

Public Facilities Committee Report

City of Newton In City Council

Thursday, May 17, 2023

Present: Councilors Leary (Chair), Gentile, Crossley, Kelley, Laredo, Norton, Kalis and Danberg

Also Present: Councilors Malakie, Bowman, and Downs

City Staff: Jonathan Yeo Chief Operating Officer, Josh Morse Commissioner of Public Buildings, John Daghlian, Associate City Engineer, and Shawna Sullivan Deputy Commissioner of Public Works

#128-23 Request for a grant of location in Valentine Street

NATIONAL GRID petition for a grant of location to install and maintain gas main in Valentine Street as follows:

- 1905' ± of 8" plastic main in Valentine Street from #85 Valentine Street to #240 Valentine Street to replace 1180' ± of 8" cast iron and 25' ± of 8" plastic main
- 40' <u>+</u> of 6" plastic main in the intersection of Howland Road and Valentine Street to replace 40' <u>+</u> of 6" cast iron main
- 40' <u>+</u> of 6" plastic main in the intersection of Bonad Road and Valentine Street to replace 40' <u>+</u> of 6" cast iron main
- 50' \pm 6" plastic main in the intersection of Wauwinet Rd to replace 40' \pm 6" cast iron and 10' \pm 6" plastic main
- 80' <u>+</u> 8" plastic main in the intersection of Bigelow Road and Valentine Street to replace 80' <u>+</u> of 6" cast iron main
- 435' ± 6" plastic main in Ellis Road from Valentine Street to the existing 8", plastic main at #38 Ellis Road to replace 420' of 6" Cast Iron and 15' ± 6" plastic gas main
- 80' <u>+</u> 8" plastic main in the intersection of Valentine Street and Oak Cliff Road to replace 40' of 8" Cast Iron and 40' + 6" cast iron main

Public Facilities Held 6-0; Public Hearing Closed 6-0 on 04/12/23

Action: Public Facilities Approved 5-2-1 (Councilors Kelley and Leary opposed and Councilor Norton abstaining)

Note: The Chair noted that this item was discussed by the Committee on 04/12/23. Mary Mulroney, National Grid Representative joined the committee to discuss item #128-23. The Council did receive the below response from National Grid regarding the petition:

"Regulated by the Department of Public Utilities the primary purpose of replacing leak prone pipe is to improve safety and reduce risk. Lining is not a viable option for the existing small diameter cast iron main segments to be addressed under the proposed project from either a cost or construction activities logistics perspective. The existing configuration of gas main has a high concentration of lateral piping that would prohibit a system shutdown that would be required prior to the application of the lining material. Gas lining is considered when a system shutdown can be achieved without disruption of customer service for an extended period, and typically on mains 16 inch or larger in diameter."

Councilors expressed their ongoing concerns regarding gas leaks in Newton and noted that there are larger leaks that should be prioritized.

It was also noted that this work does need to be done because of its connection with the City's paving schedule.

Councilor Laredo motioned to approve which passed 5-2-1 with Councilors Leary and Kelley opposed and Councilor Norton abstaining.

#134-23 Approval of roadway infrastructure improvements for Elliot Street Traffic Calming Project

<u>HER HONOR THE MAYOR</u> requesting the approval to make changes to roadway infrastructure as part of the Elliot Street Traffic Calming Project in Newton Upper Falls. The installation of a new crosswalk with a flashing beacon, intersection realignment, changes to roadway width, and creation of sidewalk-level bike lane requires the approval of the Public Facilities Committee.

Action: <u>Public Facilities Held 8-0</u>

Note: Jason Sobel, Director of Transportation joined the committee to discuss the approval of roadway infrastructure improvements for Elliot Street Traffic Calming Project. Mr. Sobel explained that there is a sharp curve on Eliot Street and this has been the scene of a number of accidents. The project goals include improved safety in the area for all users of road, reduce vehicle speeds on Eliot Street and improve pedestrian access. Mr. Sobel provided the attached memo regarding the project.

A consultant has been hired who has developed and reviewed with the department 12 different concept plans for the roadway. These were shown to the Complete Streets Working Group and they produced their recommendation for the project.

The recommended/ proposed concept plan was shown at the meeting is attached to the report. Mr. Sobel explained at Linden Street they are proposing a new pedestrian crosswalk along with an RFB (Rapid Flashing Beacon). The Mechanic Street intersection is the main portion of this project. Mr. Sobel explained that they are proposing to reconfigure the roadway so that Mechanic Street hits Eliot Street at a "T" intersection. The plan is to also narrow the roadway and eventually the shoulders will be replaced with raised bike lanes. The roadway will be 22 ft at the intersection which is wide enough for fire trucks and other larger vehicles. It was noted that there

is a Fire Station approximately 800 ft from the intersection. There will also be the addition of green space. At Cottage Street and Wetherell Street there will be another new crosswalk with a RFB and bump outs into the existing shoulder area. This will make for a narrower roadway which should reduce speeds. Mr. Sobel did note that concerns were raised regarding bicyclists safety in this area and their solution is to raise the bike lane to the sidewalk level through this intersection.

Councilors asked the following questions:

Q: Has the department considered adding a rumble strip in that area so that people know when they are crossing into another lane? In addition, what is the overall timeline for the project?

A: Mr. Sobel explained that once the conceptual plan is approved than the project would move to engineering design this year and should go out to bid this fall. The construction process would start next spring. Mr. Sobel also explained that they have not used rumble strips in many areas of the City. There have been complaints about the noise and from bicyclists.

Q: Has there been a study done regarding how larger vehicles will maneuver in this roadway?

A: Mr. Sobel explained that has not been done yet since this is only the conceptual design but this will be done during the engineering design.

Q: How wide are fire trucks and does the Fire Department feel that they can drive through this area safely?

A: Mr. Sobel explained that they are 10 ft wide and the Fire Department has determined that they can maneuver in this area safely. He noted that he will continue this conversation with the Newton Fire Department.

Q: Is there a plan for a new guardrail on Eliot Street?

A: Mr. Sobel explained that this part of the project has not be decided yet and will be determined during the engineering design.

Q: Would this area be a candidate for flex posts for the bike lanes?

A: Mr. Sobel explained that there were a few alternatives that didn't raise the bike lane and used flex posts instead. The concern is that these are not permanent and routinely need maintenance. This is a short-term measure before construction begins.

