grandparents we owe it to ourselves, but more importantly we owe it to our children and grandchildren to pursue this vision and to be involved in the decision making process and help shape the future of our rivers and their biota. The era of massive river development projects seems to be coming to an end, and we need to be players in bringing common sense and continued relief to our long over stressed river ecosystems.

### **References**

Interagency Floodplain Management Review Committee. 1994. Sharing the Challenge: Floodplain Management into the 21st Century. Washington, D.C. 189 pp + Appendices.

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Jerry L. Rasmussen, March 9, 1999