

2013 Rouge River Watershed Frog and Toad Survey

Friends of the Rouge
University of Michigan-Dearborn
4901 Evergreen Road KM Bldg, Dearborn, MI 48128
www.therouge.org



The Rouge River Watershed Frog and Toad Survey is a volunteer listening survey that has been coordinated by Friends of the Rouge since 1998. Volunteers are trained to recognize local frog and toad breeding calls and survey quarter-square-mile blocks within the Rouge River watershed from March through July. The purpose of the survey is to collect baseline data on the distribution of frogs and toads within the watershed as well as to give residents of an urbanizing area a positive experience with their local natural areas. The survey is supported by a grant from the Rouge River National Wet Weather Demonstration Project and donations from Rouge communities and participants.

Summary of Volunteer Effort

This was the sixteenth year of the Rouge River Watershed Frog and Toad Survey. There were 213 attendees at the four survey training workshops and 384 volunteers signed up to survey 324 blocks. We received data for 186 survey blocks (see Table 1 below).

Chart 1: Rouge Subwatersheds

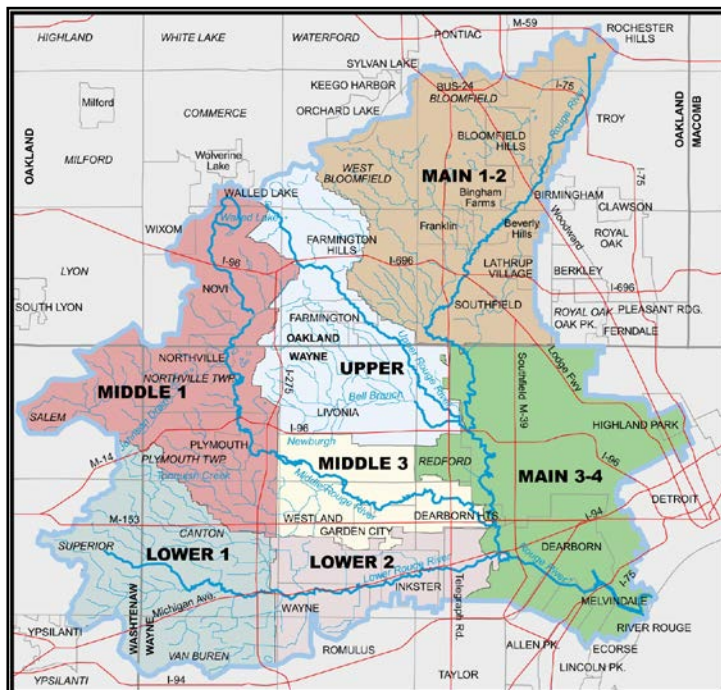


Table 1: Survey Blocks by Subwatershed

sub-watershed	# blocks surveyed	avg. # species heard per block	highest # species heard in one block
Main 1-2	39	2.6	7
Upper	23	2.8	6
Middle 1	61	3.9	7
Lower 1	30	3.3	7
Lower 2	11	2.3	5
Middle 3	11	1.9	5
Main 3-4	11	1.8	5
Total	186	2.9	7

2013 Survey Results

It was a fairly good year for frogs and toads in the Rouge Watershed. The average block had 2.9 species calling (Table 1) which was higher than in 2012 when it was 2.8. Seven of the eight species found in the Rouge were calling in a higher percentage of blocks than average (Table 2). Spring peepers were the only exception as their percentages were the same as average (51%). In comparison to last year, percentages were lower for all but western chorus frogs and green frogs, but 2012 had an exceptionally warm spring. American toads were again the most common species heard followed by green frogs.

The subwatershed with the highest average number of species heard was the Middle 1 with an average of 3.9 species calling per block (Table 1). Middle 1 contains Plymouth, Northville, Novi, and parts of Walled Lake and Salem Township. The second highest average was in the Lower 1 subwatershed with an average of 3.3 species per block. Lower 1 contains all of Canton Township and parts of Plymouth, Plymouth, Salem, Superior, Van Buren and Ypsilanti Townships. The subwatershed with the lowest average number of species heard was the

Main 3/4 with 1.8 species per block. Main 3/4 is the most urbanized area of the Rouge and contains the industrialized Main Stem. Fewer blocks are surveyed in this and the other downstream subwatersheds (Middle 3 and Lower 2).

Sections that have a high number of frogs and toads calling are expected to be better quality than those with few or none calling. In the Rouge, seven is the highest number of species heard in a single block (Chart 2). The headwaters of the Middle branch have the largest concentration of blocks with 6-7 species calling. The headwaters of the Lower, Upper and Main also contain diverse blocks.

We have completed inputting more details of the data from 2002-13 due to the assistance of a volunteer. A new database is enabling us to examine the earliest calling dates for each species over these twelve years (Chart 3). Surprisingly, the first calling date for most species has been later in the spring not earlier. The exception to this is American toads and bullfrogs. Chart 4 shows the range of dates for first calling dates for each species.

