

# Walleye in Ontario

Presented to O.F.A.H. Zone F

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By

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O.F.A.H. Zone F

**Slide 1**

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**01**

Owner, 28/04/2009

# Walleye in Southern Ontario

- 2005 Survey of Recreational Fishing in Ontario
- Walleye in Ontario
- Recent Walleye Stocking Effort in Ontario
- Minnesota Study on Walleye survival rate 1981
- Current Walleye Regulations in FMZ 18
- Walleye in FMZ 18
- Walleye Management Options in FMZ 18
- Fish & Wildlife Program Funding

# 2005 Survey of Recreational Fishing Ontario Results

- According to the 2005 Survey of Recreational Fishing in Canada conducted by DFO, recreational fishing is worth \$2.5 Billion to the economy of Ontario

# 2005 Survey of Recreational Fishing Ontario Results

- 764,374 licensed resident anglers
- 29,074 from other parts of Canada
- 472,505 non-resident anglers

Total

- 1,265,953 licenced anglers in Ontario

# 2005 Survey of Recreational Fishing Ontario Results

## Unlicensed anglers

- 522,000 unlicensed anglers under the age of 18 in 2000
- 429,000 unlicensed anglers under the age of 18 in 2005
- 42,000 unlicensed anglers over the age of 65 in 2005

# 2005 Survey of Recreational Fishing Ontario Results

## Harvest of Fish Species in 2005

- Total Caught- 114.23 million
- Total Kept- 25.05 million
- 18% Kept

# 2005 Survey of Recreational Fishing Ontario Results

- Resident anglers caught 64.72 million and kept 15.73 million- 24%
- Canadian Non-resident anglers caught 1.66 million and kept 266,000- 16%
- Non-resident anglers caught 47.85 million and kept 9.06 million- 18.9%

# 2005 Survey of Recreational Fishing Ontario Results

- Resident anglers caught an average of 85 fish and kept an average of 19
- Canadian Non-resident anglers averaged 57 fish caught and 9 kept
- Non-resident anglers averaged 101 caught and 19 kept

# 2005 Survey of Recreational Fishing Ontario Results

## Fish Species Caught in 2005:

1. Walleye - 30.45 million caught
2. Yellow perch – 21.96 million caught
3. Sunfish- 11.91 million caught
4. Northern pike – 11.88 million caught
5. Smallmouth bass – 11.71 million caught

# 2005 Survey of Recreational Fishing Ontario Results

## Fish Species Caught in 2005:

6. Rock Bass – 6.7 million
7. Largemouth – 4.65 million
8. Crappie – 3.55 million
9. Other – 3.5 million
10. Channel Catfish – 1.77 million
11. Brook Trout – 1.6 million
12. Lake Trout – 1.2 million
13. Rainbow Trout – 1.04 million

# 2005 Survey of Recreational Fishing Ontario Results

## Fish Species Caught in 2005:

14. Smelt – 622,000
15. Whitefish – 545,000
16. Chinook – 514,000
17. Muskellunge – 398,000
18. Brown Trout – 278,000
19. Splake- 138,000
- 20- Coho- 116,000
21. Sturgeon – 69,000

# 2005 Survey of Recreational Fishing Ontario Results

- Fish Species Kept in 2005:
  1. Perch – 7.7 million
  2. Walleye – 5.6 million
  3. Sunfish – 3.3 million
  4. Smallmouth – 1.4 million
  5. Crappie – 1.2 million
  6. Northern Pike – 1.1 million

# 2005 Survey of Recreational Fishing Ontario Results

## Fish Species Kept in 2005:

7. Other – 1.01 million
8. Rock Bass – 921,000
9. Smelt – 596,000
10. Largemouth bass – 568,000
11. Lake trout – 468,000
12. Channel Catfish – 380,000
13. Rainbow trout- 269,000
14. Whitefish- 237,000

# 2005 Survey of Recreational Fishing Ontario Results

## Fish Species Kept in 2005

- 15. Chinook- 175,000
- 16. Brook trout- 168,000
- 17. Splake- 70,000
- 18. Coho- 41,000
- 19. Brown Trout- 28,000
- 20. Sturgeon- 15,000
- 21. Muskellunge- 4,000

# 2005 Survey of Recreational Fishing Ontario Results

## Most Preferred Species in 2005

1. Walleye
2. Northern pike
3. Bass (general)
4. Smallmouth bass
5. Perch

# 2005 Survey of Recreational Fishing Ontario Results

## Top 3 Species Stocked in 2004

1. Lake trout
2. Brook trout
3. Splake

## Top 3 Species Caught in 2004

1. Walleye
2. Perch
3. Sunfish

# 2005 Survey of Recreational Fishing Ontario Results

- What is wrong with this picture?
- If walleye are the preferred fish why is there not more effort in increasing walleye production?

# Walleye in Ontario

- Ontario has 20% of the world's walleye waters
- Ontario has more walleye waters than any other province or state in North America

# Walleye in Ontario

- 4038 walleye lakes according to the “Atlas of Ontario Walleye Lakes”
- 3498 lakes have native walleye
- 297 lakes have introduced walleye stock
- 243 lakes have walleye of unknown origin

# History of Walleye Stocking in Ontario

- 3.6 Billion walleye stocked since 1904
- Walleye Stocking activity peaked in the 1940's and 1950's when 2.39 billion walleye were stocked
- Plantings averaged 117 million eggs and fish/year
- Many area lakes experienced walleye introductions- example. Crotch Lake 1934 to 1959 ; Bob's Lake 1926- 1954; Malcolm Lake 1936-1955

# History of Walleye Stocking in Ontario

## Crotch Lake Walleye Stocking 1934-1959

- Total of 7,650,000 Eyed Eggs
- Received 1,120,000 Eyed Eggs in 1959

# History of Walleye Stocking in Ontario

Bob's Lake Walleye Stocking  
1926-1954

Total number of 15,300,000 Eyed Eggs

1986-1994

Total number of 305,044 fry and fingerlings

2009

Rehabilitation Stocking 50,180 fingerlings

# History of Walleye Stocking in Ontario

- 90% of plantings were Eggs and Fry
- Community Fisheries Involvement Program (CFIP) partnerships began in 1981
- 1981-1991 – CFIP contributed 77% of the total number of walleye stocked in Ontario

