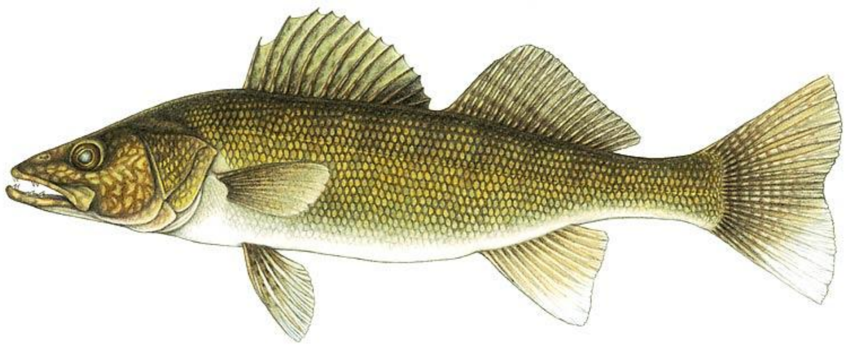
Report for 2025 by the

LAKE ERIE WALLEYE TASK GROUP

March 2026



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***Note**: Data and management summaries contained in this report are provisional. Every effort has been made to ensure their correctness. Contact individual agencies for complete data. Further, not all data related to unaccounted/missing harvest were available at time of initial publication. An updated report that includes a description of this harvest will be available online during April 2026.*

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Charges to the Walleye Task Group, 2025-2026

The charges from the Lake Erie Committee's (LEC) Standing Technical Committee (STC) to the Walleye Task Group (WTG) for the period of April 2025 to March 2026 were to:

1. Maintain and update the centralized time series of datasets:
    a. Required for bi-national population models and assessment and
    b. Produce the annual Recommended Allowable Harvest (RAH)

2. Supply needed technical support throughout the Walleye Management Plan review process.

3. Support LEC walleye management efforts by:
    a. Maintain working knowledge of the most current academic and agency research related to Lake Erie walleye population assessment and modeling including estimating and forecasting:
        i. Abundance
        ii. Age/Size/Spatial Stock structure (migration rates)
        iii. Recruitment and Mortality (M)

4. Work with the LEC/STC and Lake Erie Percid Management Advisory Group (LEPMAG) to provide technical support throughout the Walleye Management Plan review process and support the Quantitative Fisheries Center effort to transition the Walleye model from ADMB to TMB.

Review of Walleye Fisheries in 2025

2025 fishery performance and characteristics

Fishery effort and Walleye harvest data were combined for all fisheries, jurisdictions, and Management Units (MUs) to produce lake-wide summaries (Figure 1). The 2025 total estimated lake-wide harvest was 9.182 million Walleye, of which 8.274 million were harvested in the total allowable catch (TAC) area (Table 1). This TAC-area harvest represents 73% of the 2025 TAC (11.373 million Walleye) and includes Walleye harvested in commercial and sport fisheries in MUs 1-3. An additional 0.909 million Walleye (10% of the lake-wide total) were harvested outside of the TAC area in MUs 4&5 (Table 1).

The estimated sport Walleye harvest was 3.825 million fish in 2025; harvest in 2025 was above the long-term mean (1975-2024 = 2.351 million Walleye; Table 2). The 2025 Ontario angler estimates of harvest and effort were derived from a 2024 lake-wide access point creel survey. A total of 162,000 Walleye were harvested in Ontario within the TAC area, with an additional 14,000 Walleye harvested in MU4-5. Ontario does not conduct annual creel surveys and, as a result, the harvest and effort information is not used in catch-at-age analysis. The estimated harvest in 2024 will be used as the assumed Ontario angler harvest moving forward until another creel is conducted.

The 2025 Ontario commercial harvest was 5.357 million Walleye lake-wide, with 5.057 million caught in the TAC area (Table 2). In 2025, the lake-wide Ontario commercial harvest was above the long-term average (1975-2024 = 2.437 million Walleye; Table 2, Figure 2). Similarly, the TAC area commercial harvest was well above the current Walleye Management Plan's performance metric of at least 4.0 million pounds of commercial yield (2025 TAC area commercial harvest = 10.1 million pounds).

Lake-wide sport fishing effort increased in 2025 to 3.849 million angler hours. Effort increased in MUs 1 and 3 and decreased in MUs 2 and 4&5 (Table 3, Figure 3). The 2025 lake-wide average sport harvest per unit effort (HUE) increased to 0.95 Walleye/angler hour, which is the highest value in the time series and remained above the long-term (1975-2024) mean of 0.47 Walleye/angler hour. The lake-wide sport harvest per angler hour of 0.95 Walleye/angler hour is also well above the current Walleye Management Plan’s performance metric of 0.40 Walleye/angler hour (Table 4, Figure 4). In 2025, the sport HUE remained above long-term averages in all MUs (Table 4).

Lake-wide commercial fishing effort decreased in 2025 (12,258 km) relative to 2024 (17,082 km) and was below the long-term average (1975-2024 = 18,468 km; Table 3, Figure 5). Commercial effort decreased in all MUs. The total commercial gill net HUE increased in 2025 (437 Walleye/kilometer of gill net) and remained above the long-term (1975-2024) lake-wide average (145 Walleye/kilometer of gill net; Table 4, Figure 4). Commercial gill net harvest rates increased in MUs 1 and 2, and decreased in MUs 3 and 4&5, with all MUs' HUE well above the long-term averages (Table 4).

Lake-wide harvest in the commercial fishery was mostly composed of age 4 Walleye (46%) from the 2021 year class, along with lesser contributions from age 3 (16%), age 6 (11%), and age 2 (11%) Walleye from the 2022, 2019, 2023 year classes, respectively (Table 5; Table 6). The mean age of fish caught in the commercial fishery increased in 2025 (4.21) and was just above the long-term average (1975-2024 = 3.84; Table 7, Figure 6). Age composition of the lake-wide sport harvest was more variable, with age 4 Walleye (32%; 2021 year class) and age 3 Walleye (24%; 2022 year class) making the largest contributions. Age 7+ (18%; 2018 year class and older) and age 6 (12%; 2019 year class) fish also made sizeable contributions to the sport harvest (Table 6). The mean age of Walleye captured in the sport fishery increased slightly (4.91) relative to 2024 (4.72) and was above the long-term average (1975-2024 = 4.47; Table 7, Figure 6).

Statistical Catch-at-Age Analysis (SCAA): Abundance

The WTG uses a SCAA model to estimate the abundance of Walleye in Lake Erie from 1978 to 2025. This model estimates population abundance of age 2 and older Walleye using fishery-dependent and fishery-independent data sources, which includes fishery-dependent data from the Ontario commercial fishery (MUs 1-3) and sport fisheries in Ohio (MUs 1-3) and Michigan (MU 1), along with data collected from three fishery-independent gill net surveys (i.e., Ontario Partnership, Michigan, and Ohio).

Summary of 2026 SCAA model results

Based on the 2026 SCAA model, the 2025 west-central population (MUs 1-3) was estimated at 80.6 million age 2 and older Walleye (Table 8, Figure 7). An estimated 21.1 million age 4 Walleye (2021 year class) were the most abundant year class and comprised 26% of the age 2 and older Walleye population. Age 2 (23%; 2023 year class) and age 3 (20%; 2022 year class) represented the next most abundant ages. The projected number of age 2 recruits entering the population in 2026 (2024 year class) and 2027 (2025 year class) are 4.8 and 22.5 million Walleye, respectively (Table 9). Age 2 recruitment forecasts were based on August west basin age 0 interagency trawl indices; this survey is integrated within the SCAA model (Table 10). The 2026 abundance of age 2 and older Walleye in the west-central population is projected to be 57.6 million fish, with 52.8 million fish age 3 and older (Table 8; Figure 7).

Harvest Policy and Recommended Allowable Harvest (RAH) for 2026

In March 2026, the WTG applied the following Harvest Control Rule (HCR):

- *Target Fishing Mortality* of **80%** of the fishing mortality Maximum Sustainable Yield (80%F_{MSY});
- Threshold *Limit Reference Point* of **20%** of the Unfished Spawning Stock Biomass (20%SSB_0);
- Probabilistic Control Rule, P-star, P*= **0.05**;
- A limitation on the annual change in TAC of ± **20%**.

The HCR is identified in more detail within the Lake Erie Walleye Management Plan (WMP; Kayle et al. 2015; Hartman et al. 2024); however, the process for estimating the fishing mortality rate at maximum sustainable yield was updated for 2026 and the target reference point was adjusted from 60%F_{MSY} to 80%F_{MSY} after extensive stakeholder consultations (see below for further details).

Using results from the 2026 SCAA model, the projected abundance of 57.6 million age 2 and older Walleye in 2026, and the harvest policy described above, the calculated mean RAH for 2026 was 8.617 million Walleye, with a range from 7.063 (minimum) to 10.171 (maximum) million Walleye (Table 9). The WTG RAH range estimate is an AD Model Builder (ADMB, Fournier et al. 2012) generated value based on estimating ± one standard deviation of the mean RAH. AD Model Builder uses a statistical technique called the delta method to determine this standard deviation for the calculated RAH, incorporating the standard errors from abundance estimates at age and combined gear selectivity at age. The target fishing rate (80%F_{MSY} = 0.216) in the harvest policy was applied because the probability ($p < 0.001$) of the projected spawner biomass in 2027 (54.168 million kg; Figure 8) being equal to or below the limit reference point (20% SSB_0 = 10.753 million kg) after fishing at 80% of F_{MSY} in 2026 was less than the P* (0.05). Thus, the probabilistic control rule (P*) to reduce the target fishing rate and conserve spawner biomass was not invoked during the 2026 determination of RAH.

In addition to the RAH, the Harvest Control Rule adopted by LEPMAG limits the annual change in TAC to ± 20% of the previous year's TAC. According to this rule, the maximum change would be ± 20% of the 2025 TAC (11.373 million fish) with a range from 9.098 to 13.648 million Walleye. Because P* was not invoked, the 20% TAC constraints along with the RAH min/max produce a range in 2026 TAC for LEC consideration from 9.098 to 10.171 million Walleye.

Update to Stock-Recruitment Model and Harvest Policy

The WTG has been tracking a decline in the fishing mortality rate at maximum sustainable yield (F_{MSY}) for several years (Figure 9). In 2025, the WTG initiated a review of the process used to estimate F_{MSY} to try and better understand the underlying cause of the decline. The review focused on the two major components of the F_{MSY} estimation procedure: 1) the Walleye stock-recruitment model, and 2) the equilibrium-based estimate of F_{MSY} using parameters from the stock-recruitment model. The review was conducted by the WTG with support from the Quantitative Fisheries Center at Michigan State University.

Review of the Stock-Recruitment Model

A stock-recruitment relationship links the biomass of spawning fish to the number of offspring that survive (recruits) to enter a fishery. For Walleye, recruitment is measured as the number of age 2 Walleye in the population. Since 2014, the WTG stock-recruitment model has used a Ricker functional form with the following modifications: 1) autoregressive error of lag-1 (AR1) to account for alternating high and low recruitment years, and 2) the inclusion of a "period" term that shifts the stock-recruitment relationship to account for perceived productivity shifts from 1993-present associated with the colonization of Lake Erie by non-native Dreissenid mussels (*Dreissena polymorpha* and *Dreissena* *bugensis*) and Round Goby (*Neogobius melanostomus*; Jones et al. 2016). The WTG stock-recruitment model is fit using AD Model Builder (ADMB; Fournier et al. 2012) and updated each year with the most recent stock assessment information.

A review of the ADMB code identified an issue with the AR1 component of the model. The AR1 process models serial correlations by expressing each residual as a function of the previous year's residual. Because each residual relies on the year prior, the AR1 recursion process needs an initial value for the unobserved residual that precedes the first data point in the time series. In the ADMB code, the initial value for the AR1 process uses the default value of zero provided by ADMB without an associated sampling distribution – known as the stationary distribution of the AR1 process. The stationary distribution is important because it helps to ensure the AR1 process starts at a realistic value for the population while ensuring the serial correlation remains within reasonable bounds for the system (O'Brien 1999). Without the stationary distribution, the WTG stock-recruitment model may provide biased or unstable estimates of parameters and associated error (O'Brien 1999).