Chart 2: Species Diversity

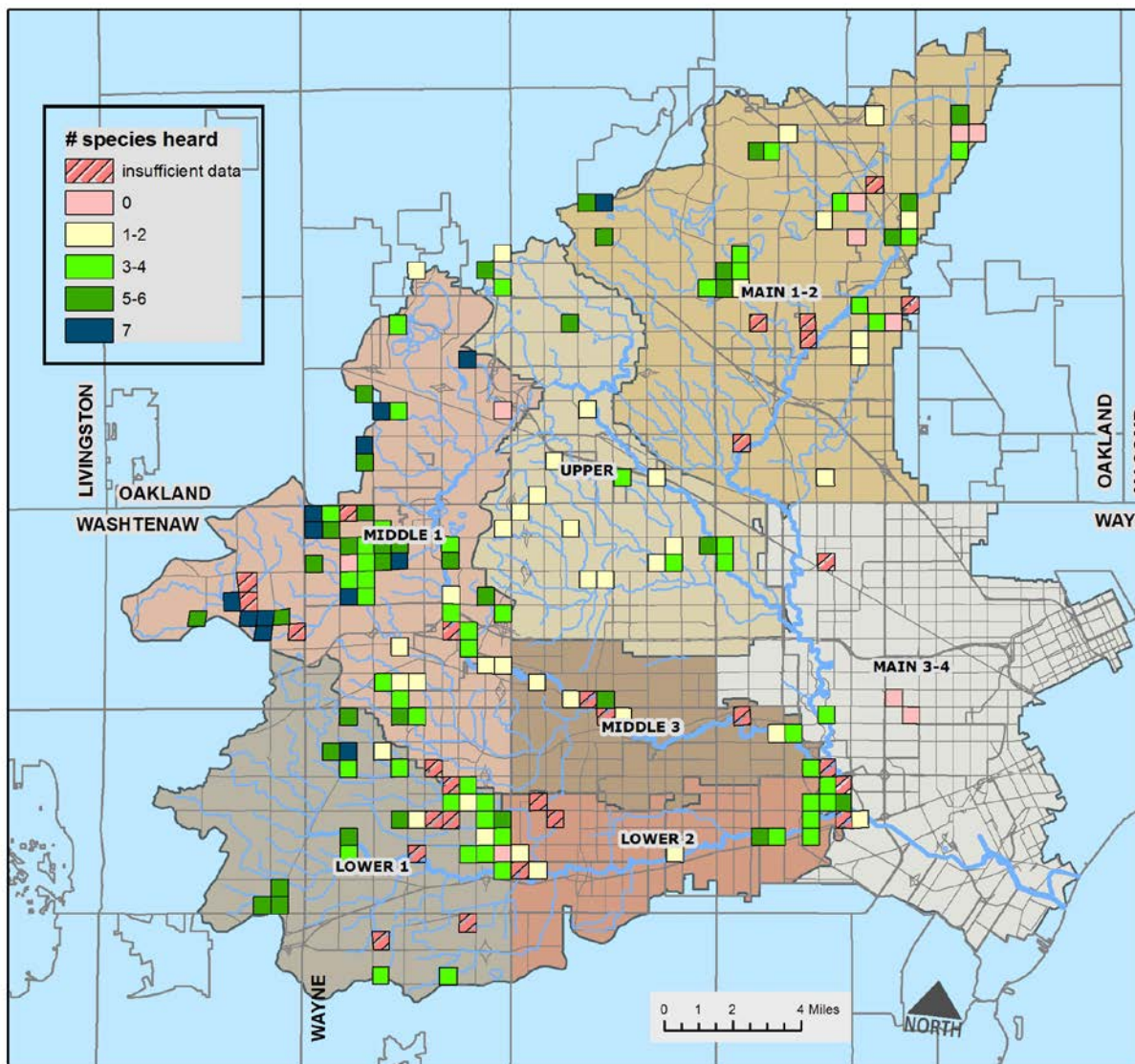


Table 2: Percent of blocks in which species was heard, 2000-2013

Species	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	Ave
Wood Frog	25	30	25	27	27	24	29	19	29	19	23	20	17	14	24
W. Chorus Frog	54	48	39	49	46	47	57	49	57	46	48	52	49	50	49
Spring Peeper	51	56	50	49	46	56	62	55	57	41	45	50	47	48	51
American Toad	77	79	80	88	84	89	87	78	74	61	62	71	58	49	76
N. Leopard Frog	19	22	19	19	14	18	21	12	22	5	18	8	9	5	16
Gray Treefrog	54	56	54	62	48	53	64	48	57	37	40	35	37	47	49
Green Frog	64	63	64	72	68	74	70	70	64	51	53	39	38	15	61
Bullfrog	19	28	17	17	12	22	17	10	22	10	13	5	7	0	15

Chart 3: First Calling Dates for each Species, 2002-2013

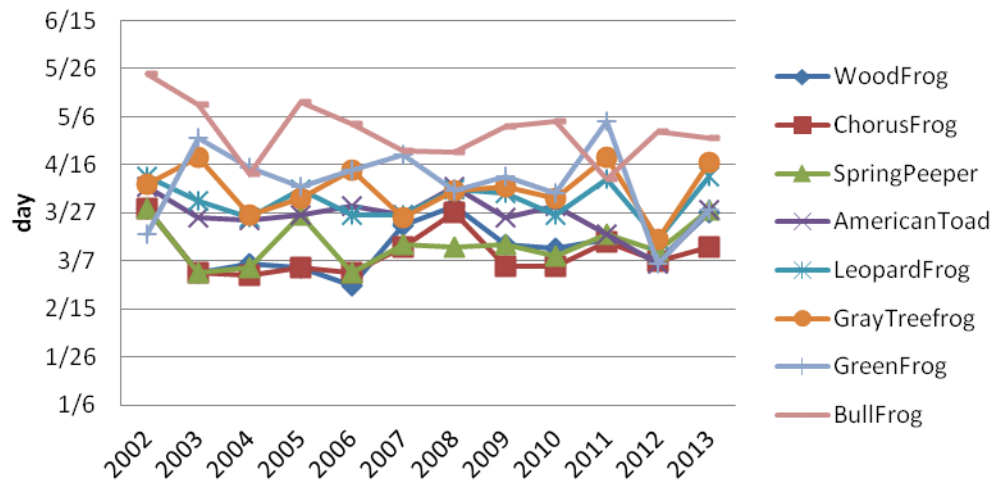
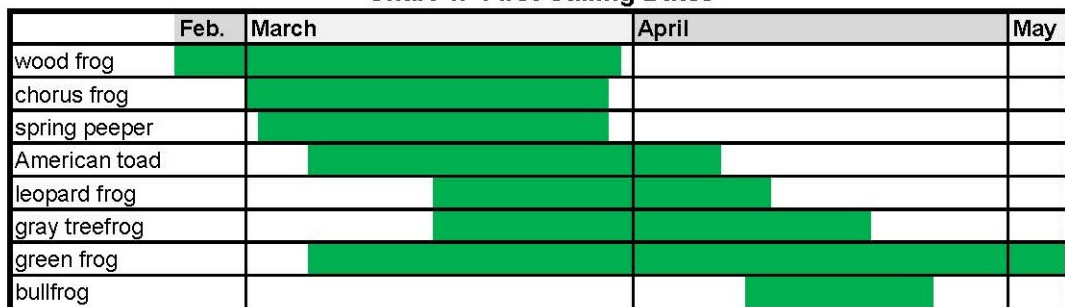
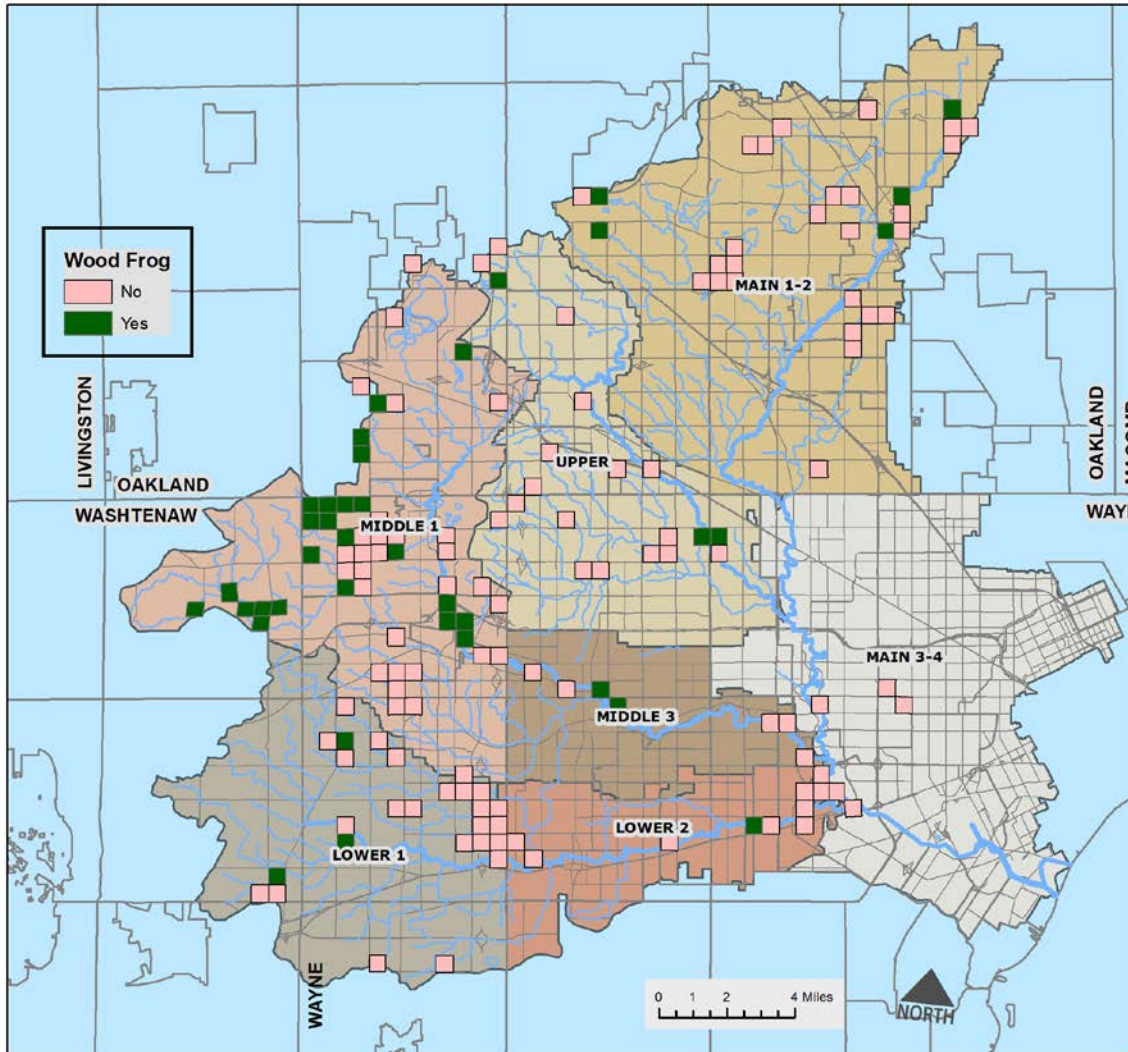


