

## **Oneida Lake/Three Mile Bay WMA** **SLELO-PRISM Water Chestnut & Hydrilla Surveillance 2012**

June 18 – 22 (Water Chestnut); August 3 & 7 (Hydrilla), 2012



**Figure 1:** Panoramic view of Oneida Lake from the McCloud Road seasonal boat launch. Photo by Mike McHale.

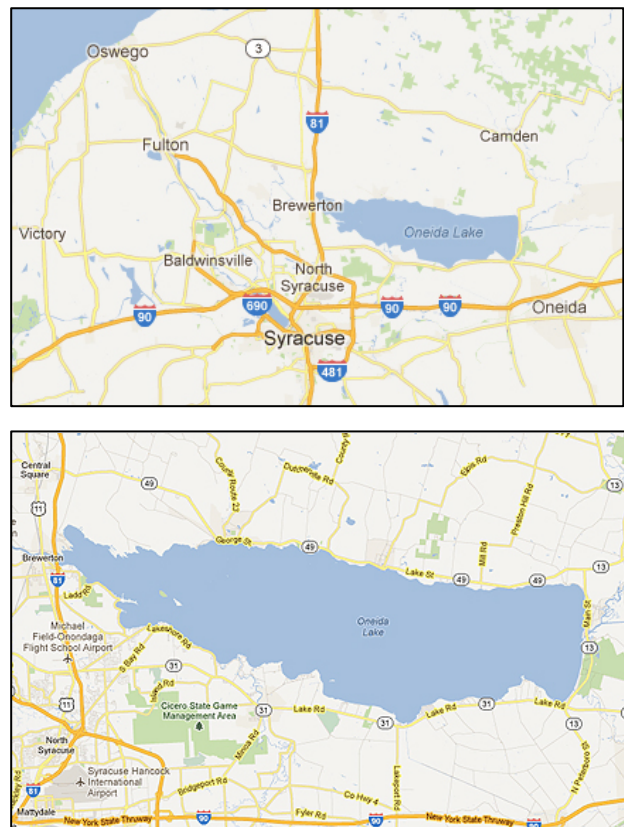
*Report drafted by Greg Chapman and Mike McHale, 6/26/12. Updated 8/21/12.*

### **Introduction and Background**

Oneida Lake is a large freshwater lake located in Oneida, Onondaga and Madison counties, New York. With a surface area of approximately 50,894 acres, it is the largest lake located completely within New York, and is an extremely popular fishing and vacationing destination. Despite Oneida Lake's large size, the lake is relatively shallow, with an average depth of 22 feet<sup>1</sup>.

Although much of the shoreline is heavily developed with camps and cottages, a variety of public access options are available along the shores of Oneida Lake.

A large portion of the northwestern shore of Oneida Lake remains undeveloped as part of the 3,939-acre Three Mile Bay Wildlife Management Area. Access to the lake from the WMA includes a year-round car-top boat launch on Shaw Road, and a seasonal car-top boat launch at the end of McCloud Road. A gate approximately one-half mile from the lake's shore restricts access to this second launch from the Monday before Memorial Day Weekend through the Monday following Labor Day Weekend. Although much of the



**Figure 2:** Map of Oneida Lake in Central New York (top) and map of Oneida Lake and immediate surroundings (bottom).

<sup>1</sup> Oneida Lake size and depth information obtained from NYS-DEC's Oneida Lake profile, available online at <http://www.dec.ny.gov/outdoor/41034.html> (accessed 6/26/12).

WMA consists of swamps and marsh, formal terrestrial access is also available from a parking area along Toad Harbor Road and a parking area along Wheeler Road. The Wheeler Road access is utilized by the New York State Department of Health as an Encephalitis Field Laboratory. For an overview of Three Mile Bay WMA, see the attached NYS-DEC map.

Shoreline fishing access is provided by two State Fishing Access Sites at the west end of Oneida Lake; parking for the northern access site is available off County Route 37, and parking for the southern access is off Kathan Road in Brewerton. Along the north shore, the Cleveland Docks Fishing Access Site provides opportunities for shoreline fishing and informal launching of small watercraft. Informal access is also available from a location under the Route 13 bridge in Sylvan Beach at the east end of the lake.

Two improved concrete boat launches are maintained by the NYS Office of Parks, Recreation and Historical Preservation (OPRHP). The Godfrey Point State Boat Launch is located on the north shore, off Lake Street (Route 49) west of the hamlet of Jewell. On the south shore, the Bush Road State Boat Launch is located off Route 31, east of the hamlet of Bridgeport. Both State Boat Launches are provided free of charge.

For a fee, boats may also be launched from Verona Beach State Park at Oneida's eastern end, and at Oneida Shores County Park along the lake's southwestern shore.

### **Targeted Locations**



**Figure 3:** Map showing locations of the seven aquatic HPAs surveyed on Oneida Lake.

Aquatic survey efforts were focused on seven Highly Probable Areas (HPAs) that were identified<sup>2</sup> for Oneida Lake, as follows:

**HPA-1:** Shaw Road car-top boat launch, Three Mile Bay WMA. Aquatic survey of the area immediately surrounding boat launch. (Survey extended eastward after initial detection of Water Chestnut).

**HPA-2:** McCloud Road seasonal car-top boat launch, Three Mile Bay WMA. Visual survey of shoreline.

**HPA-3:** Cleveland Docks Fishing Access, off Route 49 in Cleveland. Aquatic survey of

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2 See Appendix 1 for HPA assignment protocols.

immediate fishing access area.

**HPA-4:** Godfrey Point State Boat Launch, off Route 49 west of Jewell. Aquatic survey of the area immediately surrounding boat launch.

**HPA-5:** Sylvan Beach informal access. Aquatic survey of canal under bridge and outlets of two nearby marinas.

**HPA-6a:** North Shore Fishing Access, off County Route 37 north of Brewerton. Visual survey of shoreline.

**HPA-6b:** South Shore Fishing Access, off Kathan Road in Brewerton. Visual survey of shoreline. Survey extended eastward to aquatic investigation of adjacent small bays after initial detection of Water Chestnut.