# Walleye Stocking in Ontario

- On Average 92% of the stocking effort in Ontario's Hatcheries are devoted to stocking salmonids or trout
- Only 8% of the stocking effort in Ontario's hatcheries are devoted to stocking Walleye
- Large numbers of walleye are currently reared by Community Fisheries Involvement Program groups (CFIP)
- Virtually all of these fish are released as either fry or pond-reared summer fingerlings

# Walleye Stocking in Ontario

- CFIP early stocking efforts – collecting fertilized eggs, bell jar hatcheries, and releasing fry
- Now CFIP groups- encouraged to pond rear fry to summer fingerlings and discouraged from fry stocking
- Difficulties associated with pond culture limit production in fingerling programs including water temperature, dissolved oxygen, aquatic vegetation, predatory insects, and cannibalism
- Result: Some CFIP groups have survived because of good pond rearing facilities- others have stopped because of no or poor pond rearing facilities

# MNR Provincial Fish Stocking Summary 2000

- Southern Region 71,784 walleye stocked
- Southern Region 1,493,810 total fish stocked
- Southern Region Walleye Stocking 4.81 % of total number of fish stocked in the Southern Region

# MNR Provincial Fish Stocking Summary 2001

- Southern Region 111,546 walleye stocked
- Southern Region 1,537,347 total fish stocked
- Southern Region Walleye stocking 7.2% of total number of fish stocked in the Southern Region

# MNR Provincial Fish Stocking Summary 2002

- Southern Region 32,286 walleye stocked
- Southern Region 1,424,216 total fish stocked
- Southern Region Walleye Stocking- 2.26% of total number of fish stocked in Southern Region

# MNR Provincial Fish Stocking Summary 2003

- Southern Region 101,773 walleye stocked
- Southern Region 1,711,634 total fish stocked
- Southern Region Walleye Stocking 5.95% of total number of fish stocked in Southern Region

# MNR Provincial Fish Stocking Summary 2004

- Southern Region 25,238 walleye stocked
- Southern Region 1,894,166 total fish stocked
- Southern Region Walleye Stocking 1.33% of total number of fish stocked in Southern Region

# MNR Provincial Fish Stocking Summary 2005

- Southern Region 98,145 walleye stocked
- Southern Region 1,404,366 total fish stocked
- Southern Region Walleye Stocking 6.9% of total number of fish stocked in Southern Region

# MNR Provincial Fish Stocking Summary 2006

- Southern Region 198,055 walleye stocked
- Southern Region 1,531,899 total fish stocked
- Southern Region Walleye Stocking 12.9% of total number of fish stocked in Southern Region

# MNR Provincial Fish Stocking Summary 2007

- Southern Region- 0 walleye stocked
- Southern Region- 1,296,436 total fish stocked
- Southern Region Walleye Stocked- 0% of total number of fish stocked in Southern Region

# MNR Provincial Fish Stocking Summary 2008

- Southern Region 44,377 walleye stocked
- Southern Region 1,112,516 fish stocked
- Southern Region Walleye Stocked- 3.9% of total number of fish stocked in Southern Region

# MNR Provincial Stocking Summary 2009

- Southern Region 110,533 walleye stocked
- Southern Region 1,140,434 fish stocked
- Southern Region walleye stocked – 9.69% of total number of fish stocked in Southern Region



# Walleye Stocking in Ontario

- Why is the stocking effort for walleye so low in spite of its high rank as the preferred fish by anglers?

# Walleye Stocking Purpose in Ontario

- Introductions-lakes with simple fish communities- no walleyes present
- Rehabilitation-restore depressed populations and create self-sustaining populations
- Supplementation- adding or topping up pre-existing population to enhance recruitment and provide higher quality fishery- Supplemental stocking is discouraged
- Artificial (PGT)-create or sustain recreational fisheries- no expectation of natural recruitment

# Ontario Walleye Stocking Rates

- Eyed eggs – 5000/ha
- Fry- 2,000 fish/ha
- Summer fingerlings- 100-125 fish/ha (25-51mm) or (1-2 in.)
- Fall fingerlings- 25-50 fish/ha (91-122mm) or (3.5-5 in.)
- Sub-adults and Adults- 80-450 ha lakes- 0.9 fish/ha
- lakes 450- 5,000 ha- 1 fish/3 ha

# Ontario Walleye Stocking 2006

- 1,376,463 fry or 82.7% of total
- 234,640 fingerlings or 14.1% of total
- 52,647 advanced fingerlings or 3.16% of total
- 462 adults or .028% of total
- Total 1,664,212

# Total Stocking By Species in Ontario 2004

|                   |                 |
|-------------------|-----------------|
| • Atlantic Salmon | 222,284         |
| • Aurora Trout    | 42,262          |
| • Brook Trout     | 1,472,153       |
| • Brown Trout     | 401,579         |
| • Chinook Salmon  | 197,627         |
| • Lake Trout      | 4,390,514       |
| • Lake Whitefish  | 151,167         |
| • Muskellunge     | 300             |
| • Rainbow Trout   | 415,926         |
| • Splake          | 883,735         |
| • Walleye         | 194,630 (2.32%) |
| Total             | 8,372,177       |

# Walleye Stocking Costs White Lake -1992

- Fry- .046 cents
- Summer fingerlings- 3.4 cents
- Fall or advanced fingerlings- 27 cents
- Cost of providing a walleye of catchable size to the fishery- hard to measure- some studies estimate the cost from 68 cents to \$16.35 US
- How much is a keepable walleye worth?

