



# Toxic Contaminant Workgroup, August 2018

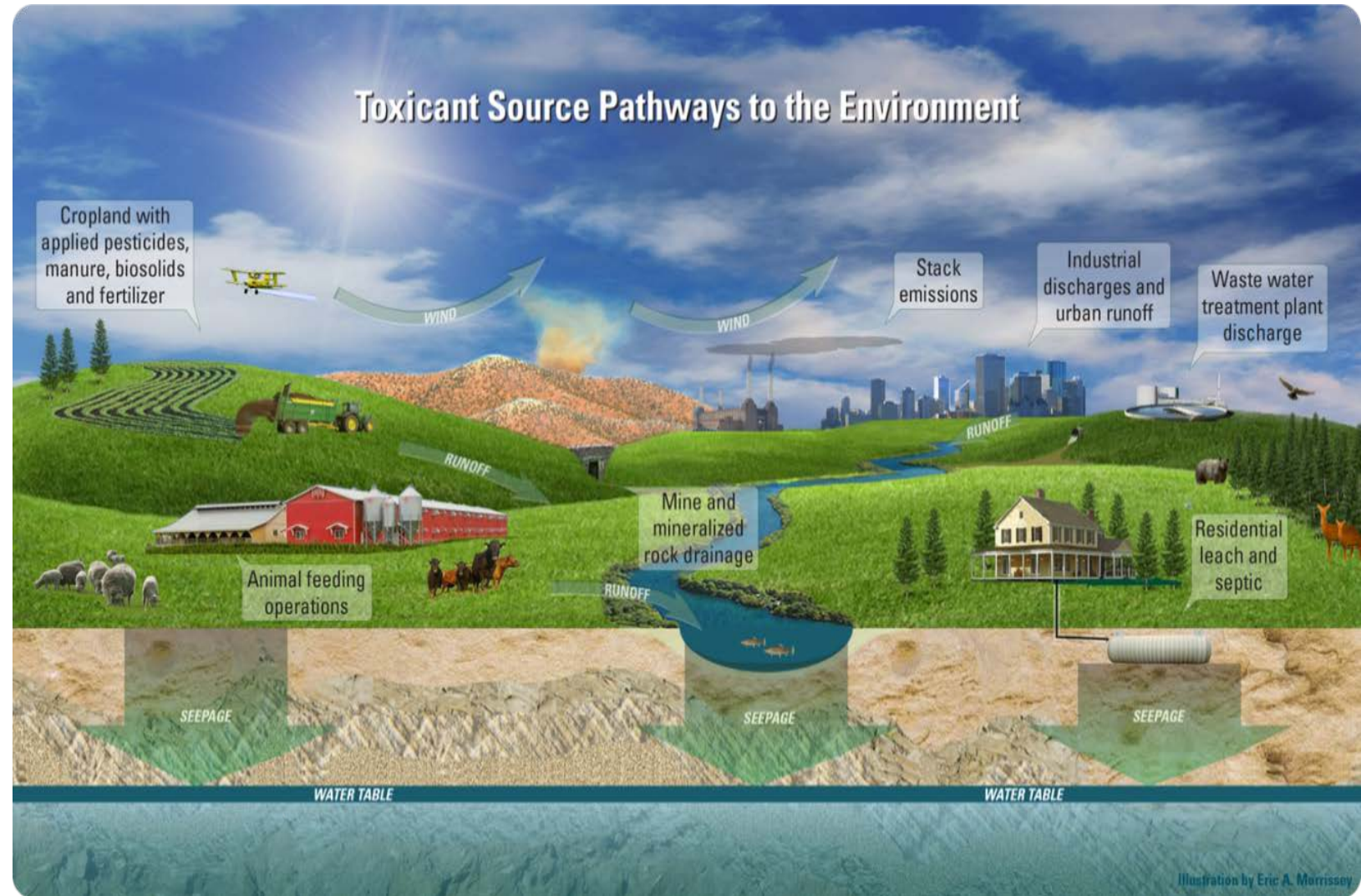
# Goal: *Toxic Contaminants Goal*

## Outcome:

Continually increase our understanding of the impacts and mitigation options for toxic contaminants. Develop a **research agenda** and further characterize the **occurrence, concentrations, sources and effects** of **mercury, PCBs and other contaminants** of emerging and widespread concern. In addition, identify which best management practices might provide **multiple benefits of reducing nutrient and sediment pollution as well as toxic contaminants** in waterways.

# Major Revisions

- Modified two of 5 issues
- Updated baseline conditions
- Revised factors
- Each Issue: REVIEW NEEDED
  - Current efforts
  - Research gaps
  - Approach and actions



# Organizing Issues

- Fish and shellfish safer for human consumption
- Contaminants degrading the health, and contributing to mortality, of fish and wildlife
- Sources, Occurrence, and transport of contaminants in different landscape settings;
- Identify and prioritize options for mitigation to inform policy and prevention strategies
- Issues of emerging concern

# Factor for each Issue

- Different assumptions about fish consumption
- Multiple factors affecting health and mortality of fish and wildlife
- Lack of data on occurrence and trends
- Limited information on practices to reduce contaminants and relation to nutrients and sediment
- Limited knowledge and implications of emerging issues
- Synthesis and implications



# Fish and shellfish safer for human consumption;

## What we learned

- Consolidate PCB science into P&P strategy
- Address mercury

## Revisions:

- PCBs text moved on gaps and science to P&P
- Mercury:
  - Added info on baseline conditions
  - Need to better reflect current efforts
  - Proposed data inventory; improved status information;



# Contaminants degrading health and mortality of fish and wildlife;

## What we learned

- Multiple factors affecting fish health, including disease
- Wildlife synthesis
- More synthesis and implications

## Revisions

- Updated fish health baseline and efforts;
- Gaps for fisheries: reproduction; tumors; disease
- Review current efforts
- Review approaches and actions



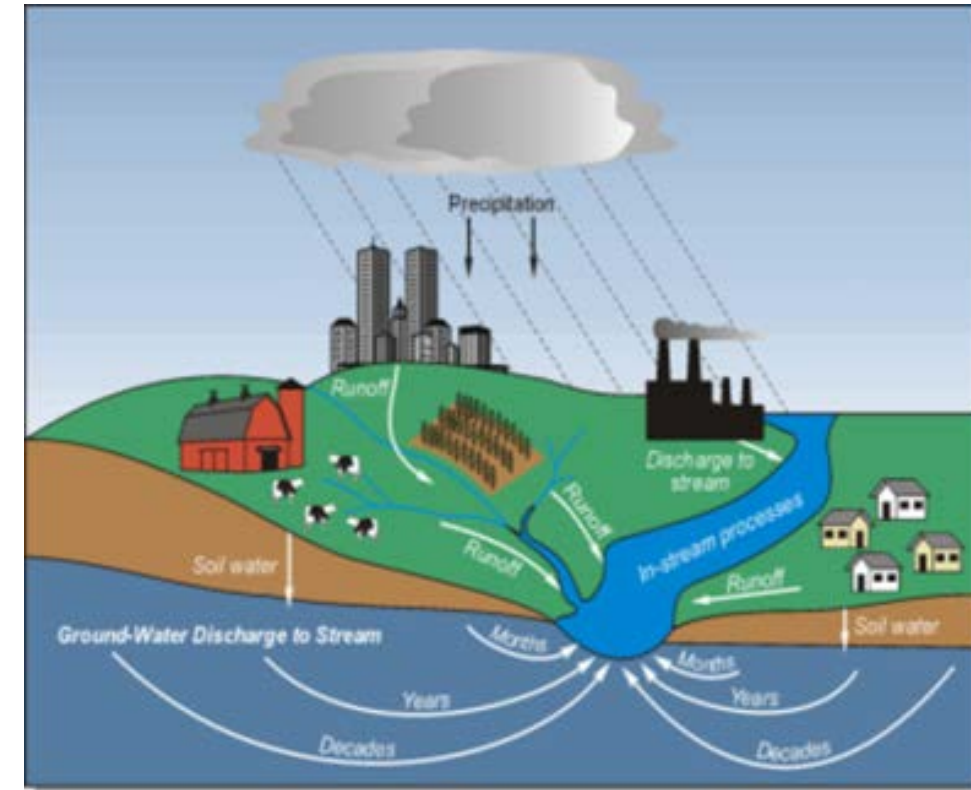
# Sources, Occurrence, and Transport

## What we learned

- EDCs in ag settings
- More use of state/academic activities

## Revisions:

- Co-occurrence of contaminants in different settings
  - Ag, urban, WWTPs
  - Sources, pathways, indicators
- Relation with nutrient and sediments
- Current efforts and approaches/actions





# Identify and prioritize mitigation options to inform policy and prevention strategies

## What we learned

- Difficultly for relative risk; Interest in co-benefits
- Synthesis and implications
- Interaction with WQ GIT and teams

## Revisions

- Focus on management implications
- More emphasis on mitigation studies
- Effectiveness of BMPs
- Use of CBP tools (CAST) and connect with source teams
- Approaches and actions



# Issues of Emerging Concern

## What we learned

- Microplastics
- UOGs
- Pollinators

## Revisions

- Algal toxins
- Flame retardants
- Road salts

## Priorities?

### ADAPTIVE MANAGEMENT FOR ECOSYSTEM DECISION MAKING

[Modified from Williams and others (2007)  
and Levin and others (2009)]

