Bringing Back Rhody Road Toads

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0   1   2
Miles

Author: Azure Giroux || Date: 3/4/2017 || Source: URI, USGS, ESRI
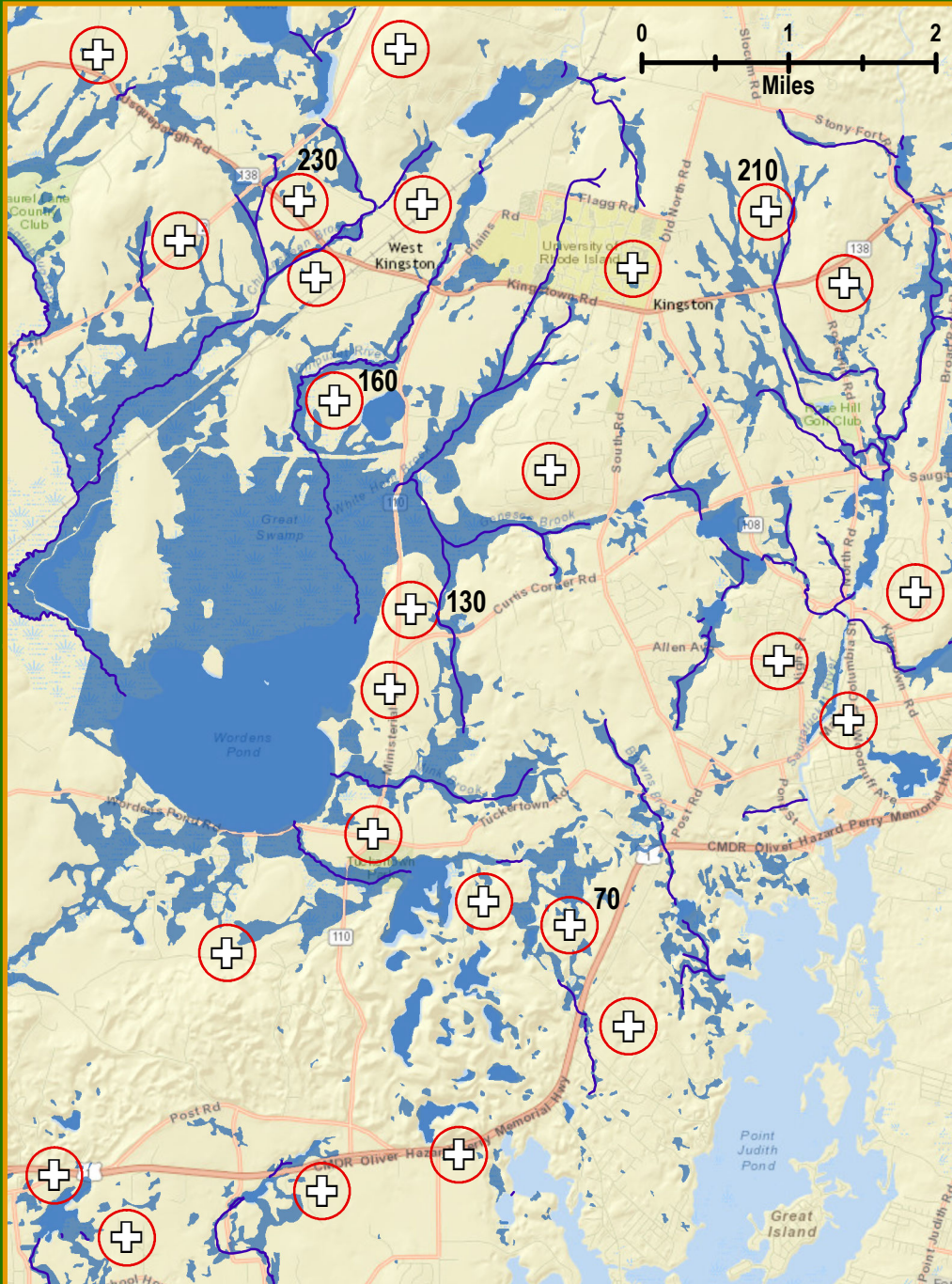
This map demonstrates potential locations of 25 reintroduction sites
for the Rhody Road Toad in South Kingstown, Rhode Island.
There are three variables that determine good reintroduction locations:

(1) Large area of freshwater wetlands within 1,000 feet of a site
(2) Close proximity to rivers and streams
(3) Far away from roads

From these variables, a site quality index was developed that distinguishes
sites that are bad and good. Results can be seen in the table below.

Site Number	Meters from Road	Meters to River	Wetland Acres[1]	Quality Index[2]
10	88.26	417.53	0.03	0
20	45.84	451.19	2.86	0
30	6.4	648.86	2.84	0
40	51.29	724.33	2	0
50	134.66	469.6	0	0
60	62.69	1383.27	0.07	0
70	430.2	614.15	0.65	1
80	137.77	456.39	4.4	1
90	30.86	477.46	0.6	0
100	67.17	774.26	1.64	0
110	48.17	732.17	0	0
120	22.55	640.92	0	0
130	135.66	280.9	0.15	1
140	9.97	608.87	0	0
150	83.14	633.13	0	0
160	733.23	346.38	0.06	1
170	107.75	726.04	0.22	0
180	60.44	256.69	1.28	0
190	107.04	695.13	2	1
200	63.26	388.64	0.14	0
210	668.72	261.15	1.14	1
220	110.84	348.11	0	1
230	129.29	374.76	6	1
240	112.19	493.63	3.19	1
250	308.49	642.52	0	0

[1]Wetland Acres are for within 1,000' of a site

[2]1=Good, 0=Bad

Legend

✚ Reintroduction Site

— Rivers

◯ 1000ft Boundary

▓ Freshwater Wetlands

Based on these variables, the five best reintroduction sites
are identified and labeled on the map with their site number.

Distance from road was the variable that carried with it the most weight in this analysis.
Proximity to roads is a high risk habitat for Rhody Road Toads, and no sites
within 100 meters were considered "good". Distance to rivers and streams were the
second most important site criteria, as toads need water to survive and thrive.
Sites that were under 800 meters from a river in addition to being far fom a road were
considered "good". Finally, the amount of wetlands within 1,000 feet of a site was
an important factor, and those that had more than 0.05 acres in addition to
meeting the aforementioned criteria were considered "good".