

Alberta Conservation Association 2017/18 Project Summary Report

Project Name: ACA Fish Stocking Evaluation

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Partnerships

Alberta Environment and Parks

Key Findings

- Angler hours per hectare ranged from 26 (Pro Alta Pond) to 5,339 (Ray's Pond).
- Dewitt's Pond had the highest seasonal angler count at 2,584 anglers.
- Pro Alta Pond had the lowest seasonal angler count at 26 anglers.

Introduction

Alberta Conservation Association assumed responsibility for delivering the Enhanced Fish Stocking (EFS) project in 1998 with the objective of providing increased angling opportunities to Albertans by stocking catchable-sized (≥ 20 cm) rainbow, brook, and brown trout in parts of the province where angling opportunities are limited. Most waterbodies are small, and situated close to municipalities making them popular family destinations. As a result, these stocked ponds can have substantial angling pressure. In 2017, we collected angler count data from 23 EFS waterbodies to estimate angling effort (hours). Effort estimates from 2017 will be combined with previous effort estimates (2009- 2016), to further evaluate the EFS project and make recommendation on fish stocking times and rates.

Methods

We used trail cameras attached to stationary structures (e.g., power pole or tree) or to a removable sign channel (Newton *et al.* 2013) to collect hourly angler counts at 23 EFS waterbodies (Table 1). Cameras collected data from May 15 to August 31, 2017 and were programmed to take photographs daily from 0700 to 2200 hours. Anglers in each photograph were counted and using bootstrap techniques, we developed a distribution of mean instantaneous angler counts. Angler count distributions multiplied by the available angling hours, provided estimates, and confidence intervals for angling effort (hours).

Results

Angler counts, and estimated angler effort showed considerable variation among our 23 study ponds (Table 1). Estimated angler effort ranged from 49 hours at Pro Alta Pond to 11,638 hours at Rays Pond (Table 1). Angler hours per hectare ranged from 26 at Pro Alta Pond to 5,339 at Ray's Pond.

Table 1. Angler counts and estimated angler effort at 23 EFS waterbodies in 2017.

Waterbody	Number of anglers in camera field of view	Lake area (ha)	Estimated angler effort	
			Total hours	Hours/ha
Anderson Dam	108	2.04	233	114
Beaumont Pond	2,075	2.45	5,893	2,401
Centennial Park Pond	613	0.50	1,128	2,238
Dewitt's Pond	2,584	3.21	8,019	2,500
Echo Dale Park Pond	473	2.37	1,162	491
Emerson Pond	853	4.54	2,658	585
Gibbons Pond	50	0.09	108	1,151
Gooseberry Park Pond	138	11.26	2,299	204
Innisfree Trout Pond	444	1.45	616	426
Irma Fish and Game Pond	456	0.44	651	1,482
Lougheed Trout Pond	404	0.97	969	995
Midway Reservoir	353	2.28	1,449	635
Nuggent Reservoir	805	0.59	1,834	3,109
Oyen Reservoir	86	0.54	95	175
Pro Alta Pond	26	1.93	49	26
Ray's Pond	2,228	2.19	11,638	5,339
Strathmore Childrens Pond	544	2.23	2,222	996
Telegraph Park Pond	729	2.16	1,659	768
Two Hills Pond	156	1.29	216	167
Viking Pond	219	0.97	1,041	1,078
Wallace Park Pond	177	0.49	51	358
Waskasoo Park Pond	684	3.48	6,545	1,883
Wetaskiwin Pond	394	0.33	818	2,514

Conclusions

Angler counts and estimated effort varied greatly among the 23 waterbodies assessed in 2017, indicating a wide range of angler use of our ponds. Using these results, we will can manage stocking times and rates, and evaluate site management options (e.g., amenities, infrastructure) at individual EFS waterbodies to better serve Alberta anglers.

Communications

- Value of put-and-take fisheries as a tool to satisfy high angling demand in Alberta. An oral presentation at 8th World Recreational Fishing Conference. July 16-20, 2017, Victoria, BC.

Literature Cited

Newton, E, B. van Poorten, T. Godin, A. Clarke, S. Greenberg, and J. Post. 2013. Using cameras to remotely measure angling effort on small lakes. Presentation at the 66th Canadian Conference for Fisheries Research – CCFFR'13, Windsor, Ontario, January 3–5, 2013

Photos



Alberta Conservation Association staff Andrew Clough setting up a trail camera.
Photo: John Hallett



Anglers at Dewitt's Pond (2017). Photo: Alberta Conservation Association



Anglers fishing at Centennial Pond in Ponoka. Photo: Alberta Conservation Association



Anglers fishing at the Strathmore Children's Pond. Photo: Alberta Conservation Association