Henrys Lake Fisheries Management 2011

Basic Fisheries Management

Reproduction/Recruitment –

how fast fish are coming into the population

- Natural reproduction
- Hatchery inputs
- Can vary when natural reproduction is substantial
- Population monitoring identifies trends in abundance

Basic Fisheries Management

Growth

- How quickly fish get to catchable size
- How quickly fish get to desirable size
- Typically measured using otoliths or similar methods

Basic Fisheries Management

Mortality – how fast fish leave the population

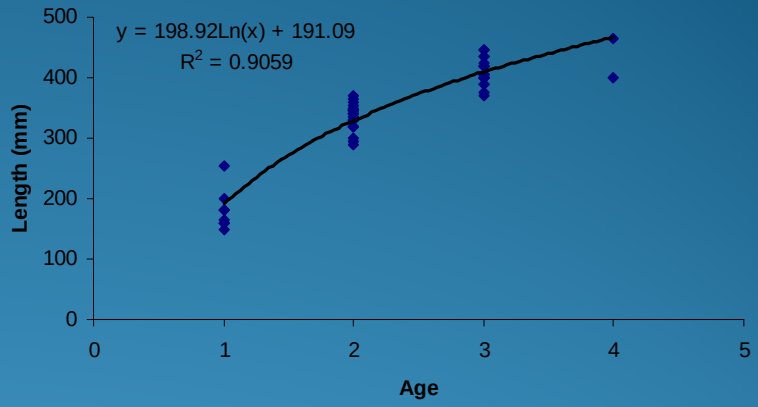
- Estimate lifespan of fish
- Causes of mortality (including angling)
- Useful in setting regulations
- Useful for establishing stocking rates

What We Understand for Henrys

Reproduction

- Hatchery inputs of 1.6 million fish
- Natural reproduction historically low
- Ongoing marking study to evaluate natural reproduction contributions in the lake
- 10% of stocked fish are marked annually. Return to creel of 10% marked fish expected if natural reproduction is low: If natural reproduction is high, < 10% expected

What We Understand for Henrys

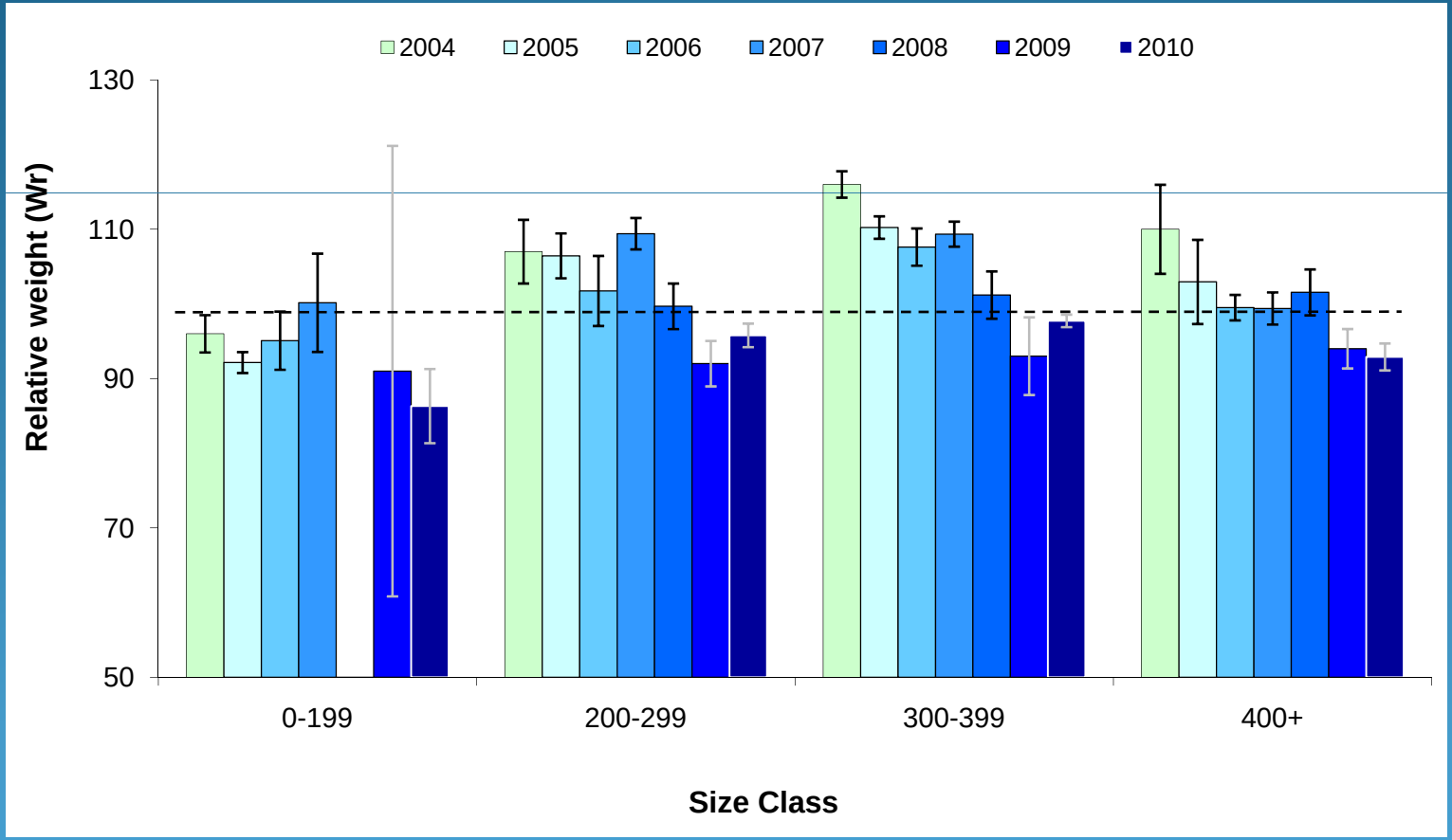


Growth

- Fast due to large amounts of forage

	Age 2	Age 3	Age 4
YCT	13	17	19
HYB	14	18	22
BKT	13	16	18

What We Understand for



What We Understand for Henrys

Mortality

- Generally high for all species
- Around 70-75% annual mortality for trout age 2-5
- Short lifespan as a result of mortality

What We Understand for Henrys

Mortality

- Angler harvest is a component of mortality
- Measure with creel survey
- Generally see fairly high release rates
- Has gone from 20% release in the 1970's to 80% release currently

Research Need:

Reproduction

- Increase in natural reproduction may allow for reduction in stocking in the future
- Need to monitor natural reproduction and its impact on trout abundance and growth
- Need to implement changes to the stocking protocol in the future?

Research Need:

Growth

- Continued decline in relative weights a concern
- Need to identify why food may be in shorter supply
- Competition with chubs one factor
- Increased abundance of trout another potential factor

Research Need:

Mortality

- Estimates of abundance are around 500,000 adult (2 year old) fish
- Angler harvest is < 20,000 annually
- Generally, we would need to see 10x higher harvest (or more) before concern would arise
- Continued monitoring, but angler harvest does not drive population
- Can we identify and alleviate natural mortality factors?

Research Need: