

2016 Sugar Lake BLC, NOP, and MUE Assessment Summary

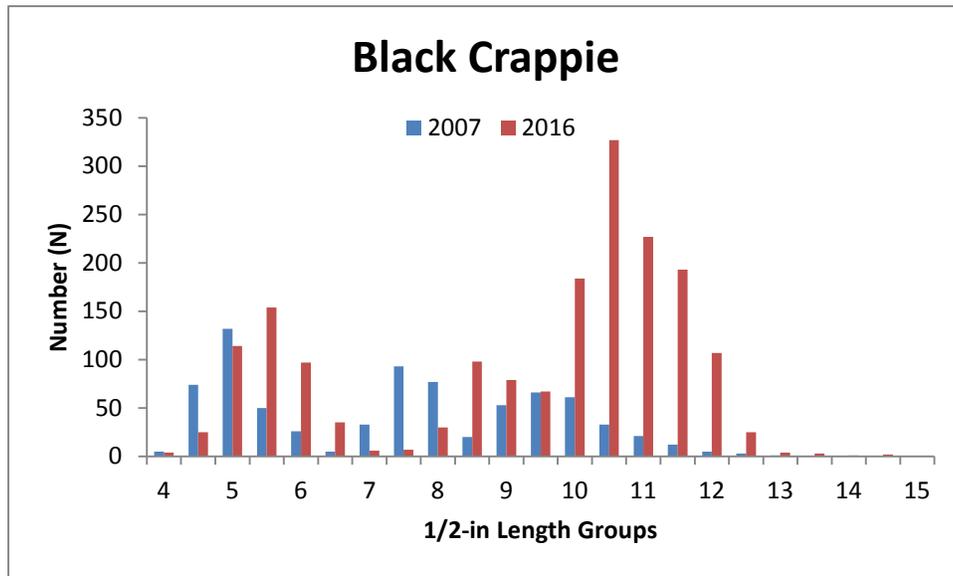


Figure 1. Length frequencies of black crappie caught during the 2016 Spring Assessment (red bars) and the 2007 Spring Assessment (blue bars).

Table 1. Size structure comparison of Black Crappie from 2007 and 2016 collected during Spring Assessments.

Year	2007	2016
N	770	1,789
Avg. TL	8.2	9.5
PSD	59	76
RSD ₁₀	27	61
RSD ₁₂	3	9

Proportional stock density (PSD) is the proportion of black crappie longer than 5” that are also larger than 8”. Relative stock density (RSD) is the proportion of fish that are longer than 5” that are also larger than a specified length. In this case we were interested in RSD₁₀ and RSD₁₂.

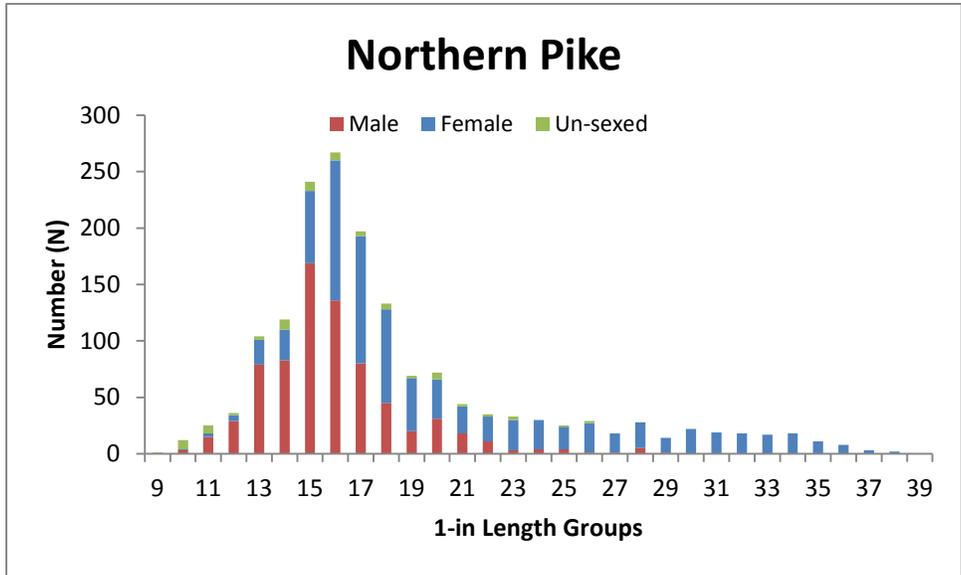


Figure 2. Length frequency of northern pike caught during the 2016 Spring Assessment.