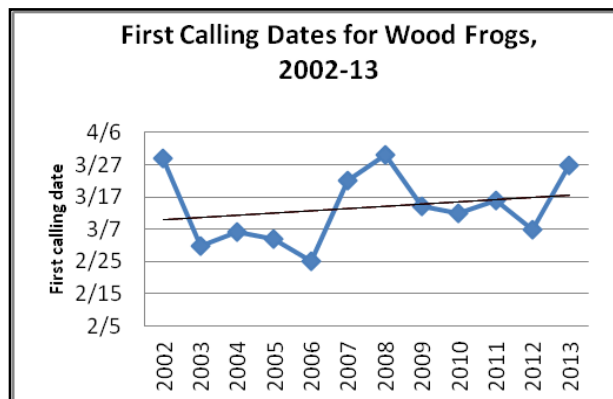
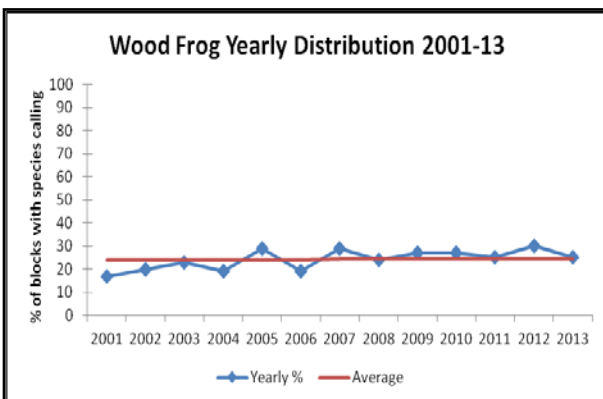
Chart 4: First Calling Dates