# Minnesota Study on Walleye Survival Rate

## Fertilization Ratios

- Nature 40% eggs fertilized  
e.g. 150,000 eggs – 60,000 fertilized
- Manual stripping 80% of eggs fertilized  
e.g. 150,000 eggs – 120,000 fertilized

# Minnesota Study on Walleye Survival Rate

## Hatch Ratios ( fry size)

- In nature 2% hatch rate

e.g. 150,000 eggs – 60,000 fertilized – 1200 fry

- Manual stripping and Jar Hatchery 70% hatch rate

e.g. 150,000 eggs – 120,000 fertilized – 84,000 fry

# Minnesota Study on Walleye Survival Rate

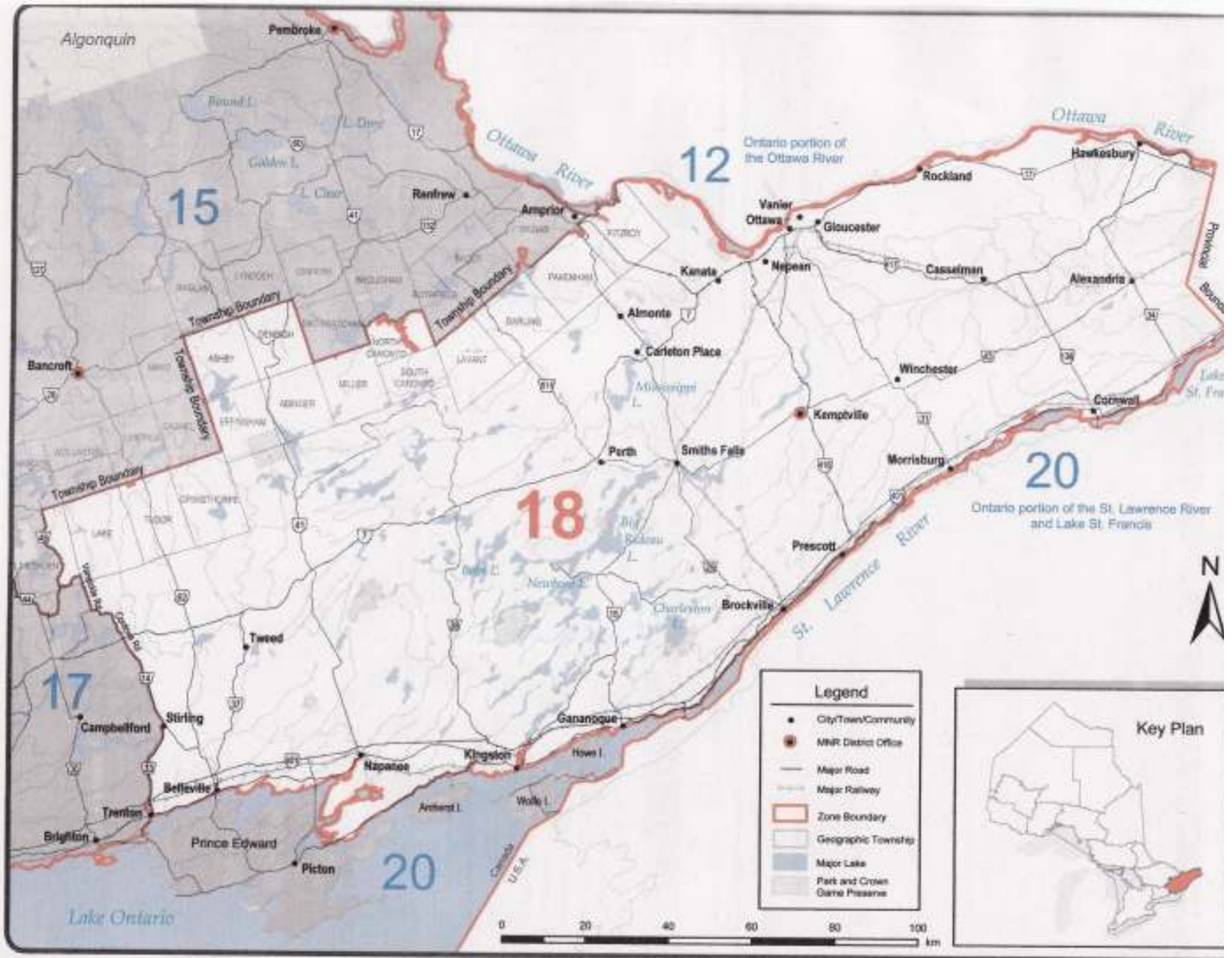
Fingerling Size Ratio ( 4 inches approximately)

- In Nature 1%

e.g. 150,000 eggs – 60,000 fertilized – 1200 fry –  
12 fingerlings

- From Jar Hatchery to fry to ponds to fingerling  
2.94%

e.g. 150,000 eggs – 120,000 fertilized – 84,000 fry –  
2470 fingerlings



Algonquin

Pembroke

15

12

Ontario portion of the Ottawa River

Ottawa River

Hawkesbury

Rockland

Vanier  
Ottawa

Gloucester

Kanata

Napanee

Casselman

Alexandria

Almonte

Carleton Place

Winchester

Cornwall

Kempville

Morrisburg

20

Ontario portion of the St. Lawrence River and Lake St. Francis

18

Perth

Smiths Falls

Prescott

St. Lawrence River

Brockville

Gananoque

17

Campbellford

Stirling

Tweed

Napanee

Kingslot

Howe I.

Brigflon

Trenton

Belleville

Prince Edward

Picton

20

Lake Ontario

0 20 40 60 80 100 km

Legend

- City/Town/Community
- MNR District Office
- Major Road
- Major Railway
- ▭ Zone Boundary
- ▭ Geographic Township
- ▭ Major Lake
- ▭ Park and Crown Game Presence

Key Plan



# Walleye Regulations

## FMZ 18 2010

- Open Seasons: Jan. 1 to March 1 & 2<sup>nd</sup> Sat. in May to Dec. 31
- Limits: S- 4; not more than 1 greater than 46 cm. or 18.1 in.
- Limits: C- 2; not more than 1 greater than 46 cm. or 18.1 in.