An improvement to the current WTG stock–recruitment model structure was also identified. In the existing formulation, the autoregressive correlation in recruitment residuals is incorporated within the observation error component of the model. This assumes that temporal correlation in recruitment arises from measurement processes (e.g., survey noise), rather than from the underlying recruitment dynamics themselves. However, variation in Walleye recruitment is more appropriately attributed to variation in biological or environmental processes, such as productivity shifts, density dependence, climatic variation, and other ecological drivers. The attribution of recruitment variation derived from biological or environmental processes to measurement process can bias estimates of stock-recruitment parameters and their associated error (Auger-Méthé et al. 2021).

A state-space formulation provides a more appropriate framework for the WTG stock-recruitment model. State-space models separate process variation (i.e., biological and environmental) and observation variation when modeling stock-recruitment dynamics (Aeberhard et al. 2018). More specifically, a state-space model allows temporal correlations in recruitment to be attributed to biological and environmental processes rather than to measurement error, which can provide better estimates of variance while also improving the interpretability of the stock-recruitment relationship (Auger-Méthé et al. 2021). Given the benefits of a state-space approach, the WTG recommended that a state-space formulation of the WTG stock-recruitment model be developed to better reflect how we understand Walleye recruitment dynamics in Lake Erie.

Review of the F_{MSY} Estimation Procedure

An equilibrium-based F_{MSY} is estimated using parameters from the stock-recruitment relationship, weight-at-age, maturity-at-age, and estimates of vulnerability-at-age (Walters and Martell 2004; Box 3.1). An important step in the F_{MSY} estimation process is calculating the equilibrium recruitment across different fishing mortality rate scenarios using the parameters from the stock-recruitment relationship. The equilibrium recruitment is calculated as follows:

$$R = \frac{\ln(\alpha) + \ln(SPR)}{\beta * SPR}$$

where α is the maximum reproductive capacity per spawner at low stock size, β is the density-dependent effect that scales the maximum recruitment, and the spawners per recruit (SPR) which is calculated using information on fishing mortality rate, vulnerability to fishing gear, maturity-at-age, and weight-at-age (Walters and Martell 2004).

The WTG process is based on the above equation with the following modifications:

$$R = \frac{\ln(\hat{\alpha}) + \ln(SPR) + period}{\beta * SPR}$$

where $\hat{\alpha}$ is a bias corrected version of the alpha parameter and $period$ is the stock-recruitment model parameter that shifts the stock-recruitment relationship from 1993-present to account for productivity change in the population. These modifications to the equilibrium recruitment calculation are not consistent with assumptions of the original equation. The inclusion of a bias corrected alpha ($\hat{\alpha}$) violates a key assumption of the equation. The WTG stock-recruitment model uses natural logarithm ($\ln$) transformed recruitment and spawning stock biomass data, which means that the alpha parameter estimate from the model is already on an appropriate scale for the equilibrium recruitment calculation (i.e., $\ln$ scale). However, the WTG model code back transforms the alpha parameter estimated by the model to the normal scale by applying a bias correction. This alpha bias correction involves adding a portion of the observation error to the alpha parameter estimate. Applying a $\ln$ transformation to the bias corrected alpha is not equal to the original $\ln(\alpha)$ estimated by the model (see Jensen inequality). More specifically, the bias corrected alpha is always higher than the original $\ln(\alpha)$ and the magnitude of difference between the two estimates increases with the level of observation error in the model. Thus, the use of a bias corrected alpha estimate from the WTG stock-recruitment model produces upwardly biased estimates of equilibrium recruitment and, in turn, F_{MSY}.

Another issue is the addition of the period term into the equilibrium recruitment equation because it violates that equilibrium assumption of the equation. The period term is an environmental covariate that characterizes the state of the population under a specific set of environmental conditions and should be excluded from the equilibrium recruitment equation.

Process to Correct Issues Identified During the Reviews

The WTG attempted to correct the stock-recruitment model issues by implementing the existing model within a state-space framework with a properly specified initial value and stationary distribution. This first attempt failed because the period parameter was not estimable. An additional iteration of the state-space model was attempted with the period parameter removed from the model; however, this iteration of the model failed as well with the observation error unable to converge at an optimum value.

The WTG decided to expand the stock-recruitment models under consideration and evaluated the following stock-recruitment model configurations:

- Beverton-Holt stock-recruitment model with normal error
- Beverton-Holt stock-recruitment model with lognormal error
- Ricker stock-recruitment model with normal error
- Ricker stock-recruitment model with lognormal error

The stock-recruitment models considered only included α and β parameters and were implemented using RTMB (Kristensen 2026). All models were evaluated using the recruitment and spawning stock biomass estimates from the 2025 WTG SCAA (WTG 2025). Each model was evaluated using the following model diagnostics: received a passing convergence code from the nlminb() function (R Core Team 2025), ensuring the maximum gradient of the objective function was less than 0.0001, Hessian matrix was positive definite, likelihood profiles for all parameters were convex and achieved a clear minimum, and the parameters were not sensitive to initial values (jitter test).

Of these models, only the Ricker stock-recruitment model with lognormal error (hereafter simple Ricker model) passed all model diagnostic checks. The reliability of the simple Ricker model was tested by fitting the model to WTG SCAA outputs from 2016-2024 and, in all cases, the simple Ricker model passed model diagnostic checks. Given its strong performance, the WTG recommended to the LEC that the simple Ricker model be used for the F_{MSY} estimation procedure moving forward (Figure 10).

Correcting the errors associated with the equilibrium recruitment calculation in the F_{MSY} estimation procedure was more straight forward. The WTG adopted the equilibrium recruitment equation as presented in Walters and Martell (2004; see above) and used the alpha parameter from the simple Ricker model without bias correction applied.

Target Fishing Rate Policy Risk Analysis

The Lake Erie Committee (LEC) recognized that the updated stock-recruitment model and F_{MSY} estimation procedure was a significant change to the Walleye management process. As a result, the LEC requested that the WTG develop a risk analysis to help the LEC and LEPMAG explore options for a new target fishing rate policy. The LEC requested that the following target fishing rate policy scenarios be included in the risk analysis:

- 80%F_{MSY} with the target fishing rate estimated annually (Shifting 0.8*F_{MSY})
- 80%F_{MSY} with the target fishing rate held constant (Fixed 0.8*F_{MSY})
- 60% F_{MSY} with the target fishing rate estimated annually (Shifting 0.6*F_{MSY})
- 60% F_{MSY} with the target fishing rate held constant (Fixed 0.6*F_{MSY})

The 80%F_{MSY} and 60%F_{MSY} target fishing rates represent the maximum and minimum, respectively, of the target fishing rate range considered. The current harvest control rule requires that F_{MSY} is estimated annually, which allows F_{MSY} to change year-to-year. To address the annual variation in F_{MSY} resulting in year-to-year changes in RAH, there was a desire to evaluate the application of constant target fishing mortality rate.

The risk analysis developed by the WTG used a forward projection simulation based on the 2025 WTG SCAA model to see how the Walleye population might respond to different target fishing rate scenarios. The simulation projected the population forwards seven years, which reflected a conservative estimate of when a new Walleye Management Plan with associated population models will be in place. The forward projection used the 2024 Walleye abundance at age as the starting condition of the projection. Variation was added to the starting condition of each simulation run by adding a random deviation to the abundance at age (normal distribution: $\mu = 0$, σ = abundance at age * 0.16). The population was projected forwards using the same catch equations used within the WTG SCAA model (Jones et al. 2016). The catch equations were parameterized with the following data: natural mortality rate of 0.32, and selectivity-at-age as estimated by the 2025 WTG SCAA model (WTG 2025). Recruitment was predicted at each step of the simulation using the simple Ricker model fit to the 2025 WTG SCAA recruitment and spawning stock biomass estimates. The model used to predict recruitment did not change for the duration of the simulation. Recruitment variation was added into the model by adding a random deviation to the predicted recruitment (normal distribution: $\mu = 0$, $\sigma = 2$).

The simulation proceeded forwards at one-year intervals using the following steps:

1. Project the population forwards using catch equations
2. Predict the incoming recruitment
3. If the reference points are estimated annually, fit the simple Ricker model and estimate the target and limit reference points
4. Calculate the harvest given the target fishing rate and assuming the full allocation of fish was captured
5. Repeat until simulation for seven years into the future

The simulation was repeated 100 times for each target fishing rate scenario. It must be noted that this is a simple approach to assessing risk and is not considered a substitution for a proper management strategy evaluation. Further, the risk analysis is not to be considered a prediction of the future state of Lake Erie's Walleye population.

Several outputs from the risk analysis were considered by the LEC and LEPMAG including total abundance (Figure 11), spawning stock biomass (Figure 12), target fishing rate (Figure 13), and total catch (Figure 14). The total abundance and spawning stock biomass showed an initial decreasing trend and leveled off by the end of the simulated period (i.e., 2031; Figure 11-12). This decrease is largely due to the simulated recruitment centering on the mean recruitment for the system, which is a lower level of recruitment than experienced by the Walleye population over the last 6 years. The total abundance did not differ among the fishing mortality rate scenarios (Figure 11). The spawning stock biomass was higher in the 60%F_{MSY} scenarios relative to the 80%F_{MSY} scenarios with none of the scenarios crossing the limit reference point (Figure 12).

As expected, the target fishing mortality rates showed a clear difference between the 60%F_{MSY} and 80%F_{MSY} scenarios, with the 80%F_{MSY} scenarios always having a higher target fishing mortality rate (Figure 13). An interesting trend was the increasing variation in target fishing rate with time for the shifting target fishing rate scenarios (Figure 13). The variation in the shifting target fishing mortality rate scenarios increases with time because more simulated variation in recruitment and spawning stock biomass is available within the data. Note that the shifting target fishing rate scenarios showed no variation for the first two time-steps of the simulation. The spawning stock biomass used in the analysis is two years behind (i.e., spawning stock biomass in 2024 produces recruits in 2026), which means the first two years were based on a static spawning stock biomass dataset.

The total catch showed a decreasing trend with time, which aligns with the pattern present in total abundance (Figure 14). Initially, the 80%F_{MSY} scenarios had a higher catch than the 60%F_{MSY} scenarios. The difference in catch between the target fishing rate scenarios decreased as the simulation progressed, with the 80%F_{MSY} scenarios having a marginally higher catch by the end of the simulation. The decreasing difference between the 80%F_{MSY} scenarios and the 60%F_{MSY} scenarios is due to a decrease in total abundance associated with the higher harvests afforded by the 80%F_{MSY} scenarios.

Stakeholder Consultations and Selecting a Target Fishing Rate Policy

The WTG presented the updated stock-recruitment model and F_{MSY} estimation procedure, and target fishing-rate policy scenarios with risk assessment to LEPMAG on December 10, 2025. Stakeholders were provided several weeks to ask questions and provide feedback to the LEC (December 10, 2025 – January 2, 2026). After careful consideration of all feedback and biological information, the LEC decided to implement a constant target fishing rate at 80%F_{MSY}. The 80%F_{MSY} estimated for 2026 will be the constant rate applied.

WTG Centralized Datasets

WTG members currently manage several databases that consist of fishery-dependent and fishery-independent surveys conducted by the respective agencies. Annually, data are compiled by WTG members to form spatially-explicit versions of agency-specific harvest data (e.g., harvest-at-age and fishery effort by management unit) and population assessment (e.g., the interagency trawl program and gill net surveys) databases. These databases are used for trends and status evaluations, estimating population abundance, and to inform the decision-making process regarding RAH. Ultimately, annual population abundance estimates are used to assist LEC members with setting TACs for the upcoming year and evaluate past harvest policy decisions. Use of WTG databases by non-members is only permitted following a specific protocol established in 1994, described in the 1994 WTG Report and reprinted in the 2003 WTG Report (WTG 2003).