Wood Frog *Rana sylvatica*

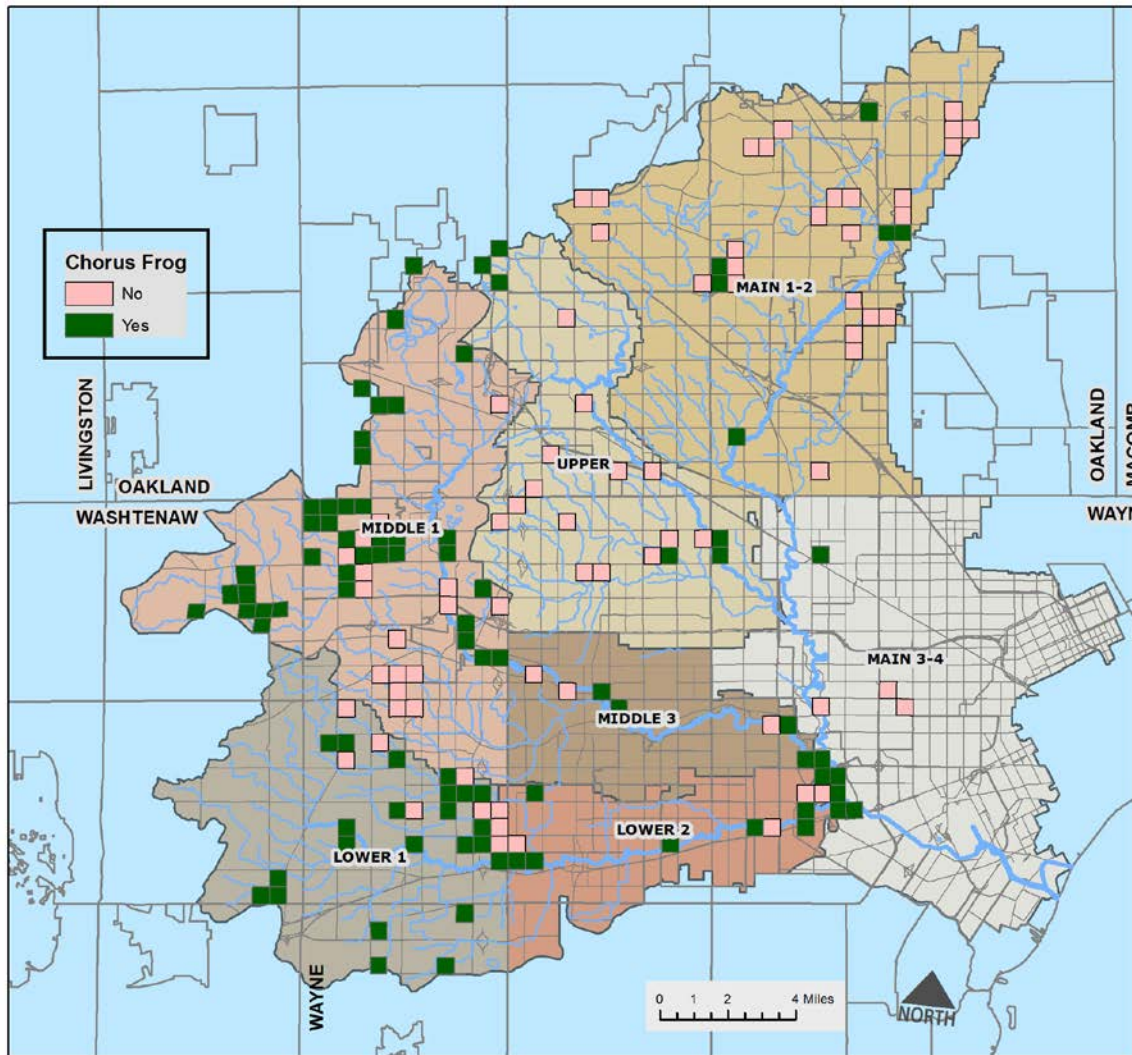


Wood frogs were heard in 25% of all watershed blocks. This is lower than last year but higher than average. They were not heard in the Main 3-4 subwatershed. Wood frogs began calling twenty days later (March 27) than last year (March 7). The trend since 2002 is for them to start calling later.

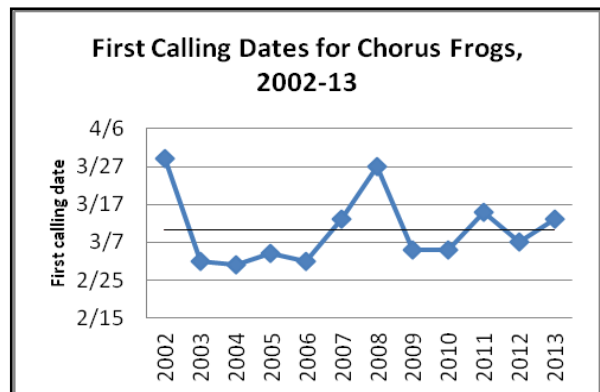
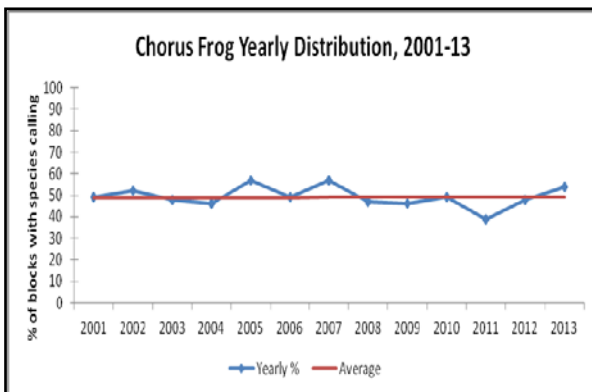


Western Chorus Frog

Pseudacris triseriata

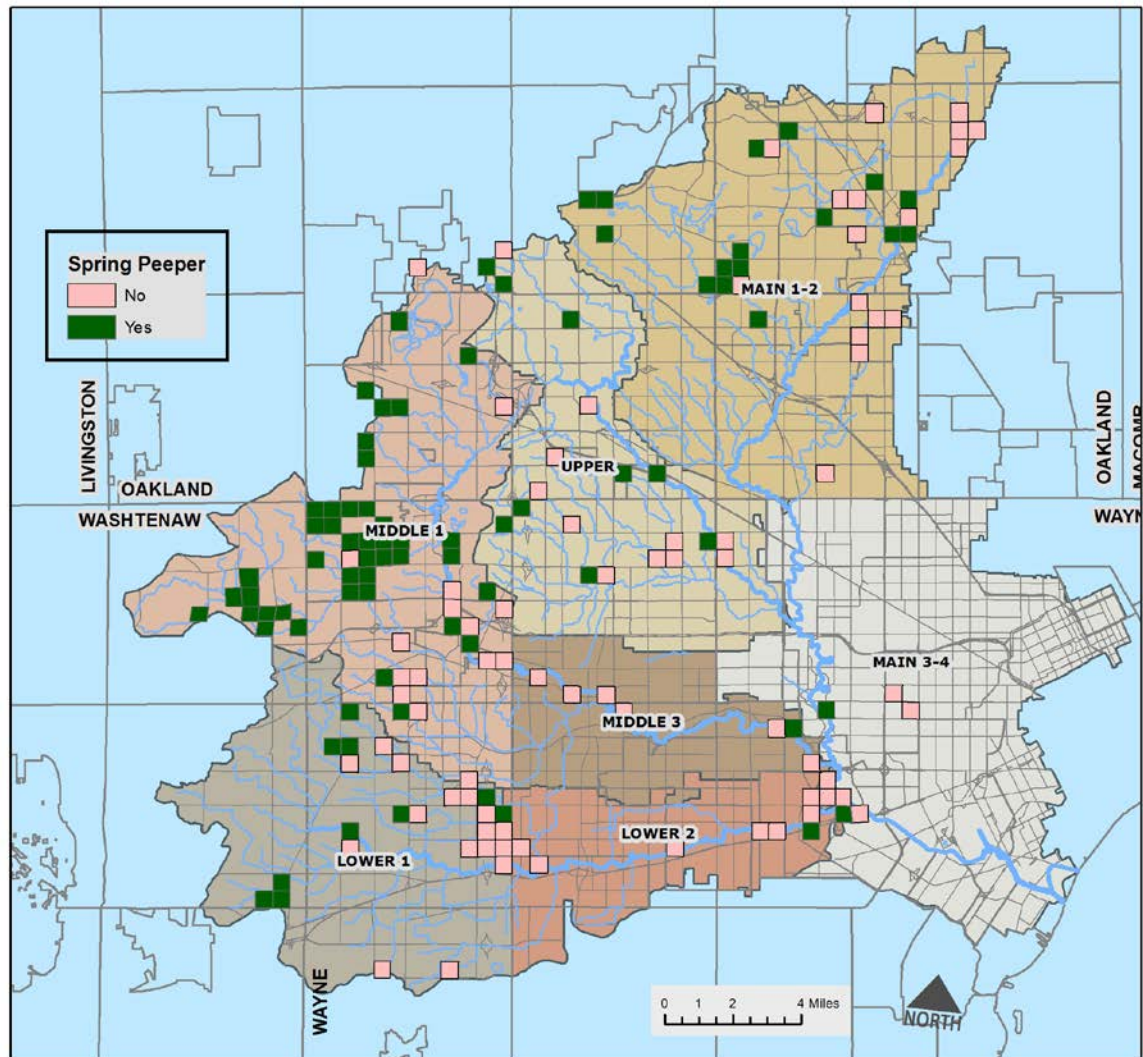


Western chorus frogs were heard in 54% of survey blocks. There were more chorus frogs heard this year than last year (48%) and more than average (49%) for the species. The first calling date this year was March 13, six days later than last year and twelve days later than the record date of March 1 in 2004. March 10 is the average first calling date and this has not changed much since 2001.