Councilors made the following comments:

Councilors noted the importance of this project and how dangerous this area can be for all. It was also noted that a number of residents in that area feel that the speed limit needs to be lowered.

Mr. Sobel did note that by narrowing the roadway this should reduce speeds in this area. Traffic Council and MassDOT would need to approve a reduction in the speed limit.

Concerns were raised regarding firetrucks and other large vehicles being able to get through this intersection with the narrowed travel lanes. This could be made worse during a harsh winter.

It was noted that there are number of 10 ft travel lanes in the City that firetrucks are able to travel down.

There were questions raised if the neighborhood would rather a guardrail or another design.

The Chair entertained the following Public Comment:

The following residents were in support of making updates in this area to make it safer for all on this road. But concerns were raised regarding the speed limit and where the signage is for the speed limit. There were also concerns raised regarding how firetrucks will get by and what the barriers will look like at the sharp corner on Eliot Street. It was noted that this should be considered a safety zone with 20 mph as the speed limit. There was also concerns raised regarding the area council not being notified of this project.

Linda Ghiron, 17 Champa Street Julie Irish, 8 Columbia Ave Jay Werb, 31 Williams Street

Councilors discussed holding the item until these concerns can be addressed. There will also be an additional community meeting with the area council regarding the project.

Councilor Laredo motioned to hold which passed unanimously.

Referred to Public Facilities and Finance Committees

#165-23 Appropriate \$750,000 for the Newton Free Library's HVAC system

<u>HER HONOR THE MAYOR</u> requesting authorization to appropriate and expend the sum of seven hundred fifty thousand dollars (\$750,000) from June 30, 2022 Certified Free Cash to a Public Buildings Department Capital Account to fund the replacement of the Newton Free Library's HVAC system as detained in the FY-24-FY28 CIP.

Action: Public Facilities Approved 8-0

Note: Josh Morse, Commissioner of Public Buildings joined the committee to discuss the appropriated of \$750,000 to make updates to Account to fund the replacement of the Newton Free Library's HVAC system as detained in the FY-24-FY28 CIP.

Commissioner Morse explained that they are in the feasibility stage of converting the library from fossil fuel to a fully electric heating and cooling system. There are several grants and rebates for this project and it will help if there is an approval from the City Council for these funds when they are applying for these grants. The utility usage in all public buildings are monitored and last year the Library's electricity usage did increase 36% due to the failing cooling system.

It was questioned if these updates will include the auditorium. Commissioner Morse explained yes it will address the entire facility. There is only partial air conditioning now but parts are on order for the second chilling tower.

Councilor Laredo motioned to approve which passed unanimously.

#206-22 Adoption an Ordinance to prohibit the use of anti-coagulant rodenticides

COUNCILORS NORTON, LEARY, LUCAS, BOWMAN, MALAKIE, GREENBERG, HUMPHREY AND DANBERG requesting the adoption of an Ordinance to prohibit the purchase or application of anti-coagulant rodenticides by the City or City

contractors.

Action: Public Facilities Approved 7-0 (Councilor Gentile not voting)

Note: Councilor Norton joined the committee to discuss the adoption of an ordinance to prohibit the use of anti-coagulant rodenticides. She was joined by Laura Kiesel who discussed the importance of this ordinance due to the number of eagles who have died due to the use of anti-coagulant rodenticides. Ms. Kiesel's article titled "Rodenticides are killing animals way up the food chain" is attached. The concerns are also related to children and pets who have ingested the substance. It was noted that the most effective way of controlling the rat population is limiting their food source.

Commissioner Morse noted that the City does not use this form of rat poison and tells contractors not to use it either. This item will codify a policy that is already in place.

Councilors noted the importance of not using anti-coagulant rodenticides.

Councilor Danberg motioned to approve which passed 7-0 with Councilor Norton not voting.

The Committee adjourned at 9:00 pm.

Respectfully Submitted,

Alison Leary, Chair



MEMORANDUM

Date: February 20, 2023 Job No.: 10482

To: Jason Sobel, P.E, PTOE, Department of Public Works

Cc: Complete Streets Working Group

From: Jeff Maxtutis, Senior Associate and Anna Sangree, Transportation Planner

Subject: Elliot Street Traffic Calming Concepts Development

BETA Group, Inc. (BETA) was contracted by the City of Newton to develop concept plans for traffic calming measures on Elliot Street between Linden Street and Wetherell Street. This memorandum describes project priorities, existing conditions, concepts developed by BETA, feedback received from the City of Newton Complete Streets Working Group and identifies a preferred concept.

1.0 PROJECT LOCATION

The project location is an approximately 700-foot-long segment of roadway including the sharp curve on Elliot Street in Newton between Linden Street and Wetherell Street. The segment of Elliot Street is located in the Upper Falls neighborhood in western-central Newton and generally follows a southwest to northeast alignment through the neighborhood, connecting on the west to Central Avenue in Needham at the Charles River and on the northeast to Route 9 in Newton.



Figure 1: Project Location on Elliot Street between Linden Street and Wetherell Street

2.0 Project Priorities

The following project priorities were shared with the project team by the City of Newton during the conceptual design phase.

- Slow vehicles entering the Elliot Street curve, and improve safety at the Elliot Street / Mechanic Street intersection
- Provide consistent separated bicycle accommodation
- Provide safe pedestrian crossings across Elliot Street to the east and west of the curve at Mechanic Street
- Implement green infrastructure (environmentally conscious streetscape elements), in the form of native plantings and trees
- Minimize ongoing maintenance needs

3.0 Existing Conditions

3.1 SITE VISITS:

The project kicked off with a site visit between the BETA project team and Newton City staff on June 27, 2022. After the first visit, the project team visited the project location on multiple times to measure the stopping sight distance to proposed crosswalk locations, roadway widths, and identify the location of utility poles, catch basins, lighting, trees, and other constraints. During the visits, the team also made informal travel behavior observations.

3.2 ROADWAY CHARACTERISTICS:

Elliot Street between Linden Street and Wetherell Street is characterized by dense residential land uses on both sides, is classified as a major collector roadway, and is under City jurisdiction. Elliot Street accommodates a single 10-foot-wide travel lane in each direction divided by a solid double yellow center line, with 4- to 4.5-foot shoulders on each side through most of the project area. A 45-degree curve in the road exists at the Elliot Street intersection with Mechanic Street. At the curve in the roadway, the travel lanes widen to between 12 and 13 feet, the shoulders narrow to two to three feet, and the double yellow centerline becomes dashed.