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Table 1. Annual Lake Erie walleye total allowable catch (TAC, top) and measured harvest (Har; bottom, bold), in numbers of fish from 2015 to 2025. TAC allocations are based on water area: Ohio, 51.11%; Ontario, 43.06%; and Michigan, 5.83% (Standing Technical Committee 2007). New York and Pennsylvania do not have assigned quotas, but are included in annual total harvest.

Year		TAC Area (MU-1, MU-2, MU-3)				Non-TAC Area (MUs 4&5)				All Areas
		Michigan	Ohio	Ontario [a]	Total	NY	Penn.	Ontario	Total	Total
2015	TAC	239,846	2,102,665	1,771,488	4,114,000				0	4,114,000
	Har	**65,740**	**1,073,263**	**1,382,600**	**2,521,603**	**55,201**	**46,523**	**89,882**	**191,606**	**2,713,209**
2016	TAC	287,827	2,523,301	2,125,872	4,937,000				0	4,937,000
	Har	**65,816**	**855,820**	**1,959,573**	**2,881,209**	**50,963**	**32,937**	**112,743**	**196,643**	**3,077,852**
2017	TAC	345,369	3,027,756	2,550,874	5,924,000				0	5,924,000
	Har	**56,938**	**1,261,327**	**3,232,817**	**4,551,082**	**70,010**	**162,949**	**129,217**	**362,176**	**4,913,258**
2018	TAC	414,455	3,633,410	3,061,135	7,109,000				0	7,109,000
	Har	**176,089**	**1,972,295**	**3,478,713**	**5,627,097**	**123,503**	**270,189**	**263,204**	**656,896**	**6,283,993**
2019	TAC	497,357	4,360,194	3,673,449	8,531,000				0	8,531,000
	Har	**153,171**	**2,558,359**	**3,362,053**	**6,073,583**	**174,466**	**419,975**	**229,466**	**823,907**	**6,897,490**
2020	TAC	596,817	5,232,131	4,408,052	10,237,000				0	10,237,000
	Har	**191,490**	**1,973,038**	**3,680,335**	**5,844,863**	**84,615**	**208,760**	**243,175**	**536,550**	**6,381,413**
2021	TAC	716,000	6,278,352	5,289,490	12,284,000				0	12,284,000
	Har	**177,948**	**2,492,386**	**4,940,829**	**7,611,163**	**43,772**	**145,261**	**186,192**	**375,225**	**7,986,388**
2022	TAC	847,274	7,427,816	6,257,910	14,533,000				0	14,533,000
	Har	**114,465**	**2,581,307**	**6,047,336**	**8,743,108**	**75,774**	**232,780**	**217,116**	**525,670**	**9,268,777**
2023	TAC	788,566	6,913,139	5,824,296	13,526,000				0	13,526,000
	Har	**142,619**	**2,089,520**	**5,680,932**	**7,913,071**	**80,582**	**239,353**	**308,428**	**628,363**	**8,541,434**
2024	TAC	749,621	6,571,724	5,536,655	12,858,000				0	12,858,000
	Har	**135,921**	**2,460,453**	**5,925,663**	**8,522,037**	**102,152**	**318,220**	**368,075**	**788,447**	**9,310,484**
2025	TAC	663,046	5,812,740	4,897,214	11,373,000				0	11,373,000
	Har	**172,692**	**2,882,454**	**5,218,536**	**8,273,682**	**179,299**	**414,294**	**314,920**	**908,513**	**9,182,195**

[a] Ontario sport harvest values from 2014 to 2023 were estimated from the 2014 lake-wide aerial creel survey. Ontario sport harvest values in 2024 were estimated from a lake-wide access point creel survey. These values are included in Ontario's total walleye harvest, but are not used in catch-at-age analysis.

Table 2. Annual harvest (thousands of fish) of Lake Erie walleye by gear, management unit, and agency from 2015 to 2025. Means contain data from 1975 to 2024.

	Sport Fishery															Commercial Fishery					
	Unit 1				Unit 2			Unit 3			Units 4 & 5					Unit 1	Unit 2	Unit 3	Unit 4		Grand
Year	OH	MI	ON[a]	Total	OH	ON[a]	Total	OH	ON[a]	Total	ON[a]	PA	NY	Total	Total	ON	ON	ON	ON	Total	Total
2015	746	66	45	857	187	13	200	140	13	153	13	47	55	115	1,325	633	354	325	77	1,388	2,713
2016	577	66	45	688	139	13	152	140	13	153	13	33	51	97	1,090	946	594	348	100	1,988	3,078
2017	592	57	45	694	316	13	330	353	13	367	13	163	70	246	1,636	1,735	918	508	116	3,277	4,913
2018	955	176	45	1,177	666	13	679	351	13	365	13	270	124	407	2,627	1,523	1,433	451	250	3,657	6,284
2019	1,297	153	45	1,495	947	13	960	314	13	328	13	420	174	607	3,391	1,666	1,237	387	217	3,507	6,897
2020	537	191	45	774	908	13	921	528	13	541	13	209	85	306	2,543	1,938	1,185	486	230	3,839	6,381
2021	1,318	178	45	1,541	810	13	824	364	13	377	13	145	44	202	2,944	2,750	1,375	745	173	5,042	7,986
2022	1,298	114	45	1,458	771	13	784	513	13	526	13	233	76	321	3,089	3,222	1,976	778	204	6,180	9,269
2023	1,099	143	45	1,287	677	13	690	313	13	326	13	239	81	333	2,636	2,981	1,556	1,073	295	5,905	8,541
2024	979	136	25	1,140	732	76	808	749	61	810	14	318	102	435	3,193	2,724	2,201	839	354	6,118	9,311
2025	1,265	173	25	1,462	722	76	798	895	61	956	14	414	179	608	3,825	2,625	1,888	544	301	5,357	9,182
Mean	1,413	236	41	1,690	341	12	349	213	14	224	10	117	50	110	2,351	1,511	605	354	95	2,437	4,788

[a] Ontario sport harvest values from 2014 to 2023 were estimated from the 2014 lake-wide aerial creel survey. Ontario sport harvest values in 2024 were estimated from a lake-wide access point creel survey. These values are included in Ontario's total walleye harvest, but are not used in catch-at-age analysis.

Table 3. Annual fishing effort for Lake Erie walleye by gear, management unit, and agency from 2015 to 2025. Means contain data from 1975 to 2024.

	Sport Fishery [a]															Commercial Fishery [b]				
	Unit 1				Unit 2			Unit 3			Units 4 & 5					Unit 1	Unit 2	Unit 3	Units 4&5	
Year	OH	MI	ON [c,d]	Total	OH	ON [c,d]	Total	OH	ON [c,d]	Total	ON [c,d]	PA	NY	Total	Total	ON	ON	ON	ON	Total
2015	1,430	165	--	1,595	564	--	564	341	--	341	--	162	215	377	2,876	6,980	6,487	5,379	792	19,637
2016	1,514	236	--	1,750	439	--	439	397	--	397	--	141	217	358	2,944	6,980	7,969	4,523	1,448	20,920
2017	1,351	187	--	1,538	726	--	726	501	--	501	--	228	213	441	3,207	8,056	7,239	3,636	1,527	20,458
2018	1,239	261	--	1,500	813	--	813	354	--	354	--	248	229	477	3,144	5,215	7,421	2,636	1,896	17,168
2019	1,739	265	--	2,004	1,036	--	1,036	307	--	307	--	439	297	736	4,083	4,165	6,365	2,402	1,353	14,285
2020	1,111	301	--	1,413	1,511	--	1,511	659	--	659	--	395	279	674	4,257	5,759	6,576	3,049	1,738	17,122
2021	2,148	325	--	2,473	1,430	--	1,430	584	--	584	--	258	183	441	4,928	7,279	6,528	3,168	1,236	18,212
2022	1,891	275	--	2,166	1,219	--	1,219	498	--	498	--	306	224	530	4,412	7,017	7,013	2,642	924	17,596
2023	1,855	266	--	2,121	1,018	--	1,018	376	--	376	--	285	198	483	3,998	6,691	6,000	2,965	963	16,619
2024	1,352	249	52	1,601	944	146.9	944	651	108	651	74	303	211	514	3,710	5,904	6,827	2,873	1,478	17,082
2025	1,641	256	--	1,896	783	--	783	658	--	658	--	298	213	511	3,849	4,379	4,452	2,114	1,313	12,258
Mean	2,726	610	101	3,389	802	68	815	428	110.4	455	97.67	236	231	308	4,921	8,449	5,768	4,228	855	18,486

[a] Ohio, Michigan, Pennsylvania and New York sport units of effort are thousands of angler hours.

[b] Estimated Standard (Total) Effort in kilometers of gill net = (walleye targeted effort x walleye total harvest) / walleye targeted harvest.

[c] Ontario sport effort values were estimated with a lake-wide aerial (2014) and access point (2024) creel surveys. Values are in thousands of rod hours

[d] Ontario sport fishing effort is not included in area and lake-wide totals due to effort reporting in rod hours

Table 4. Annual catch per unit effort for Lake Erie walleye by gear, management unit, and agency from 2015-2025. Means contain data from 1975 to 2024.

	Sport Fishery [a]															Commercial Fishery [b]				
	Unit 1				Unit 2			Unit 3			Units 4 & 5					Unit 1	Unit 2	Unit 3	Unit 4	
Year	OH	MI	ON [c,d]	Total	OH	ON [c,d]	Total	OH	ON [c,d]	Total	ON [c,d]	PA	NY	Total	Total	ON	ON	ON	ON	Total
2015	0.52	0.40	--	0.51	0.33	--	0.33	0.41	--	0.41	--	0.29	0.26	0.27	0.43	90.6	54.5	60.3	97.3	70.7
2016	0.38	0.28	--	0.37	0.32	--	0.32	0.35	--	0.35	--	0.23	0.23	0.23	0.34	135.5	74.6	77.0	69.0	95.0
2017	0.44	0.30	--	0.42	0.44	--	0.44	0.70	--	0.70	--	0.71	0.33	0.53	0.48	215.3	126.9	139.6	76.2	160.2
2018	0.77	0.67	--	0.75	0.82	--	0.82	0.99	--	0.99	--	1.09	0.54	0.83	0.81	292.0	193.1	171.0	132.0	213.0
2019	0.75	0.58	--	0.72	0.91	--	0.91	1.02	--	1.02	--	0.96	0.59	0.81	0.81	399.9	194.4	161.3	160.1	245.5
2020	0.48	0.64	--	0.52	0.60	--	0.60	0.80	--	0.80	--	0.53	0.30	0.44	0.58	336.5	180.2	159.3	132.5	224.2
2021	0.61	0.55	--	0.60	0.57	--	0.57	0.62	--	0.62	--	0.56	0.24	0.43	0.58	377.7	210.6	235.0	140.1	276.9
2022	0.69	0.42	--	0.65	0.63	--	0.63	1.03	--	1.03	--	0.76	0.34	0.58	0.68	459.1	281.8	294.3	221.0	351.2
2023	0.59	0.54	--	0.59	0.67	--	0.67	0.83	--	0.83	--	0.84	0.41	0.66	0.64	445.5	259.3	361.9	306.3	355.3
2024	0.72	0.55	0.48	0.70	0.78	0.52	0.78	1.15	0.56	1.15	0.20	1.05	0.48	0.82	0.81	461.4	322.4	292.0	239.5	358.2
2025	0.77	0.67	--	0.76	0.92	--	0.92	1.36	--	1.36	--	1.39	0.84	1.16	0.95	599.3	424.2	257.2	228.9	437.0
Mean	0.50	0.39	0.41	0.48	0.38	0.28	0.38	0.47	0.22	0.47	0.13	0.45	0.22	0.31	0.47	203.2	108.2	99.0	100.5	145.0

[a] Ohio, Michigan, Pennsylvania and New York sport CPE = Number/angler hour

[b] Commercial CPE = Number/kilometer of gill net

[c] Ontario sport fishing CPE was estimated from the 2024 lake-wide access point creel survey values are in number/rod hour

[d] Ontario sport fishing CPE is not included in area and lake-wide totals due to effort reporting in rod hours

Table 5. Catch at age of walleye harvest by management unit, gear, and agency in Lake Erie during 2025. Units 4 and 5 are combined in Unit 4.

