Chemours Consent Order Aquatic Toxicity Test Results Summary

NC Secretaries' Science Advisory Board Meeting
December 3, 2025

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DEQ Environmental Toxicologist

Consent Order Paragraph 14 PFAS

PFMOAA

PMPA

PFO2HxA

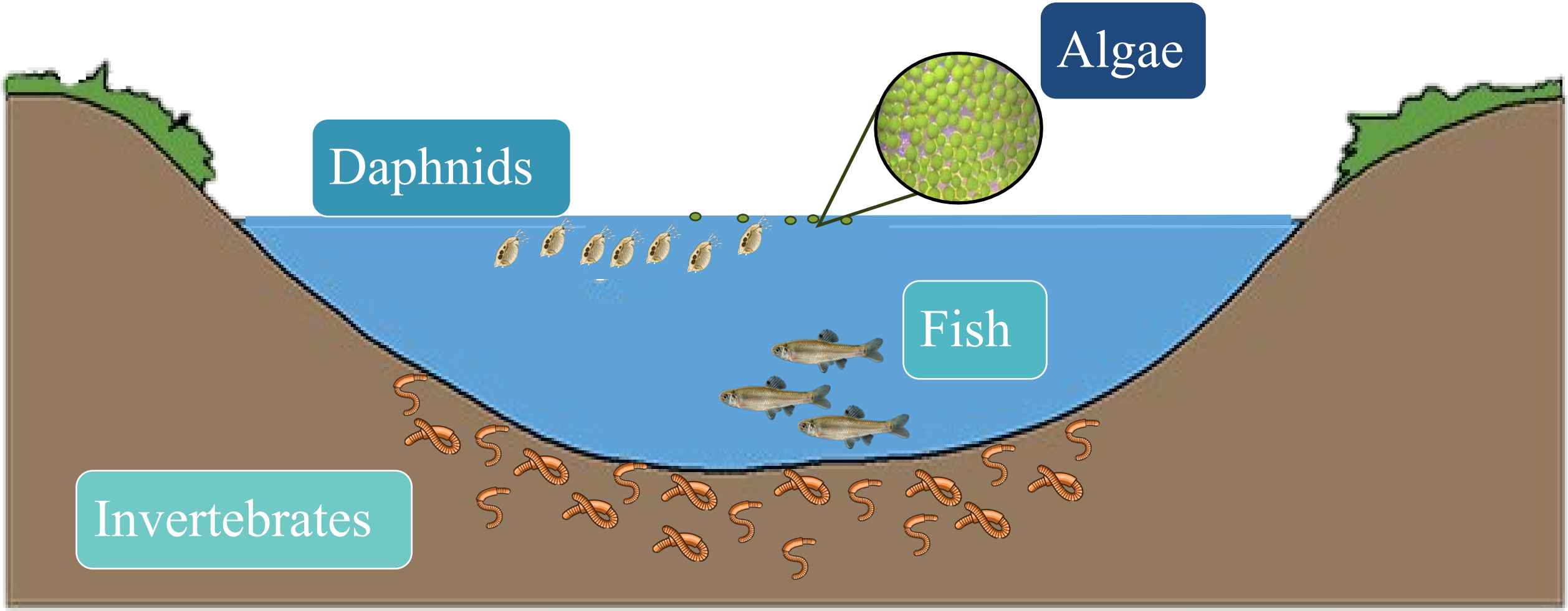
PEPA

Nafion BP2

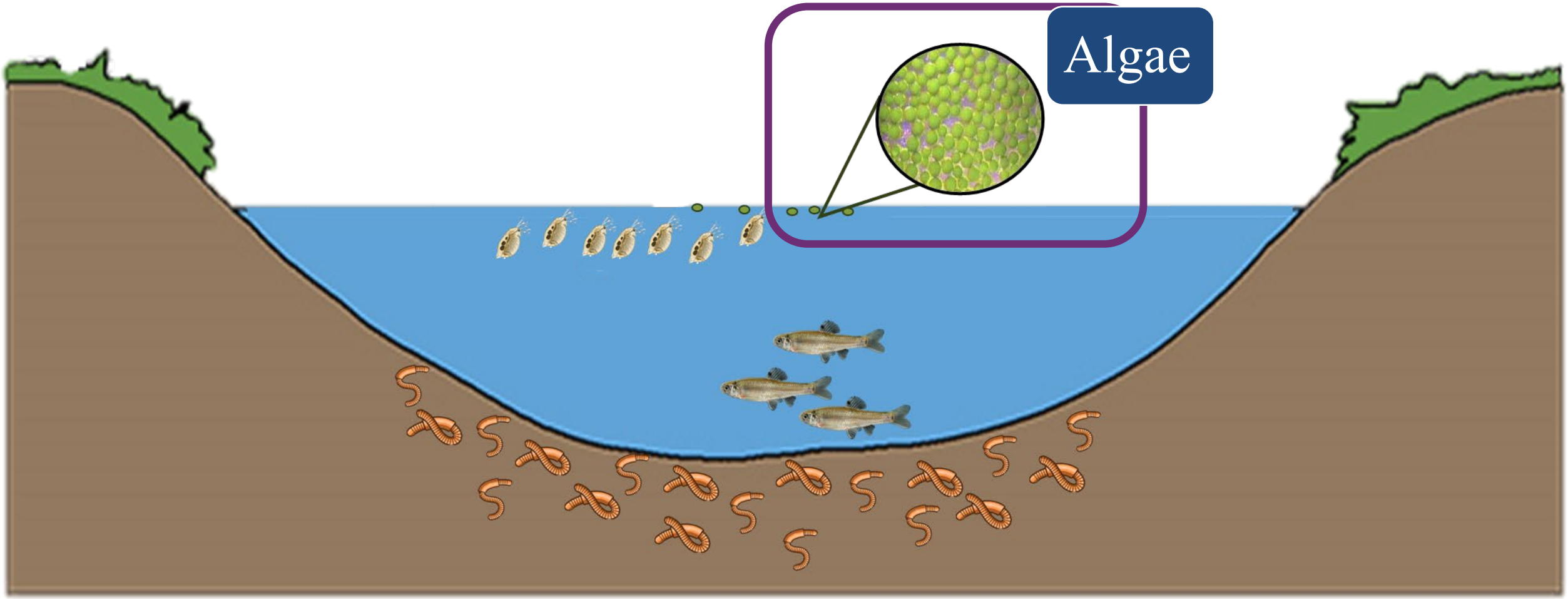
Aquatic Toxicity Studies

- Algal acute (72-hour growth) toxicity study
- Daphnid acute toxicity study
- Daphnid chronic (reproduction) toxicity study
- Fish acute toxicity study
- Sediment 10-day freshwater invertebrates

