# Dam Removals on the Des Plaines River

Des Plaines River Watershed Workgroup

8/18/22



#### History of State Dam Removals

- Governor Quinn's Dam Removal Initiative
  - Announced at the Hoffman Dam Removal Completion Ceremony in 2012
  - \$10 million Dollars
  - 12 dams noted for removal

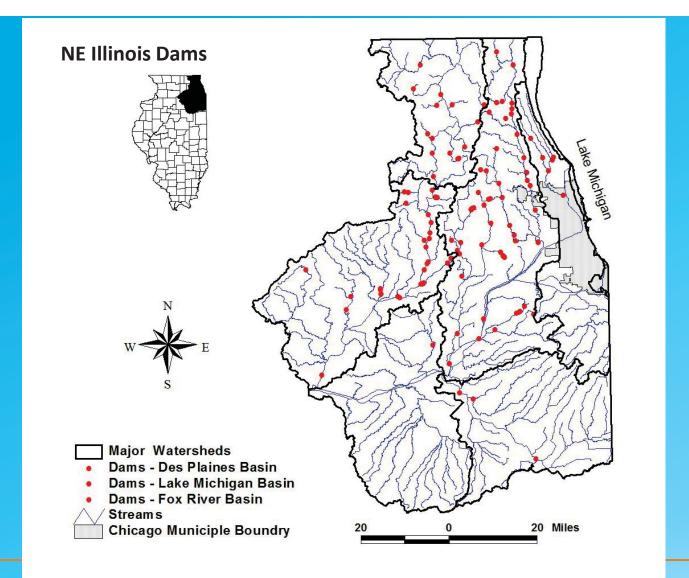


#### Dams to Remove on Des Plaines River

- Dam 1
- Dam 2
- Dam 4 (Devon)
- Dempster Street Dam
- Touhy Ave Dam

- Armitage Dam
- Fairbank Road Dam
- Hofmann Dam







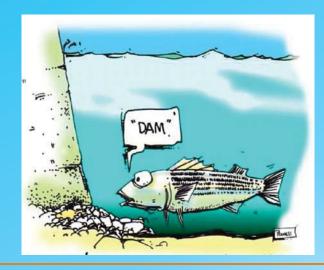
## Des Plaines River Watershed





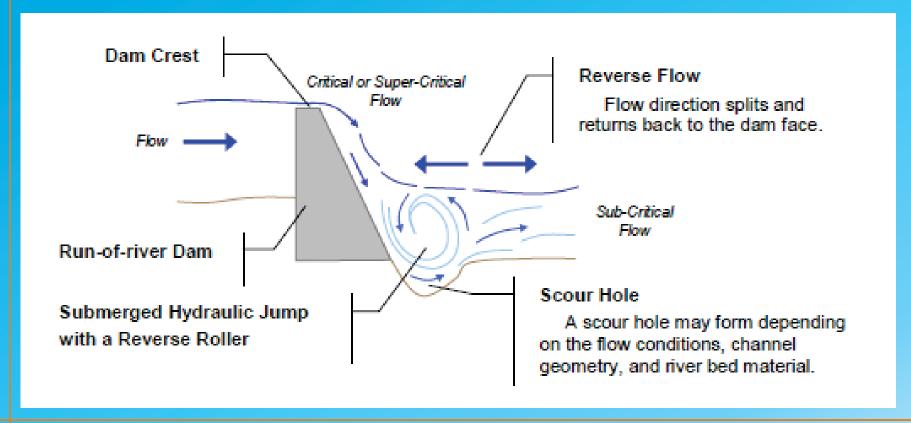
## Why Dam Removal?