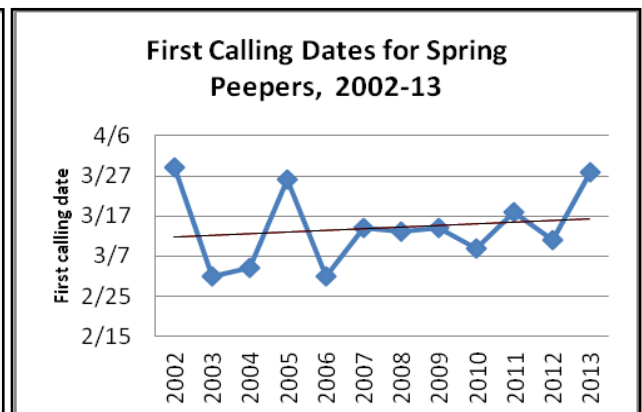
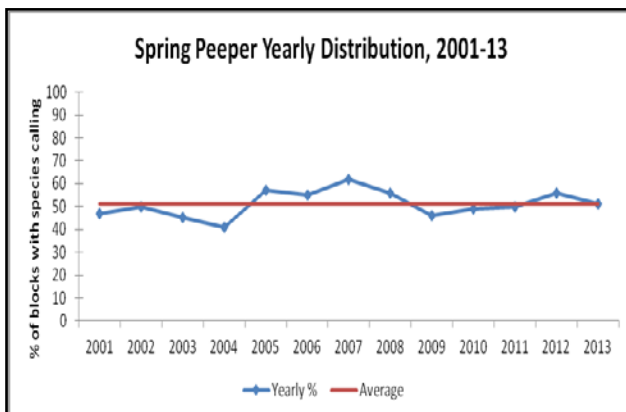


Spring Peeper

Pseudacris crucifer

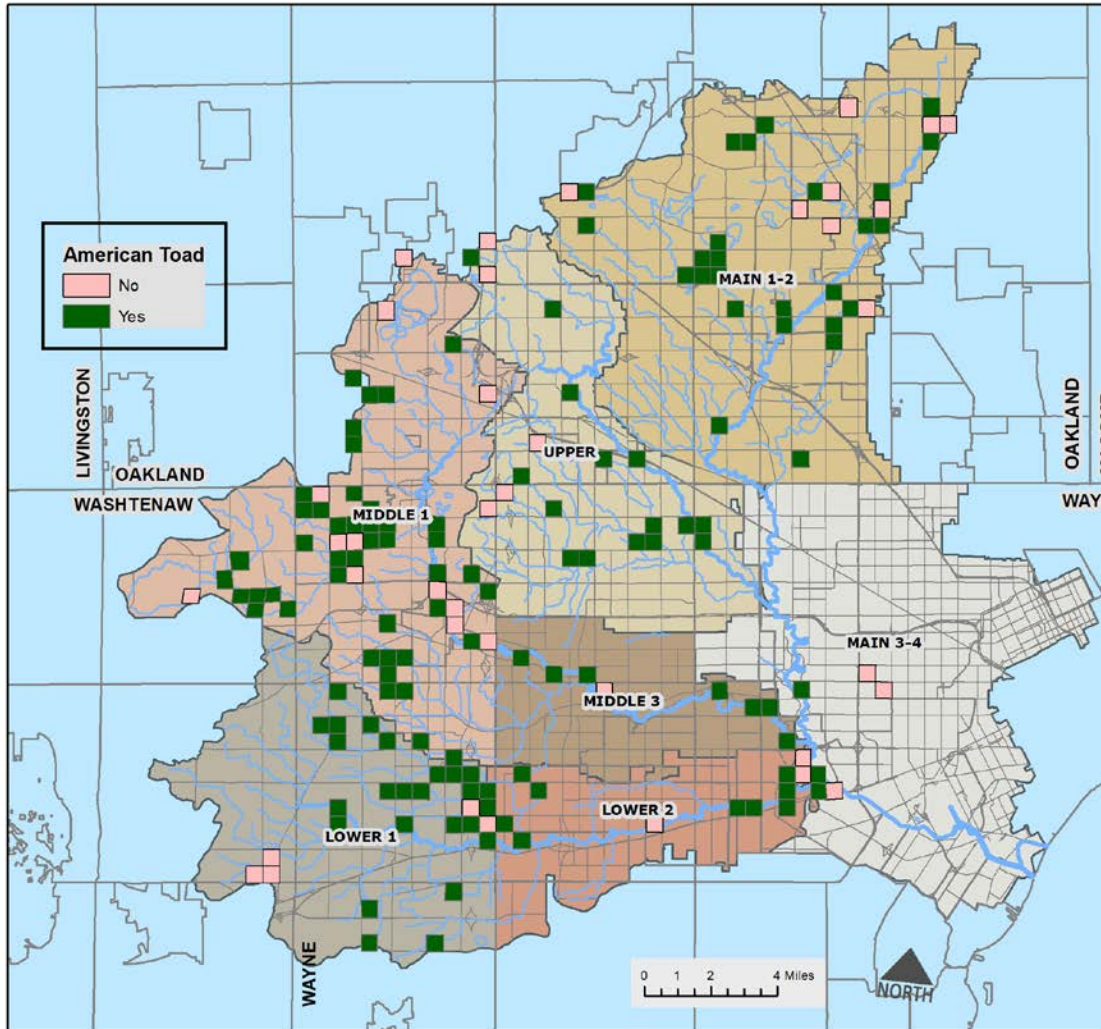


Spring peepers were calling in an average number of blocks (51%) and in fewer than last year (56%). Calling started very late this year (March 28), only a day earlier than the latest start date of March 29 in 2002. First calling dates are trending somewhat later since 2002 with March 14 as the average.

