

**ERIE CHANGES AFFECTING WALLEYE  
MIGRATIONS  
BY ALI SHAKOOR  
DETROIT RIVER WORKSHOP  
SEMINAR #2**

**ERIE CHANGES AFFECTING  
WALLEYE SPAWNING MIGRATIONS**



*James Valentine*  
**SPORTFISHING**

# Overview

## CHANGES IN FISH MOVEMENT

1. WHERE DO DETROIT RIVER WALLEYE SPEND WINTER?
2. HOW DO WARM WINTERS EFFECT THE FOOD CHAIN IN ERIE?
3. LESS FISH SPAWNING IN THE RIVER WITH WARMER WINTERS?
4. LACK OF WARM WATER DISCHARGE AND SPAWNING

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# WINTER WALLEYE LOCATIONS

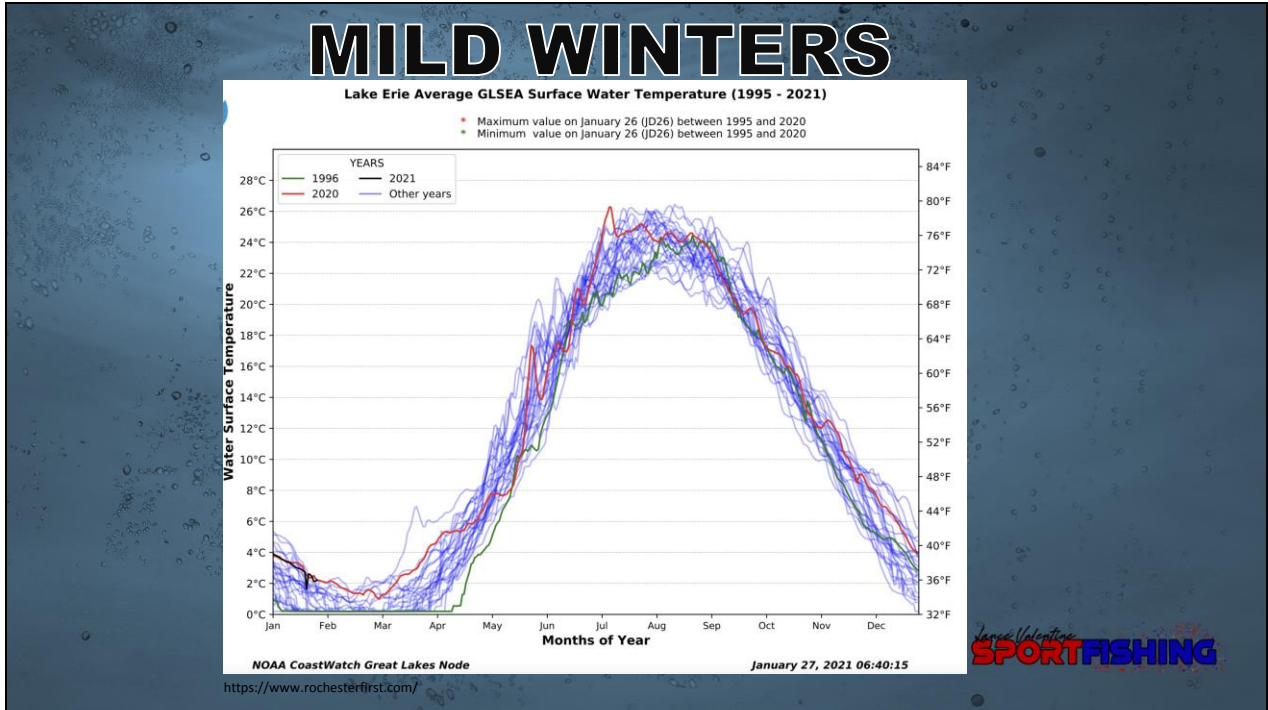
1. **WALLEYE ARE ALWAYS MIGRATING, EVEN RESIDENT FISH**
  - **SCALE OF MOVEMENT**
2. **DEEP TO SHALLOW, NEAR TO OFFSHORE, ETC**
  - **DIFFERENT TYPES OF MIGRATIONS/MOVEMENTS**
  - **DIEL**
  - **SPAWNING-BRIEF REVIEW**