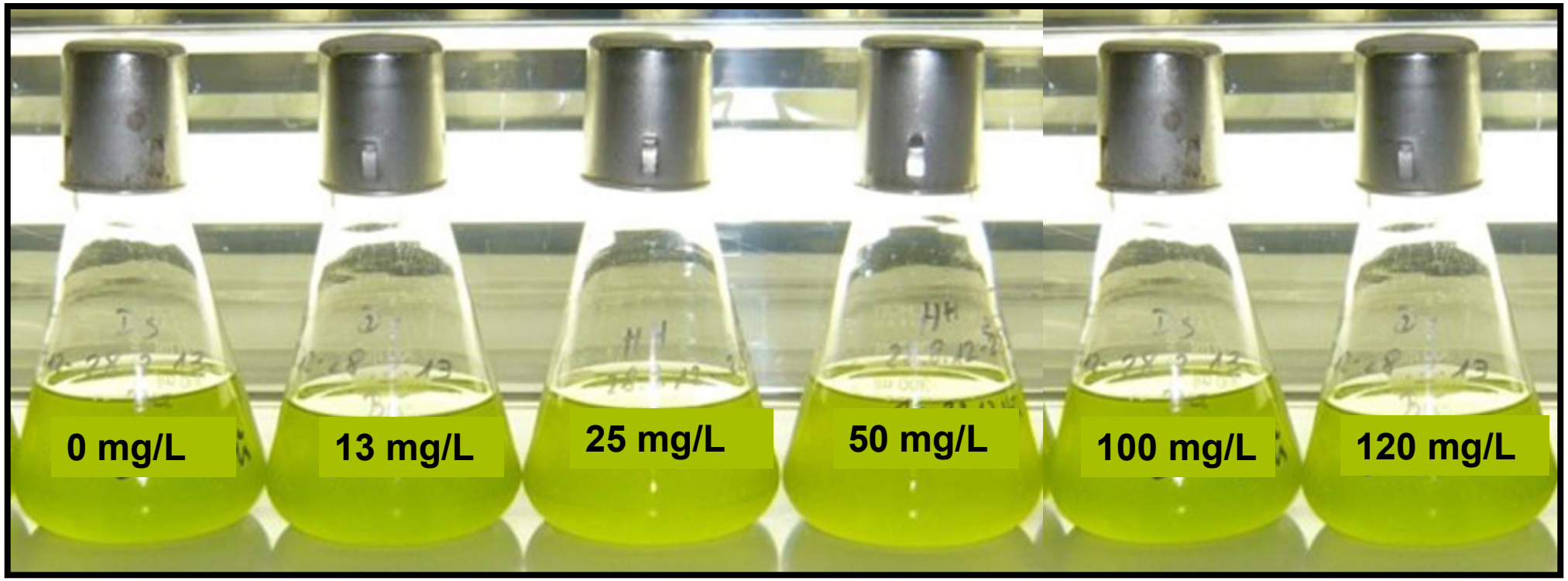
Model Aquatic Food Web Diagram



Algae – Primary Producers

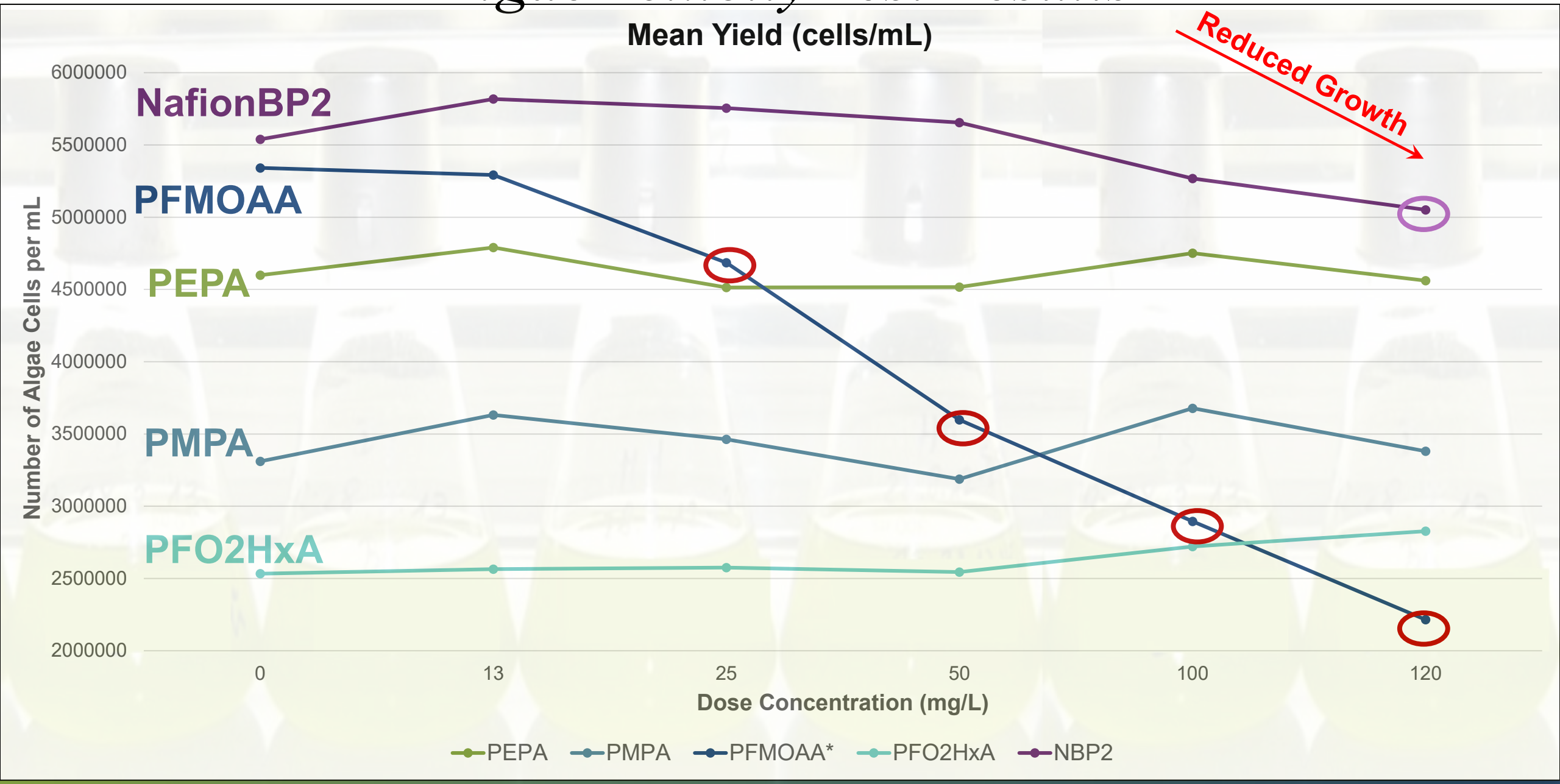


Algae Toxicity Test

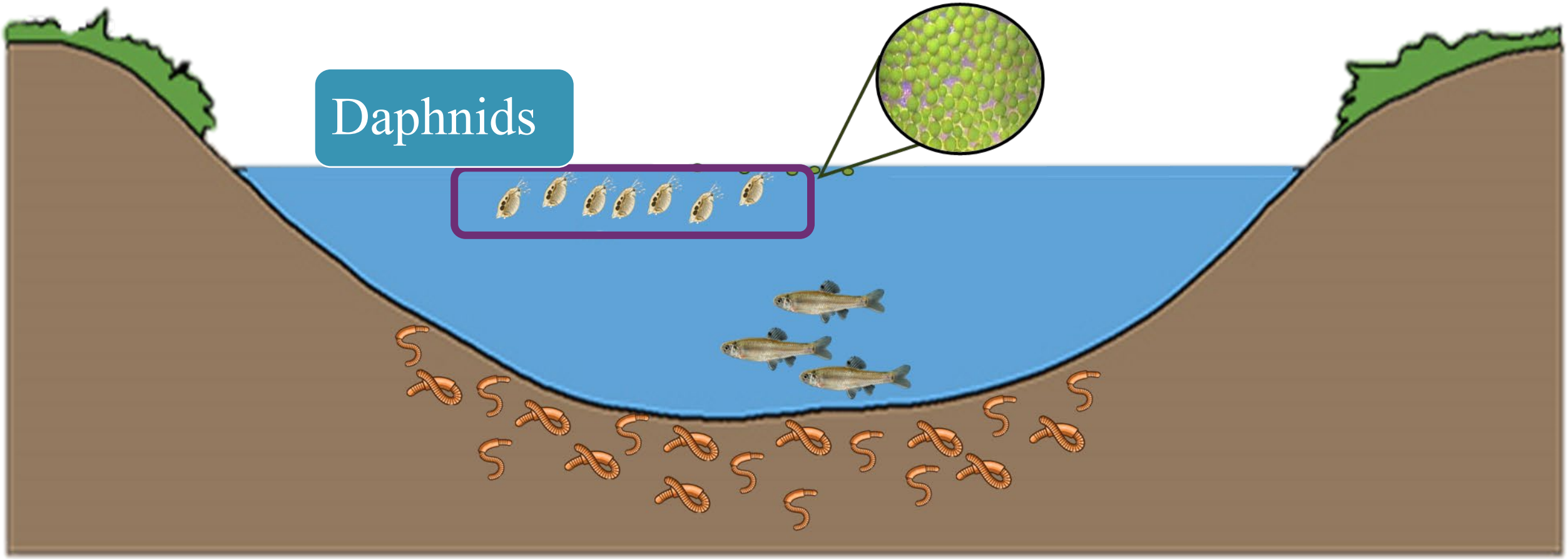


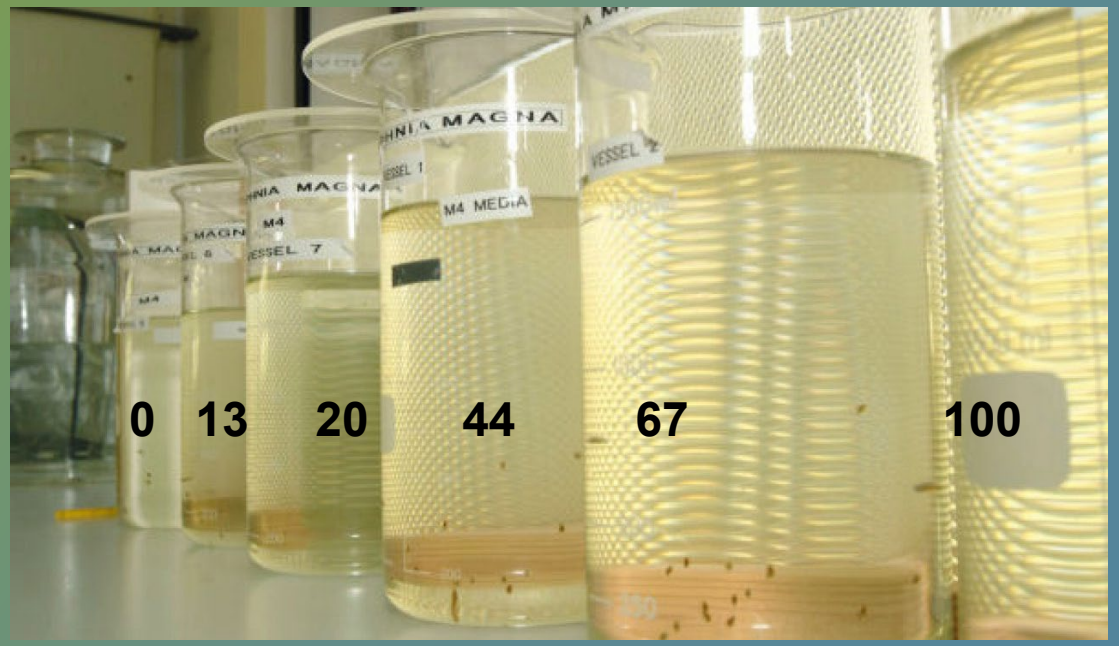
- Measures inhibition of growth compared to 0mg/L Control
- Throughout a 96-hour testing period.
- Based on Method OECD201