		Commercial	Sport					All Gear
Unit	Age	Ontario	Ohio	Michigan	New York	Pennsylvania	Total	Total
1	1	73,057	493	0			493	73,550
	2	379,406	94,875	405			95,280	474,686
	3	376,071	354,471	20,904			375,375	751,446
	4	1,032,750	352,786	36,637			389,423	1,422,173
	5	177,589	107,650	34,404			142,054	319,643
	6	381,175	144,052	21,299			165,351	546,526
	7+	204,497	210,448	29,521			239,969	444,466
	Total	2,624,545	1,264,775	143,170	--	--	1,407,945	4,032,490
2	1	6,991	991				991	7,982
	2	85,002	57,484				57,484	142,486
	3	341,682	223,317				223,317	564,999
	4	1,110,271	232,728				232,728	1,342,999
	5	156,967	64,070				64,070	221,037
	6	119,759	60,649				60,649	180,408
	7+	67,822	82,959				82,959	150,781
	Total	1,888,494	722,198	--	--	--	722,198	2,610,692
3	1	0	0				0	0
	2	55,126	42,683				42,683	97,809
	3	87,898	212,465				212,465	300,363
	4	248,199	298,118				298,118	546,317
	5	55,042	75,638				75,638	130,680
	6	54,573	91,639				91,639	146,212
	7+	42,847	174,940				174,940	217,787
	Total	543,685	895,483	--	--	--	895,483	1,439,168
4	1	0				0	0	0
	2	40,329			0	0	0	40,329
	3	36,974			26,327	27,033	53,360	90,334
	4	90,543			65,819	180,692	246,511	337,054
	5	36,820			21,334	34,858	56,192	93,012
	6	48,416			34,044	68,293	102,337	150,753
	7+	47,452			31,775	104,573	136,348	183,800
	Total	300,534	--	--	179,299	415,449	594,748	895,282
All	1	80,048	1,484	0	0	0	1,484	81,532
	2	559,863	195,042	405	0	0	195,447	755,310
	3	842,625	790,253	20,904	26,327	27,033	864,517	1,707,142
	4	2,481,763	883,632	36,637	65,819	180,692	1,166,780	3,648,543
	5	426,418	247,358	34,404	21,334	34,858	337,954	764,372
	6	603,923	296,340	21,299	34,044	68,293	419,976	1,023,899
	7+	362,618	468,347	29,521	31,775	104,573	634,216	996,834
	Total	5,357,258	2,882,456	143,170	179,299	415,449	3,620,374	8,977,632

Table 6. Age composition (in percent) of walleye harvest by management unit, gear, and agency in Lake Erie during 2025. Units 4 and 5 are combined in Unit 4.

		Commercial	Sport					All Gears
Unit	Age	Ontario	Ohio	Michigan	New York	Pennsylvania	Total	Total
1	1	2.8	0.0	0.0	--	--	0.0	1.8
	2	14.5	7.5	0.3	--	--	6.8	11.8
	3	14.3	28.0	14.6	--	--	26.7	18.6
	4	39.3	27.9	25.6	--	--	27.7	35.3
	5	6.8	8.5	24.0	--	--	10.1	7.9
	6	14.5	11.4	14.9	--	--	11.7	13.6
	7+	7.8	16.6	20.6	--	--	17.0	11.0
	Total	100.0	100.0	100.0	--	--	100.0	100.0
2	1	0.4	0.1	--	--	--	0.1	0.3
	2	4.5	8.0	--	--	--	8.0	5.5
	3	18.1	30.9	--	--	--	30.9	21.6
	4	58.8	32.2	--	--	--	32.2	51.4
	5	8.3	8.9	--	--	--	8.9	8.5
	6	6.3	8.4	--	--	--	8.4	6.9
	7+	3.6	11.5	--	--	--	11.5	5.8
	Total	100.0	100.0	--	--	--	100.0	100.0
3	1	0.0	0.0	--	--	--	0.0	0.0
	2	10.1	4.8	--	--	--	4.8	.
	3	16.2	23.7	--	--	--	23.7	20.9
	4	45.7	33.3	--	--	--	33.3	38.0
	5	10.1	8.4	--	--	--	8.4	9.1
	6	10.0	10.2	--	--	--	10.2	10.2
	7+	7.9	19.5	--	--	--	19.5	15.1
	Total	100.0	100.0	--	--	--	100.0	100.0
4	1	0.0	--	--	0.0	0.0	0.0	0.0
	2	13.4	--	--	0.0	0.0	0.0	4.5
	3	12.3	--	--	14.7	6.5	9.0	10.1
	4	30.1	--	--	36.7	43.5	41.4	37.6
	5	12.3	--	--	11.9	8.4	9.4	10.4
	6	16.1	--	--	19.0	16.4	17.2	16.8
	7+	15.8	--	--	17.7	25.2	22.9	20.5
	Total	100.0	--	--	100.0	100.0	100.0	100.0
All	1	1.5	0.1	0.0	0.0	0.0	0.0	0.9
	2	10.5	6.8	0.3	0.0	0.0	5.4	8.4
	3	15.7	27.4	14.6	14.7	6.5	23.9	19.0
	4	46.3	30.7	25.6	36.7	43.5	32.2	40.6
	5	8.0	8.6	24.0	11.9	8.4	9.3	8.5
	6	11.3	10.3	14.9	19.0	16.4	11.6	11.4
	7+	6.8	16.2	20.6	17.7	25.2	17.5	11.1
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 7. Annual mean age (years) of Lake Erie walleye by gear, management unit, and agency from 2015 to 2025. Means include data from 1975 to 2024.

	Sport Fishery															Commercial Fishery					All Gears
	Unit 1				Unit 2			Unit 3			Units 4 & 5					Unit 1	Unit 2	Unit 3	Unit 4		
Year	OH	MI	ON	Total	OH	ON	Total	OH	ON	Total	ON	PA	NY	Total	Total	ON	ON	ON	ON	Total	Total
2015	6.23	5.85	--	6.20	6.88	--	6.88	8.73	--	8.73	--	7.43	8.29	7.89	6.74	4.57	6.30	8.58	8.08	6.14	6.42
2016	5.17	4.98	--	5.15	5.46	--	5.46	6.91	--	6.91	--	7.48	8.06	7.83	5.68	3.25	4.07	4.97	8.69	4.07	4.61
2017	4.54	4.39	--	4.52	3.52	--	3.52	3.67	--	3.67	--	4.17	5.68	4.63	4.14	2.90	2.65	2.86	5.86	2.93	3.32
2018	3.91	3.73	--	3.88	3.56	--	3.56	3.95	--	3.95	--	4.09	4.92	4.35	3.88	3.25	3.18	3.18	4.19	3.28	3.53
2019	4.36	4.12	--	4.33	4.37	--	4.37	4.53	--	4.53	--	4.70	5.10	4.82	4.45	3.82	3.99	3.86	4.29	3.91	4.17
2020	NA	NA	--	--	NA	--	--	NA	--	--	--	4.95	6.05	5.27	NA	3.83	4.11	4.12	3.63	3.94	NA
2021	5.05	5.16	--	5.06	4.54	--	4.54	4.65	--	4.65	--	4.59	5.99	4.91	4.85	4.21	4.32	3.11	3.38	4.05	4.34
2022	4.82	4.65	--	4.80	4.62	--	4.62	5.03	--	5.03	--	4.26	5.47	4.56	4.77	3.79	3.81	3.66	3.42	3.77	4.10
2023	5.13	4.84	--	5.10	4.99	--	4.99	5.38	--	5.38	--	5.84	5.90	5.86	5.20	4.23	4.08	3.36	3.14	3.98	4.35
2024	4.66	5.49	4.45	4.76	4.33	4.31	4.33	4.76	5.14	4.76	7.90	5.07	5.78	5.24	4.72	4.20	3.92	3.74	4.41	4.05	4.27
2025	4.76	5.22	--	4.82	4.38	--	4.38	5.06	--	5.06	--	5.63	5.45	5.58	4.91	4.22	4.08	4.30	4.84	4.21	4.50
Mean	4.27	3.98	--	4.22	4.50	--	4.51	5.44	--	5.45	--	6.23	7.12	6.65	4.47	3.65	3.87	4.74	6.10	3.84	4.09

Table 8. Estimated abundance at age, survival (S), fishing mortality (F) and exploitation (u) for Lake Erie walleye, 1985-2026 (from ADMB 2026 catch at age analysis recruitment integrated model, M=0.32).