**HPA-7:** Bush Road State Boat Launch, off Route 31 east of Bridgeport. Aquatic survey of the area immediately surrounding boat launch.

Visual terrestrial surveys were also conducted at four additional terrestrial HPAs (tHPAs) within the Three Mile Bay WMA, as follows:



**Figure 4:** Map showing location of terrestrial HPAs (tHPAs) within Three Mile Bay WMA.

**tHPA-1:** Toad Harbor Road Parking Area. Visual survey conducted along trail (marked with red blazes) leading to swamp edge.

**tHPA-2:** Shaw Road car-top boat launch. Visual survey conducted along shoreline trails and at parking lot perimeter.

**tHPA-3:** McCloud Road seasonal car-top boat launch. Visual survey conducted at parking area and along road beyond access gate to the shoreline.

**tHPA-4:** Wheeler Road access. Visual survey conducted at parking area and along road leading to NYSDOH Encephalitis Field Laboratory.

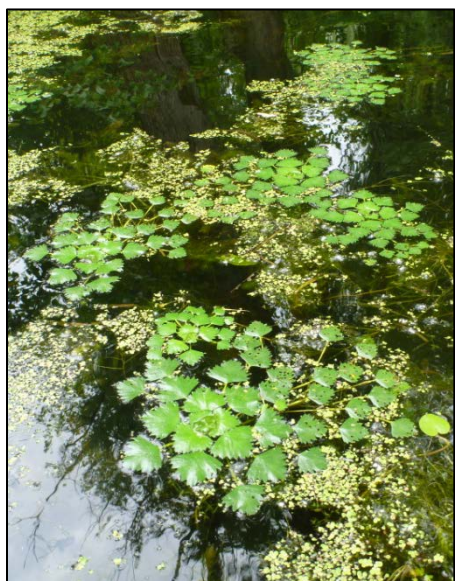


## **Survey Methods and Objectives**

A survey targeting Water Chestnut (*Trapa natans*) and other aquatic and riparian invasive species<sup>3</sup> was undertaken by SLELO-PRISM seasonal employees Mike McHale and Greg Chapman on June 18 through June 21, 2012. Additional terrestrial surveys were conducted within the Three Mile Bay WMA on June 22, 2012.

A subsequent survey targeting Hydrilla (*Hydrilla verticillata*) was undertaken by SLELO-PRISM seasonal employees Mike McHale and Greg Chapman on August 3 and 7, 2012.

At HPAs 1, 3, 4, 5 and 7, additional data detailing submerged aquatic vegetation was collected via rake toss. Rake toss locations were also added during Hydrilla surveillance at HPA-6b. For each rake toss location, a weighted rake was thrown twice, once from each side of the canoe. Submerged aquatic vegetation collected on the end of the rake was then analyzed from each toss, and the total number of species present was recorded, as well as the number and identification of all invasive species present.



**Figure 6:** A Water Chestnut occurrence of typical size and density near HPA-1 on June 18, 2012. Photo by Greg Chapman.



**Figure 5:** Mike McHale (left) and Greg Chapman (right) conducting a rake toss analysis near the Bush Road State Boat Launch, June 21, 2012. Photo by Rob Williams.

Terrestrial surveys within Three Mile Bay WMA were conducted by visually inspecting areas adjacent to roads, trails and parking areas at each tHPA for the presence of invasive species, particularly those identified as high priority (i.e. species included in the Prevention Watch-List and Target Management Species lists in the SLELO-PRISM Strategic Plan).

Invasive species occurrences were recorded using the iMapInvasives Observation Field Form and reported to the iMapInvasives database. A Garmin hand-held GPS unit was used to record invasive species occurrence coordinates, locations of rake tosses as well as tracking the route taken during the survey.

### **Observations and Actions: Aquatic**

During aquatic surveys of the Oneida Lake HPAs, Water Chestnut (*Trapa natans*) was observed to be growing near two locations: HPA-1 (Shaw Road launch) and HPA-6b (South Shore Fishing Access). After the initial

3 For a list of targeted species, see the SLELO-PRISM 2012–2016 Strategic Plan, pp. 36 – 37.



**Figure 7:** Photo showing an example of relatively dense Water Chestnut growth, located within a swamp channel north of Big Bay, June 19, 2012. Photo by Greg Chapman.

detection of water chestnut, survey areas at both locations were extended to better understand the scope of the plant's establishment.

At HPA-1, the survey was extended to the bays to the east (particularly Big Bay) containing large, calm areas conducive to aquatic plant growth, and the larger channels draining to the lake from the adjacent swampland. Water Chestnut was observed to

be growing generally throughout the area, although often at low densities (see Figure 6, previous page and Figure 8, below). Water Chestnut growth was observed to be somewhat denser within the swamp channels

and in the open areas near these channels' outlets. The most severe areas of Water Chestnut growth were still restricted to isolated patches of thick growth (see Figure 7), and no large continuous mats or large-scale monocultures were observed. See Figure 8 (below) for a visual estimation of Water Chestnut growth near HPA-1.

Some removal of Water Chestnut was undertaken at HPA-1, specifically in the channel and bay nearest to the boat launch and a far dispersed small patch growing in the northwestern portion of Big Bay. Removal efforts were halted after it was determined that the area affected was too large for a two-person team to accomplish efficiently. Approximately one-half of one trash bag of plants were removed.



**Figure 8:** Map showing extended survey and generalized Water Chestnuts observations east of HPA-1, June 19, 2012. Light red areas contained dispersed small clusters of plants, while darker red areas were observed to contain more and larger clusters of Water Chestnuts. The green line shows the route taken during the survey.





**Figure 9:** Water Chestnut observations at HPA-6b. The red area indicates general area in which plants were observed; the green line shows the survey route taken.

