

Salmon River Estuary Japanese Knotweed Assessment SLELO-PRISM

July 24 & 30, 2012

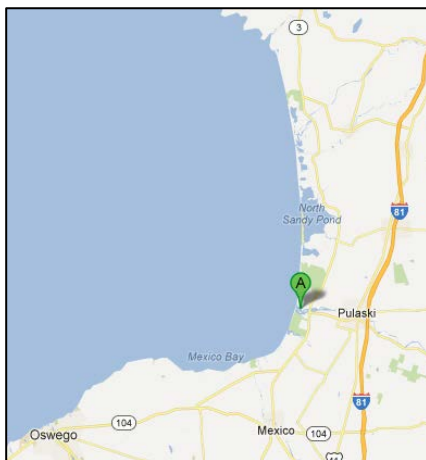


Figure 1: Panoramic view of the Salmon River Estuary, looking west, July 24, 2012. Photo by Mike McHale.

Report drafted by Greg Chapman and Mike McHale, 8/3/12.

Introduction and Background

The Salmon River is an important sportfishing destination located in Oswego County, New York, and passes through the villages of Pulaski and Altmar. Populations of Chinook, Coho and Atlantic salmon, steelhead and brown trout are maintained both through annual stocking and management focused on enhancing natural reproduction of these fish within the river. Public fishing access is plentiful along the approximately 14 miles of the lower river downstream of the Lighthouse Hill Dam, where much of the land is accessible through Public Fishing Rights easements, and these areas see heavy fishing pressure during the fall salmon and spring steelhead runs.



Figures 2 & 3: Location of the Salmon River Estuary in the Eastern Lake Ontario region of New York (left), and overview map of the Salmon River Estuary and surrounding area (right).

The Salmon River Freshwater Estuary is defined as that portion of the lower river that is directly influenced by the lake levels of nearby Lake Ontario. The estuary extends east from the Salmon River's outlet into Lake Ontario to approximately 1200 feet east of the State Route 3 bridge. This braided portion of the river is bordered by emergent marsh, riverine wetlands and shrub swamps, and is recognized as important fish spawning habitat as well as a staging area for steelhead and salmon preparing for their annual spawning runs. Additionally, the variety of wetland habitats within the estuary are important habitat for birds and other wildlife, including several threatened bird species¹.



Figure 3: View of the Salmon River Estuary, looking downstream from the Route 3 DEC Fishing Access, July 24, 2012. Photo by Greg Chapman.

Public access of the Salmon River Estuary is possible from both a NYSDEC handicapped-accessible fishing platform off Route 3, and the Pine Grove Boat Launch off Pine Grove Road, maintained by the NYS Office of Parks, Recreation and Historic Preservation.

Survey Methods and Objectives

In preparation for the development of a comprehensive Salmon River Estuary Japanese Knotweed Management Plan, SLELO-PRISM Field Crew Members Mike McHale and Greg Chapman conducted a visual Japanese Knotweed assessment of the lower Salmon River on July 24 and 30, 2012. Marsh and island perimeters were visually surveyed for occurrences of Japanese Knotweed (*Polygonum cuspidatum*) via canoe. Patch size was visually estimated for each continuous patch of Japanese Knotweed. A Garmin hand-held GPS unit was used to record invasive species occurrence coordinates as well as tracking the route taken during the survey.

Observations

Within the area surveyed, 26 separate occurrences (patches) of Japanese Knotweed were observed. The area covered by each patch was visually estimated; estimated patch sizes varied from 15.2 ft² to 10,506.6 ft². The total area covered by Japanese Knotweed within the area surveyed was estimated to be 51,467.7 ft².

1 Information regarding the definition, extent and ecological importance of the Salmon River Estuary summarized from the Salmon River Watershed Natural Resources Assessment (McGee 2008) , pages 35, 36 and 57 – 69. Available in two parts online at http://www.dec.ny.gov/docs/regions_pdf/srwas.pdf and http://www.dec.ny.gov/docs/regions_pdf/srwasb.pdf.



Although Japanese Knotweed was observed throughout the estuary, general distribution was uneven. In general, Japanese Knotweed occurred most frequently and in larger patches upstream of the Route 3 bridge; some of these patches likely fall outside of the area formally identified as the estuary (which formally ends approximately 1200 feet upstream of the Route 3 bridge).

Figure 4: Medium-sized Japanese Knotweed patch within the Salmon River Estuary, July 30, 2012. Photo by Greg Chapman.

Field Test: As a prerequisite to eventual treatment of knotweed, permission is being sought from the New York State department of Transportation (DOT) to conduct a field test to determine the best method of Glyphosate application to Japanese Knotweed. A comparison of Foliar application and cut-stump application will be assessed.

Data Tables and Maps

Table 1: Japanese Knotweed observation data for the Salmon River Estuary. See Figures 6 & 7 for point locations.