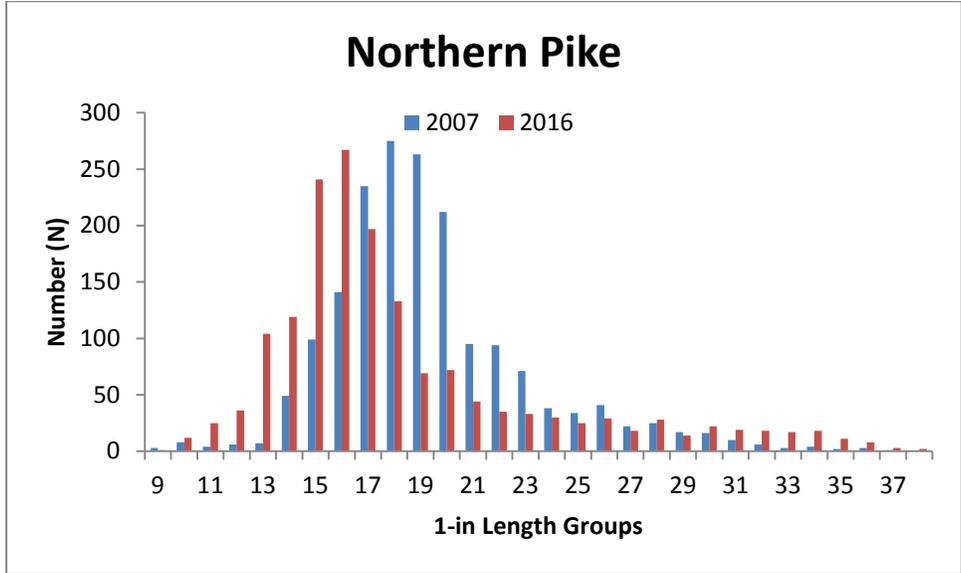


Figure 3. Length frequency of northern pike caught during the 2007 and 2016 Spring Assessments.

Table 2. Size structure comparison of northern pike from 2007 and 2016 collected during Spring Assessments.

Year	2007	2016
N	1,784	1,650
Avg. TL	19.9	18.8
PSD	27	25
RSD ₂₄	13	18
RSD ₃₀	3	8

Proportional stock density (PSD) is the proportion of northern pike longer than 14" that are also larger than 21". Relative stock density (RSD) is the proportion of fish that are longer than 14" that are also larger than a specified length. In this case we were interested in RSD₂₄ and RSD₃₀.