At HPA-6b, the small bays east of the shoreline fishing access were surveyed. Small, isolated patches of Water Chestnut were observed to be growing in the calm areas near shore and along the east shore of the small nearby island. Only a single plant was observed growing in the calm, weedy area immediately east of the Route 81 bridge, and this plant was removed. No other removal of Water Chestnut was undertaken at this location.

Initial plans to coordinate a Rapid Response event to remove these areas of Water Chestnut growth were halted after further research revealed that several organizations were already engaged in suppressing Water Chestnut growth on Oneida Lake. These groups and organizations include the Salt City Bassmasters Club (focusing removal efforts on the west end of Oneida Lake, particularly Big Bay), the Oneida Shores Rotary Club, the Oswego County Soil and Water Conservation District, and the Oneida Lake Association (focusing efforts on the east end of the lake). Survey data and maps of Water Chestnut observations were

provided to these groups as a supplement to their efforts and as a way of encouraging continued Water Chestnut suppression activities on Oneida Lake.

Water Chestnut was not observed to be growing at other HPAs surveyed. Areas near HPAs 2, 3, 4 and 7 were generally open water with rocky or sandy bottoms, and did not appear to be as generally conducive to aquatic plant growth. Instances of Eurasian Water-Milfoil (*Myriophyllum spicatum*) and Curly-Leaf Pondweed (*Potamogeton crispus*) were recorded at several locations, and European Frog-Bit (*Hydrocharis morsus-ranae*) was observed growing in several location near HPA-1. See Tables 1 and 2 for complete survey results.

No Hydrilla occurrences were observed at any Oneida Lake locations during surveys on August 3 and 7, 2012.

### **Observations: Terrestrial**

No species listed on the SLELO Prevention Watch List were observed during the course of the terrestrial survey of four tHPAs within Three Mile Bay WMA. Several terrestrial invasive plants common to our region were observed, including *Phragmites*, Garlic Mustard (*Alliaria petiolata*), Multiflora Rose (*Rosa multiflora*) and Buckthorn (*Rhamnus* sp.) See Table 3 for full survey results.



**Figure 10:** Mike McHale inspects roadside vegetation at tHPA-2 (McCloud Road) in Three Mile Bay WMA. Photo by Greg Chapman.

## Observation Data Tables

Refer to subsequent maps for point locations. Key to abbreviations used in all tables: **EWM**: Eurasian Water-milfoil **CLPW**: Curly-leaf Pondweed **EFB**: European Frog-bit **WC**: Water Chestnut **PH**: Phragmites **BT**: Buckthorn

**Table 1:** Rake toss results from Oneida Lake HPAs 1, 3, 4, 5 and 7 collected during Water Chestnut surveillance.  
(Continued on next page.)

Location: HPA-1 (Three Mile Bay WMA car-top launch)						Date: 6/18/12
Point	Throw	Depth	# Spp.	# Inv.	Invasive Species present	Notes
199	1	8'	3	0		Visual: EFB WC: 1 plant, pulled
	2	8'	0	0		
202	1	5'	2	0		
	2	4'	4	0		
203	1	5'	4	0		
	2	5'	1	0		
205	1	3'	4	1	CLPW	
	2	3'	5	2	CLPW, EMF	
Location: HPA-1 (Three Mile Bay WMA car-top launch)						Date: 6/19/12
Point	Throw	Depth	# Spp.	# Inv.	Invasive Species present	Notes
209	1	7'	2	1	EWM	
	2	7'	2	0		
Location: HPA-3 (Cleveland Docks fishing access)						Date: 6/20/12
Point	Throw	Depth	# Spp.	# Inv.	Invasive Species present	Notes
217	1	10'	2	0		
	2	11'	0	0		
218	1	7'	2	0		
	2	6'	1	0		
Location: HPA-4 (Godfrey Point State Boat Launch)						Date: 6/20/12
Point	Throw	Depth	# Spp.	# Inv.	Invasive Species present	Notes
219	1	5'	1	0		
	2	5'	2	0		
220	1	2'	0	0		Sandy/Rocky bottom Sparse vegetation
	2	2'	0	0		

Location: HPA-5 (Sylvan Beach canal access) Date: 6/20/12						
Point	Throw	Depth	# Spp.	# Inv.	Invasive Species present	Notes
221	1	9'	3	0		Visual: CLPW
	2	9'	1	0		
222	1	5'	3	0		
	2	5'	4	1	EWM	

Location: HPA-7 (Bush Rd. State Boat Launch) Date: 6/21/12						
Point	Throw	Depth	# Spp.	# Inv.	Invasive Species present	Notes
224	1	3'	2	0		Visual: CLPW
	2	2'	2	0		
225	1	2'	2	0		
	2	3'	3	0		

**Table 2:** General invasive species observation points for Oneida Lake aquatic surveys. (*Continued on next page.*)

Location: HPA-1 (Three Mile Bay WMA car-top boat launch) Date: 6/18/12		
Point	Species	Notes
200	WC	1 small plant pulled
201	WC, PH	Pulled several WC Phragmites along shore ~50ft.
204	WC	Multiple plants pulled, scattered single plants along both sides Discontinued pulling due to potential time involved Visual on CLPW

Location: HPA-1 (Three Mile Bay WMA car-top boat launch) Date: 6/19/12		
Point	Species	Notes
206	EFB	
207	EFB, CLPW	
208	WC	
210	WC	Small scattered young plants, hand pulled
211	WC	Single plant
212	WC	Single plant



213	WC	Small patch
214	WC	Scattered plants throughout area
215	WC	Small patch in channel cove
216	WC	WC scattered throughout channel, Especially thick in coves and small calm side channels

Location: HPA-5 (Sylvan Beach canal access) Date: 6/18/12		
Point	Species	Notes
223	CLPW, EWM	

**Table 3:** Terrestrial invasive and non-native species observations from tHPAs at Three Mile Bay WMA. (*Continued on next page.*)