Algae Toxicity Test Results



Daphnia – Primary Consumers

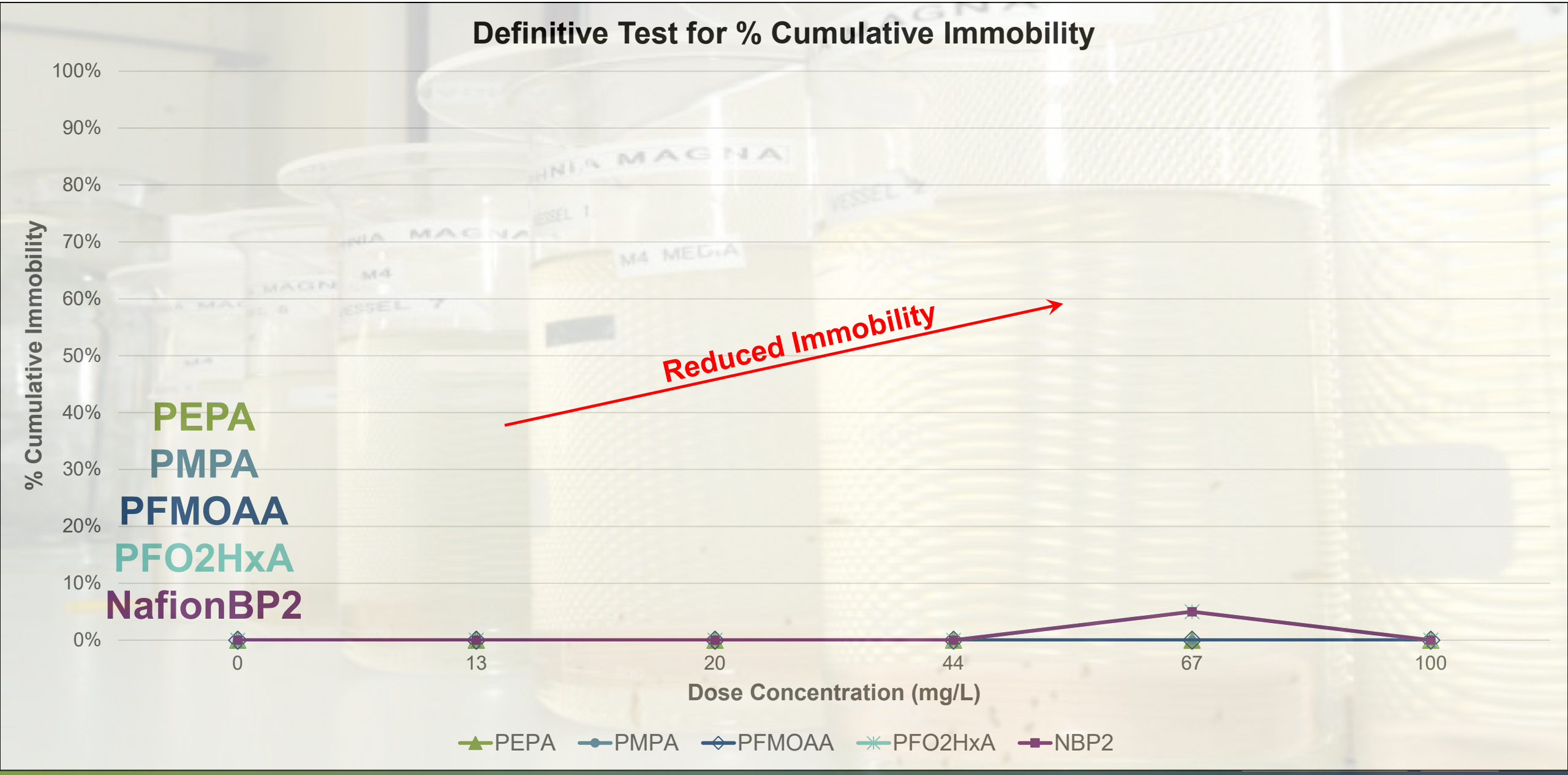


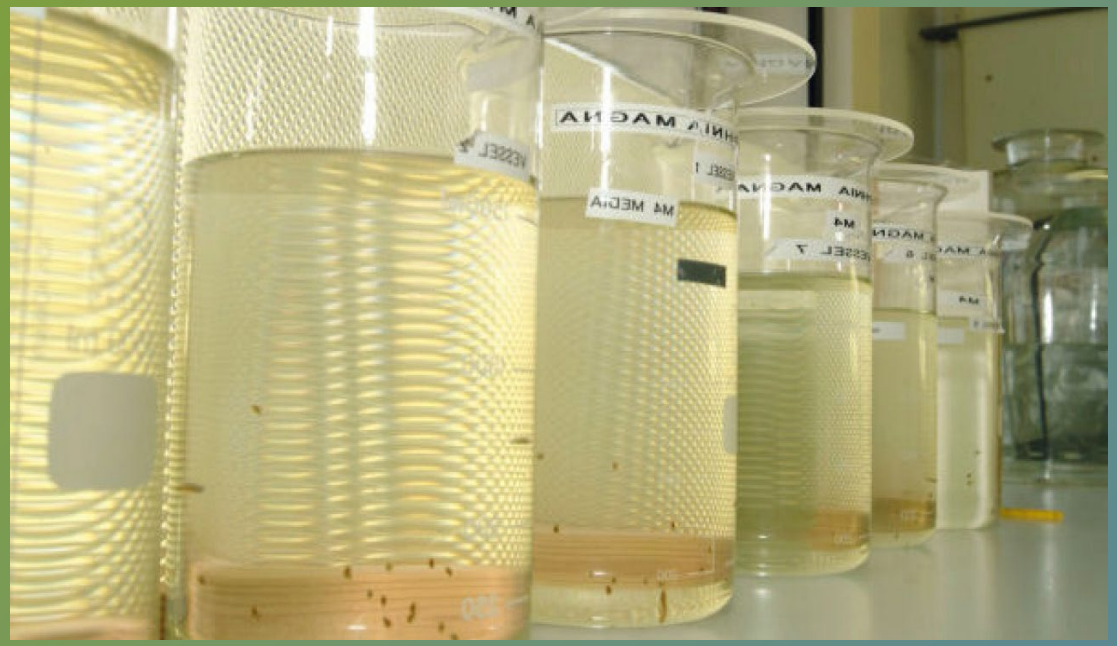


Daphnia Toxicity Test (Acute)

- Measures immobility compared to 0 mg/L Control
- Over a 48-hour testing period
- Based on Method OECD 202