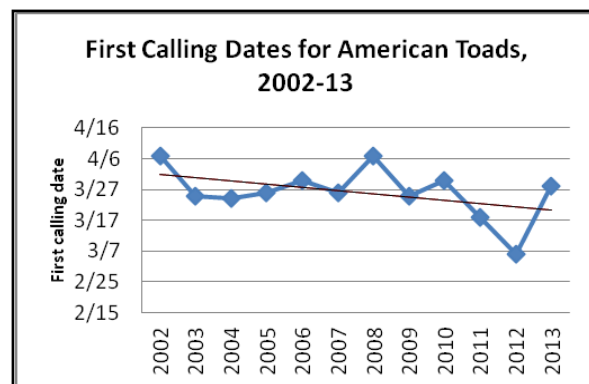
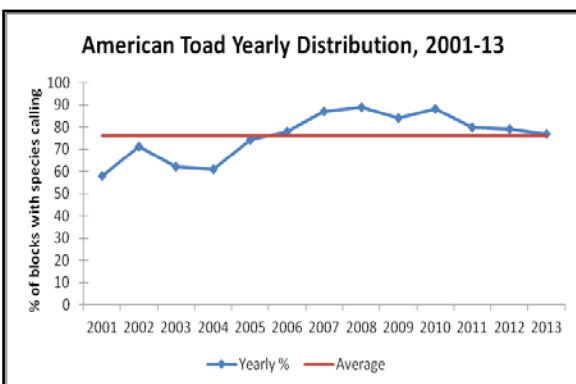


American Toad

Bufo americanus

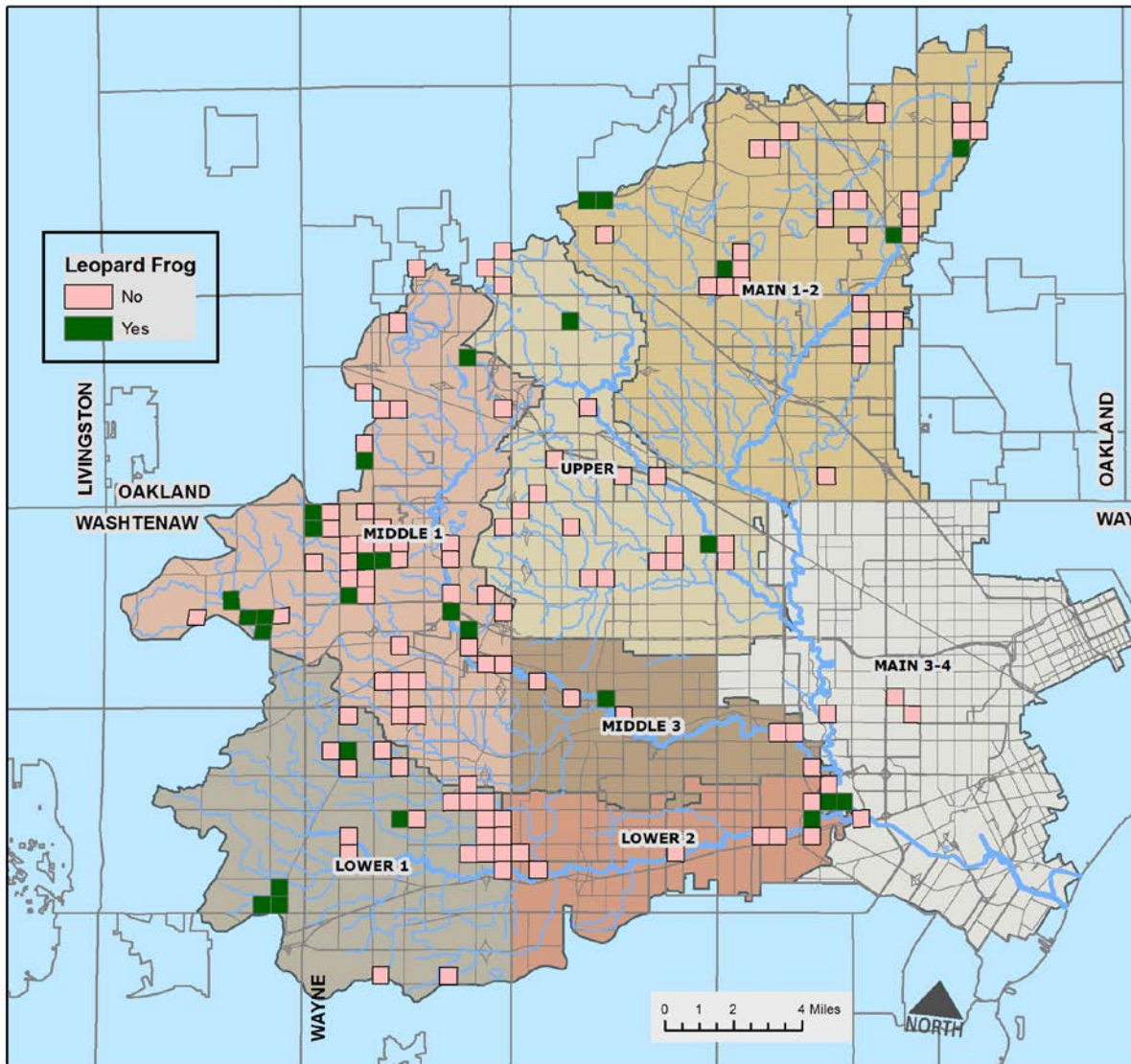


American toads were calling in 77% of all blocks. This is slightly above average (76%) but lower than last year (79%). They started calling on March 28 which is later than average. First calling dates are trending earlier with March 26 being the average. Surveyors have been told that toads start calling on April 15 (Toad Day), based on statewide data. Tax day is no longer Toad Day in the Rouge!

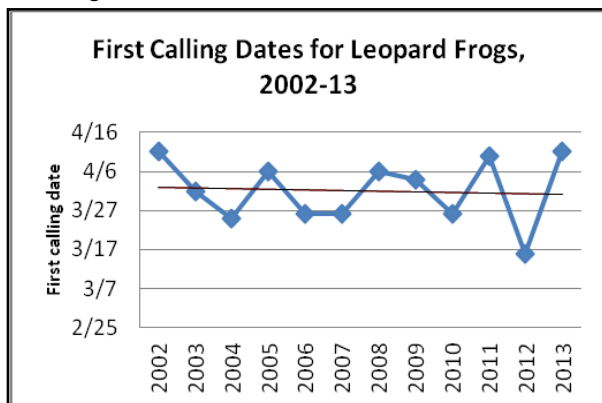
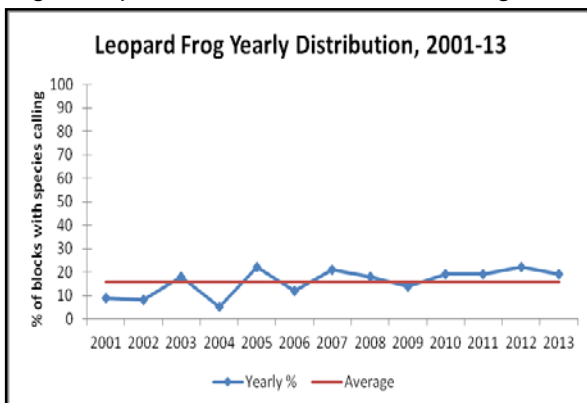