Location: tHPA1 (Toad Harbor Rd.) Date: 6/22/12		
Point	Species	Notes
227	European Frog-Bit	Scattered at swamp edge
228	Common Buckthorn	Clusters
229	Common Buckthorn	

Location: tHPA2 (Shaw Rd.) Date: 6/22/12		
Point	Species	Notes
231	Honeysuckle, Common Buckthorn, Coltsfoot	Scattered intances around perimeter of parking lot
233	Common Buckthorn	
234	Phragmites	start of large Phragmites stand
235	Phragmites	end of large Phragmites stand
236	Phragmites	On opposite shore 100 ft
237	Multiflora Rose	25 ft
238	Phragmites	On opposite shore 150ft

Location: tHPA3 (McCloud Rd.) Date: 6/22/12		
Point	Species	Notes
239	Honeysuckle, Bladder Campion, Common Mullein	At parking area perimeter
240	Garlic mustard, Daylilies	Scattered plants along road
241	Multiflora rose	Cluster
242	Multiflora rose	Custer along road side 100ft
243	Phragmites	50 ft square patch
244	Phragmites	Multiple acres of common reed

Location: tHPA4 (Wheeler Rd.) Date: 6/22/12		
Point	Species	Notes
245	Honeysuckle	
246	Honeysuckle	
247	Multiflora Rose, Honeysuckle	Honeysuckle common along roadside
248	Common Buckthorn	Several bushes
249	Garlic Mustard	Clusters at roadside
250	Multiflora Rose	
251	Autumn Olive	

**Table 4:** Rake toss data collected during Hydrilla surveillance. Note the addition of points at HPA-1, HPA-5 and HPA-6b; see additional maps for location data. (*Tables continued on next page.*)

Location: HPA-1 (Shaw Rd/Three Mile Bay)							Date: 8/3/12
Point	Lat/Long	Throw	Depth	# Spp.	# Inv.	Invasive Spp. present	Notes
002	43.24983607	1	8'	5	0		
	-76.10982279	2	8'	4	0		
004	43.25265457	1	4.5'	4	1	EWM	
	-76.11671465	2	4.5'	4	1	ZM	
005	43.25449809	1	6'	3	1	EWM	
	-76.12147775	2	6'	5	1	EWM	
006	43.25619232	1	6'	5	1	EWM	
	-76.11977018	2	6'	4	1	EWM	
007	43.25381999	1	9'	3	1	EWM	
	-76.11291588	2	7'	3	1	EWM	
008	43.25134741	1	5'	5	1	EWM	
	-76.10921452	2	6'	3	1	EWM	
199	43.24179011	1	7'	1	0		
	-76.08714572	2	8'	1	0		
209	43.2510372	1	5'	5	1	EWM	
	-76.1114892	2	4'	6	1	EWM	

Location: HPA-3 (Cleveland Docks fishing access)							Date: 8/7/12
Point	Lat/Long	Throw	Depth	# Spp.	# Inv.	Invasive Spp. present	Notes
217	43.23156419	1	4'	3	0		
	-75.88103707	2	4'	2	0		
218	43.23090211	1	6'	1	0		
	-75.8811307	2	6'	1	0		

Location: HPA-4 (Godfrey Point State Boat Launch)							Date: 8/7/12
Point	Lat/Long	Throw	Depth	# Spp.	# Inv.	Invasive Spp. present	Notes
219	43.22329695	1	3'	1	0		
	-75.8502091	2	3'	1	0		
220	43.22316376	1	3'	0	0		
	-75.84961256	2	3'	2	0		

Location: HPA-5 (Sylvan Beach canal access)							Date: 8/7/12
Point	Lat/Long	Throw	Depth	# Spp.	# Inv.	Invasive Spp. present	Notes
221	43.19472346	1	4'	4	0		Visual: Brittle Naiad, EWM
	-75.72788218	2	5'	3	0		
222	43.19451249	1	6'	3	0		Visual: EWM, CLPW
	-75.72700166	2	5'	2	0		
223	43.19750626	1	2'	2	0		Visual: EWM
	-75.72642541	2	2'	3	0		
005	43.19528991	1	6'	3	0		Visual: Brittle Naiad
	-75.7274583	2	5'	2	0		