Daphnia Toxicity (Acute) Results

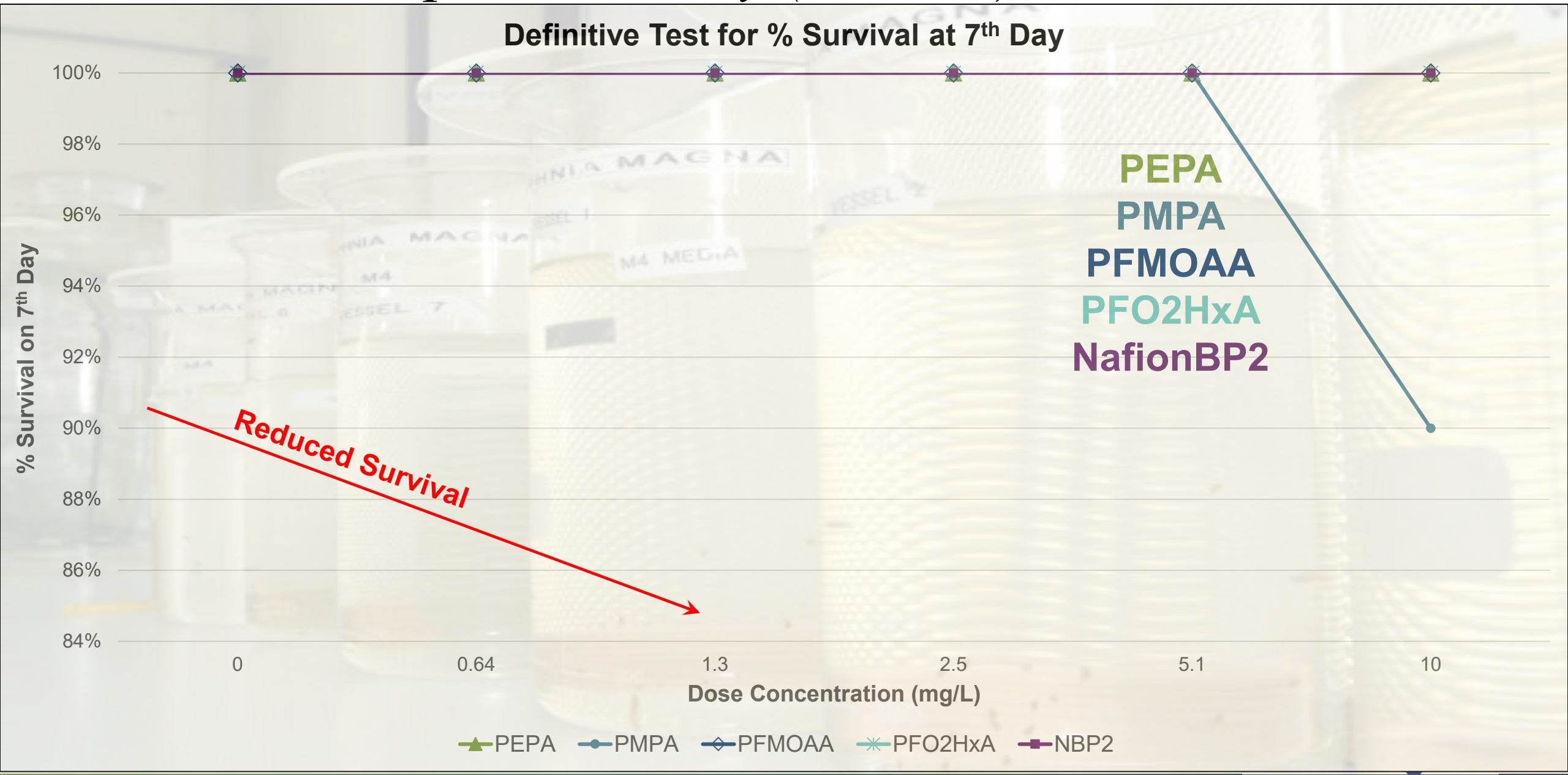




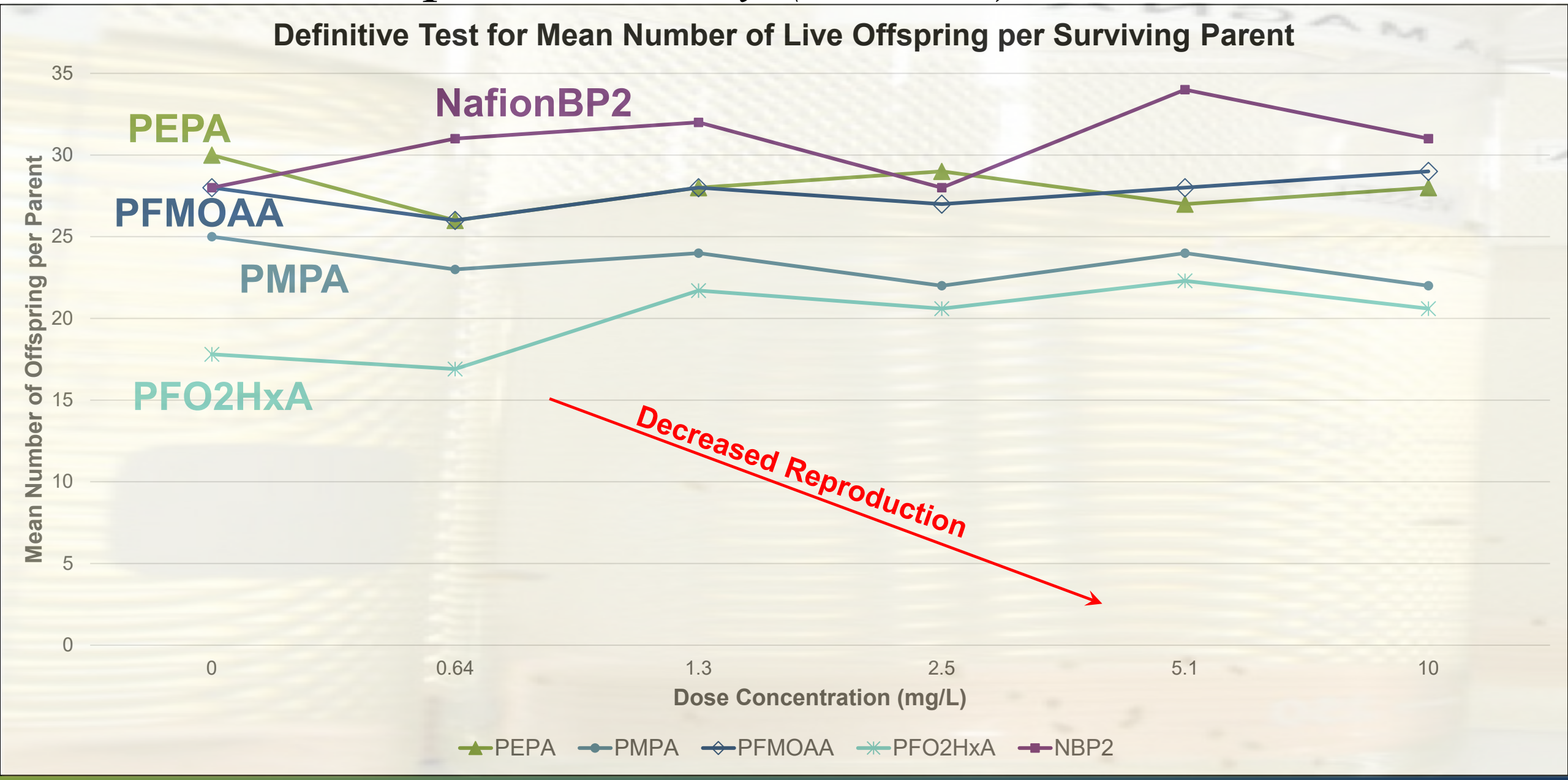
Daphnia Toxicity Test (Chronic)