Continuous five-foot-wide concrete sidewalks with a two-foot-wide grass buffers are provided along both sides of the corridor and pedestrian ramps are provided at the side street crossings. There are no existing crosswalks across Elliot Street in the study area. Bicycle accommodation is not provided. On-street parking is permitted on Elliot Street in the study area except on the stretch of roadway 100 feet to the west of Cottage Street, but on-street parking on Elliot Street is uncommon. The MBTA 59 bus runs along Elliot Street through the project area, and one bus stop is provided on each side of Elliot Street at the intersection of Cottage Street and at the intersection of Linden Street. The speed regulation on Elliot Street is 25 MPH for eastbound travelling vehicles from the Needham Town Line until around Wetherell Street, where the speed regulation increases to 30 MPH. For westbound travelling vehicles, the speed regulation is 30 MPH from Route 9 to around Cottage Street where the speed regulation decreases to 25 MPH. The posted speed limit signs within the study area align with Elliot Street's speed regulation. Elliot Street carries around 7,500 vehicles per day, according to data collected by the City in August of 2017.



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Within the project area, Elliot Street intersects with Linden Street, Mechanic Street, Cottage Street and Wetherell Street as unsignalized T-intersections. All four intersecting streets are classified as local roadways and under City jurisdiction. Linden Street intersects Elliot Street from the south to form a three-way unsignalized intersection, stop controlled at the Linden Street northbound approach. Linden Street is 20 feet wide and provides one lane in each direction, but no centerline is marked. At the intersection with Elliot Street, Linden Street has sidewalks on both sides. Linden Street follows a north-south alignment, connecting to the Upper Falls Greenway to the south.

Mechanic Street intersects Elliot Street from the south. Mechanic Street follows a north-south alignment connecting to the Upper Falls Greenway to the south. At the Elliot Street intersection, Mechanic Street splits, creating two separate intersections, separated by a triangular landscaped traffic island. The Mechanic Street approaches are stop controlled. Mechanic Street provides one lane in each direction, but no centerline is marked. Sidewalks are provided on both sides of the roadway. **Figure 2** shows the current configuration of the intersection.

Cottage Street intersects Elliot Street from the north to form a three-way unsignalized intersection, stop controlled at the Cottage Street



Figure 2: Mechanic Street and Linden Street

southbound approach. Cottage Street follows a north-south alignment and connects Elliot Street to the residential neighborhoods to the north. At the intersection, Cottage Street provides one lane in each direction, but no centerline is marked. Sidewalks are provided on both sides of the roadway. At the Elliot Street intersection, Cottage Street has a steep downward grade towards the intersection.

Wetherell Street intersects Elliot Street from the southeast to form a three-way unsignalized intersection, stop controlled at the Wetherell Street approach. Wetherell Street connects with Mechanic Street to the west. The road provides one lane in each direction, but no centerline is marked. Sidewalks are provided on both sides of the roadway.

On-street parking is permitted on Mechanic Street, Cottage Street, Wetherell Street and Linden Street, but "No Parking here to the Corner" signs exist on all the side streets prohibiting parking close to the Elliot Street intersections.

3.3 CRASHES

MassDOT reported eight crashes in the study area on Elliot Street between 2015 and 2022, averaging one crash per year. Of the crashes, three crashes were single vehicle crashes, involving a vehicle colliding with a tree, and two crashes were rear end crashes. Two of the reported crashes resulted in a suspected injury. No crashes were reported involving pedestrians or bicyclists. A crash summary is provided in **Table 1**.



Table 1: Project Corridor Crash Summary (2015-2022)

Table 1: Project Corridor Crash Summary (2015-2022)				
	Number of Crashes			
Collision Type				
Angle	1			
Rear-End	2			
Head-On	1			
Sideswipe	1			
Pedestrian / Bicycle	0			
Single Vehicle Crash	3			
Rear-to-rear	0			
	Crash Severity			
Property Damage	5			
Non-Fatal Injury	2			
Unknown	1			
	Weather			
Clear	5			
Cloudy	1			
Snow	1			
Unknown	1			
	Time of Day			
Morning Peak (06:00-9:59)	1			
Midday (10:00-15:59)	3			
Evening Peak (16:00-19:59)	3			
Overnight (20:00-05:00)	1			
	Time of Year			
December – February	2			
March – May	2			
June – August	2			
September – November	2			
	Year			
2015	1			
2016	0			
2017	1			
2018	2			
2019	0			
2020	2			
2021	1			
2022	1			
Total graphes 2015 2022	Summary			
Total crashes 2015 – 2022	8			
Average crashes per year	1			

Source: MassDOT IMPACT Portal



4.0 CONCEPT ALTERNATIVES

4.1 ALTERNATIVES DESCRIPTION

In order to develop concept alternatives reflecting the City of Newton priorities, BETA evaluated the best practices in traffic calming facility types, examined the feasibility of different facilities within the project corridor, created concept alternatives for each project intersection, developed cost estimates for the concepts, considered how traffic calming alternatives could be combined toward maximizing safety while minimizing cost, and worked with the City's Complete Streets Working Group to identify a preferred concept.

Facilities considered during the conceptual design process included street level bicycle lanes separated from traffic by vertical flex posts or bollards, grade separated (e.g., sidewalk-level) bicycle lanes, curb extensions, rapid rectangular flashing beacons (RRFBs), curb ramps with detectable warning panels, raised crosswalks, narrowed travel lanes, intersection realignment, and speed feedback radar signs.

One concept was developed for the crossing of Elliot Street at Wetherell Street, two concepts were developed for the crossing at Elliot Street and Cottage Street, two concepts were developed for the crossing at Elliot Street and Linden Street, and six concepts were developed for the curved section of the corridor at Mechanic Street. The preliminary project concepts were presented to the Complete Streets Working Group on August 11, 2022, and revised concepts on December 1, 2022. The concept alternatives are summarized in **Table 2**.

