

Dunkard Creek Fish Kill Assessment September - October 2009



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WVDNR role is to assess damage:

- Determine the number of fish killed
- Size groups of fish killed
- Restoration of fishery

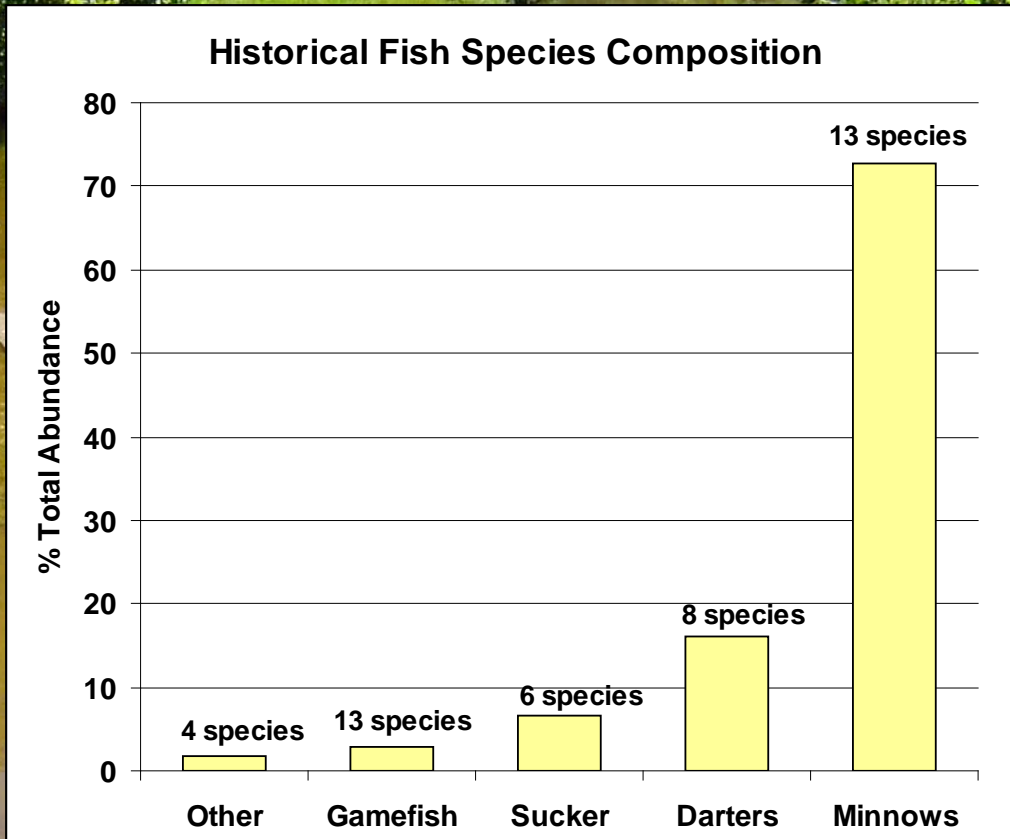


Historical Fish Data

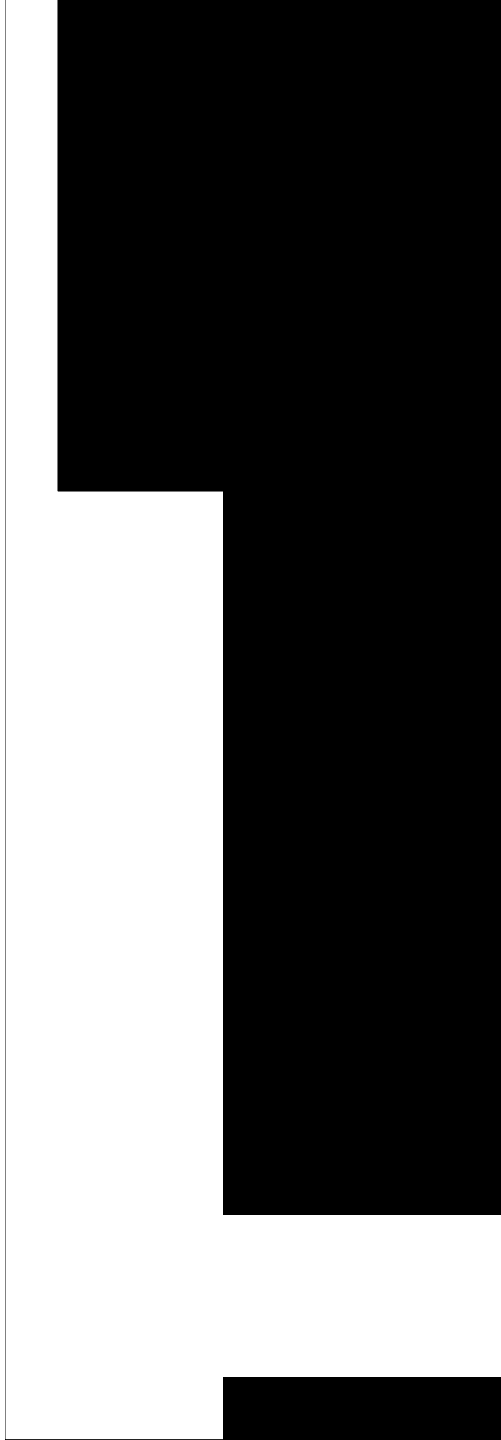
➤ 11 surveys from 1959 - 2009

➤ 44 fish species

➤ Several game fish, but most notably smallmouth bass and muskellunge.



- September 1: Dead fish first reported to WVDEP at Pentress (milepoint 10).
- September 2: DNR conducts fish assessment from state line upstream 10 miles to Pentress; Concurrent mussel assessment. 1st Fish Kill
- September 9: Additional dead fish reported upstream at Brave (mp 17). 2nd Fish Kill
- September 16: More dead fish reported at Wana (mp 22) further upstream. 3rd Fish Kill
- September 14-18: Fish counts conducted daily up to 26 miles upstream of state line.
- October 19 - 21: DNR fish surveys at 9 sites to document fish survival (mp 2 - 30).





Fish Kill

- 20+ fish species
- Preliminary fish kill estimate: 15,000 – 22,000 in WV



Blood and organ analysis

Results suggested response to a toxic substance.



What toxin??



Golden Algae

Tributary mouths served as refugia. However, flows were too low to allow large fish to move upstream and escape toxicity of Dunkard Creek.



Rudolph Run near Pentress



Reported catches by WV Husky Musky club members from 1969 to 2008 ranked Dunkard Creek 16th out of 70 reported waters.



Muskies have been stocked by DNR since 1960s



Fish Restoration

- Game fish (i.e. musky, smallmouth bass) will not be stocked until the cause of the kill is confirmed and it is determined that the conditions will not reoccur.



This musky was stocked in Summer 2009

- 14 mussel species dead
- 100% mortality
- Was the last major stronghold for mussels in the Mon River drainage.
- May take generations to restore mussel population.



Mussel Restoration?



Slow, complex, and expensive.

Mud puppy

- High mortality



WVDNR Questions

- What other fisheries are at risk?
- Are there other basins with similar water quality that could experience a similar situation?
- Where else does golden algae occur in WV?