- Measures survival compared to 0 mg/L
- Over a 7-day testing period
- Compares number of offspring to 0mg/L
- Based on OECD Method 211

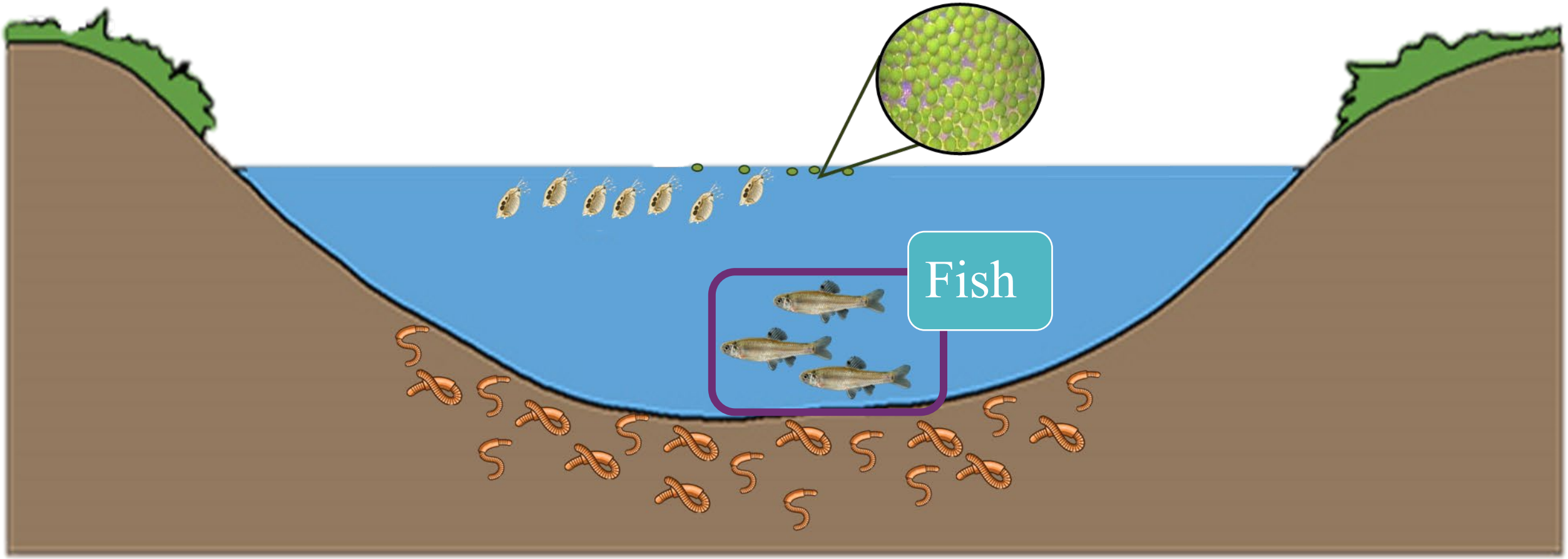
Daphnia Toxicity (Chronic) Results



Daphnia Toxicity (Chronic) Results



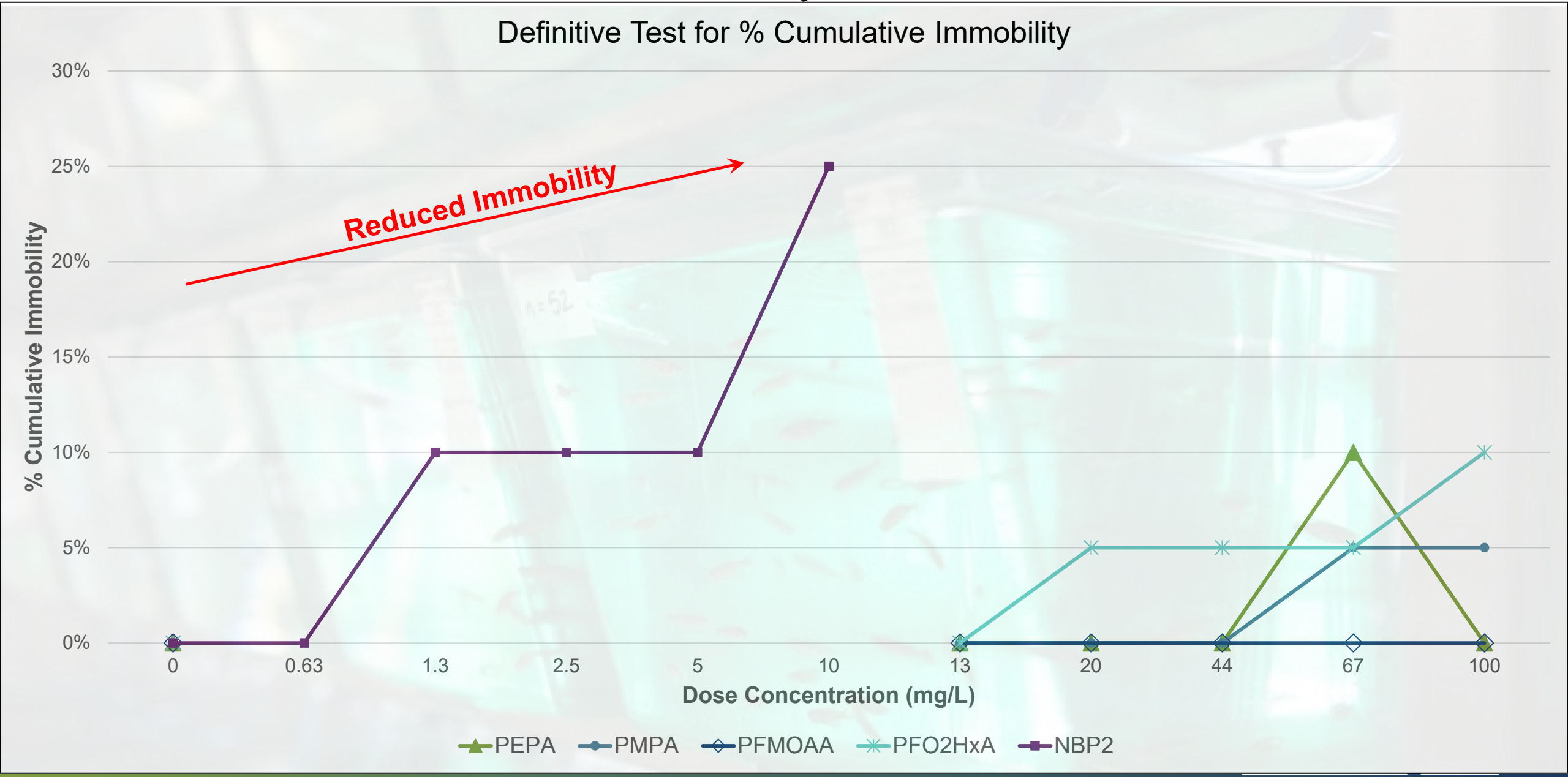