- Public Safety
- Water Quality / Aquatic Habitat
- Fish Passage
- Improved Recreation
- Economic Benefits





#### Public Safety – Submerged Hydraulic Roller





## Public Safety

- Risk of life loss due to hydraulic roller below each dam
  - Watercraft going over the dam
  - Fishermen getting too close from downstream
  - Falling in at the abutments
- Reduce risk of emergency responders or good Samaritans to put





ILLINOIS

#### Water Quality / Aquatic Habitat



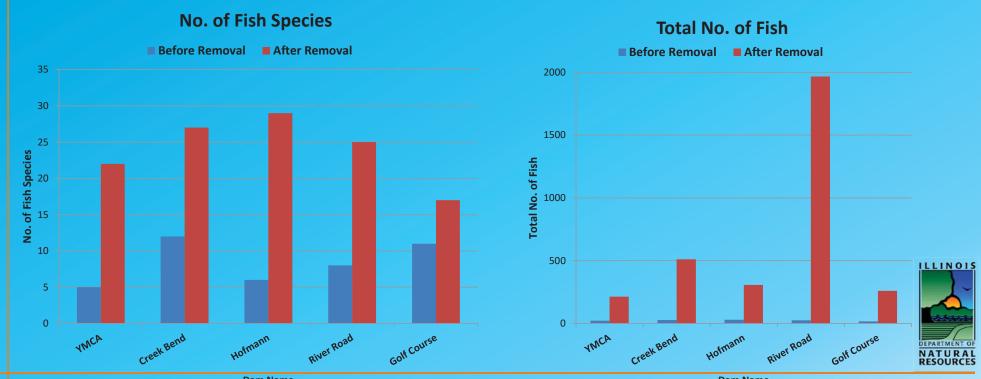
#### **Dam Removal Benefits**

- Reduced stream temperatures and increased dissolved oxygen
- Reduces the accumulation of upstream nutrient-rich sediments
- Allows woody debris to flow downstream for habitat instead of building up
- Increases streambank vegetation and natural habitat
- Wetlands are revitalized and allows additional plants grow



# Fish Passage

#### **IDNR Fisheries Studies of NE Dams**



**Dam Name** 

**Dam Name** 

#### Improved Recreation

- Navigable waterways are extended for boaters and kayakers
- Anglers benefit from increased species diversity and longer migration lengths
- Overall increased tourism and revenue
- Associated recreation increases
  - Hiking
  - Birdwatching



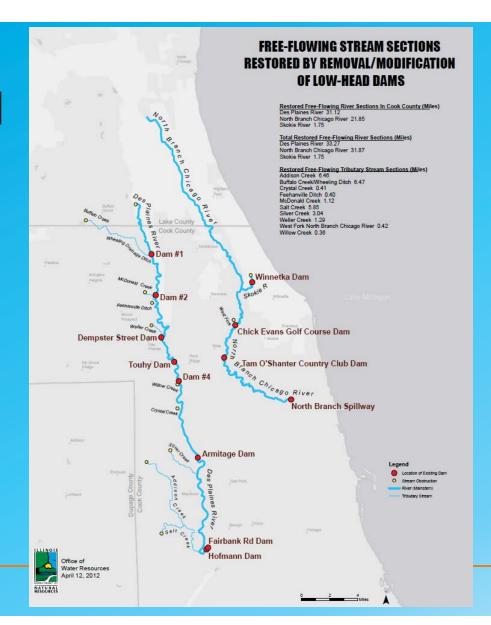


#### **Economic Benefits**

- No Structure Maintenance Costs
- No Sediment Removal
- Less Downstream Erosion Repair Costs
- Emergency Response Costs
- Liability Lawsuits