Northern Leopard Frog

Rana pipiens

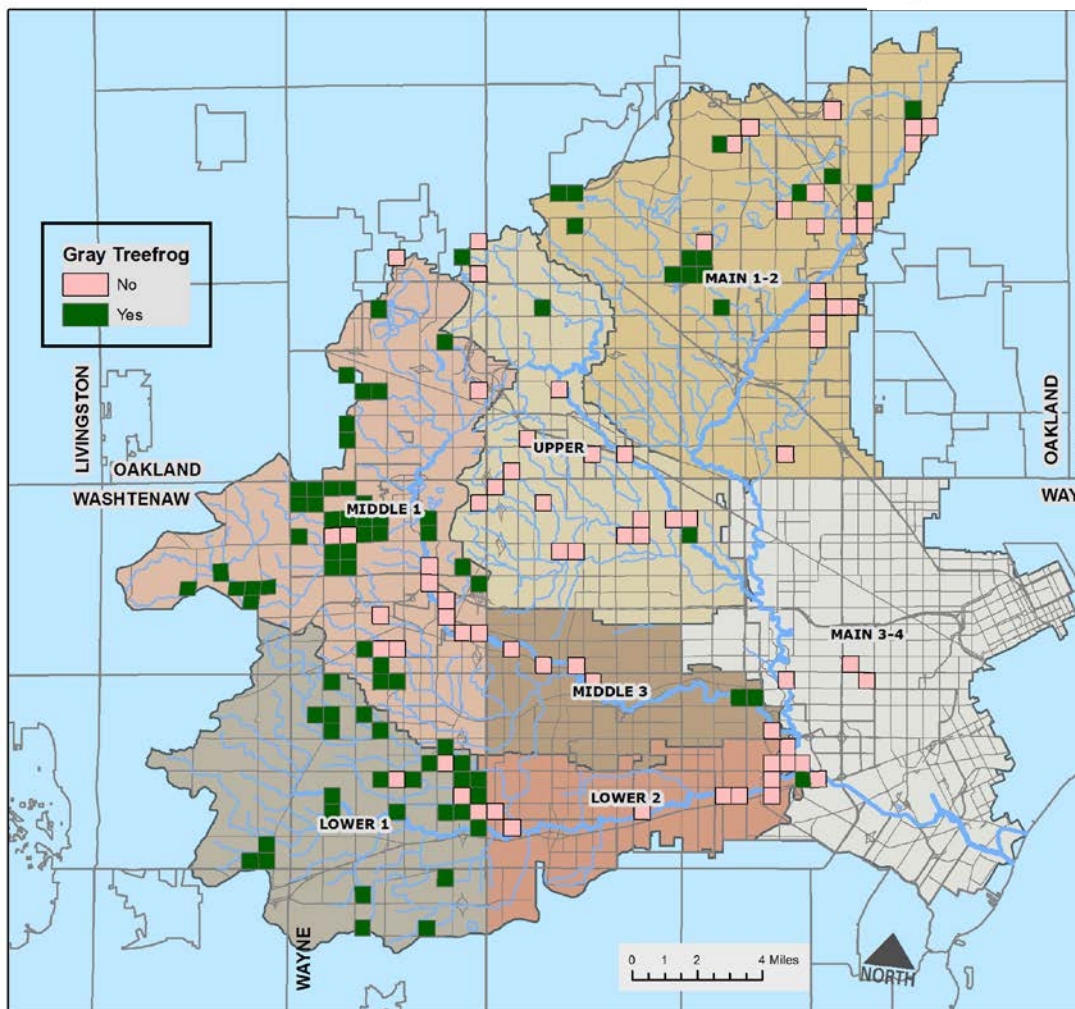


Northern Leopard Frogs, one of the most sensitive species in the watershed, were calling in 19% of all blocks. This is above average (16%) but below last year (22%). They were not heard in the Main 3-4 and Lower 2 subwatersheds this year. They started calling on April 11 which is later than the average of April 1. Over time, the first calling date is trending somewhat later.



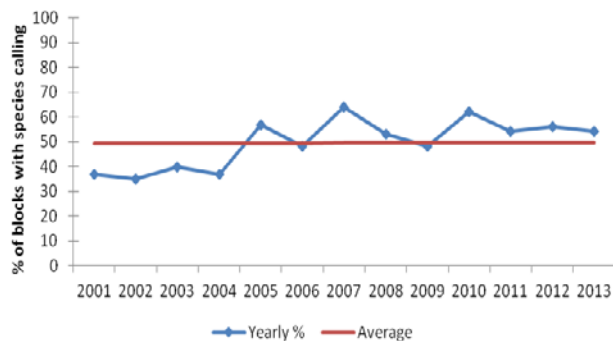
Eastern Gray Treefrog

Hyla versicolor

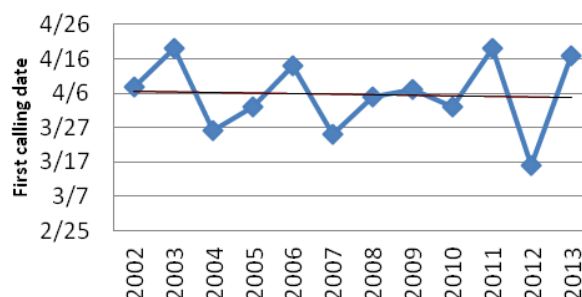


Eastern gray treefrogs were heard in 54% of all blocks, higher than average (50%) but lower than last year (56%). They were not heard in the Main 3-4 subwatershed. They began calling on April 17, later than the average date of April 5. Over time, the first calling date is somewhat later.