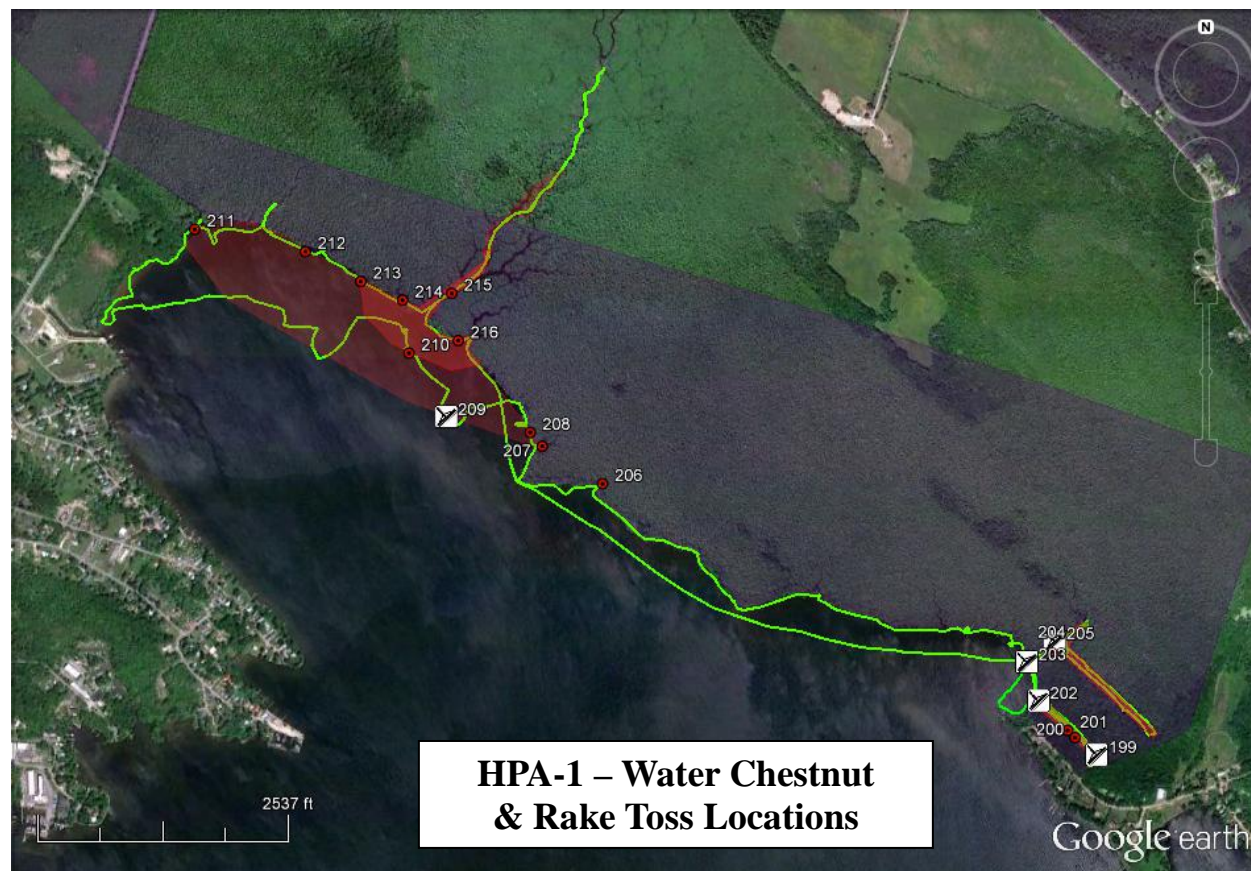
Location: HPA-6b (South Shore Fishing Access near Route 81 bridge)							Date: 8/7/12
Point	Lat/Long	Throw	Depth	# Spp.	# Inv.	Invasive Spp. present	Notes