Fish – Secondary Consumers



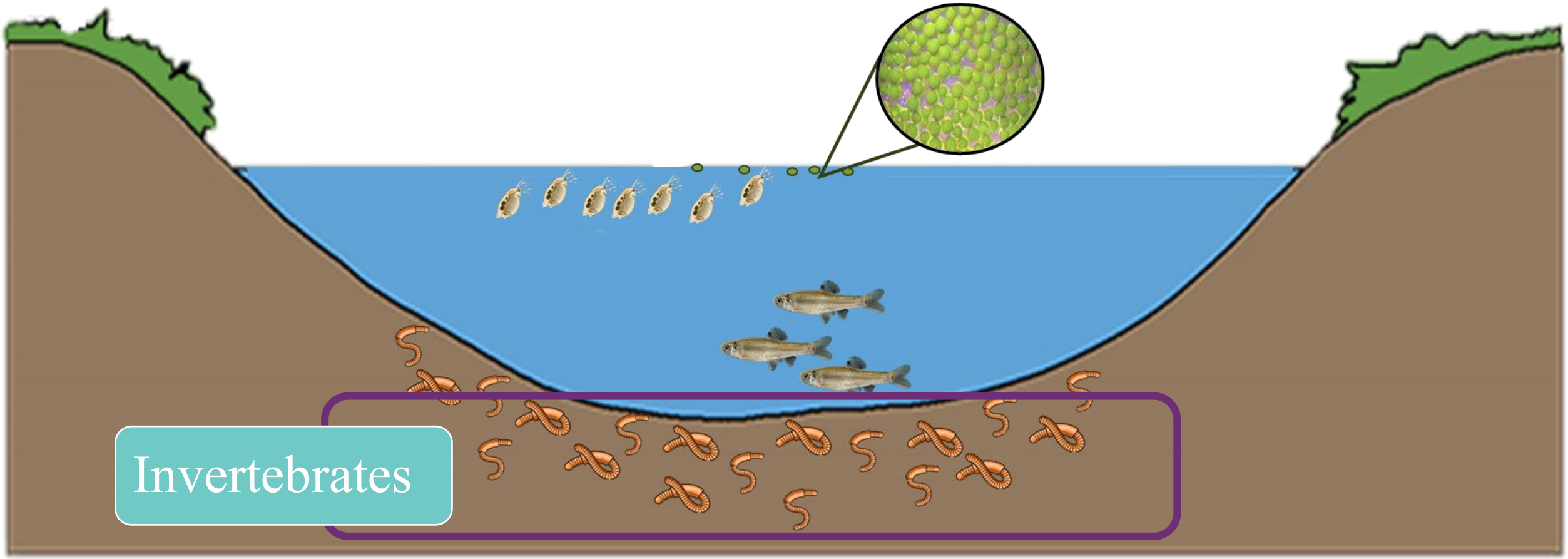
Fish Toxicity Test

- Measures survival compared to 0mg/L Control
- Over a 7-day testing period
- Based on OECD Method 211

Fish Toxicity Results



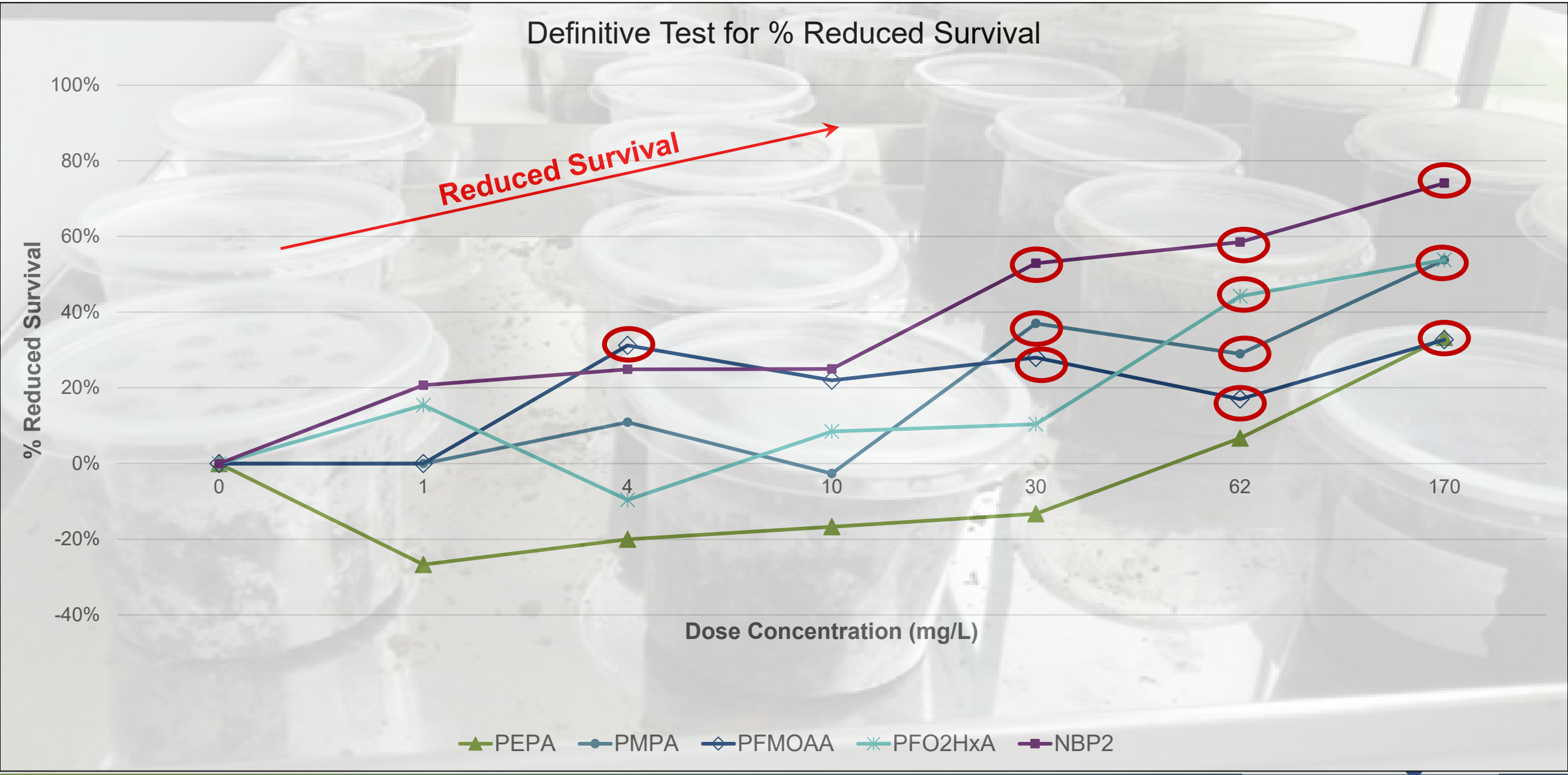
Invertebrates – Primary Consumers and Decomposers