Year	Age						Total	Ages 2+		
	2	3	4	5	6	7+		S	F	u
1985	6,334,190	53,222,000	4,242,140	4,274,080	943,675	1,409,030	70,425,115	0.652	0.108	0.088
1986	24,595,900	4,352,930	34,612,100	2,715,450	2,741,730	1,501,650	70,519,760	0.636	0.133	0.107
1987	23,674,700	16,580,000	2,728,790	21,239,100	1,676,950	2,626,440	68,525,980	0.641	0.124	0.100
1988	55,699,600	15,981,800	10,444,200	1,682,050	13,176,500	2,660,480	99,644,630	0.639	0.127	0.103
1989	11,572,000	37,032,900	9,796,090	6,234,030	1,014,660	9,636,700	75,286,380	0.635	0.134	0.108
1990	10,162,000	7,821,540	23,390,700	6,060,680	3,895,370	6,625,720	57,956,010	0.641	0.125	0.101
1991	5,207,060	6,925,910	4,993,080	14,695,600	3,845,240	6,685,040	42,351,930	0.652	0.108	0.088
1992	16,676,400	3,584,990	4,495,820	3,202,430	9,498,800	6,813,090	44,271,530	0.647	0.116	0.094
1993	22,400,000	11,316,400	2,258,690	2,789,190	2,007,500	10,268,000	51,039,780	0.623	0.153	0.122
1994	3,621,280	14,812,100	6,724,870	1,316,610	1,652,630	7,292,950	35,420,440	0.611	0.173	0.136
1995	18,713,600	2,417,960	8,965,230	4,006,390	797,994	5,457,070	40,358,244	0.618	0.162	0.128
1996	21,336,100	12,316,200	1,411,180	5,147,130	2,349,160	3,701,890	46,261,660	0.597	0.196	0.153
1997	2,459,110	13,718,100	6,835,840	766,959	2,870,390	3,415,150	30,065,549	0.585	0.216	0.167
1998	22,408,000	1,612,270	7,955,920	3,893,360	446,021	3,690,410	40,005,981	0.599	0.192	0.151
1999	11,029,900	14,345,000	884,825	4,275,520	2,150,000	2,312,050	34,997,295	0.615	0.166	0.131
2000	10,284,600	7,303,170	8,487,880	515,556	2,542,990	2,681,630	31,815,826	0.626	0.148	0.118
2001	32,235,400	6,883,060	4,427,070	5,075,940	314,274	3,216,850	52,152,594	0.678	0.069	0.057
2002	3,768,100	22,315,300	4,515,880	2,874,930	3,322,780	2,312,200	39,109,190	0.677	0.070	0.058
2003	25,992,300	2,642,670	15,060,900	3,024,850	1,938,410	3,810,960	52,470,090	0.686	0.057	0.048
2004	380,101	18,222,900	1,781,840	10,076,200	2,034,710	3,870,590	36,366,341	0.684	0.060	0.050
2005	112,572,000	271,218	12,476,800	1,212,010	6,883,510	4,036,600	137,452,138	0.703	0.033	0.028
2006	3,750,950	79,754,800	183,339	8,387,480	820,330	7,416,630	100,313,529	0.677	0.070	0.058
2007	7,705,510	2,663,660	53,907,200	123,021	5,660,430	5,560,830	75,620,651	0.677	0.070	0.058
2008	2,069,650	5,486,260	1,805,470	36,238,600	83,028	7,577,930	53,260,938	0.683	0.062	0.051
2009	19,881,000	1,473,470	3,742,390	1,224,060	24,695,300	5,222,310	56,238,530	0.695	0.043	0.036
2010	7,338,910	14,186,200	1,009,890	2,549,060	837,228	20,519,600	46,440,888	0.692	0.048	0.040
2011	7,480,960	5,252,130	9,789,630	692,657	1,753,440	14,658,200	39,627,017	0.693	0.047	0.040
2012	12,603,300	5,335,660	3,613,770	6,704,870	476,739	11,313,800	40,048,139	0.679	0.068	0.056
2013	9,476,880	8,906,470	3,558,160	2,390,340	4,466,030	7,858,600	36,656,480	0.674	0.074	0.061
2014	4,735,840	6,702,570	5,922,020	2,343,050	1,582,940	8,163,300	29,449,720	0.651	0.109	0.088
2015	7,245,780	3,318,600	4,329,210	3,777,700	1,505,920	6,253,510	26,430,720	0.653	0.106	0.086
2016	25,437,100	5,059,150	2,123,540	2,734,680	2,407,680	4,944,380	42,706,530	0.678	0.068	0.057
2017	98,860,200	17,818,100	3,273,500	1,358,150	1,764,040	4,749,590	127,823,580	0.693	0.046	0.039
2018	9,848,990	69,613,600	11,724,000	2,132,610	891,017	4,275,490	98,485,707	0.674	0.074	0.061
2019	12,806,800	6,980,420	46,744,600	7,809,730	1,428,770	3,461,420	79,231,740	0.670	0.080	0.066
2020	34,912,900	9,072,580	4,663,610	30,940,200	5,196,290	3,251,980	88,037,560	0.676	0.072	0.060
2021	51,646,600	24,583,300	5,972,160	3,040,030	20,320,100	5,567,230	111,129,420	0.670	0.080	0.066
2022	18,304,700	36,132,200	15,858,900	3,807,890	1,955,630	16,742,200	92,801,520	0.654	0.105	0.085
2023	47,237,200	12,778,000	23,281,300	10,111,900	2,452,580	12,069,500	107,930,480	0.667	0.085	0.070
2024	22,650,400	32,972,800	8,244,230	14,871,300	6,526,560	9,403,240	94,668,530	0.653	0.106	0.086
2025	18,735,700	15,758,100	21,095,500	5,220,230	9,524,790	10,252,900	80,587,220	0.655	0.102	0.084
2026	4,778,350	13,098,400	10,159,400	13,446,500	3,357,840	12,762,000	57,602,490			

Table 9. Estimated harvest of Lake Erie walleye for 2026, and population projection for 2027 when fishing with 80% F_{msy}. The 2026 and 2027 projected spawning stock biomass values are from the ADMB-2026 recruitment-integrated model. The range in the RAH was calculated using ± one standard deviation from the mean RAH.

SSB_0=	53.765	million kilograms
20% SSB_0=	10.753	million kilograms
F_{msy} =	0.270	

	2026 Stock Size (millions of fish)	80% F_{msy}		Rate Functions			2026 RAH (millions of fish)			Projected 2027 Stock Size (millions)	
Age	**Mean**	**F**	**Sel(age)**	**(F)**	**(S)**	**(u)**	**Min.**	**Mean**	**Max.**	**Mean**	
2	4.778		0.257	0.056	0.687	0.046	0.166	0.221	0.276	22.538	
3	13.098		0.894	0.193	0.599	0.151	1.624	1.978	2.332	3.282	
4	10.159		1.000	0.216	0.585	0.167	1.403	1.699	1.994	7.842	
5	13.447		0.942	0.204	0.592	0.158	1.752	2.131	2.510	5.944	
6	3.358		0.885	0.191	0.600	0.150	0.410	0.503	0.595	7.966	
7+	12.762		0.975	0.211	0.588	0.163	1.707	2.086	2.464	9.521	
Total (2+)	57.602	0.216				0.150	7.063	8.617	10.171	57.093	
Total (3+)	52.824						6.897	8.396	9.895	34.555	
SSB	70.900	mil. kgs								54.168	mil. kgs

probability of 2027 spawning stock biomass being less than 20% SSB_0 = 0.000%

Table 10. Mean catch per hectare of age-0 Walleye observed in bottom trawls towed in the western basin by the Ontario Ministry of Natural Resources (ONT) and Ohio Department of Natural Resources (OH) between 2000 and 2025.

Year Class	Year of Recruitment to Fisheries	OH+ONT Trawl Age-0 CPHa
2000	2002	4.113
2001	2003	28.499
2002	2004	0.139
2003	2005	183.015
2004	2006	5.402
2005	2007	12.665
2006	2008	2.051
2007	2009	25.408
2008	2010	7.238
2009	2011	7.107
2010	2012	26.260
2011	2013	6.502
2012	2014	6.417
2013	2015	10.584
2014	2016	29.050
2015	2017	84.105
2016	2018	9.224
2017	2019	22.852
2018	2020	255.581
2019	2021	225.310
2020	2022	97.480
2021	2023	345.599
2022	2024	83.413
2023	2025	132.474
2024	2026	19.048
2025	2027	127.785

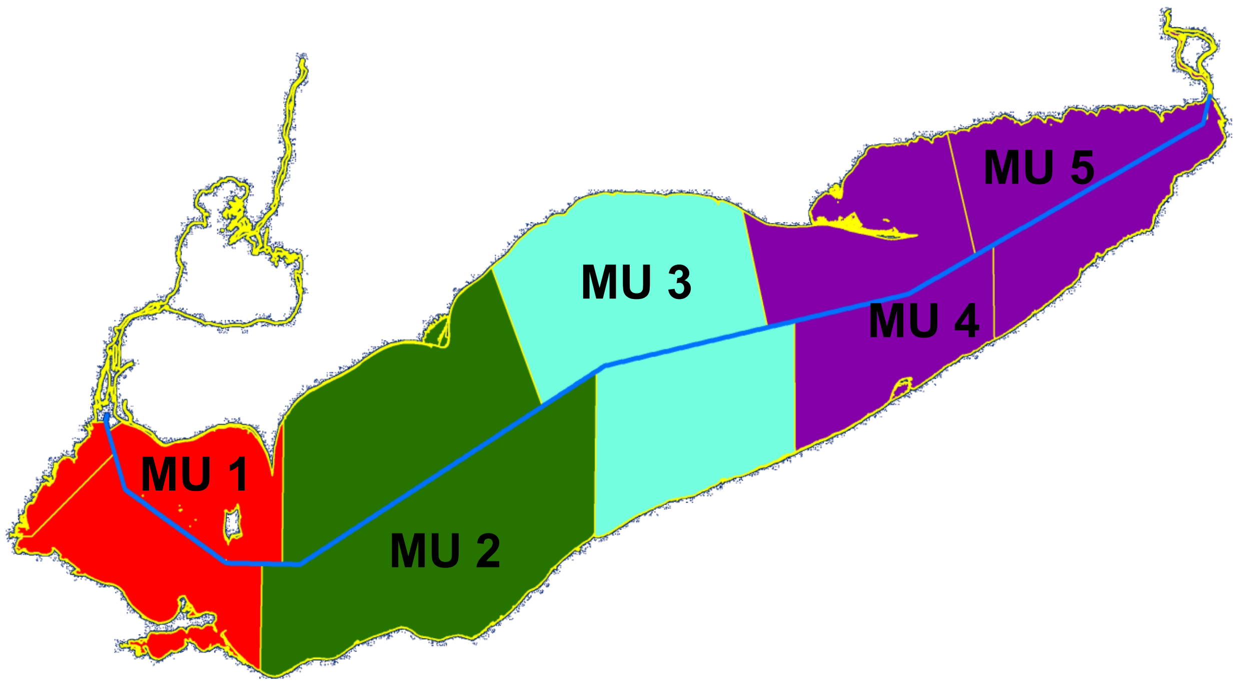

Figure 1. Map of Lake Erie with management units (MU) recognized by the Walleye Task Group for interagency management of Walleye.

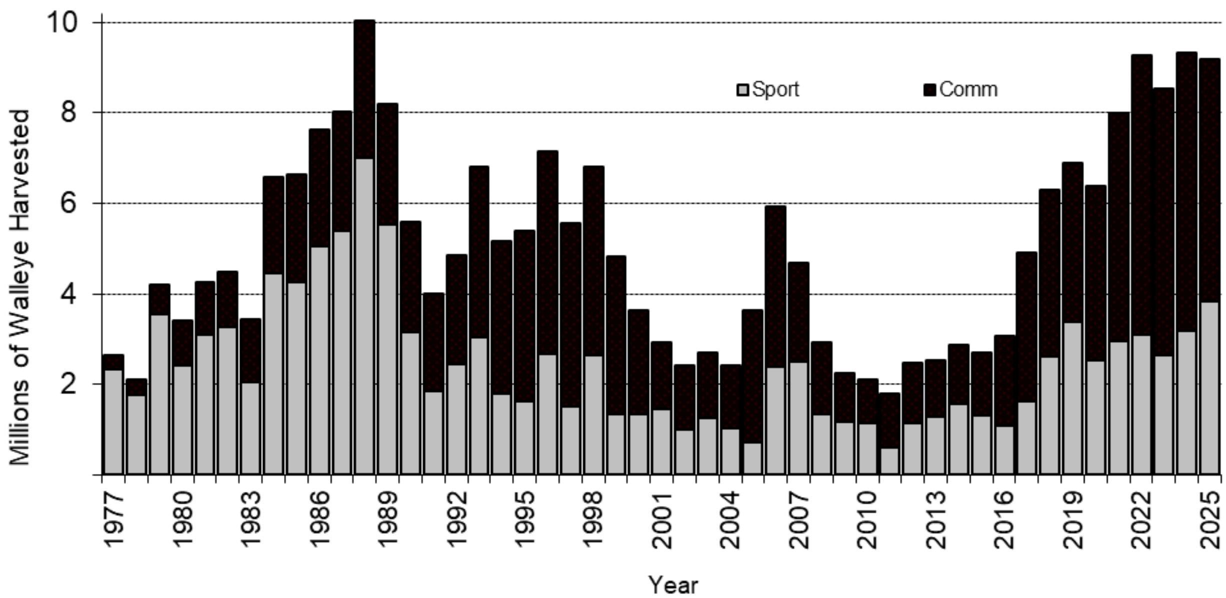

Figure 2. Lake-wide harvest of Lake Erie Walleye by sport and commercial fisheries during 1977-2025.