002	43.23500421	1	4'	4	0		
	-76.1304613	2	4'	4	0		
003	43.23801583	1	5'	3	0		
	-76.133587	2	5'	1	0		

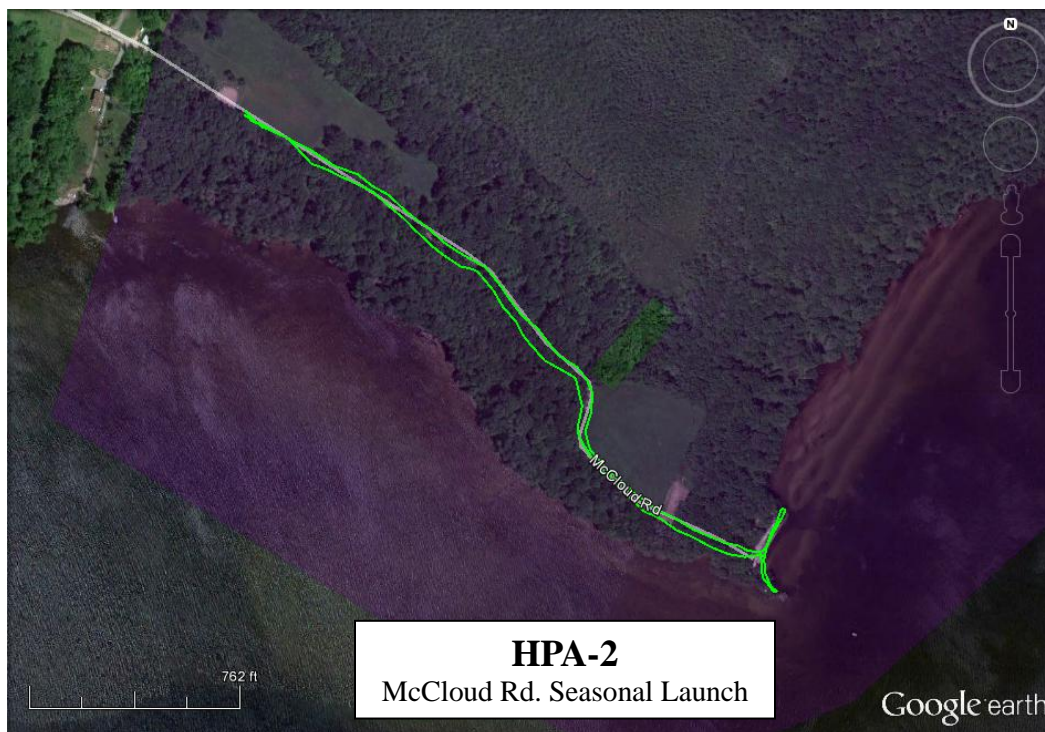
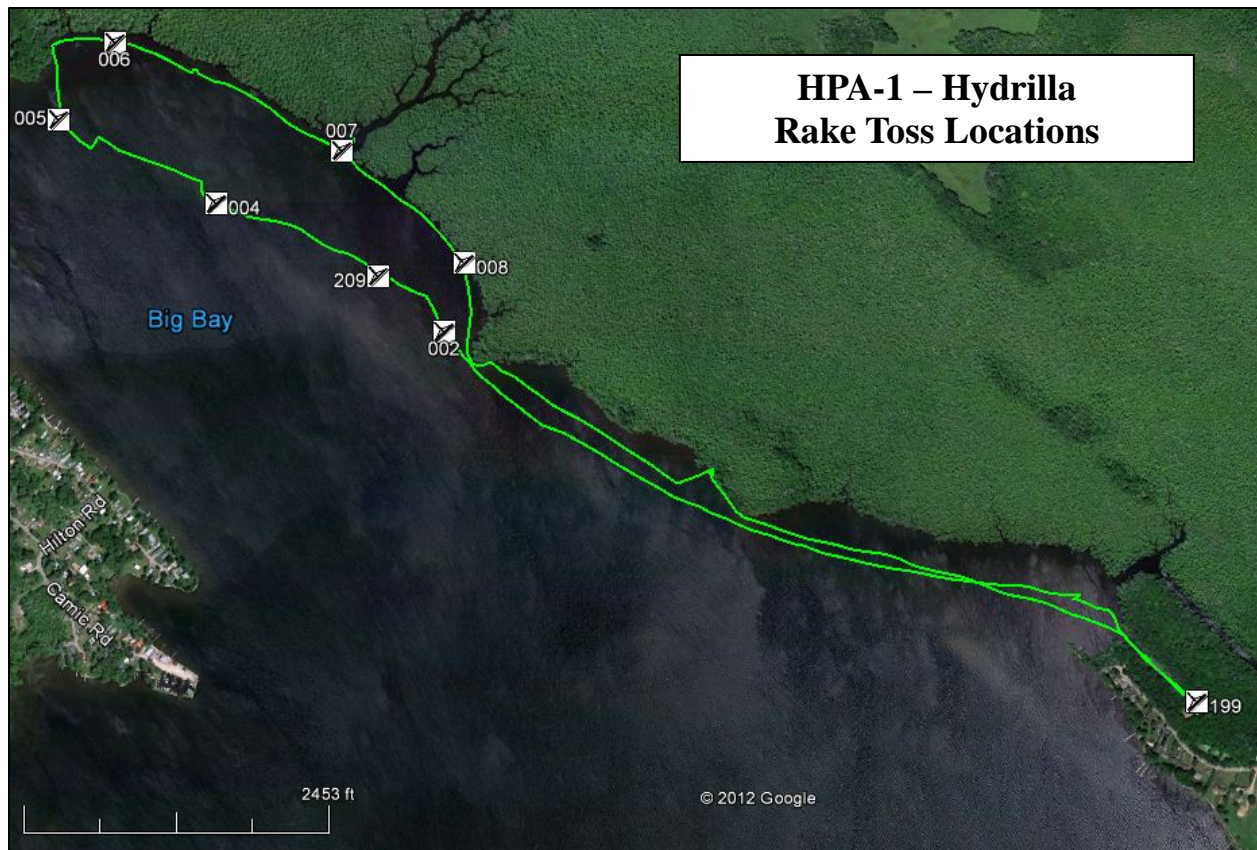