Table 2: Summary of Concept Alternatives

Elliot Street at Linden Street						
Alternative 1	Separated bike lanes, a new crosswalk, curb extensions, RRFB, and upgraded curb					
	ramps.					
Alternative 2 A new crosswalk, RRFB, and upgraded curb ramps.						
	Elliot Street at Mechanic Street					
Alternative 1A	Narrowed travel lanes, a north side bollard separated bike lane, and south side curb separated bike lane through the existing traffic island.					
Alternative 1B Same as 1A with shortened crossing distance.						
Alternative 2A	Narrowed travel lanes, a north side sidewalk level bike lane, and a south side bollard separated bike lane.					
Alternative 2B	Narrowed travel lanes, a north side sidewalk level bike lane, and a south side curb separated bike lane through the existing traffic island.					
Alternative 3A	Intersection realignment, narrowed travel lanes, a north side and south side sidewalk separated bike lane, shortened crossing distances, and additional landscaped areas.					
Alternative 3B	Same as 3A with raised crosswalk on side street.					



Table 2: Summary of Concept Alternatives (Continued)

Elliot Street at Cottage Street				
Alternative 1 Separated bike lanes, a new crosswalk, curb extensions, RRFB, and upgraded curb ramps.				
Alternative 2 Same as 1 with raised crosswalk on side street.				
Elliot Street and Wetherell Street				
Alternative	Separated bike lanes, a new crosswalk, curb extensions, RRFB, and upgraded curb ramps.			

A detailed description of each concept is provided below.

Elliot Street at Linden Street

Alternative 1 for the Linden Street and Elliot Street intersection eliminates the shoulder in the immediate vicinity of the intersection to accommodate a four-foot-wide bike lane separate from traffic, a curb extension, and a new high visibility crosswalk with a rapid rectangular flashing beacon (RRFB). To reduce conflict between people biking and people crossing the street, the bike lane is positioned at the back of the curb ramp within the curb extension. A detectable warning strip is used to delineate the separation between the sidewalk area and the bike lane for people with limited vision.

Alternative 2 was developed as a less expensive option for the intersection. This option adds a new crossing across Elliot Street at Linden Street including an RRFB and reconstructed curb ramps but does not provide curb extensions or a separated bicycle facility at the intersection. Figure 3 and Figure 4 show concepts for Alternatives 1 and 2, respectively.

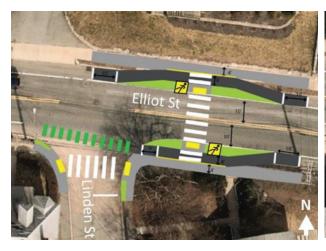


Figure 3: Elliot Street at Linden Street
Alternative 1



Figure 4: Elliot Street at Linden Street
Alternative 2



Elliot Street at Mechanic Street

At the intersection of Elliot Street and Mechanic Street, the project team examined multiple alternatives. The alternatives differed in the type of protection utilized for the bike facilities, the location of crosswalks, the utilization of raised crosswalks vs. traditional crosswalks, and the location of the bike lanes. The bike treatments considered included both street level and grade-separated (or sidewalk-level) bike lanes. The bike lane on the south side of the intersection either stayed in the roadway or moved south into the existing traffic island through widening of the existing sidewalk area. The utility pole on the island was considered in all alternatives and no concept is expected to require the relocation of the pole. All bike lanes at sidewalk level required bike ramps to get cyclists from the existing shoulder bike facility to the raised facility. The concepts include lower and higher cost and maintenance alternatives.

Figure 5 and **Figure 6** show **Alternatives 1A and 1B** for the Mechanic Street intersection. Alternative 1A and 1B both include a vertical flex-post or bollard protected bike lane on the north side of the intersection and a bike lane on the south side through the existing traffic island. Neither alternative moves the curb on Elliot Street or the existing guardrail on the southeast side of the intersection. The introduction of the flex-posts/bollards narrows the roadway to reduce vehicle speeds and creates a more comfortable space for bicyclists separated from traffic. The only difference between these two alternatives is the location of the crosswalk on the south side of the intersection. Alternative 1A extends the crosswalk to the existing gap in the guardrail, and Alternative 1B shortens the crosswalk by moving the crosswalk to meet the sidewalk south of the guardrail.





Figure 5: Mechanic Street Alternative 1A

Figure 6: Mechanic Street Alternative 1B



Alternative 2A, shown in Figure 7, introduces a sidewalk-level bike lane on the north side of the intersection and a flex-post/bollard protected bike lane on the south side of the intersection the same as in Alternative 1A. It is noted that a sidewalk-level bike lane has a lower stress level and higher comfort level for bicyclists compared to street level bike lanes. This alternative requires moving the curb on both the north and south side of the intersection to accommodate the bike lanes. The guardrail stays in the same place in this alternative. Alternative 2B, shown in Figure 8, maintains the sidewalk level bike lane on the north side of the intersection shown in Alternative 2A and has the same treatment on the south as Alternative 1B. Both Alternatives 2A and 2B have narrowed travel lanes.



Elliot St

Figure 7: Mechanic Street Alternative 2A

Figure 8: Mechanic Street Alternative 2B

Elliot Street at Mechanic Street and Cottage Street

Alternatives 3A and 3B for Mechanic Street include the Cottage Street intersection, shown in Figures 9 and 10. These concepts show the most significant geometric changes to the Elliot Street at Mechanic Street intersection. Both alternatives realign the Mechanic Street intersection to meet Elliot Street at a right angle to reduce pedestrian and bicycle crossing distance and improve sight lines for all modes. The alternatives provide a sidewalk level bicycle facility on both sides of the roadway. Both Mechanic Street alternatives allow for the removal of the guardrail on the east side of the intersection. The intersection realignment also eliminates the Mechanic Street (west) intersection with Elliot Street to reduce the number of turning vehicle conflicts and simplify the operations of the intersection. The private residential driveway in this area is reconfigured to provide access/egress at Mechanic Street (east). Cottage Street is configured similarly to Alternative 1 at the Linden Street and Elliot Street intersection, with a new crosswalk across Elliot Street, an RRFB, and a bike lane provided at sidewalk level behind the new crosswalk. The crosswalk at this location is at an existing pedestrian desire line. Alternative 3B differs from Alternative 3A by raising the crosswalks and bike lane crossings across Mechanic Street and Cottage Street for improved visibility and a consistent level. Both alternatives reduce impervious pavement area, add greenspace, and narrow travel lanes.