# Walleye Regulations FMZ 18

## Exceptions-Size Limits

- Bennett Lake: must be > 46cm. Or 18.1 in.
- Christie Lake: none between 35-50 cm. or 13.8-19.7 in.
- Clayton Lake: must be > 41 cm. or 16.1 in.
- Crotch Lake: none between 46-61 cm. or 18.1- 24 in.
- Fawn Lake: none between 46-61 cm. or 18.1-24 in. (see Crotch Lake)
- Pike Lake: none between 35-50 cm. or 13.8-19.7 in.

# Walleye Regulations FMZ 18

## Exceptions- Size Limits

- Taylor Lake: must be > 41 cm. or 16.1 in.
- Twin Island Lake: none between 46-61 cm. or 18.1-24 in. (see Crotch Lake)
- Upper Rideau Lake: S-2; C-1 must be > 50 cm. or 19.7 in.
- White Lake: none between 35-50 cm. or 13.8-19.7 in.

# Walleye Regulations FMZ 18

## Sanctuaries No Fishing Mar. 1- Fri. Before 2<sup>nd</sup> Sat. In May

Christie Lake Bathurst Twp downstream to bridge at Tay River Lot 7, Con. 11

- Crotch Lake and Mississippi River- Palmerston Twp.; from Sidedam Rapids to north shore of Skull Island- **no fishing Mar. 1 to June 15**
- Dalhousie Lake and Mississippi River within 300 metres ( 984 ft.) radius of the bridge of the twp. Road crossing the Mississippi River where it enters Dalhousie Lake; Dalhousie Twp.
- Hopple Creek- Osnabruck Twp

# Walleye Regulations FMZ 18

## Exceptions-Sanctuaries

- Indian River and Clayton Lake within 300 m. (984 ft) radius of Command Bridge crossing Indian River where it enters Clayton Lake
- Mississippi River-Drummond Twp., from 79.2 m (260 ft.) of Main St to Mississippi Lake
- Mississippi River- Drummond Twp., from 79.2 m. ( 260 ft. ) east to 240.8 ( 750 ft.) west of Main St- **Closed all year**

# Walleye Regulations FMZ 18

## Exceptions- Sanctuaries

- Mississippi River- Pakenham Twp. Between the falls in the town of Almonte and upstream side of bridge on Lanark County Road 20-
- Raisin River- those portions of the river in the village of Martinstown and Lot 43, Con. 1 north side of Raisin River in Charlottenburgh Twp.-
- Sand Lake- N. Crosby Twp. that part lying in Lots 15 and 16 in Con. 1X and Lot 15 in Con. V111, and the waters of the river flowing between Wolfe and Sand Lake- no fishing from Mar.1 to last Sat. in June

# Walleye Regulation FMZ 18

## Exceptions- Sanctuaries

- South Nation River- Cambridge Twp., Coupal's dam in Casselman downstream to the westerly limit of Lot. 11 Con. V-
- South Nation River- Finch Twp. Hamlet of Crysler-
- South Nation River- N. Plantagenet Twp. Between north side of Con. 1V and a point 30.5 m. (100 ft.) upstream of CPR right-of-way-
- South Nation River- Winchester Twp. Village of Chesterville
- Tay River- Bathurst Twp. Lots 3 to 6 In Con. 2 & 3

# Sanctuaries FMZ 18

- Are walleye sanctuaries necessary given that the walleye season is closed between March 1 and the Fri. Before the 2<sup>nd</sup> Sat. In May?

# Walleye Regulations FMZ 18

- Fishing regulations are designed to provide a sustainable fishery

Where do we go from here?

- Size limits?
- Possession limits?
- Season?
- Sanctuaries?
- Stocking?

# Walleye Regulations FMZ 18

## Proposed Options- 2005

- Option 1: Minimum Size Limit 50 cm (19.7"), 4 Fish Limit ( 2 for Conservation Licence)
- Option 2: Maximum Size Limit 40 cm (15.7"), 4 Fish Limit ( 2 for Conservation Licence)
- Option 3: Protected Slot Limit 35-55 cm (13.8-21.7 ") 4 Fish Limit ( 2 Conservation Licence)
- Option 4: Protected Slot Limit 40-65 cm (15.7-25.6") 4 Fish Limit (2 Conservation Licence)

# Current Walleye Regulations FMZ 18

- Size Limits: S-4; not more than 1 greater than 46. cm (18.1") C-2; not more than 1 greater than 46 cm (18.1")
- Open Season: Jan. 1 to March 1 & 2<sup>nd</sup> Sat. In May to Dec. 31

# Current Walleye Regulation FMZ 18

## Enforcement Issues

- Size Limits- exceptions on some lakes
- Walleye sanctuaries- are they necessary? Do they protect other fish?
- Walleye closes: March 1
- Perch: Open all year
- Northern Pike Season: Jan. 1 to **March 31 & 2<sup>nd</sup>** Sat. In May to Dec. 31
- Ice Huts Removal : March 15
- What is wrong with this picture?

# Current Walleye Regulations FMZ 18

- What would you like to see retained in the current regulations?
- What would you like to see changed in the current regulations?