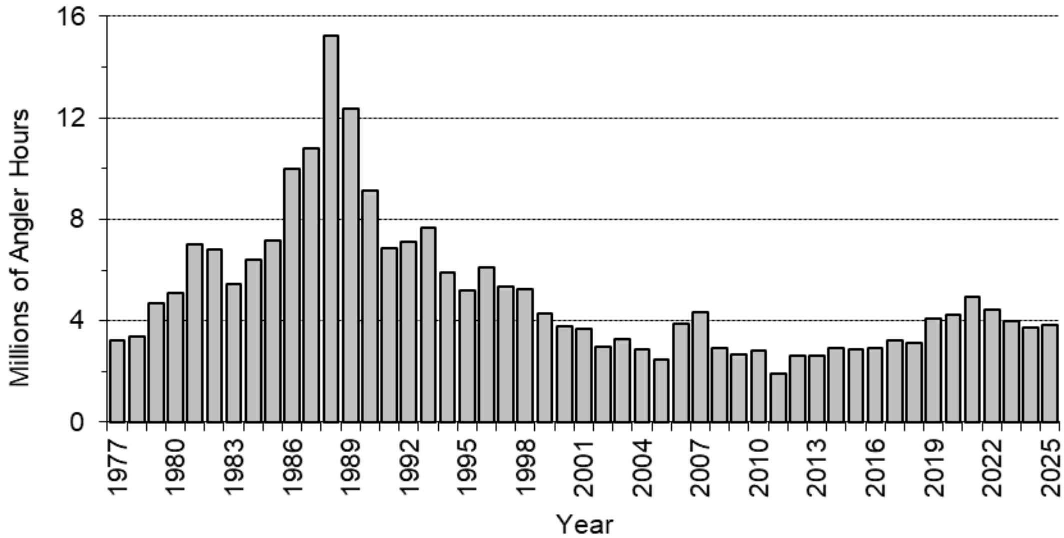

Figure 3. Lake-wide total effort (angler hours) by U.S. sport fisheries for Lake Erie Walleye during 1977-2025.

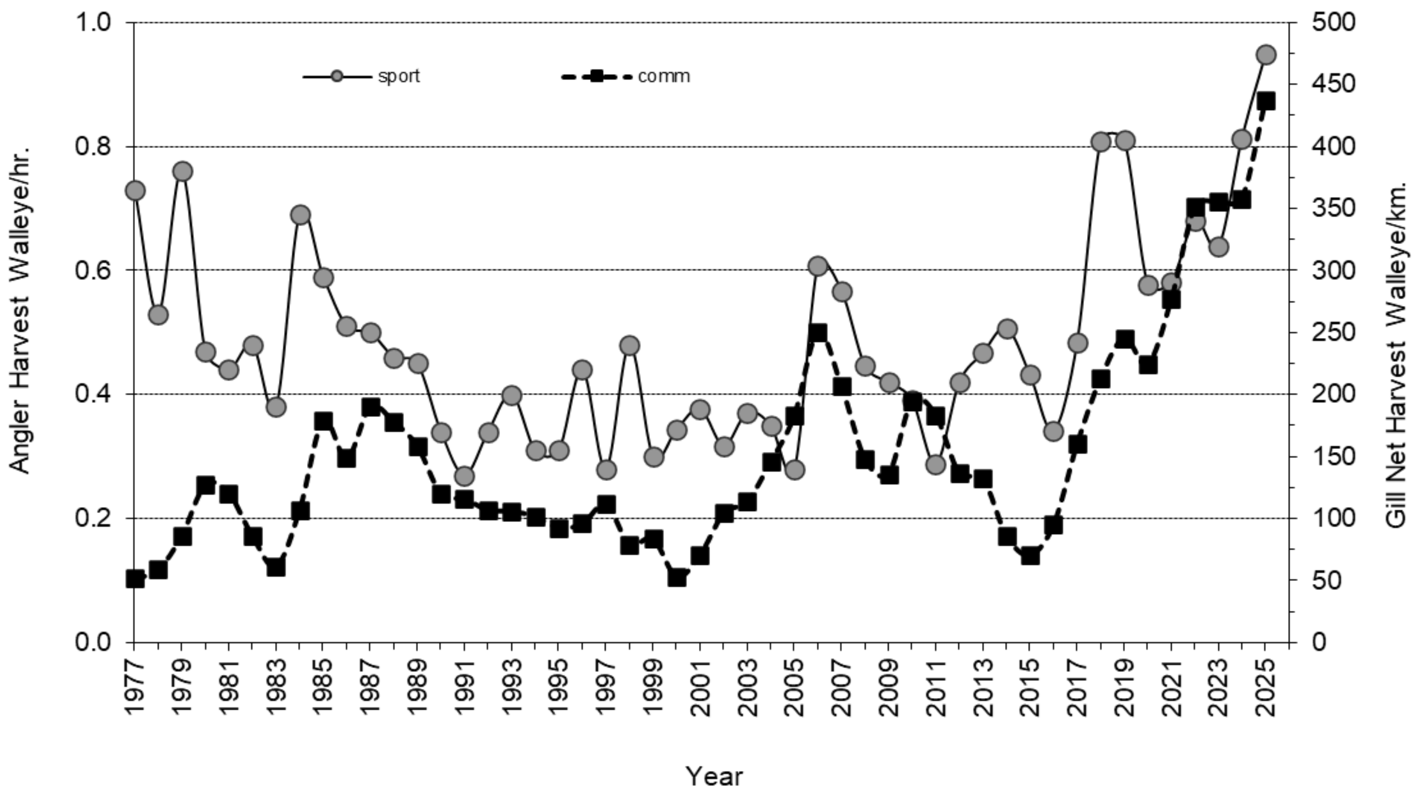

Figure 4. Lake-wide harvest per unit effort (HPE) for Lake Erie sport and commercial Walleye fisheries during 1977-2025.

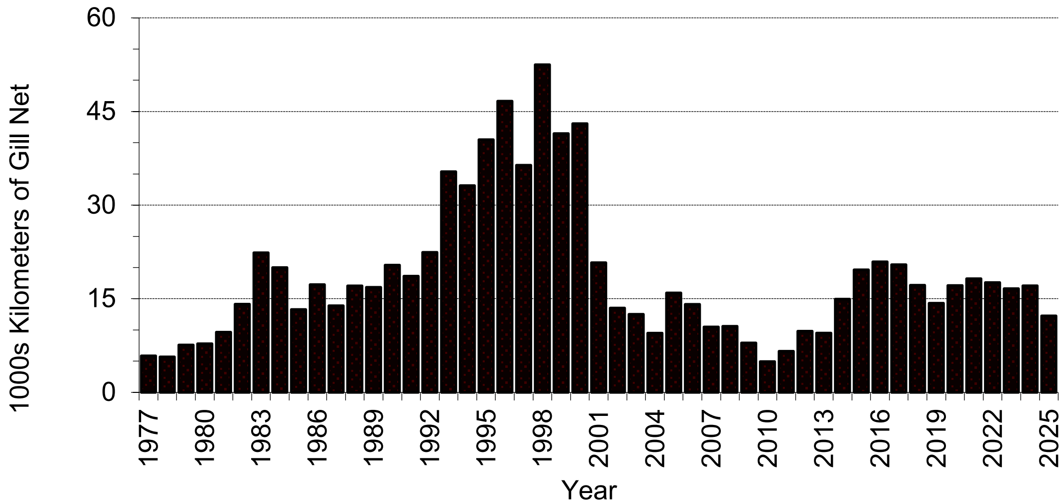

Figure 5. Lake-wide total effort (thousand kilometers of gill net) by Ontario commercial fisheries for Lake Erie Walleye during 1977-2025.

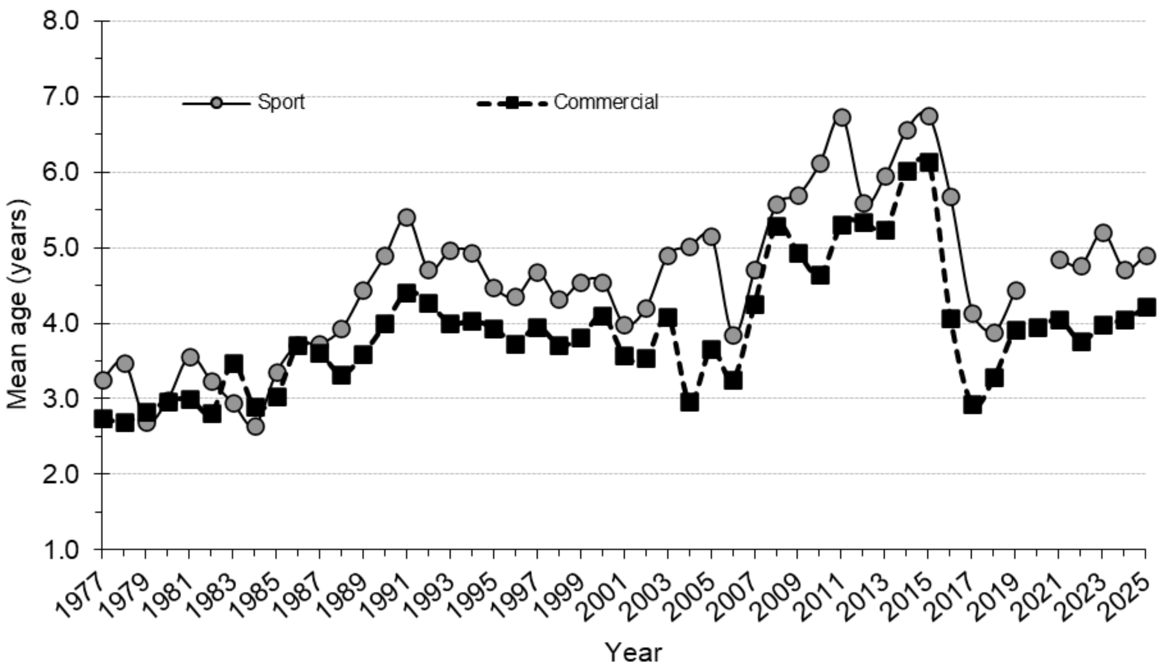

Figure 6. Lake-wide mean age of Lake Erie Walleye in sport and commercial harvests during 1977-2025.

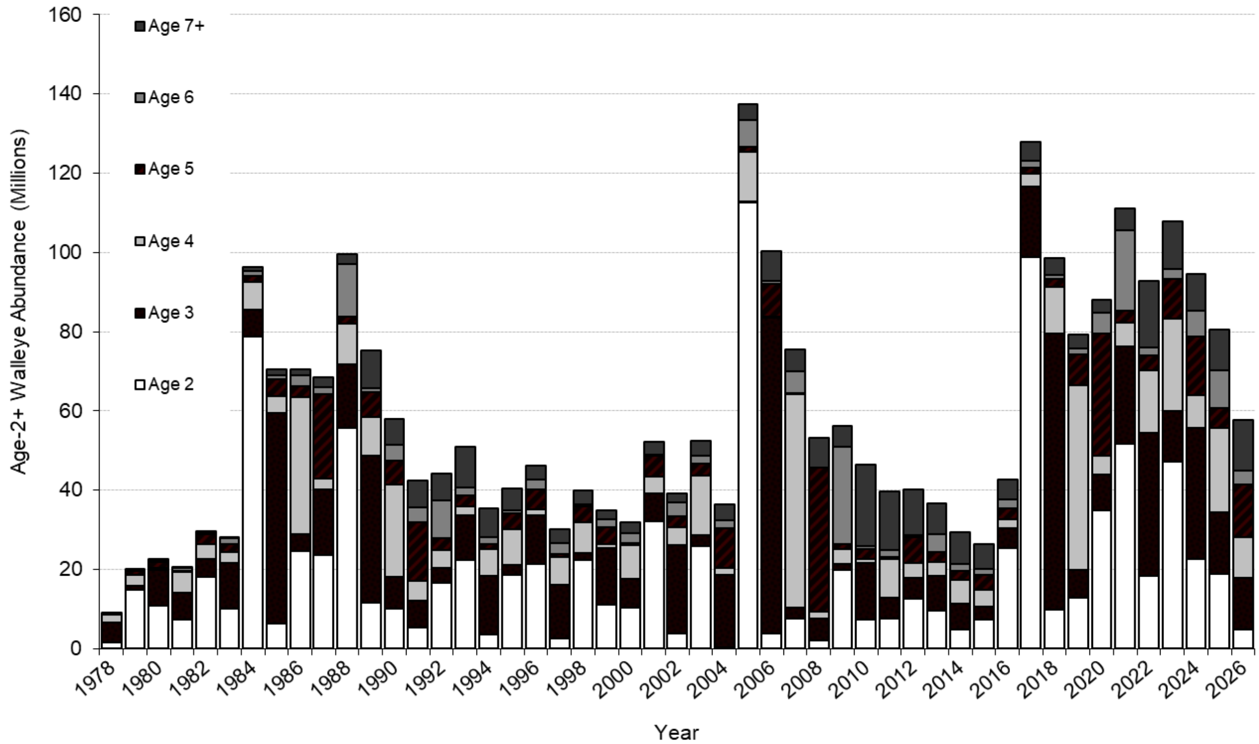

Figure 7. Abundance at age for age-2 and older Walleye in Lake Erie's west and central basins during 1978-2025 and the 2026 projection estimated from the ADMB model. Data shown are from Table 8.