Location: Salmon River Estuary			Date: 7-24-2012				
Point	Lat.	Long.	Length (ft)	Width (ft)	Area (ft ²)	Notes	
188	43.56940485	-76.18603835			2,276.4	Evaluated with GPS	West of Rout 3 Total Area (ft ²) 8,778.3
190	43.56781622	-76.18817565	31	23.25	720.8		
191	43.56689572	-76.19569405	62	15.5	961.0		
192	43.56992234	-76.19686735	31	23.25	720.8		
193	43.57230918	-76.19877582	62	15.5	961.0		
194	43.57267781	-76.20129568	15.5	15.5	240.3		
195	43.56741473	-76.18923529	93	31	2,883.0		
196	43.56782142	-76.20066946	3.9	3.9	15.2	Just a few plants	
197	43.57048242	-76.18324173	23.4	23.4	547.6	NW bank comprises 15.6 ft ² SE bank 562 ft ²	East of Rout 3 Total Area (ft ²) 42,689.4
198	43.57090831	-76.18138983	46.8	15.6	730.1		
199	43.570198	-76.181918	95	23.4	2,223.0	Evaluated with GPS	
201	43.570014	-76.182839	424	23.4	9,921.6	Evaluated with GPS	
203	43.56773861	-76.18387045	31.2	46.8	1,460.2		
204	43.567348	-76.183741	155	39	6,045.0	Evaluated with GPS	

206	43.56713536	-76.18459792	70.2	23.4	1,642.7	Multiple small patches on either side of the bank
207	43.56763	-76.182555	449	23.4	10,506.6	Evaluated with GPS
208	43.56746494	-76.18305825	15.6	31.2	486.7	
209	43.56767256	-76.1822711	15.6	15.6	243.4	
211	43.56851075	-76.18101038	46.8	23.4	1,095.1	
212	43.56862198	-76.18068131	109.2	31.2	3,407.0	
213	43.56888215	-76.18108355	46.8	15.6	730.1	
214	43.56909974	-76.1813325	54.6	15.6	851.8	
215	43.56860949	-76.18153609	62.4	31.2	1,946.9	
216	43.56917183	-76.18234	15.6	23.4	365.0	
217	43.56935531	-76.18275097	15.6	15.6	243.4	
218	43.67405609	-75.50527015	15.6	15.6	243.4	
			Total Area: 51,467.7			

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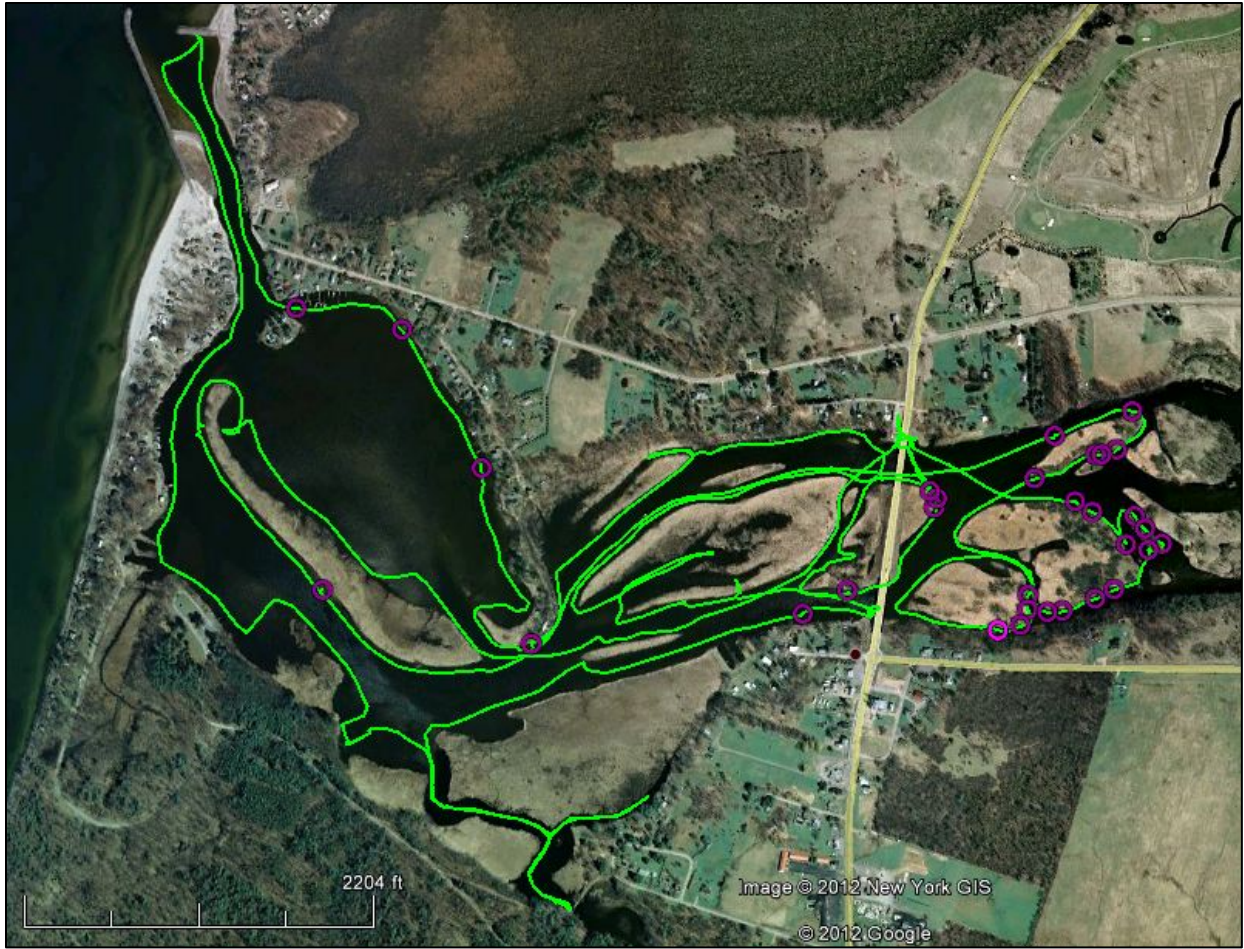