# Walleye Lakes FMZ 18

## Kemptville District

- Bennett Lake, Big Rideau
- Christie Lake, Clayton Lake, Crosby Lake,
- Dalhousie Lake, Flower Round Lake, Joes Lake
- Long Lake, Lower Rideau Lake
- Mississippi Lake
- Park Lake, Patterson Lake, Pike Lake
- Robertson Lake
- Taylor Lake
- Upper Rideau

# Walleye Lakes FMZ 18

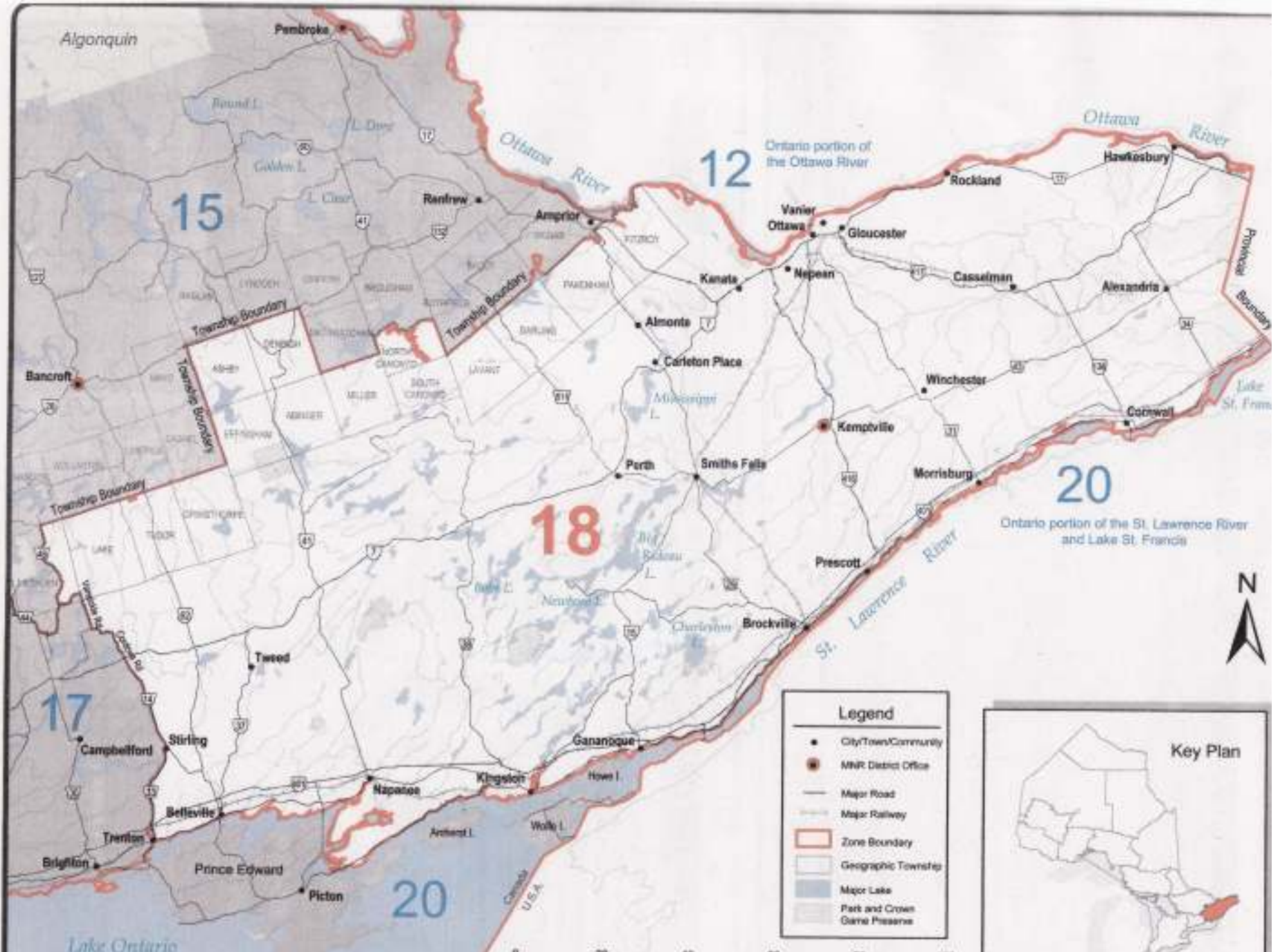
## Kingston Area

- Beaver Lake, Big Clear Lake, Bob's Lake
- Crowe Lake
- Depot Lakes
- Hambly Lake
- Sand (Davis) Lake, Sand (Westport) Lake, Sharbot Lake
- Thirty Island Lake
- Wolfe Lake

# Walleye Lakes FMZ 18

## Bancroft District (Mazinaw Area)

- Big Gull (Clarendon) Lake, Buckshot Lake
- Canonto Lake, Crotch Lake
- Denbigh Lake
- Govan Lake
- Kashwakamak Lake, Kennebec Lake
- Malcolm Lake, Marble Lake, Mazinaw Lake, Mississagagon Lake
- Pine Lake
- Redhorse Lake