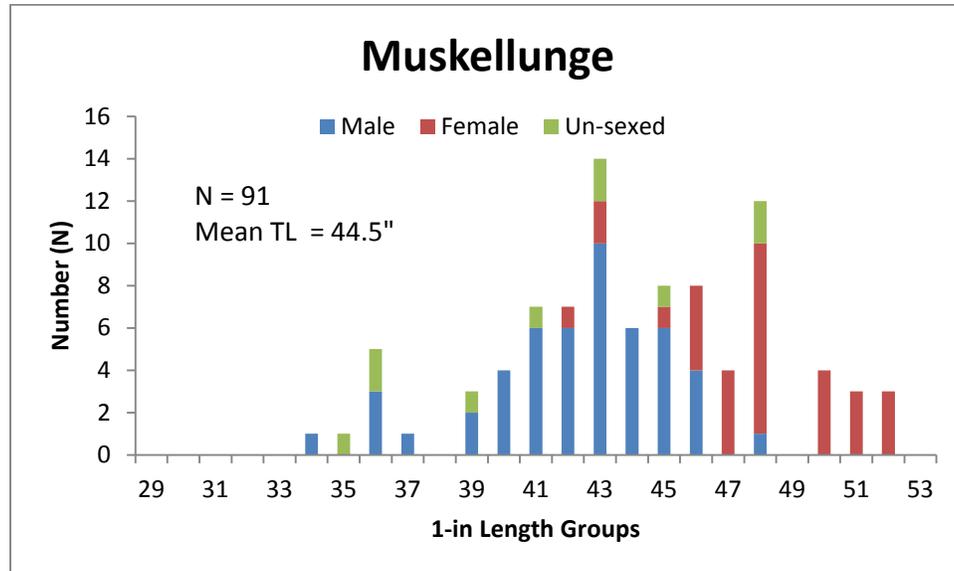


Figure 4. Length frequency of muskellunge caught during the 2016 Spring Assessment (*trap netting and electrofishing).

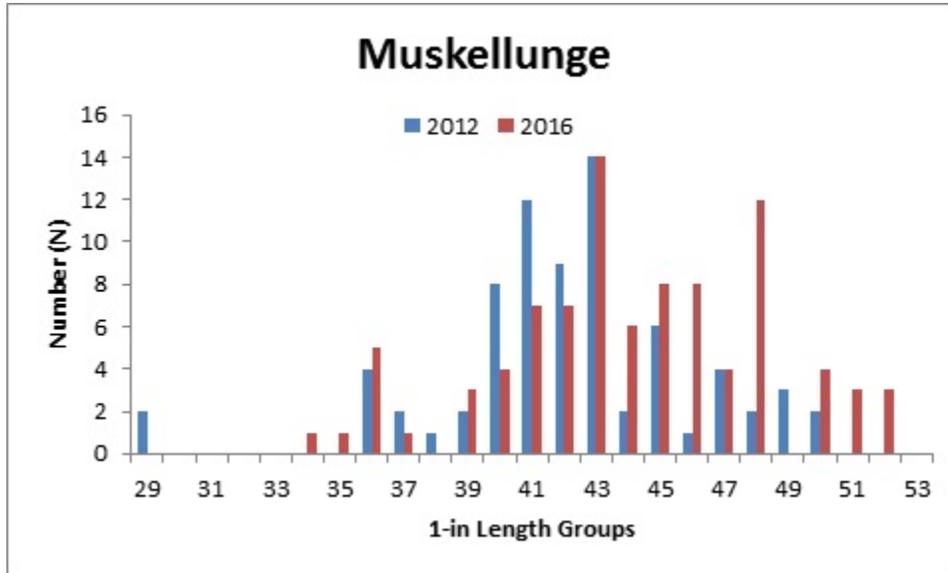


Figure 5. Length frequency of muskellunge caught during the 2016 Spring Assessment (*trap netting and electrofishing).

Table 3. Size structure comparison of muskellunge from 1998 to 2016 collected during Spring Assessments.

Year	1998	2003	2007	2012	2016
N	30	72	106	74	91
Avg. TL	37	39	41	42.4	44.5
PSD	97	97	99	98	100
RSD ₃₈	48	62	84	87	91
RSD ₄₂	21	42	37	57	76
RSD ₅₀	0	0	2	2	11

Proportional stock density (PSD) is the proportion of muskellunge longer than 30" that are also larger than 30". Relative stock density (RSD) is the proportion of fish that are longer than 20" that are also larger than a specified length. In this case we were interested in RSD₃₈, RSD₄₂, and RSD₅₀.

Table 4. Peterson population estimates for the Sugar Lake muskellunge population from 2007 – 2016.

Year	Estimate	#/acre
2007	144 < 268 < 549	0.26
2012	105 < 222 < 513	0.22
2016	95 < 150 < 250	0.15
Schnable Estimate (recap phase)	93 < 167 < 813	0.16