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# WINTER WALLEYE LOCATIONS

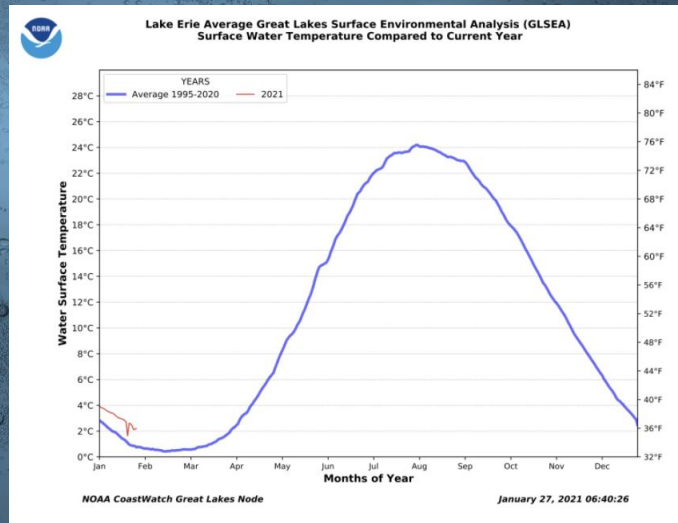
3. MOVEMENT TO STAGING AREAS IN LATE FALL
  - PHOTOPERIOD, TEMPERATURE, URGE TO SPAWN
  - BAIT-SOMATIC VS GAMETE GROWTH
  - WATER TEMPERATURE-VARIES WITH DEPTH
4. SOME WALLEYE MOVE TO SPAWNING AREAS EARLY