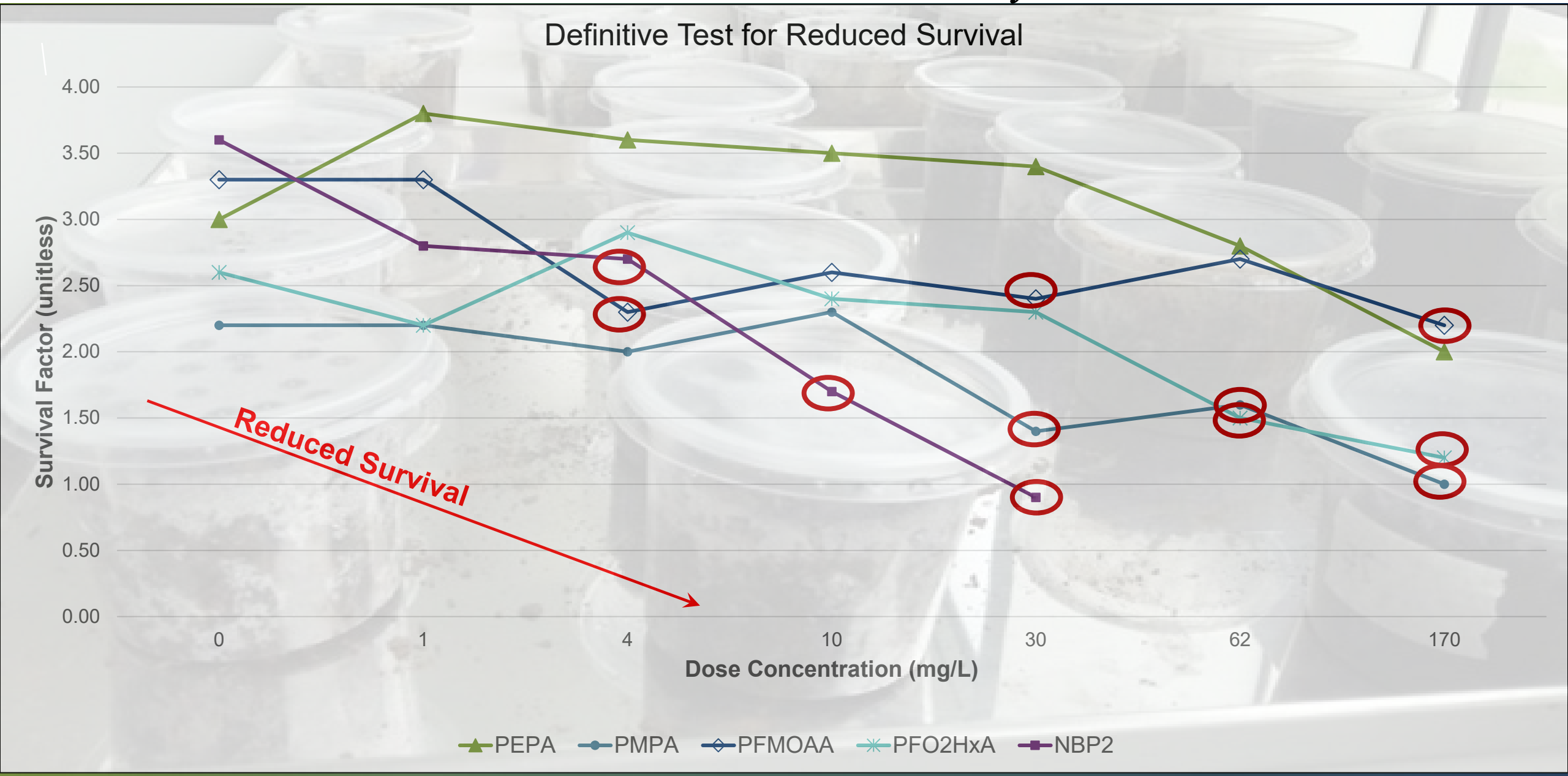
Invertebrate Toxicity Test

- Measures survival compared to 0mg/L Control
- Over a 10-day testing period
- Based on EPA Method OCSPP 850.1735

Sediment/Invertebrate Toxicity Results



Sediment/Invertebrate Toxicity Results



CO PFAS That Yielded a Toxic Response for At least One Dose*

CO PFAS	Algae	Daphia (acute)	Daphnia (chronic)	Fish	Sediment
PMPA					PMPA
PEPA					
PFMOAA	PFMOAA				PFMOAA
PFO2HxA					PFO2HxA
Nafion BP2	Nafion BP2			*NS* Nafion BP2	Nafion BP2

* Statistically Significant according to tests described in Final Reports. [NS] Not Statistically significant but noteworthy.

Aquatic Toxicology Results: *What do these results mean?*

The results inform the environmental impacts of the Chemours PFAS contamination in the Cape Fear River.

All 5 of the required aquatic toxicity tests will provide the basis for understanding how the Chemours PFAS compounds have impacted the different trophic levels in the freshwater ecosystem.

These results could be used to derive Bioconcentration Factors

(analogous to the Bioaccumulation Factors that DEQ has derived from the 2022/2023 Fish Sampling effort).

These results are unlikely to be used to derive human health values without rodent data to corroborate the findings.

Ongoing and Upcoming Rodent Toxicity Studies

Next Steps: Studies Underway and Completed

Receive/Review final reports for in-progress rodent 28-day studies

- Present at SAB meetings as they are received

Next Steps: Remaining Studies

Rodent Toxicity Studies:

- *90-day toxicity study in rats*
- *90-day toxicity study in mice*
- All 5 PFAS

Doses and Scheduling

- Discuss with Chemours toxicologist and Charles River Labs scientists