004	43.23547284	1	3'	1	0	
	-76.13032652	2	3'	3	0	

Location: HPA-7 (Bush Rd. State Boat Launch)							Date: 8/7/12
Point	Lat/Long	Throw	Depth	# Spp.	# Inv.	Invasive Spp. present	Notes
224	43.16253712	1	2'	1	0		
	-75.92620254	2	2'	3	0		
225	43.16311296	1	3'	1	0		Visual: CLPW
	-75.92685892	2	3'	3	0		

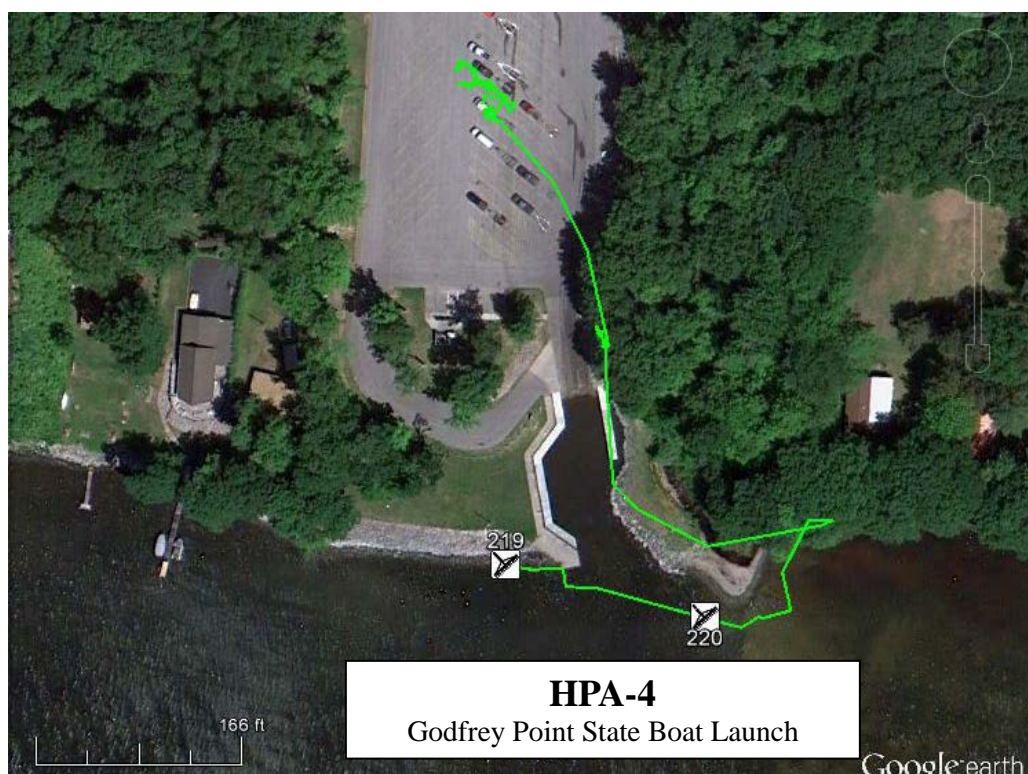
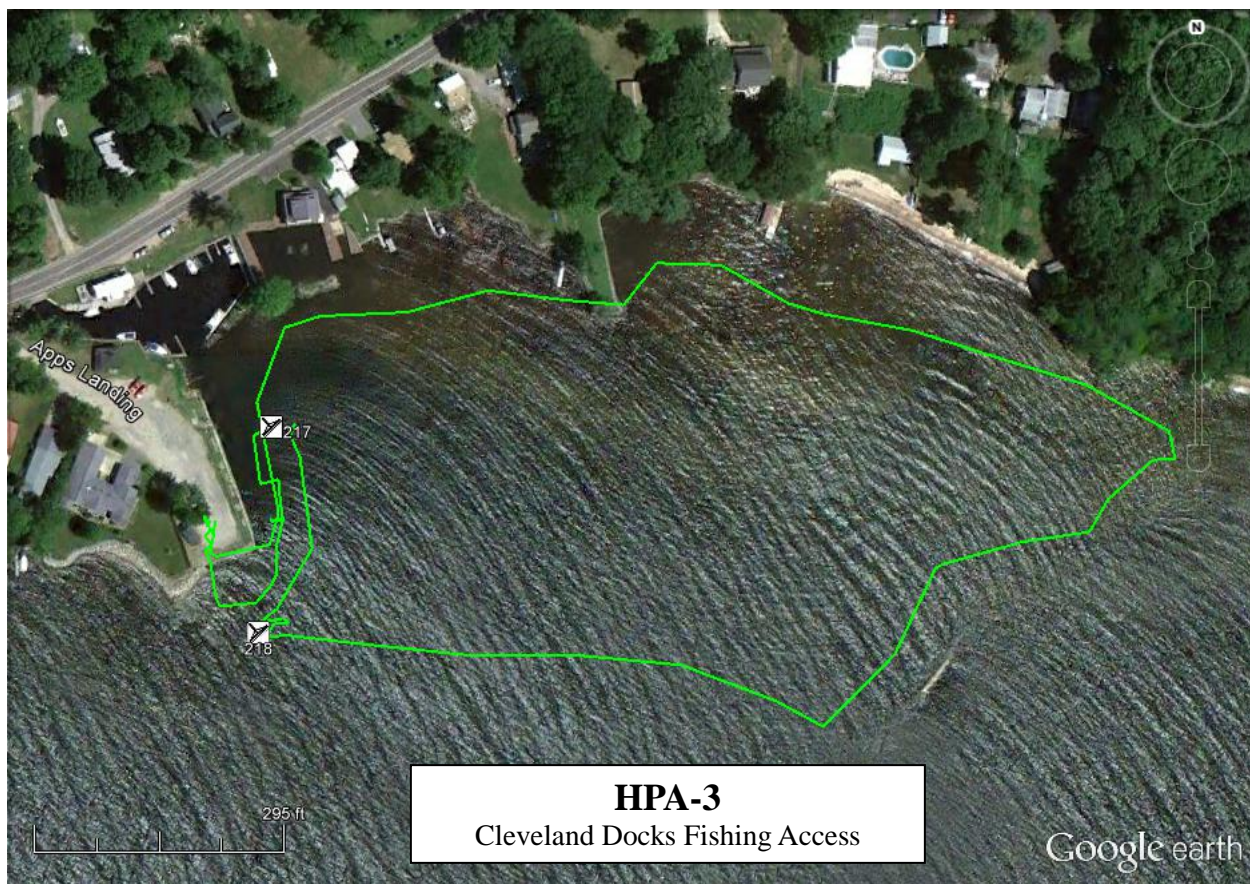
### Survey Maps