Figure 9: Mechanic Street Alternative 3A

Figure 10: Mechanic Street Alternative 3B

Elliot Street at Wetherell Street

The final concept in **Figure 11** shows a crosswalk across Elliot Street at Wetherell Street, an alternative to the Cottage Street crossing shown in **Figures 9 and 10**. The stopping sight distance to a potential new crosswalk on Elliot Street at Wetherell Street is longer (340 feet) than the sight distance to a potential new crosswalk at the Cottage Street intersection (250 feet), providing more time for vehicles traveling eastbound on Elliot Street to stop. The alternative again mimics the design of Alternative 1 at the Linden Street and Elliot Street crossing including a new crosswalk, RRFB, curb extensions, and bike lanes in back of the accessible ramps. The concept requires the removal of a mature large tree on the north side of Elliot Street and does not provide crossing at the existing pedestrian desire line.



Figure 11: Elliot Street and Wetherell Street

4.2 ALTERNATIVES EVALUATION

To decide which alternatives to include in the final package of preferred corridor improvements, BETA evaluated the advantages and disadvantages of each alternative, created cost estimates for each alternative, and conducted a discussion with the Complete Streets Working Group and the City of Newton to determine the package of improvements that best advances the project goals within the limits of the project budget.

Table 3 summarizes the advantages and disadvantages of each concept alternative as identified by the BETA project team, City staff, and members of the Complete Streets Working Group.



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Alt.	Table 3: Evaluation of Advantages Advantages	Table 3: Evaluation of Advantages and Disadvantages and Cost Estimate (2022) of Each Alternative Disadvantages	Cost Concept Image
Elliot	Elliot Street and Linden Street		
1	 Slows vehicle speeds and creates a Gateway area Shortens pedestrian crossing distance Separates bicycles from traffic and pedestrians Adds new crosswalk Provides RRFB, signaling pedestrian presence Serves existing pedestrian desire line connecting south to the Upper Falls Greenway 	Expensive Separated bike lanes are short	\$136,000
2	 Adds new crosswalk Provides RRFB, signaling pedestrian presence Inexpensive Serves existing pedestrian desire line connecting south to the Upper Falls Greenway 	 Does not shorten crossing distance or significantly slow vehicle speeds 	\$46,000
Elliot	Elliot Street and Mechanic Street		
14	 Separates bicycles on south side of curve Adds bike lane on north side of the roadway Narrows travel lanes Inexpensive 	 On-going maintenance of flex-posts/bollards Wintertime flex-post/bollard removal seasonally eliminates benefit of bollards No significant pedestrian benefit 	SSS,000
18	 Separates bicycles on south side of curve Adds bike lane on north side of the roadway Narrows travel lanes Inexpensive Shortens crossing distance 	On-going maintenance of flex-posts/bollards Wintertime flex-post / bollard removal seasonally eliminates benefit of bollards	\$73,000



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Table 3: Evaluation of Advantages and Disadvantages and Cost Estimate (2022) of Each Alternative (continued)

S Situry San	2) Herizayy	Mechanic	CHERDAY
\$128,000	\$135,000	\$211,000	\$235,000
 Flex-posts/bollards require on going maintenance Wintertime flex-post/bollard removal seasonally eliminates benefit of bollards 	• More expensive than 2A	• Expensive	• Expensive
 Creates permanent vertically separated bicycle accommodation on the north side of the curve Narrows travel lanes Formalizes bike lanes on south side of the curve 	Creates permanent vertically separated bicycle accommodation on both sides of curve Narrows travel lanes	 Creates permanent vertically separated bicycle accommodation on both sides of curve Narrows travel lanes Shortens crossing distances, reducing conflicts, and improves vehicle sight lines May allow for removal of the guardrail 	 Creates permanent vertically separated bicycle accommodation on both sides of curve Narrows travel lanes Shortens crossing distances, reducing conflicts, and improves vehicle sight lines Adds raised crossings across side street May allow for removal of the guardrail
2A	28	3A	38



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		Sunctook	Quuetpay		
(pan		\$136,000	\$146,000		\$139,000
Table 3: Evaluation of Advantages and Disadvantages and Cost Estimate (2022) of Each Alternative (continued)		• Expensive	• Expensive		 Removes mature tree Does not provide crossing at an existing pedestrian desire line Expensive
Table 3: Evaluation of Advantages and	Elliot Street and Cottage Street	 Slows vehicle speeds and creates a gateway area Shortens crossing distance Separates bicycles Adds new crosswalk, with RRFB, signaling pedestrian presence Crossing at existing pedestrian desire line 	 Slows vehicle speeds and creates a gateway area Shortens crossing distance Separates bicycles Adds new crosswalk with RRFB, signaling pedestrian presence Provides raised crosswalk across side street Crossing at existing pedestrian desire line 	Elliot Street and Wetherell Street	Slows vehicle speeds and creates a Gateway area Shortens crossing distance Separates bicycles Adds new crosswalk with RRFB, signaling pedestrian presence Longer sight distance to curve than at Cottage Street



Following the initial evaluation of the concept alternatives, BETA created 12 packages of improvements (shown in **Table 4**), combining the alternatives. The advantages and disadvantages, costs, and trade-offs of each package were discussed with the Complete Streets Working Group and City staff on December 1, 2022. During the conversation, the Complete Streets Working Group and the City expressed the importance of prioritizing packages that included alternatives 3A or 3B with the realignment of the Mechanic Street intersection which provide a significant pedestrian and bicycle improvement. The Working Group noted the importance of shortened pedestrian crossing distances, increased green space, improved sight lines, and sidewalk level bike lanes at the curve at this location. The Working Group also noted the importance of reducing ongoing maintenance costs associated with the alternatives that included flex posts/bollards. This led the Working Group to narrow the packages down to #5, #6, #11, and #12.

Table 4. Considered Packages of Improvements with 2022 Cost Estimates

#	Packages	Cost (2022)
1	Linden 1 + Mechanic 1A + Wetherell (or Cottage 1)	\$333,000
2	Linden 1 + Mechanic 1B + Wetherell (or Cottage 1)	\$348,000
3	Linden 1 + Mechanic 2A + Wetherell (or Cottage 1)	\$403,000
4	Linden 1 + Mechanic 2B + Wetherell (or Cottage 1)	\$410,000
5	Linden 1 + Mechanic 3A/Cottage 1	\$480,000
6	Linden 1 + Mechanic 3B/Cottage 2	\$514,000
7	Linden 2 + Mechanic 1A + Wetherell (or Cottage 1)	\$243,000
8	Linden 2 + Mechanic 1B + Wetherell (or Cottage 1)	\$258,000
9	Linden 2 + Mechanic 2A + Wetherell (or Cottage 1)	\$313,000
10	Linden 2 + Mechanic 2B + Wetherell (or Cottage 1)	\$320,000
11	Linden 2 + Mechanic 3A/Cottage 1	\$390,000
12	Linden 2 + Mechanic 3B/Cottage 2	\$424,000



5.0 Preferred Alternative

The Complete Streets Working Group reached consensus on **Package #11** as the Preferred Alternative. This package of improvements prioritizes safety and operations at the Mechanic Street and Cottage Street intersections, and is the most cost effective option that achieves the primary project goals.

