PESTICIDE USE ENFORCEMENT COMPLAINT FORM

CalPEATS Tracking No.: INV-40-20180928-32

	Received	Injury / Incident	Assigned
Dates/Time *(if applicable)*	9-10-18 1315 Hours	Appox. 8-27-18	9-10-2018
Received By:	Rusty Hall		
Method Received *(mark one)*		X **Phone**	**Letter** **In Person**

Complainant's Name: [redacted]							
Home Address: [redacted] Morro Bay						***Home Phone:*** [redacted]	
Work Address:						***Work Phone:***	
Relationship to Situation:	X	**Neighbor**		**Employee**		**Customer**	
		Interested Party		**Other (explain)**			
Other Agency:		**Health**		**Envr Health**		**APCD**	
		Other (explain)					
Prior contact with this office	X	**NO**		**YES**	**DATE:**		

Respondent [redacted]							
Mark One		**GROWER**		**AGPCO**		**SPCO**	**PCA**
		PILOT		**DEALER**		**MG**	
	X	**OTHER** (explain) Adjacent neighbor					
Home Address: [redacted]				***City:*** Morro Bay		***Phone:*** [redacted]	
Mail Address: [redacted]				***City:*** Dinuba		***Phone:***	
Applicator's Name: Same							
Mark One		**EMPLOYEE**		**OPERATOR**		**MANAGER**	X **HOMEOWNER**

Episode Location: [redacted] Morro Bay, CA 93442
Commodity / Crop: Ornamental trees
Pesticides Involved: Unknown, possibly glyphosate

Type of Episode *(Briefly describe symptoms or damage)*		
Human		
Property Loss	Ongoing herbicide damage to ornamental trees.	
Environmental		
Other (Explain)		
Follow-Up Required	X **YES** (See attached narrative)	
	NO (Explain)	
Submitted By: Rusty Hall		***Date:*** 9-10-2018

Narrative

9/10/2018 1315 Hours
[redacted] contacted Rusty Hall, Agricultural Inspector/Biologist to file a complaint about her neighbor. [redacted] claims her trees had been sprayed with an herbicide which has damaged them. What [redacted] told Hall is summarized as follows:

> She has an elm, acacia and other trees she believes have been sprayed by her neighbor. The trees show herbicide damage appearing as dead and dying foliage and has grown progressively worse. She noticed the damage about three weeks ago. She has contacted the Morro Bay Police and filed a complaint, but they were not able to prove anything and told her they needed more evidence. She has taken photographs to document the damage. She has also taken samples which she has placed in her freezer. This has also happened about 2 years ago and she has photographs from the time. She suspects the herbicide was Roundup. Her neighbors first name is [redacted] but she couldn't recall his last name. He also lives in Dinuba.

Hall informed [redacted] that we could not process her samples to test for residues because they are not considered official samples and lack impartiality. Hall informed [redacted] that her complaint would be transferred it to the current district inspector, Kim Daum, for assignment.

9/10/2018 1500 Hours
I, Kim Daum Agricultural Inspector/Biologist, called [redacted] and left a message for her to call me back regarding the incident.

9/11/2018 1045 Hours
I contacted [redacted]. What [redacted] told me is summarized as follows:

> She lives in a one-story house in Morro Bay. Her neighbor directly behind her house, to the east, has a two-story house with a balcony and window, facing west, overlooking her backyard. She has several trees planted along the 6-foot-tall fence separating her yard from her neighbors' yard, acting as a privacy screen but she has now lost that privacy. She has been living in her house since 1985 and her neighbor behind her, [redacted] moved in about 6 or 7 years ago. [redacted] trees along the fence are tall and [redacted] and her had an agreement to have an arborist top them every year. She agreed with [redacted] they would share the cost. [redacted] would contact her yearly and they would arrange the tree topping and payment. The tree topping stopped 3 years ago when [redacted] never contacted her about it. She suspects he stopped contacting her because getting the trees pruned by an arborist was too expensive. A year later she noticed damage to her trees and some of the branches on her side had been cut back. The damage, which she suspected to be herbicide damage, was only affecting the top and the side of the trees facing his property [redacted] trees and plants had dead branches and dying foliage. The damage seemed to get progressively worse over time, so she filed a police report. The responding Morro Bay police officer, Jeremy Painter, interviewed [redacted] According to [redacted] denied spraying her