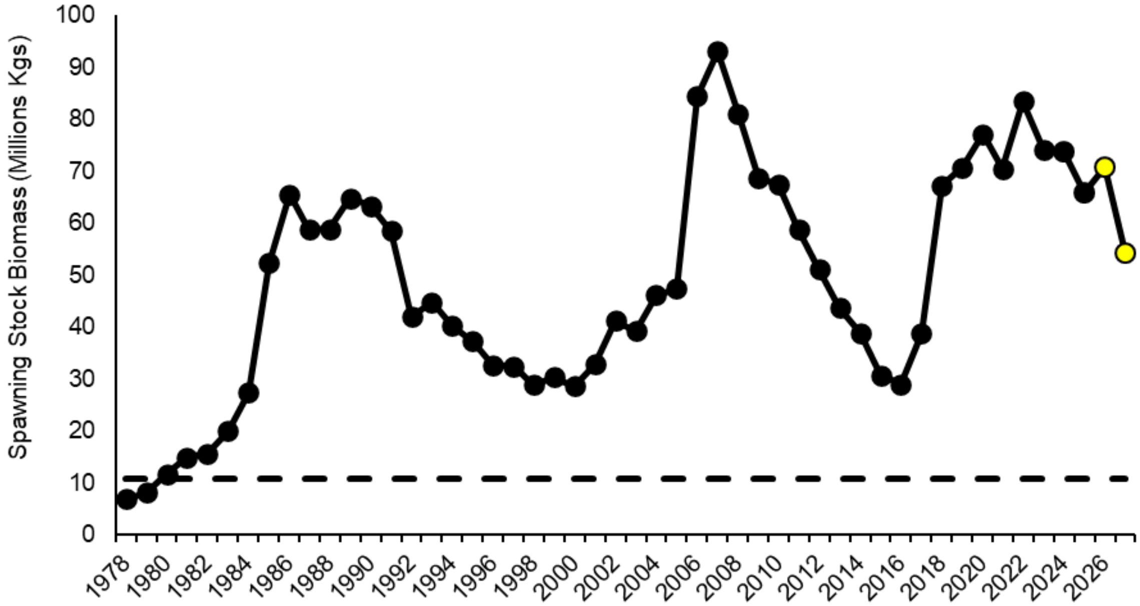

Figure 8. Spawning stock biomass of Walleye in Lake Erie's west and central basins during 1978-2025, with the 2026 and 2027 projections (yellow), estimated from the ADMB model. The black, dashed line represents the limit reference point (20% SSB_0; 10.753 million kgs).

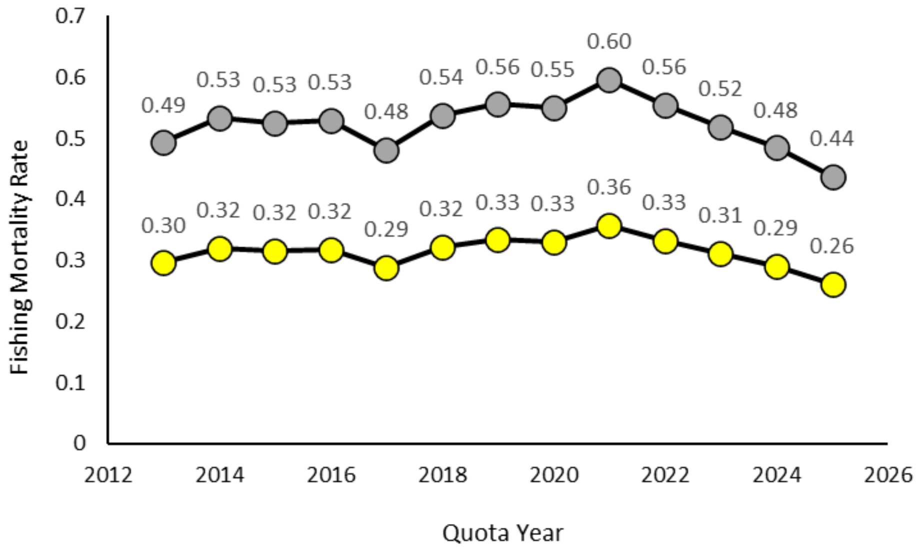

Figure 9. Fishing mortality rate at maximum sustainable yield (grey points; top) and target fishing mortality rates (yellow points; bottom) used by the Walleye Task Group to derive recommended allowable harvest during 2013-2025. Quota year indicates the year the target fishing rate was applied.

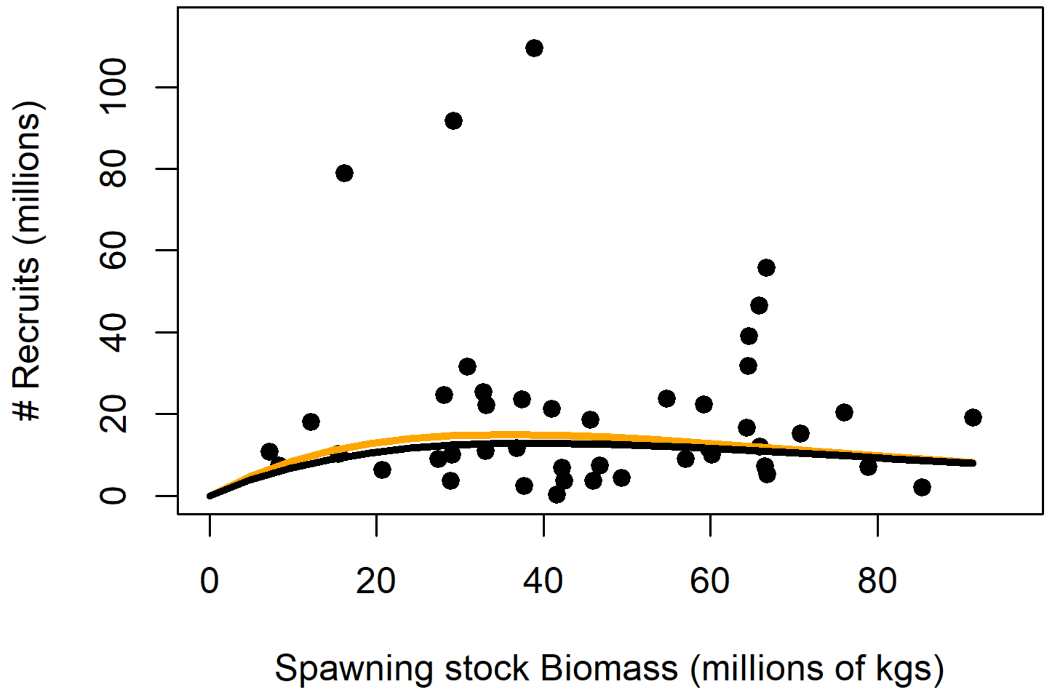

Figure 10. Abundance of age 2 Walleye (millions of fish) versus the spawning stock biomass (millions of kgs) for Lake Erie Walleye between 1980 and 2022. The solid black line represents the WTG stock-recruitment model using the alpha parameter estimated by the model and not the bias corrected alpha. The solid orange line represents the updated stock-recruitment relationship.

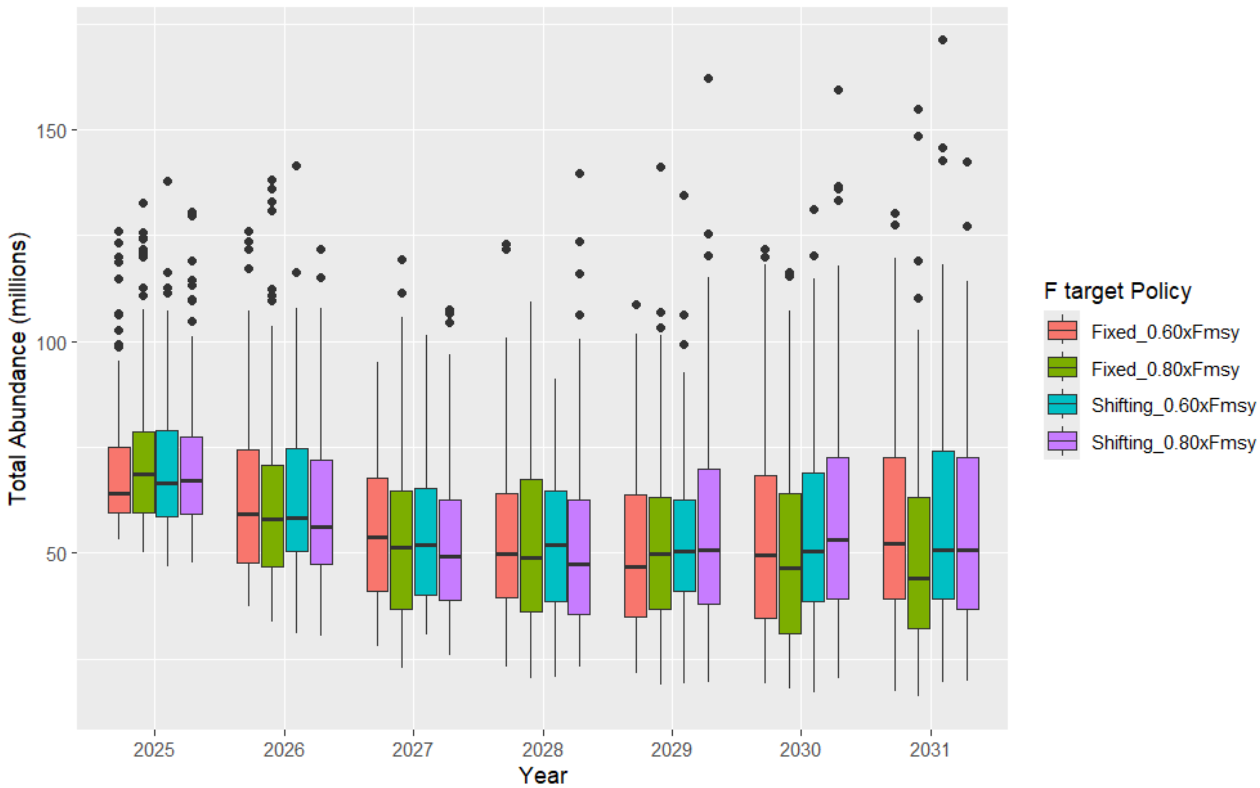

Figure 11. Simulated total abundance of the Lake Erie Walleye population from 2025-2031 when harvest is managed according to four different target reference point policies: 80%F_{MSY} with the target fishing rate estimated annually (Shifting 0.8*F_{MSY}), 80%F_{MSY} with the target fishing rate held constant (Fixed 0.8*F_{MSY}), 60% F_{MSY} with the target fishing rate estimated annually (Shifting 0.6*F_{MSY}), and 60% F_{MSY} with the target fishing rate held constant (Fixed 0.6*F_{MSY}). The shaded region of the box plot represents the 25th and 75th quartile of the data. The dark shaded line within the boxplot represents the median or 50th quartile of the data. The whiskers represent 1.5 times the interquartile range from the top and bottom of the box. The black dots represent data points that fall outside of the whiskers and are considered outliers.