Package #11 includes Elliot Street and Linden Street Alternative 2 (new crossing with an RRFB), Elliot Street and Mechanic Street Alternative 3A (intersection realignment with sidewalk level bike lanes and shortened crossings), and Cottage Street Alternative 1 (new crosswalk, curb extensions, and RRFB). While this package does not include a curb extension at the new Linden Street crosswalk, this modification is offset by the significant benefits provided at Mechanic Street.

The Working Group meeting discussion concluded that Package #11:

- Provides a high level of safety and mobility benefits for all modes at Elliot Street and Mechanic Street, viewed as the most critical location in the study area.
- Realigns an unconventional intersection and reduces impervious area by increasing green space.
- Incorporates two additional crossings across Elliot Street at Cottage Street and at Linden Street following existing pedestrian desire lines - with curb extensions at the Cottage Street crossing and RRFBs at both locations.
- Does not require ongoing maintenance costs (including staff time) associated with flex posts/bollards.
- Preserves a mature tree located at the Wetherell intersection.
- Provides a high level of traffic calming benefit by providing a pinch point at the Cottage Street intersection.
- Generally, falls within the budget allocated for this project.

Full details on the Complete Streets Working Group discussion including cost estimates are provided in the Appendix.

6.0 NEXT STEPS

The City will move into the design phase of the preferred alternative and meet with the public and stakeholders. Once the project is designed, the City can move towards construction.



Jason Sobel, Department of Public Works February 20, 2023 Page 15 of 16

APPENDIX

A. COMPLETE STREETS WORKING GROUP MEETINGS

During the conceptual design process, the BETA project team met with the Newton Complete Streets Working Group two times; August 11, 2022, and December 1, 2022, to discuss the alternative concepts.

Concept Review on August 11, 2022

At this meeting, BETA presented preliminary concepts for the intersection of Linden Street and Elliot Street, the intersections of Mechanic Street and Cottage Street, and the intersection of Wetherell Street and Elliot Street. During the conversation, we received the following feedback.

- If the level landing area for the curb ramp is in the bike lane, consider where people will activate the RRFB.
- The roadway width is narrow to accommodate all of the amenities planned.
- Consider tactile separation between bike lane and sidewalk for people with limited vision.
- Consider pavement markings like shark teeth and signage as a visual cue to drivers to slow down on both sides of the gateway.
- If speeds are reduced, removing the guardrail would be preferred.
- Snow removal should be considered when deciding on the type of bike lane separation. Sidewalk level bike lanes would allow for plowing of sidewalks and bike lanes at the same time.
- The Cottage Street crosswalk alternatives would require moving the bus stop.
- Raised devices should be considered on the side streets but not on Elliot Street, as these receive scrutiny by the fire department.
- General consensus was in favor of Alternative 3B with the Linden and Cottage Streets curb extensions.

Concept Review on December 1, 2022

At this meeting, BETA presented updated concepts, cost estimates and a cost benefit analysis to the Complete Streets Working Group for comment. During the conversation, BETA received the following feedback:

- Consider the pros and cons of each of the alternatives, as this will assist with the public process.
- Consider the cost of maintenance when evaluating alternative concepts, and generally, any means of lowering maintenance is preferred.
- When considering tradeoffs, a more significant investment at Mechanic Street and Cottage Street is more important than a higher investment at Linden Street.
- Desire to remove the guardrail if possible.
- Consider the width of any grass strips, for ease of maintenance.
- Alternatives that increase green space are more desirable.
- Importance of engaging the public and local stakeholders early in the process.
- General preference for Mechanic Street Alternative 3A, Alternative 1 for Cottage Street, and Alternative 2 for Linden Street.



B. ELLIOT STREET CONCEPTUAL COST ESTIMATES

DRAFT

CONCEPTS	COST
Elliot/Linden 1	\$136,000
Elliot/Linden 2	\$46,000
Elliot/Mechanic 1A	\$58,000
Elliot/Mechanic 1B	\$73,000
Elliot/Mechanic 2A	\$128,000
Elliot/Mechanic 2B	\$135,000
Elliot/Mechanic 3A/Cottage	\$344,000
Elliot/Mechanic 3B/Cottage	\$378,000
Elliot/Wetherell	\$139,000

CONCEPT COMBINATIONS	COST
Linden 1 + Mechanic 1A + Wetherell	\$333,000
Linden 1 + Mechanic 1B + Wetherell	\$348,000
Linden 1 + Mechanic 2A + Wetherell	\$403,000
Linden 1 + Mechanic 2B + Wetherell	\$410,000
Linden 1 + Mechanic 3A/Cottage	\$480,000
Linden 1 + Mechanic 3B/Cottage	\$514,000
Linden 2 + Mechanic 1A + Wetherell	\$243,000
Linden 2 + Mechanic 1B + Wetherell	\$258,000
Linden 2 + Mechanic 2A + Wetherell	\$313,000
Linden 2 + Mechanic 2B + Wetherell	\$320,000
Linden 2 + Mechanic 3A/Cottage	\$390,000
Linden 2 + Mechanic 3B/Cottage	\$424,000







INVESTIGATION

Rodenticides are killing animals way up the food chain

Poisons used by Massachusetts municipalities are killing more than just the rats they're targeting

By **LAURA KIESEL**

PUBLISHED DECEMBER 26, 2021 10:00AM (EST)



Rat poison trap box (Getty Images/richard johnson)

This article is syndicated by the *MassWire news service* of the Boston Institute for Nonprofit Journalism.

It was a sunny Friday morning in late July of this year when Jodi Sylvester, a wildlife photographer from central <u>Massachusetts</u>, drove into the <u>Boston</u> area to check in on a pair of juvenile bald eagles that

often served as her subjects. The pair had recently fledged but were still sticking by their parental nest along the Mystic River.