Figure 5: General overview of survey route (green line) and Japanese Knotweed occurrences (purple circles) at the Salmon River Estuary.

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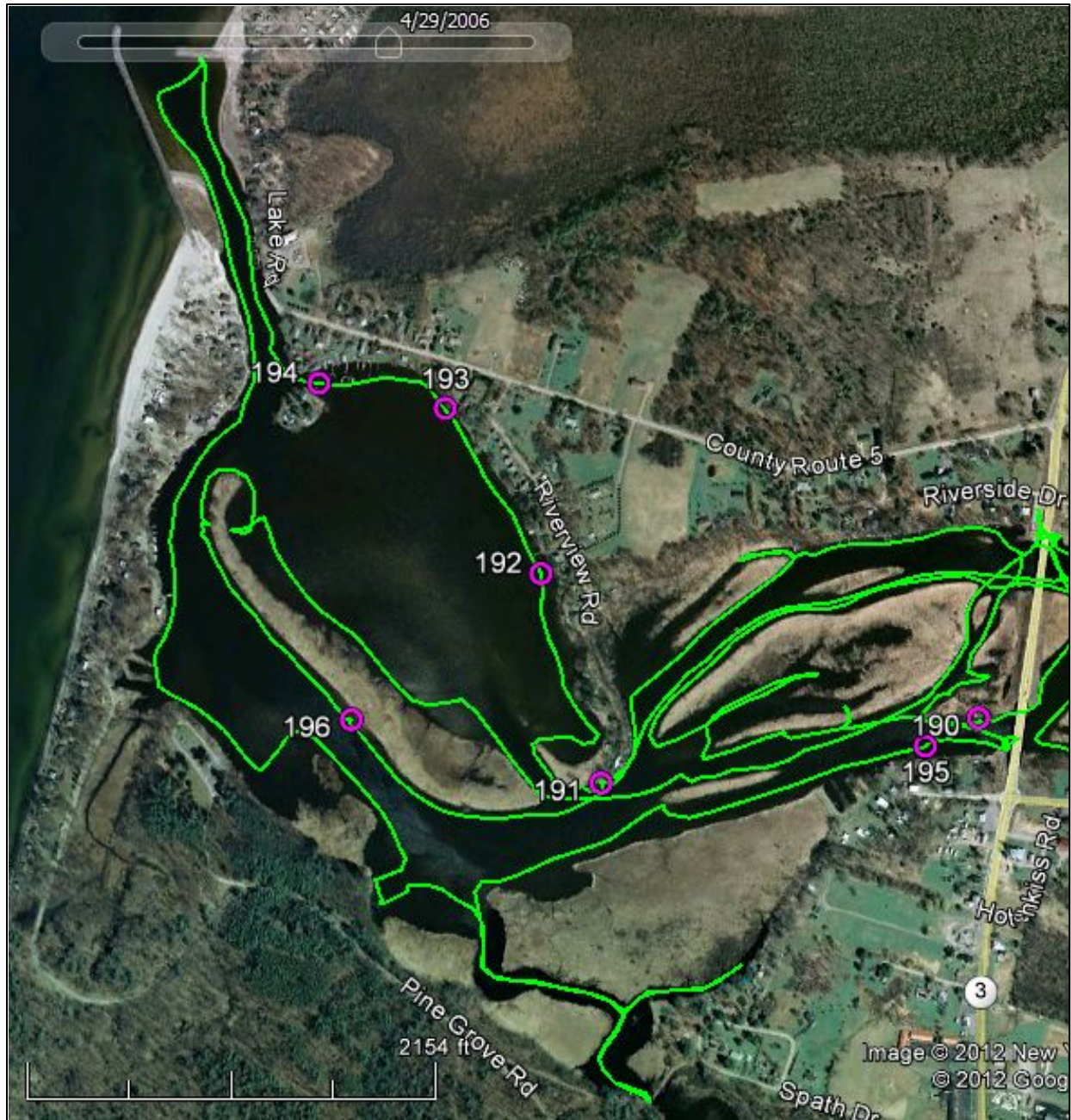