Gray Treefrog Yearly Distribution, 2001-13

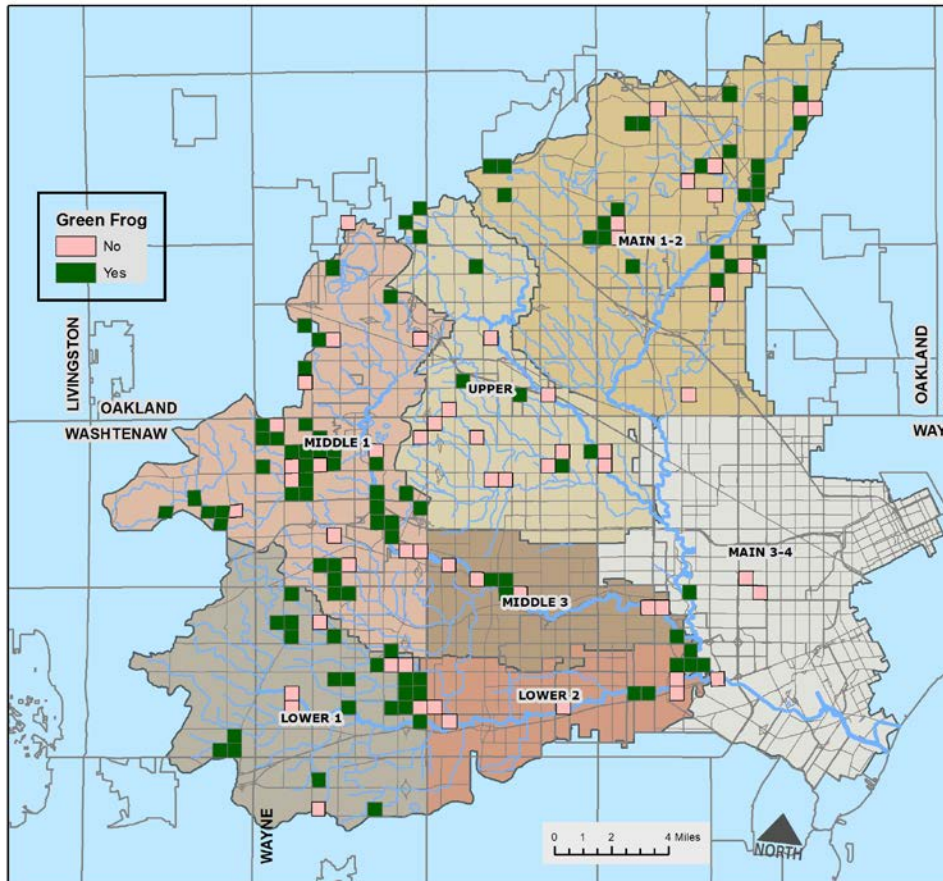


First Calling Dates for Gray Treefrogs, 2002-13

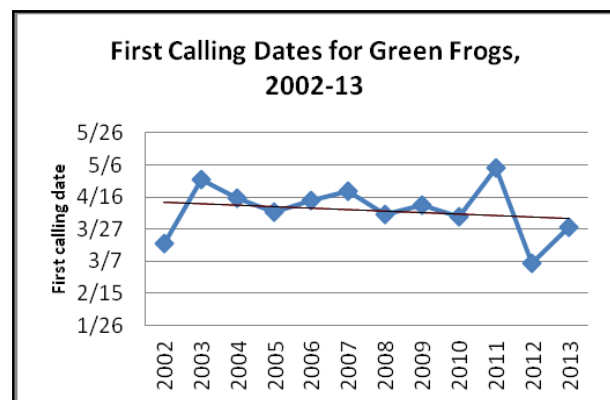
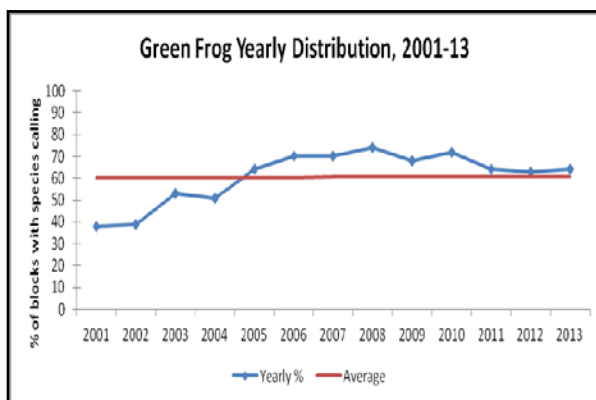


Green Frog

Rana clamitans

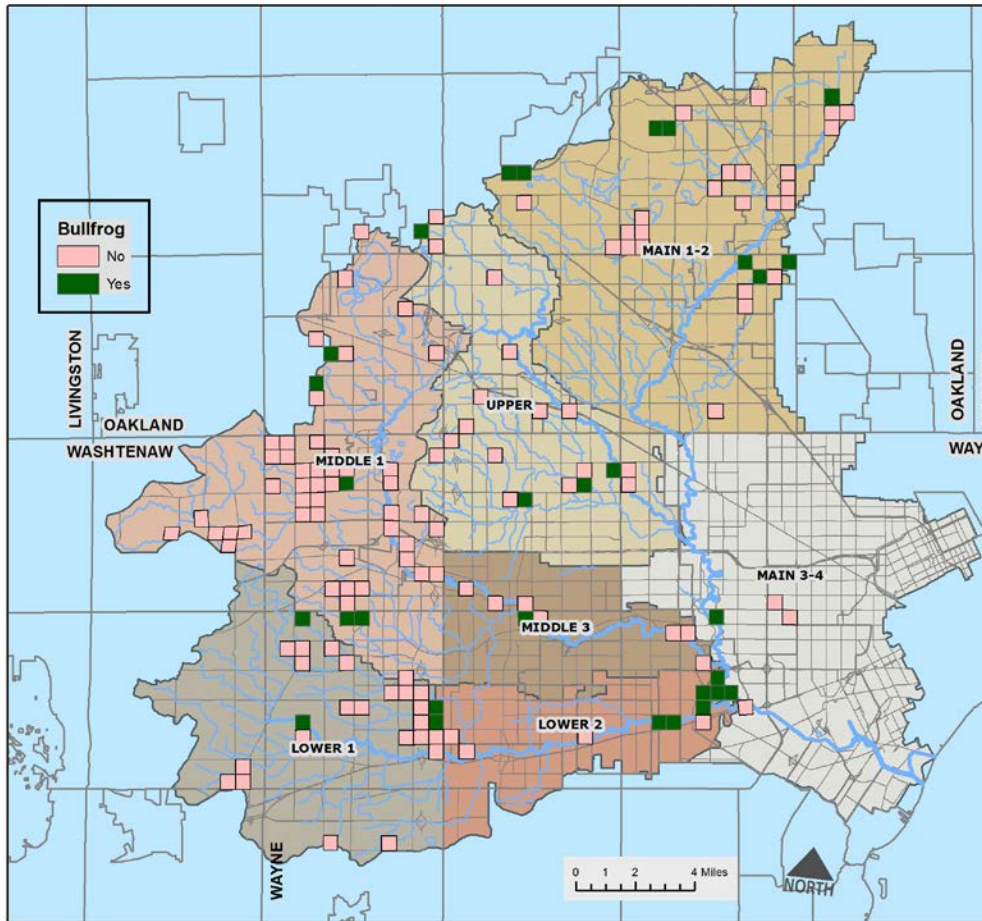


Green frogs were heard in a higher percentage of blocks (64%) than average (61%) and than last year (63%). They started calling on March 28, earlier than the average of April 8. Over time, the first calling date is somewhat later.



Bullfrog

Rana catesbeiana



Bullfrogs were heard in more blocks (19%) than average (15%) but less than in 2012 (28%) which was a record year for them. They started calling on March 28 which is close to average for the species. First calling dates are trending earlier for this species.