When Sylvester arrived, she noticed one of the eaglets was acting strangely. She was perched on a low branch of a tree with her eyes closed and one of her talons dangling off the side.

"I had never seen anything like it, and I knew it wasn't okay," Sylvester says.

In the afternoon, things took a turn for the worse.

The eaglet fluttered from her tree branch and fell onto the ground face first and was barely moving. Sylvester made several phone calls, until she finally reached a professional who agreed to help.

D (who asked that she be identified only by the initial of her first name) arrived on the scene shortly after. D checked the eaglet's wristband, which identified her as C25. She reported the eaglet's status to the state wildlife agency and with its permission, transported C25 to Tufts Wildlife Clinic in Grafton.

"The eaglet was so sick, she couldn't lift her head, even when I picked her up," D recalled.

D, who has been working in animal rescue for decades and has expertise in birds of prey, had a strong suspicion what was making the eaglet sick. "I was pretty sure it was rodenticide poisoning."

D dropped the eaglet off at the clinic and hoped for the best. C25 died not even an hour after she was admitted.

A few weeks later, a necropsy performed by state wildlife officials confirmed C25 had succumbed to poisoning from exposure to second-generation anticoagulant rodenticides, or SGARs, which prevent blood from clotting in animals and humans.

Most likely, C25 had eaten rats that had consumed the poison—a phenomenon known as "secondary exposure." The rats probably consumed the poisons out of the many bait stations that dotted the residences and businesses around C25's main hunting territory in Arlington and that have become a ubiquitous fixture of the metro area.

C25 is the second bald eagle confirmed to die due to SGARs exposure in the state this year. The first eagle was one in Waltham, a cousin of C25 who was reportedly found dead on top of her nest with unhatched eggs beneath her. Another bald eagle exhibiting severe rodenticide poisoning was found and euthanized on Cape Cod in 2018. Only recently upgraded from "threatened" status to a "species of special concern" under the Massachusetts Endangered Species Act, bald eagles were once extinct in the state due to the effects of DDT, until the toxin was federally banned in 1972.

And bald eagles aren't the only species susceptible to SGARs poisoning.

"We probably get between 100 and 200 animals a year," says Zak Mertz, executive director of the Birdsey Cape Wildlife Center in Barnstable, which is part of the New England Wildlife Centers (NEWC).

Though NEWC sees SGARs exposure across species, Mertz says birds of prey seem to bear the brunt of poisonings, likely due to rodents being a primary staple of many of their diets. Occasionally, a raptor poisoning will make it into the news, either because as with C25, it's a listed species, or as in the case of Ruby the red-tailed hawk in 2015, because that specific animal is known locally. But these isolated stories do not hint at the larger trend of wildlife poisonings due to SGARs in the state.

While Mertz asserts all of the rodenticide cases treated at NEWC affect him and his colleagues, there was one that was particularly

difficult: a nest of great horned owls discovered in April on the Cape either dead or dying.

"One chick was just covered in blood, bleeding from every orifice, and we did everything we could to save it, even giving it an emergency blood transfusion from another owl at the center," Mertz says.

"Unfortunately, he didn't make it."

Of that owl family, only one survived—a young owlet. It took many months of aggressive treatment to get it to the point where its blood would clot on its own again, and it was finally released in early December.

For Sylvester, it's a familiar story. Besides C25, one of her other favorite photographic subjects was a great horned owl nest in Jamaica Plain.

"But all four of them died due to rat poison," says Sylvester. "It wiped out the entire family."

Bait and wish

As I reported in 2018, SGARs were banned from over-the-counter sales in 2015 by the US Environmental Protection Agency due to reports that thousands of children were winding up in emergency rooms across the country annually because of accidental poisoning. The majority of children impacted by these rodenticides were young children of color residing in low-income housing.

Though SGARs usually cannot be found on shelves in retail stores anymore, they are still allowed to be deployed by licensed pest control professionals in "tamper resistant" bait stations as a way to reduce child exposure. But studies determining whether the bait stations reduce incidents of child poisonings due to SGARs seem to be limited. One 2020 EPA report noted a 46% decline in child rodenticide incident reports related to SGARs between 2011 to 2017 and 79% between 2009 and 2018. (Over these same time periods, poisonings from first-

generation anticoagulant rodenticides, which are still available over the counter, have increased dramatically—between 60 and 80%, respectively.)

For those unfamiliar with them, these bait stations tend to be placed against the sides of buildings and houses. They are nondescript black boxes that often resemble tool boxes. Sometimes they bear warning labels on top of them that name the rodenticide inside and list an EPA registration code; sometimes they do not, leaving people to guess at their contents—if they notice them at all.

While the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requires that a pesticide product such as SGARs must be labeled, that requirement pertains to the "immediate container" the product comes in, rather than the bait station it is often distributed in, unless they are packaged together (which they often are not). This means in many cases, only the pest control professional may be aware of what the product actually is and its hazardous potential. This can enable landlords to mislead their tenants about what is being used on their properties for rodent management and the potential threats it poses to children, pets and local wildlife.

"Unless a landlord is distributing a product with a label that contains false or misleading claims about a product's contents, it is not a violation under FIFRA for a landlord to make inaccurate claims about the contents of a product," an EPA representative wrote in an email response to questions for this article. The EPA rep also wrote that it is not a violation under FIFRA for pest control professionals to make inaccurate claims about the impact of SGARs on non-target animals, as long as they are not putting a false label on a bait station.

(Disclaimer: As a former wildlife biologist and advocate, <u>I have been vocal</u> about wanting a statewide ban on SGARs.)

Public records requests filed with several housing authorities in municipalities where high-profile SGARs-related wildlife cases were reported—including Arlington, Waltham, Cambridge, and Boston—yielded findings that all of them use SGARs on their public housing properties.

For instance, the Cambridge Housing Authority has 358 bait stations containing SGARs spread throughout the 22 properties it manages. More than half of those bait stations were placed between 2018 and this year.

Most municipalities in the metro area, like Arlington and Waltham, also require any new construction to have bait stations on site during the predemolition phase. While there is no requirement for those bait stations to include SGARs, a public records request with the town of Arlington revealed pest control companies contracted for nearly all of the 32 sites approved in 2021 used SGARs—even those sites without any signs of rodent activity.