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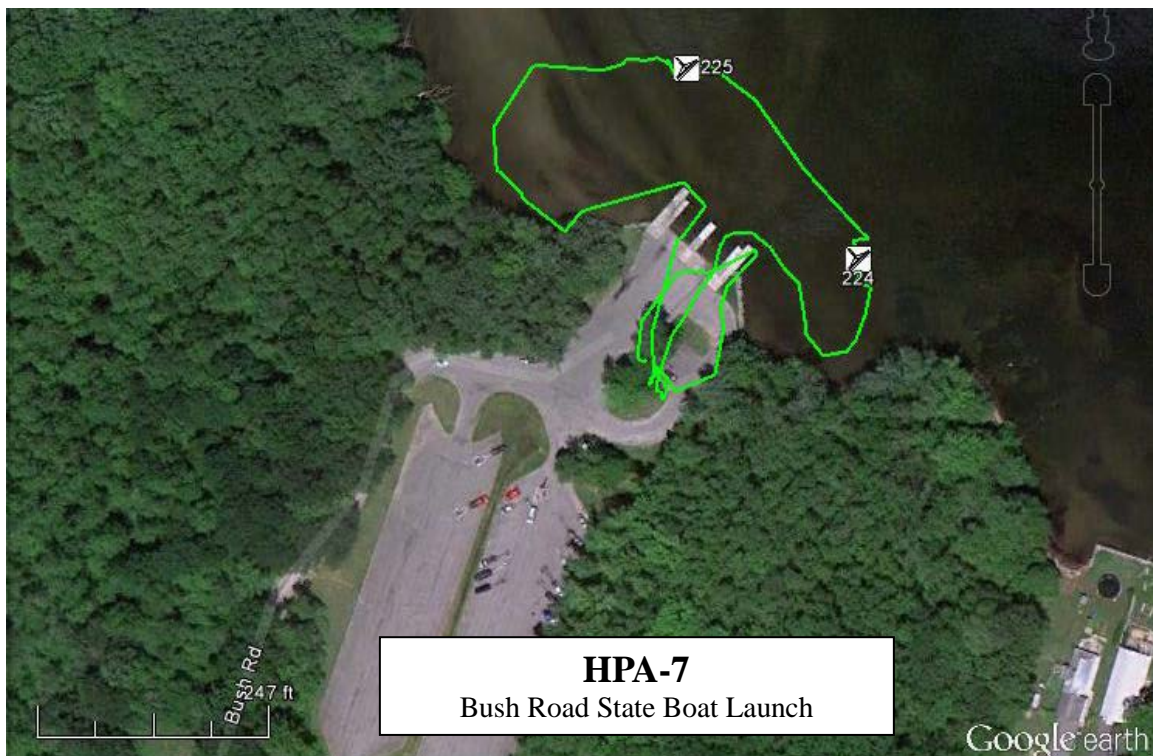
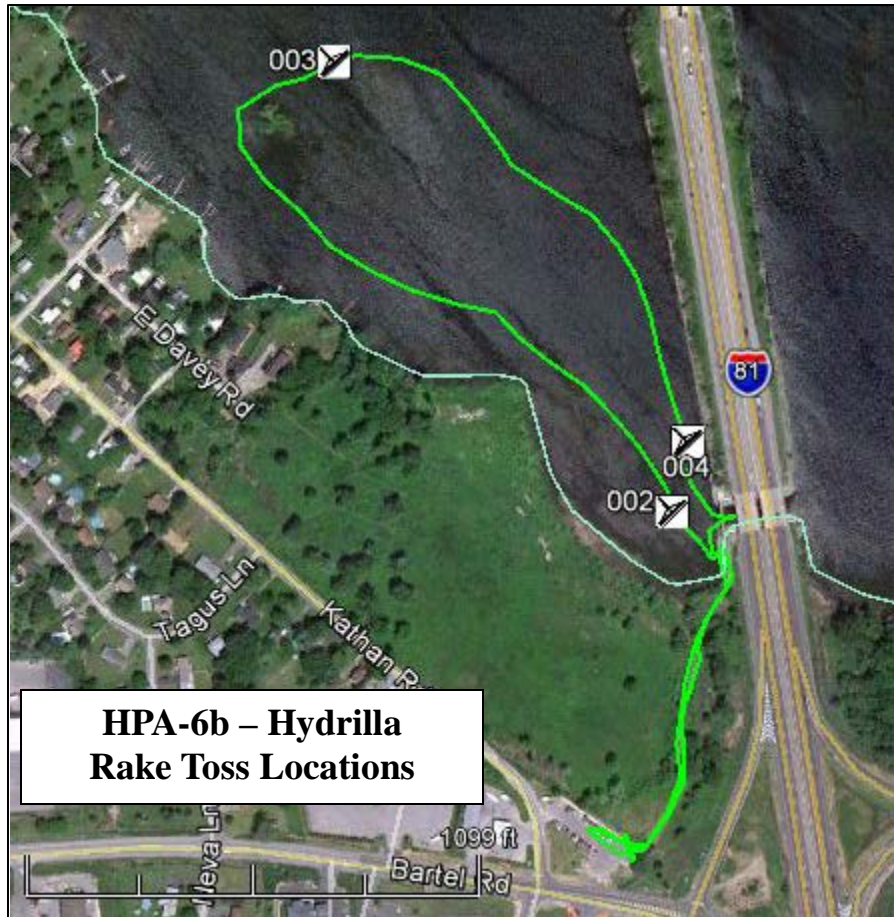
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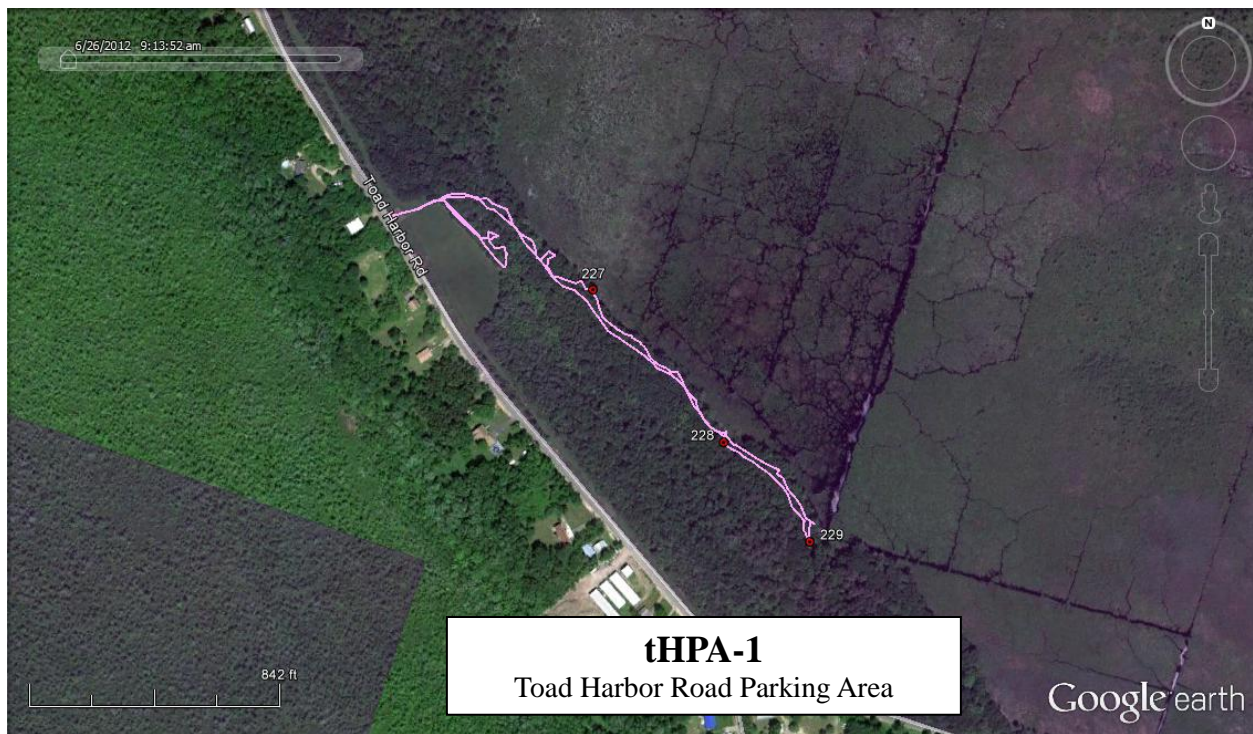
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