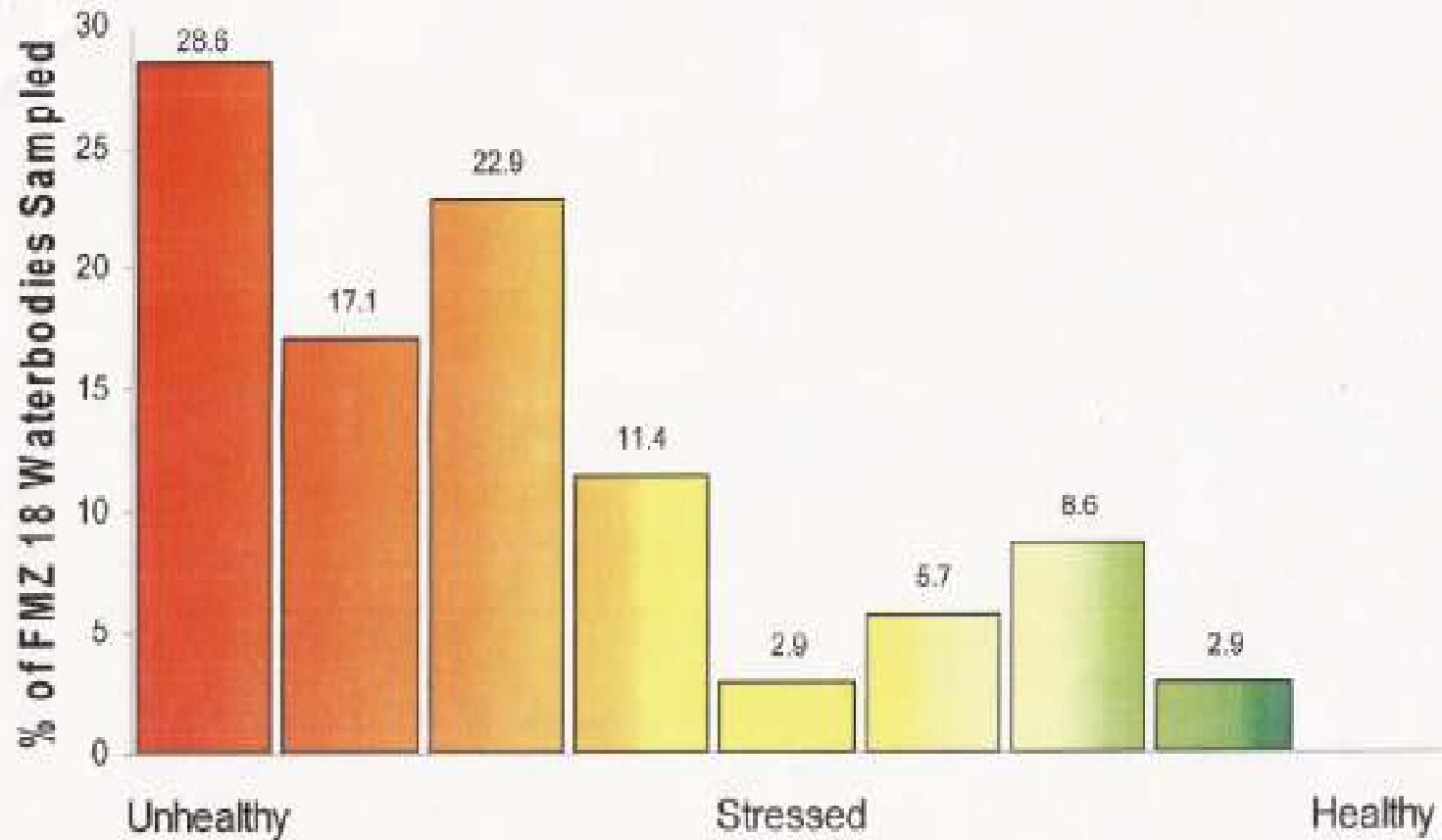
# Walleye in FMZ 18

## Indices Utilized to Classify Walleye Populations

| Criteria | Indicator                            | Healthy           | Stressed          | Unhealthy         |
|----------|--------------------------------------|-------------------|-------------------|-------------------|
| Catch    | Mean age                             | 4.6 years         | 3.8 years         | 4.0 years         |
|          | <b>Maximum age</b>                   | <b>17.4 years</b> | <b>14.6 years</b> | <b>11.6 years</b> |
|          | <b># of age classes <sup>1</sup></b> | <b>11.7</b>       | <b>8.1</b>        | <b>4.8</b>        |
|          | Mean size                            | 394mm             | 369mm             | 383mm             |
|          | <b>Mature female H</b>               | <b>0.76</b>       | <b>0.61</b>       | <b>0.36</b>       |

1. These are the number of age classes in the FWIN catch with more than 1 sample (i.e.,  $n \geq 2$ ).

# Walleye In FMZ 18



# Walleye in FMZ 18

16 out of 35 or 45.7% of walleye lakes are:

Unhealthy/Collapsed including:

Pringle Lake, Sheldrake Lake, Second Depot Lake, Pine Lake, Redhorse Lake, Pike Lake, Dalhousie Lake, Mississippi Lake, Long Lake, Horseshoe Lake, Mississagagon Lake, Malcolm Lake, Bennett Lake, Stoco Lake, Beaver Lake, Wolfe Lake

# Walleye in FMZ 18

12 out of 35 or 34.3% of walleye lakes are:

Unhealthy/Collapsed to Stressed/Unstable

Including:

Sharbot Lake, Denbigh Lake, Georges Lake,  
Crowe Lake, Kennebec Lake, Big Clear Lake,  
Buck Lake, Govan Lake, Canonto Lake, Bobs  
Lake, Kashawakamak Lake

# Walleye in FMZ 18

3 out of 35 or 8.6% of walleye lakes are:  
Stressed/Unstable including:

Crotch Lake, Bull Lake, Big Gull Lake

# Walleye in FMZ 18

3 out of 35 or 8.6% of walleye lakes are:

Stressed/Unstable to Healthy/Stable including:

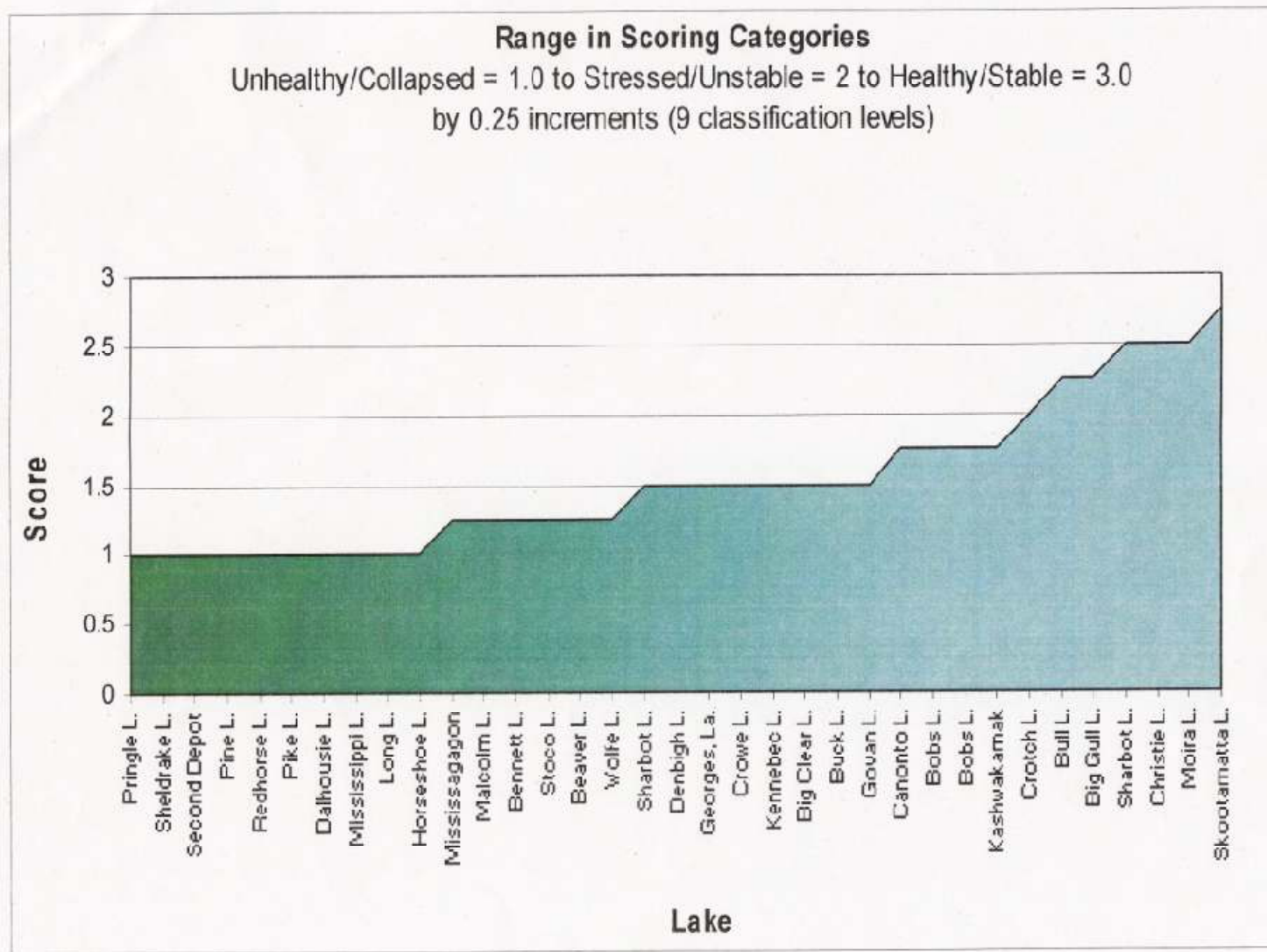
Sharbot Lake, Christie Lake, Moira Lake

# Walleye in FMZ 18

1 out of 35 or 2.9% of walleye lakes are:  
Healthy/Stable

Skootamatta Lake

# Walleye in FMZ 18



# Walleye in FMZ 18

| Lake             | Score | Category                                 |
|------------------|-------|--|
| Pringle L.       | 1     | Unhealthy/collapsed                      |
| Sheldrake L.     | 1     | Unhealthy/collapsed                      |
| Second Depot L.  | 1     | Unhealthy/collapsed                      |
| Pine L.          | 1     | Unhealthy/collapsed                      |
| Redhorse L.      | 1     | Unhealthy/collapsed                      |
| Pike L.          | 1     | Unhealthy/collapsed                      |
| Dalhousie L.     | 1     | Unhealthy/collapsed                      |
| Mississippi L.   | 1     | Unhealthy/collapsed                      |
| Long L.          | 1     | Unhealthy/collapsed                      |
| Horseshoe L.     | 1     | Unhealthy/collapsed                      |
| Mississagagon L. | 1.25  | Unhealthy/collapsed                      |
| Malcolm L.       | 1.25  | Unhealthy/collapsed                      |
| Bennett L.       | 1.25  | Unhealthy/collapsed                      |
| Stoco L.         | 1.25  | Unhealthy/collapsed                      |
| Beaver L.        | 1.25  | Unhealthy/collapsed                      |
| Wolfe L.         | 1.25  | Unhealthy/collapsed                      |
| Sharbot L.       | 1.5   | Unhealthy/Collapsed to Stressed/Unstable |
| Denbigh L.       | 1.5   | Unhealthy/Collapsed to Stressed/Unstable |
| Georges, La.     | 1.5   | Unhealthy/Collapsed to Stressed/Unstable |
| Crowe L.         | 1.5   | Unhealthy/Collapsed to Stressed/Unstable |
| Kennebec L.      | 1.5   | Unhealthy/Collapsed to Stressed/Unstable |
| Big Clear L.     | 1.5   | Unhealthy/Collapsed to Stressed/Unstable |
| Buck L.          | 1.5   | Unhealthy/Collapsed to Stressed/Unstable |
| Govan L.         | 1.5   | Unhealthy/Collapsed to Stressed/Unstable |
| Canonto L.       | 1.75  | Unhealthy/Collapsed to Stressed/Unstable |
| Bobs L.          | 1.75  | Unhealthy/Collapsed to Stressed/Unstable |
| Bobs L.          | 1.75  | Unhealthy/Collapsed to Stressed/Unstable |
| Kashwakamak L.   | 1.75  | Unhealthy/Collapsed to Stressed/Unstable |
| Crotch L.        | 2     | Stressed/Unstable                        |
| Bull L.          | 2.25  | Stressed/Unstable                        |
| Big Gull L.      | 2.25  | Stressed/Unstable                        |
| Sharbot L.       | 2.5   | Stressed/Unstable to Healthy/Stable      |
| Christie L.      | 2.5   | Stressed/Unstable to Healthy/Stable      |
| Moira L.         | 2.5   | Stressed/Unstable to Healthy/Stable      |
| Skootamatta L.   | 2.75  | Healthy Stable                           |

Unhealthy/Collapsed = 1.0 to Stressed/Unstable = 2 to Healthy/Stable = 3.0 by 0.25 increments  
(9 classification levels)

# Walleye in FMZ 18

Recent Walleye Stocking

Mississagagon Lake- intermittent Fingerling stocking since 1983

Report Card: Unhealthy/Collapsed

Skootamatta Lake – Fry stocking – eggs from Skootamatta Lake- 1984, 1989, 1998, 1999 (2), 2007

Report Card: Healthy/ Stable

# Walleye in FMZ 18

One lake has received mostly fingerling stocking since 1983. Mississagagon Lake is rated Unhealthy/Collapsed.