#### Dams Removed





# Des Plaines River Water Dam Removals -Completed

Stream	Dam Name	Owner	Completi on Date	Height (ft.)	Width (ft.)	Location	River Mile	Miles reconne cted	Cost	Funding Entities
Des Plaines River	Ryerson Dam	Lake County FPD	Feb-11	2.50	120	Riverwoods, IL	77.5	5	\$299,157	Owner
Des Plaines River	Armitage Avenue Dam	Cook County Forest Preserve Dist	Jan-12	5.50	106	Elmwood Park, IL	53.8	7	\$402,991	ACOE/IDNR
Des Plaines River	Fairbanks Avenue Dam	Cook County Forest Preserve Dist	Feb-12	2.00	158	Riverside, IL	44.3	1	\$400,000	ACOE/IDNR
Des Plaines River	Hoffman Dam	State of Illinois	Sep-12	12.50	258	Riverside, IL	44.5	10	\$2,500,000	ACOE/IDNR
Des Plaines River	Dam No. 2	Cook County Forest Preserve Dist	Aug-14	3.50	151	Mt. Prospect	69.3	8.4	\$153,000	IDNR
Des Plaines River	Dam No.1	Cook County Forest Preserve Dist	Sep-14	4.00	127	Wheeling	73.1	13.1	\$186,000	IDNR
Des Plaines River	Wright Woods / Dam No.1A	Lake County Forest Preserve Dist	Oct-16	1.50	121	Vernon Hills	82.4	1.8	\$308,200	Lake Co./IDNR
Des Plaines River	MacArther Woods/ Dam No.1B	Lake County Forest Preserve Dist	Oct-16	3.00	140	Vernon Hills	84.1	25.4	\$308,200	Lake Co./IDNR
Des Plaines River	Dempster Street	Cook County Forest Preserve Dist	Nov-16	4.00	102	Des Plaines	64.8	44.7	\$274,990	CCFPD/IDNR
Des Plaines River	Touhy Avenue	Cook County Forest Preserve Dist	Dec-21	4.00	106	Park Ridge	62.3	2.4		CCFPD/IDNR
Des Plaines River	Devon Avenue	Cook County Forest Preserve Dist	Dec-21	4.00	106	Rosemont	60.5	2.3		CCFPD/IDNR
Seavey Ditch	Golf Coarse Dam	Vernon Hills Golf Coarse	Dec-08	4.00	45	Veron Hills, IL	0.57	2	\$60,000	Owner
East Branch DuPage River	Churchill Woods	DuPage County	Sep-11	4.00	50	Lilse, IL	46.8	5.3	\$1,062,000	IEPA/Cons Found.
West Branch DuPage River	Warrenville Dam	DuPage County	Jul-11	8.00	100	Warrenville, IL	33.9	23.7	\$1,036,000	DuPage Co./NOAA'
West Branch DuPage River	McDowell Grove Dam	DuPage County	Jul-11	5.00	100	Naperville, IL	36.6	2.3	\$1,427,540	DuPage Co./NOAA'



# Hoffman Dam – Pre-Construction (Aug '06)







# Hoffman Dam –Construction (Jun '12)





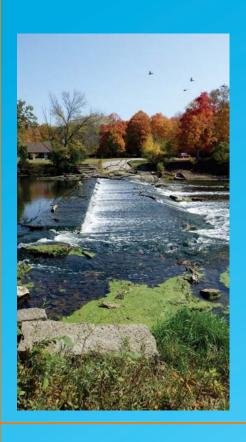
# Hoffman Dam – Post-Construction (Aug '12)

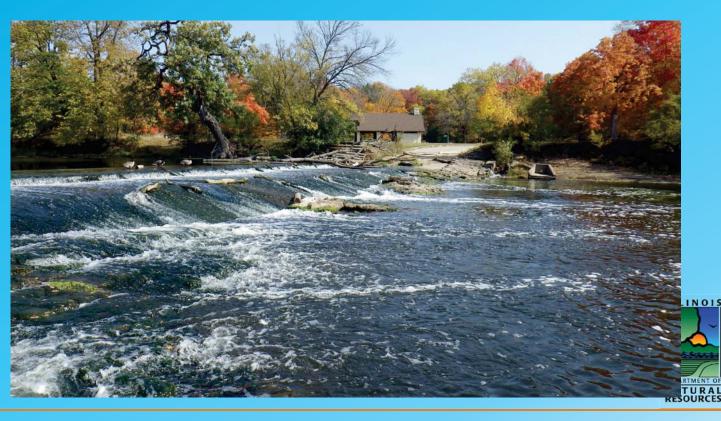






# Des Plaines Dam 1 – Pre-Construction (Oct '12)





# Des Plaines Dam 1 – Construction (Mar '13)





RESOURCES

# Des Plaines Dam 1 – Post-Construction (Apr '14)







# Des Plaines Dam 4 – Pre-Construction (Apr '21)







# Des Plaines Dam 4 – Construction (Nov '21)







# Des Plaines Dam 4 – Post-Construction (Nov '21)









#### **Future Work**

#### Fox River

- Carpentersville
- North Aurora
- Montgomery
- Statewide
  - Working with Wilmington
  - Multiple on Sangamon River
  - Sears & Steele Dams on Rock River





# Thank you!

Wes Cattoor, P.E. CFM

Section Chief, Engineering Studies

IDNR – Office of Water Resources

Wes.Cattoor@illinois.gov