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# MILD WINTERS



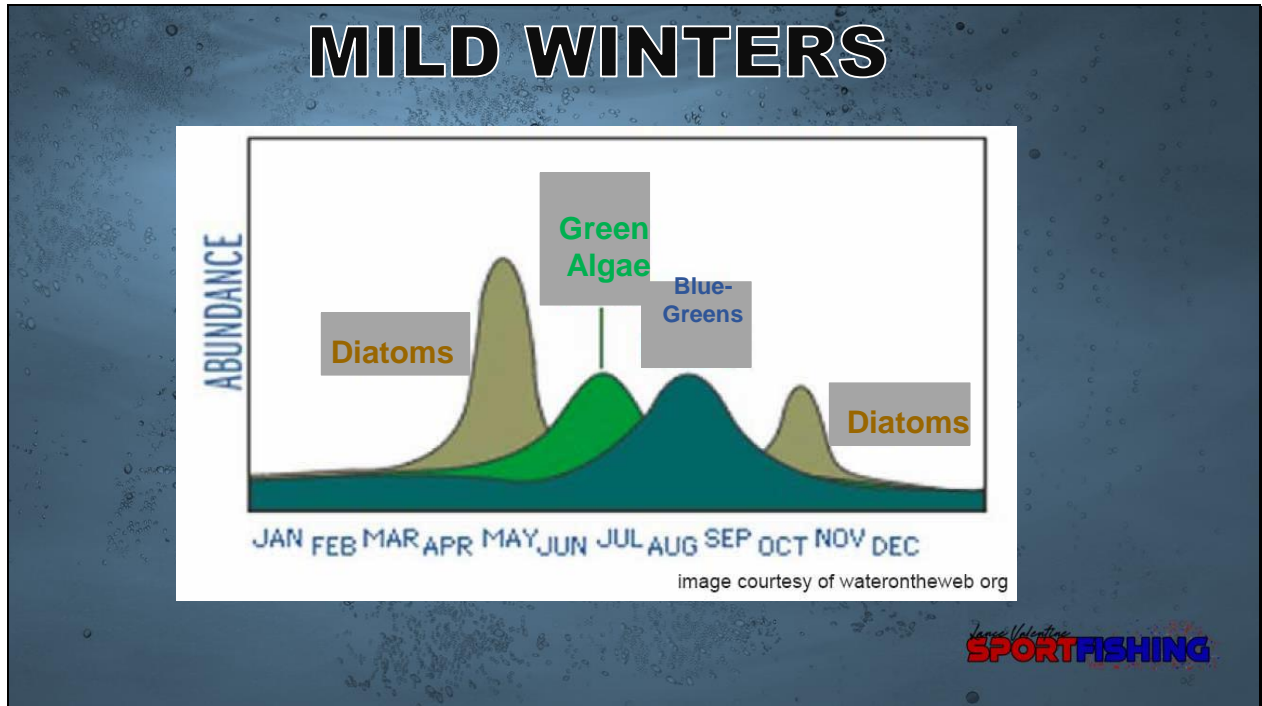
<https://www.rochesterfirst.com/>

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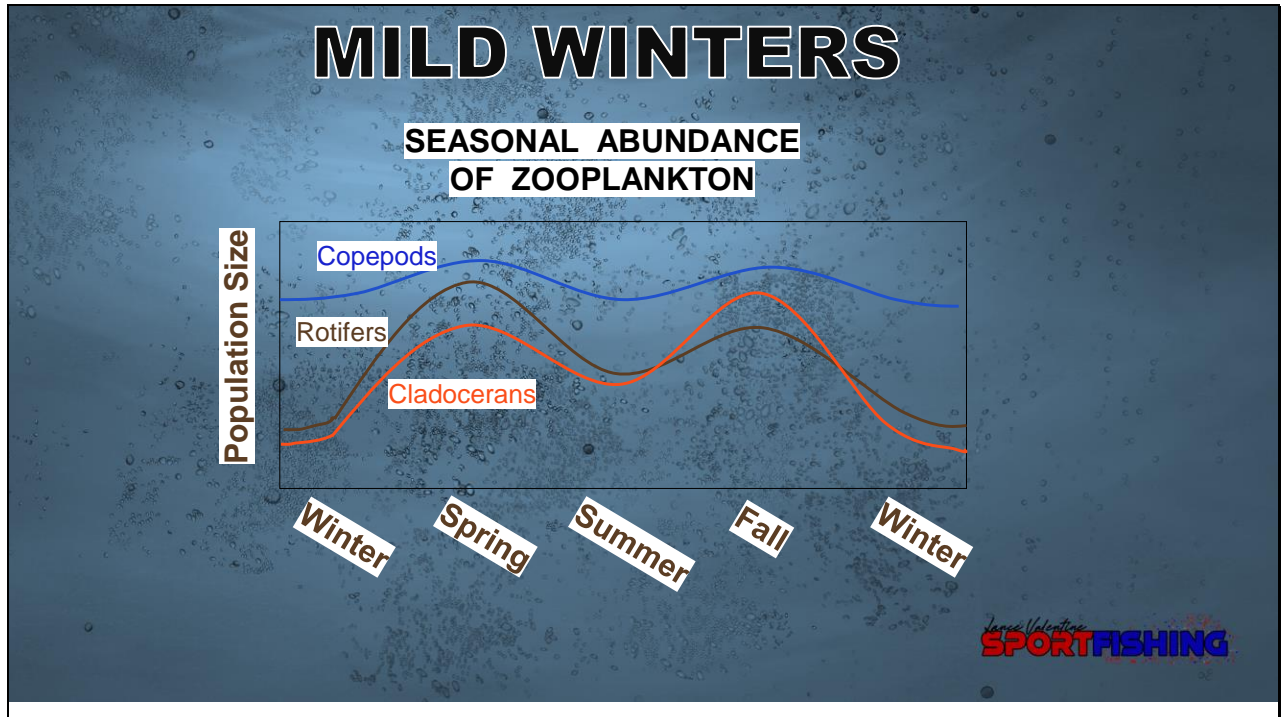
# **MILD WINTERS WHAT AFFECTS DO THEY HAVE?**

- 1. MILDER WINTERS MAY RESULT IN EARLIER ICE-OFF AND SPAWNING**
- 2. MILDER WINTERS MAY IMPACT PREY SPECIES LIKE GIZZARD SHAD**
  - MOVEMENT AND SPAWN**
  - WALLEYE MOVEMENTS AND FEEDING**
- 3. MAY CAUSE ISSUES IN PHENOLOGY (TIMING)**

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# **WARM WATER DISCHARGES CHANGES IN FISH MOVEMENT**


- 1. WARM WATER DISCHARGE IN TRENTON AND OTHER AREAS SHUT DOWN**
- 2. • FORMALLY A BEACON FOR SPAWNING FISH**
  - PLUME OF WARM WATER THAT ENTERED LAKE**
  - HELD BAIT FOR POST-SPAWN FISH**
- 3. LACK OF DISCHARGE HAS CHANGED HOW FISH MOVE INTO THE RIVER**

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# WARM WATER DISCHARGES

4. LESS SPAWNING ON US SIDE TO MIDRIVER
  - EGG MATS
  - DECREASED SPAWNING EARLY IN THE SEASON
5. LACK OF DISCHARGE MAY HAVE CHANGED SPAWNING PATTERNS IN DETROIT RIVER

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**ANTHROPOGENIC INPUTS HAVE AN EFFECT**

- **ENVIRONMENTAL, BEHAVIORIAL, MAYBE LEADING TO MICROEVOLUTION**

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