trees and told Painter she had given him permission to cut back the trees. [redacted] only gave him permission to cut the branches that were on his side of the fence. Officer Painter said without other evidence there is not much they can do to prov[redacted] was responsible for the damage[redacted] learned she could take leaf samples and put them in the freezer, to preserve them, and send them to a lab to test for herbicides. However, after researching the cost associated and not knowing what herbicide was used she decided not to. Three weeks ago, McFarlin started noticing more damage to her trees.[redacted]s a teacher and was home all summer and did not see anyone spraying. She observed damage on the top of her loquat, acacia and elm tree. This damage faced[redacted] property. Smaller plants growing at the base of the elm and acacia also showed damage.[redacted] believed[redacted] sprayed her trees and herbicide dripped down onto these smaller plants below. The grass in her lawn under the acacia tree is dead as well.[redacted] knows[redacted] uses herbicides on his property because the moss in between the pavers he has in his yard is dead, but the rest is alive. She has photos of her trees from two years ago, after the first suspected incident, and again a couple weeks ago. She contacted the police again about the recent incident and a different police officer, Officer Domingo Flores, responded.

9/11/2018 1600 Hours

Hall and I arrived at[redacted] property. From the front of[redacted] house looking east, towards[redacted] property, we could see the damage on the acacia tree and a large elm tree located on the south end of her backyard.[redacted] has two additional trees in her backyard along the fence shared with[redacted] There is a loquat in her property's northeast corner and an unidentified acacia tree in the center of her back yard. The largest and tallest tree is the elm tree in the southeast corner of her yard. The loquat tree appears to be healthy and full, apart from some leaf burn to a small patch of leaves at the top of the canopy on the southeast side of the tree **(see Attachment A, photo of loquat tree leaf burn)**. About half of the acacia tree has dead leaves and branches on the east side of the tree along the fence facin[redacted] property. The leaves on the branches of the damaged section of the acacia are shorter, distorted and clumped together **(see Attachment B, photo of acacia half dead next to Garispe's shared fence line)**. A section of the grass on the northeast end of the yard under the acacia tree's canopy is dead **(see Attachment C, photo of dead grass under acacia's canopy).** The section of dead lawn lined up with a gap in between the loquat and the elm and would be in line with a directed spray from [redacted] side. There is a woody shrub, a Pittosporum sp. under the acacia tree growing just abov[redacted] fence that has stunted narrow, deformed chlorotic leaves and very short internodes and leaf stacking, a type of growth called "witches'-broom". Several "witches' brooms" were on several terminal branches on the side facing[redacted] property **(see Attachment D, photo of pittosporum sp. with abnormal growth and witches'-brooms)**. All [redacted] plant damage and injuries follows the shared fence line with[redacted] **(see again Attachment B, photo of acacia half dead next to[redacted] shared fence line)**. The elm tree has the most severe, extensive and significant damage **(see Attachment E, photo of elm with damage right side and undamaged left side)**. The whole canopy of the elm takes up about half of[redacted] yard and about 60 -70% of the tree is dead or dying **(see Attachment F, photo facing east of[redacted] elm tree & below yellow flowering abutilon with necrotic burn spots below)**. The damage is limited to and adjacent to[redacted] fence. The southeast side of the elm tree furthest from[redacted] property line has healthy growing foliage