Despite the immense popularity of SGARs, there is virtually no peer-reviewed research to support their effectiveness on reducing rodent populations in suburban and urban ecosystems. In reality, reported sightings of rat activity in the Boston metro area have only continued to increase with the proliferation of bait stations containing SGARs. This might be because rodents have long been known to develop resistance to anticoagulant poisons such as SGARs with prolonged use.

Though tamper-resistant bait stations may reduce (but far from eliminate) SGAR poisonings of children, bait stations do not address other risks. A 2021 study found that rats that consume SGARs are more susceptible to contracting some diseases they can then spread to humans, like leptospirosis and E. coli. And as illustrated with the case of C25, the bait stations do not prevent secondary SGARs exposure to wildlife and pets.

NEWC and several other wildlife rehabilitators and animal control officers interviewed for this article all report noticing an uptick in recent

years—in some cases, considerable—in the numbers of animals exhibiting symptoms of rodenticide poisoning. Several people also noted that even of those animals that survive poisoning, recovery periods seem to be taking longer and requiring more in-depth treatment.

Preying on predators

The EPA has long known about the impacts of SGARs on wildlife, with a comparative assessment conducted back in 2001 concluding that the most prominently used SGAR, brodifacaum, posed "high primary and secondary risks to birds and nontarget mammals."

A much more recent EPA assessment of all anticoagulant rodenticides (ARs) conducted in 2020 affirmed, "The nature of risk to mammals and birds from ARs is well-established and includes mortality from primary and secondary exposure, as well as chronic growth and reproduction effects." This same report found that of the nearly 700 confirmed SGARs-related cases in wildlife documented in the US since 2010, brodifacoum and bromadiolone were the primary culprits, making up nearly 70%.

While 700 incidents may not sound like a lot over the course of a decade, only a few states in the entire country actually attempt to track such incidents that occur within their borders—Massachusetts being one of them. The exorbitant price of definitive testing to confirm SGAR poisoning is usually too cost prohibitive for wildlife rehabbers and clinics often working on shoestring budgets.

One Massachusetts study the 2020 EPA report references found that ARs were discovered in 96% of the raptors tested, with 99% of them testing positive for brodifacoum.

"SGARs poison rat predators such as raptors (hawks, owls, eagles) and foxes," says Heidi Ricci, director of policy and advocacy at Mass

Audubon. "This ironically increases rodent populations since the rodents breed much faster than their predators."

Ricci explains that the negative impact of SGARs on wildlife is why Mass Audubon, along with NEWC and several other animal and environmental advocacy organizations, have co-sponsored a new proposed piece of legislation that seeks to address the issue.

H.3991, introduced by State House Rep. James Hawkins (D-Attleboro), would require that pest control professionals disclose the public health and environmental risks of SGARs to prospective consumers and get signed consent forms if they still agree to use them. It would also create an online database to better track use and disclosures of SGARs (I have been on some of the coalition calls for this bill to ask questions and offer input).

So far, the bill has-62-co-sponsors in the State House, and had its hearing with the Joint Committee for Natural Resources, the Environment and Agriculture on Dec 14. That hearing will also include consideration of two other bills that could impact SGARs regulation in Massachusetts. H.910 would empower local governments with the ability to regulate—and potentially ban—certain pesticides, including rodenticides, on private property (currently state law does not allow municipalities to ban or restrict pesticides). H.4143 would move authority and oversight of pesticide use and application in the state from the Massachusetts Department of Agricultural Resources to the state Department of Environmental Protection.

The pest lobby

In addition to legislative efforts in Massachusetts concerning SGARs, they were banned in California in 2020 until their risks could be further evaluated by the state, while British Columbia placed a temporary moratorium on the rodenticides. Many local, state, and federally owned parks, wildlife refuges, and conservation lands—as well as school properties—have excluded them altogether.

If SGARs pose such high environmental and public health risks, while lacking data to support their effectiveness in reducing rodents in metro areas, why do they continue to be used so prevalently?

"As a commercial salesman, the biggest commission comes from rodenticide subscriptions," says Jerry Darcy, a former pest control professional, who worked for a national pest company in Massachusetts. "[That's why they] don't care what their product does to the environment."

Darcy—who asked his real name not be used to protect his identity—was forced to resign when his employer threatened legal action against him and delayed his pay for months after he was quoted in the news under his professional title discussing alternatives to poisons for rodent control. Darcy believes he was treated this way because rodenticides make up the biggest revenue stream for his company (which he also asked not be named), despite the fact that when he first interviewed for the job he was told he would be able to engage in poison-free work.

The pest control industry has invested hundreds of thousands of dollars contributing to federal elections in the last decade.

According to the website OpenSecrets, which tracks campaign funding, the National Pest Management Association significantly increased its contribution rates to political candidates between 2012 and 2018 as compared to the decade prior. The vast majority of contributions (between 75% and 90%) were donated to Republican candidates.

The National Pest Management Association has also taken credit for influencing state governments, noting in <u>one article in a pest industry trade publication</u> that the association "dominated at the state-level thanks to the cooperation, energy and execution of our state pest control associations and State Policy Affairs Representatives."

Drew Toher, community resource and policy director of the nonprofit Beyond Pesticides, believes the influence of the pest control industry also extends to the very agency tasked with its oversight: the US EPA.

"The government pesticide program is sorely deficient to the point of failing," Toher says. "And recent reports show a disturbing depth of corruption."

Toher is referencing recent <u>investigative work by the</u>
<u>Intercept</u> detailing the EPA's mishandling of the cases of four scientist whistleblowers at the agency. The scientists alleged the EPA's Office of Chemical Safety and Pollution Prevention tampered with dozens of chemical assessments in order to portray them as safer than they actually are and were retaliated against for speaking out.

Another report published by the US Government Accountability Office this year found that the EPA failed to prioritize its own program that evaluates different chemicals and that it proposed a 34% (\$12.7 million) cut to the 2021 budget to the division responsible for assessing the health and environmental risks of the chemicals they evaluate.

Almost all of the public housing agencies and municipal representatives interviewed for this article explained that the pest control companies they contracted with assured them SGARs were legal, safe, posed little environmental threat, and are the most effective methods for rodent control.

None of the major pest control companies contacted responded to specific questions for this article. Sylvester, the photographer who found a sickly C25, offered a point of view from outside of the pest control industry.

"It makes me think that I can't do [wildlife photography] anymore," Sylvester says. "All of the losses, it's just too much. Just one of the many reasons why these poisons must be banned."

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By LAURA KIESEL

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