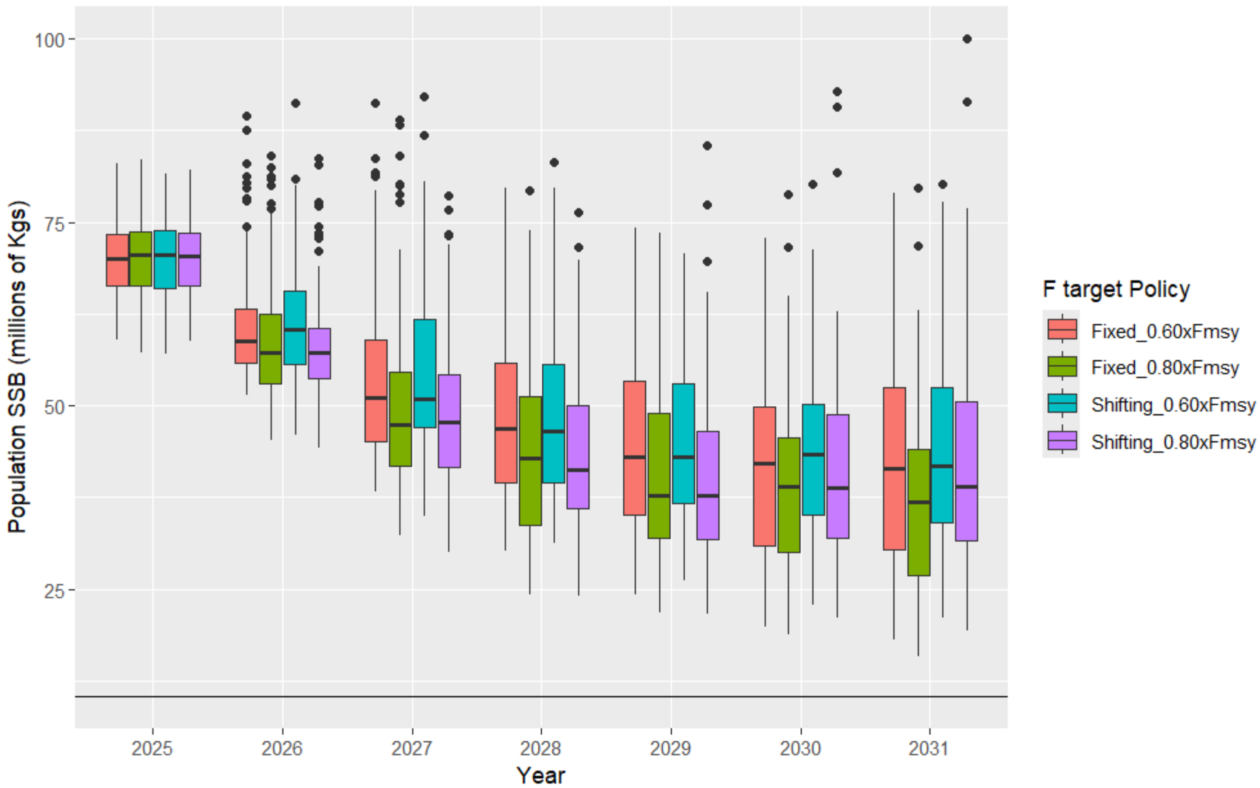

Figure 12. Simulated spawning stock biomass of the Lake Erie Walleye population from 2025-2031 when harvest is managed according to four different target reference point policies: 80%F_{MSY} with the target fishing rate estimated annually (Shifting 0.8*F_{MSY}), 80%F_{MSY} with the target fishing rate held constant (Fixed 0.8*F_{MSY}), 60% F_{MSY} with the target fishing rate estimated annually (Shifting 0.6*F_{MSY}), and 60% F_{MSY} with the target fishing rate held constant (Fixed 0.6*F_{MSY}). The solid black line running horizontally represents the limit reference point (i.e., 20% SSB_0). The shaded region of the box plot represents the 25^{th} and 75^{th} quartile of the data. The dark shaded line within the boxplot represents the median or 50^{th} quartile of the data. The whiskers represent 1.5 times the interquartile range from the top and bottom of the box. The black dots represent data points that fall outside of the whiskers and are considered outliers.

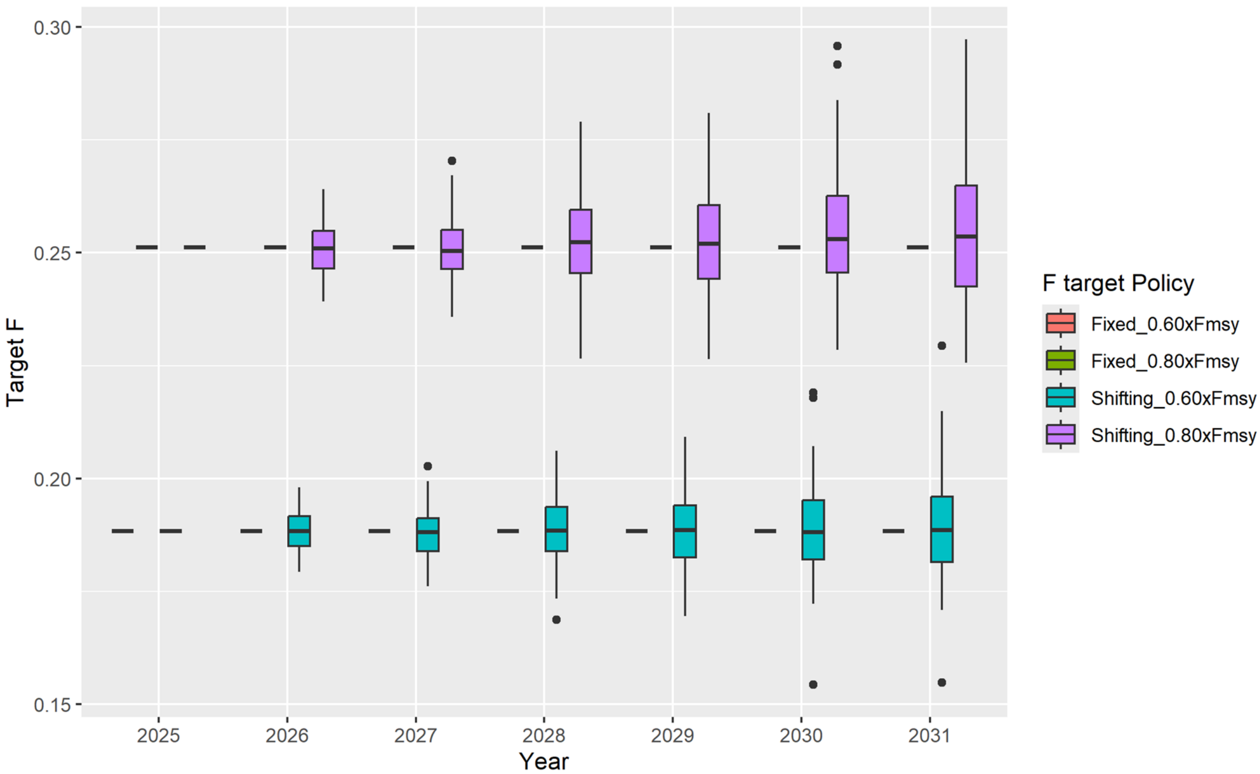

Figure 13. Simulated target reference point applied to the Lake Erie Walleye population from 2025-2031 when managed according to four different target reference point policies: 80%F_{MSY} with the target fishing rate estimated annually (Shifting 0.8*F_{MSY}), 80%F_{MSY} with the target fishing rate held constant (Fixed 0.8*F_{MSY}), 60% F_{MSY} with the target fishing rate estimated annually (Shifting 0.6*F_{MSY}), and 60% F_{MSY} with the target fishing rate held constant (Fixed 0.6*F_{MSY}). The constant target fishing rate scenarios appear as solid black lines because they do not vary year-to-year or across simulation runs. The shaded region of the box plot represents the 25th and 75th quartile of the data. The dark shaded line within the boxplot represents the median or 50th quartile of the data. The whiskers represent 1.5 times the interquartile range from the top and bottom of the box. The black dots represent data points that fall outside of the whiskers and are considered outliers.

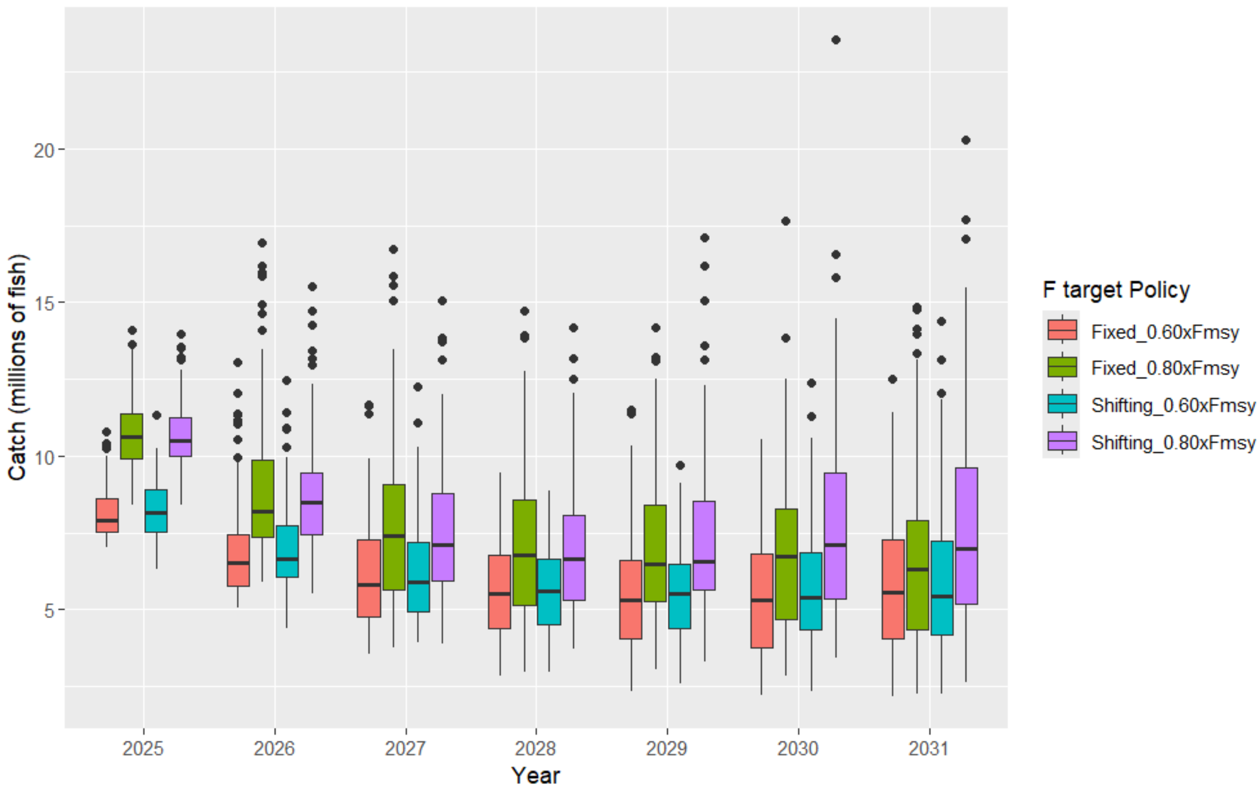

Figure 14. Simulated catch from the Lake Erie Walleye population from 2025-2031 when managed according to four different target reference point policies: 80%F_{MSY} with the target fishing rate estimated annually (Shifting 0.8*F_{MSY}), 80%F_{MSY} with the target fishing rate held constant (Fixed 0.8*F_{MSY}), 60% F_{MSY} with the target fishing rate estimated annually (Shifting 0.6*F_{MSY}), and 60% F_{MSY} with the target fishing rate held constant (Fixed 0.6*F_{MSY}). The shaded region of the box plot represents the 25th and 75th quartile of the data. The dark shaded line within the boxplot represents the median or 50th quartile of the data. The whiskers represent 1.5 times the interquartile range from the top and bottom of the box. The black dots represent data points that fall outside of the whiskers and are considered outliers.