Figure 6: Japanese Knotweed observations west of the Route 3 bridge. See Table 1 for corresponding data.

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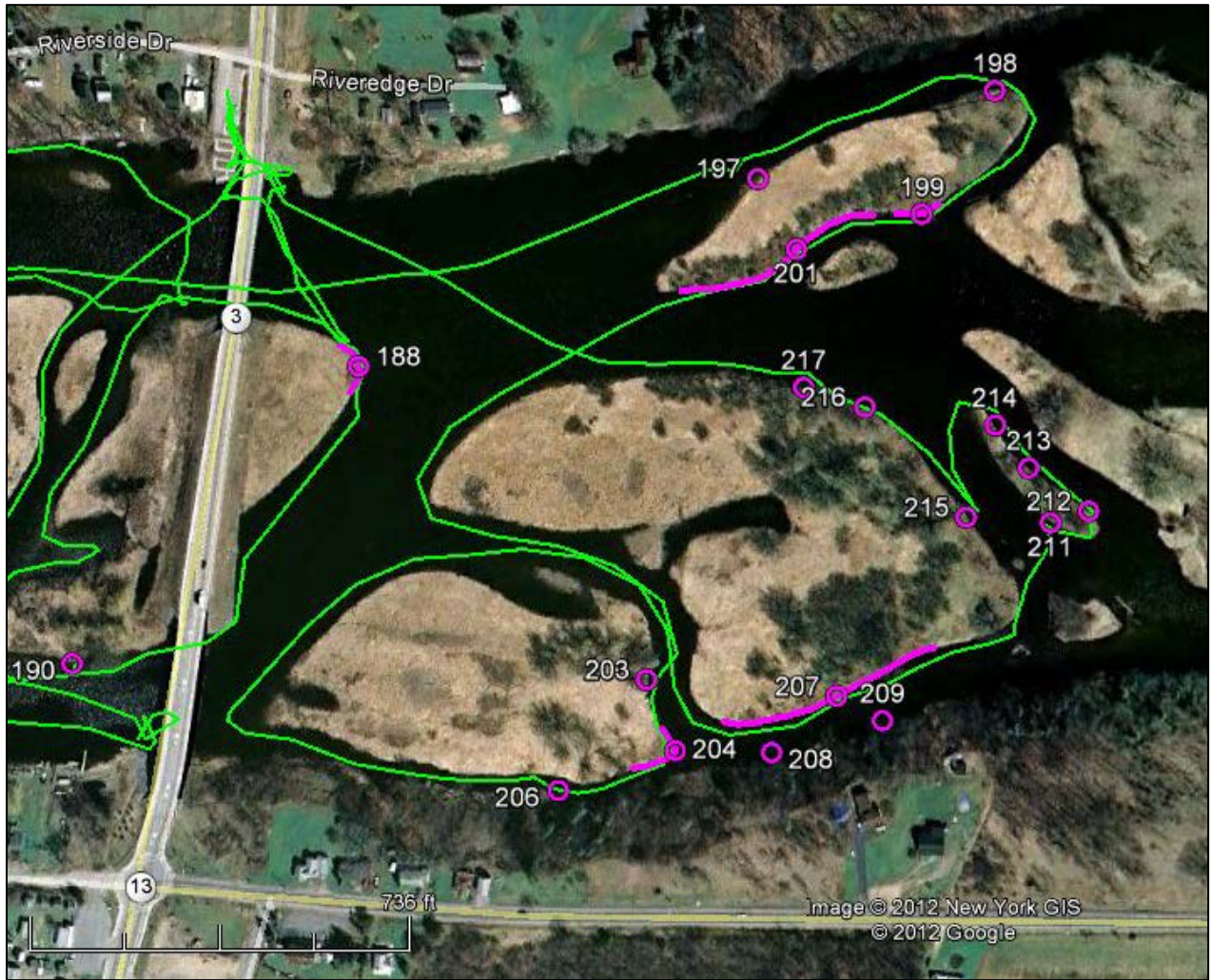


Figure 7: Japanese Knotweed observations east of the Route 3 bridge. See Table 1 for corresponding data.