Why?

- Overharvesting?
- Genetics?
- Habitat?
- Competition?
- Predation?

# Walleye in FMZ 18

## Mississagagon Walleye Stocking

1983- 51,600 fingerlings (99.5 fish/ha)

1984- 64,973 fingerlings (125.3 fish/ha)

1986- 47,400 fingerlings (91.4 fish/ha)

1987- 62,094 fingerlings (119.7 fish/ha)

2003- 484 fingerlings (0.9 fish/ha)

2004- 275,000 fry (530.2 fish/ha) 7,500 fingerlings (14.5 fish/ha)

2005- 8,145 fingerlings (15.7 fish/ha)

2006- 11,365 fingerlings

2007- 13,000 fingerlings

2008- 7,000 fingerlings

2009- 11,000 fingerlings

# Walleye in FMZ 18

## Skootamatta Walleye Stocking

- Fertilized Eggs 1923, 1942-43, 1946-54
- Fry Stocking 1984, 1989, 1998, 1999 (2), 2007

# Walleye in FMZ 18

- Skootamatta Lake is graded Healthy/Stable. Skootamatta Lake is the only lake that received fry stocking over several years.
- Walleye eggs were removed from this lake and fry returned to the same lake.
- What would be wrong with fry stocking using this method in other lakes?

# Walleye in FMZ 18

## Skootamatta Lake- 1999 FWIN Results

- Average CUE
- 15 Age Classes- higher than average (11.7)
- 23 maximum age- very high (17.4)
- Very high mean weight and lengths at maturity
- High mean age and lower age of maturity
- Higher fecundity (eggs/female) and sustainable mortality rates
- Result: high scoring FWIN survey and “healthy” fishery
- Why?

# Walleye in FMZ 18

## Skootamatta Lake

- So was it fry stocking from eggs that came from Skootamatta Lake that achieved the “Healthy/Stable” rating for this lake?
- Or was it other factors such as habitat, genetics, underharvesting, low predation, or lack of competition that help achieve “Healthy/Stable” rating for this lake?
- Or both?

# Walleye in FMZ 18

## Goal:

- To enhance the walleye fishery in FMZ 18

## Objectives:

- Manage walleye harvest within sustainable limits
- Identify, improve, create, and protect walleye habitat
- Optimize potential for annual walleye population recruitment
- Increase public awareness, and participation in walleye management

# Walleye in FMZ 18

Strategies:

Regulations changes

- Slot Size Limits?
- Possession Limits?
- Seasons?
- Bait? Gear?
- Edible Fish Size?

# Walleye in FMZ 18

## Strategies:

- Lake Assessment- FWIN, Broadscale Monitoring
- Identify lakes which would benefit from rehabilitation stocking
- Sanctuaries Assessment
- Lake and Stream Habitat Assessment and Enhancement
- Stocking Fry? Fingerling? Both?
- Stocking – Genetics? Competition? Forage?
- Enforcement

# Walleye in FMZ 18

## Issues

- Overharvesting
- Invasive Species
- Illegal or unregulated Harvesting
- Water Levels
- Education
- Inconsistencies in Current Regulations
- Climate Change
- Habitat degradation
- Enforcement

# Walleye in FMZ 18

## Summary:

- Walleye preferred fish according to the survey
- Recreational Fishing valued at \$2.5B in Ontario and \$131 Million for the economy of FMZ 18
- Assessment indicates declining resource
- Stocking is a controversial issue among fisheries managers and the public and stocking capacity underutilized
- Regulations are to be standardized across FMZ 18

# Walleye In FMZ 18

- How do we manage and enhance walleye populations now and for the years to come?
- Regulations?
- Compliance?
- Stocking? Fry? Fingerling? Both?
- Stocking? Rehabilitation? Put-Grow-Take?
- Stocking? Egg source?
- Education?

# Fish & Wildlife Program Funding

- 2006/7 Operating Budget for Fish & Wildlife Programs
- \$74 million
- Includes species at risk & invasive species programs, biodiversity strategy, culturing and stocking fish, allocating resources, managing wildlife, Great Lakes, enforcement etc.
- 80% supplied by Special Purpose Account ( hunting, fishing, and trapping licences, royalties, fines)
- \$59.2 Million from SPA
- \$14.8 Million from Consolidated Revenue Fund (CRF)
- 11% or \$8.1 million for Fish Culture
- Recreational Fishing to Ontario's economy
- \$2.5 Billion dollars

# Fish & Wildlife Program Funding

Fishing and Hunting Licences are not HST Exempt

HST Revenues collected from Fishing and Hunting Licences do not get added to SPA.

\$60 Million of licence sales provides \$4.8 Million to the CRF

This means that when the current government provides \$15 Million towards Fish and Wildlife programs all other users of the outdoors( 5 Million) and other taxpayers are really only contributing \$10.2 Million from the CRF. The remaining \$4.8 Million is generated through the sale of fishing and hunting licences. A tax on a licence.

Therefore, this government may contribute even less money towards the maintenance of Fish and Wildlife programs in Ontario than in previous years

# Walleye in Ontario

- 2005 Survey of Recreational Fishing in Ontario
- Walleye in Ontario
- Recent Walleye Stocking Effort in Ontario
- Minnesota Study on Walleye survival rate 1981
- Current Walleye Regulations in FMZ 18
- Walleye in FMZ 18
- Walleye Management Options in FMZ 18
- Fish & Wildlife Program Funding

# Walleye in Ontario

How do we manage for walleye in FMZ 18?

1. Regulations?
2. Stocking?
3. Both?