this is a section nearest [redacted] home and farthest from [redacted] fence. All along the shared fence between [redacted] houses, there is a large dead and damaged section of the elm tree. The damage is both old and new and ongoing. The tree is attempting to survive, showing some new growth on several branches in the damaged section. This new growth is feeble, stunted and distorted. The leaves are chlorotic, narrowed and malformed and have shortened internodes of growth showing "leaf stacking" in a "witches'-broom" pattern diagnostic of past herbicide damage. Directly under the dead and dying areas of the elm tree, next to the fence is a yellow flowering abutilon plant with recent necrotic and chlorotic spots on the leaves, and ongoing distortion, curling and cupping on the new growth **(again see Attachment F, photo facing east of [redacted] elm tree & below yellow flowering abutilon with necrotic burn spots below)**. The distortion, curling and cupping is symptomatic of an exposure and injury to an auxin or plant growth regulator (PGR) type herbicide. Auxin or plant growth regulator type herbicides are absorbed by the plant and accumulate in the plants faster growing points. This causes distortion, twisting, bending of stems and leaves as well as "cupping" or "puckering", specifically to leaves. Next to the yellow flowering abutilon, under the same damaged section of the elm, there is a red flowering abutilon showing the same recent necrotic burn spots on the leaves and ongoing leaf cupping, narrow distorted growth on the newer developing leaves **(see Attachments G, H & I photos of [redacted] red flowering abutilon with necrotic burn spots and distorted growth)**. Both abutilons have some minor damage from earwigs and/or slugs/snails showing as small areas of the leaf removed and this injury is mostly on the lower portions of the plant. At the base of the elm tree, under the same damaged section of the canopy, is a geranium plant. The geranium shows the beginnings of sublethal herbicide damage. The geranium's younger leaves, still undergoing growth, are cupped, crinkled and distorted, typical of a synthetic auxin herbicide. There was also a fern near the elm showing recent burn spots. Except for the loquat, the worst injury was to the portion of the plants that grew above the top of the fence, the pittosporum sp., the acacia and the elm.

None of these trees, plants and shrubs showed any signs of powdery or downy mildew. None of the plants showed any apparent zinc, iron deficiencies. The pattern of the damage and the type of injury observed on [redacted] trees and plants was consistent with a sublethal exposure to an herbicide application in the past (old damage combined with new damage on the acacia and elm) then more recent herbicide injuries. Other recent damage was the dead grass in a section of lawn next to their fence, the abutilon's deformed leaves and necrotic burn spots, the geranium's deformed leaves and necrotic burn spots on the fern. The more recent herbicide damage is estimated to have occurred within the last 60 days and only occur along [redacted] shared fence. Taking all the past and ongoing damage to [redacted] plants together, it showed an herbicide (or a combination of herbicides) had been applied from the top of the fence and higher. The fence created a barrier and the higher foliage a partial barrier to [redacted] awn, abutilon, geranium and fern. The type of damage to the lawn, abutilon, geranium and fern was more collateral from dripping and spray that appeared to have filtered through and downward rather than from a direct spray.

We asked [redacted] if she would feel comfortable with us contacting [redacted] for his statement and she agreed [redacted] provided us the Morro Bay Police Department incident numbers for her complaints on May 10, 2016 and September 6, 2018.

Back at the office we created a diagram of [redacted] backyards identifying [redacted] plants and their locations **(see Attachment J, reference diagram of [redacted] backyards)**. An aerial photograph was printed of [redacted] properties for reference **(see Attachment K, aerial photo of [redacted] properties)**.

9/12/2018 1138 Hours
Hall and I spoke with Catherine Yee, the San Luis Obispo County Enforcement Branch Liaison (EBL) for the Department of Pesticide Regulation (DPR), via speaker phone on the best way to proceed with this complaint. Yee instructed us to obtain a statement from [redacted] that he had sprayed an herbicide or obtain a witness statement from anyone who had possibly seen [redacted] application before DPR would authorize sampling [redacted] damage plants. Yee said a positive sample result could support our investigation. Yee recommended we proceed with calling [redacted] and obtaining the police reports for our records.

9/12/2018 1245 Hours
I called Officer Painter asking to obtain the following police reports from [redacted] wo alleged vandalism complaints. These were Incident # 1605100021 and Incident # 1809060040.

9/12/2018 1500 Hours
I called [redacted] and what he told me is summarized as follows:

> He thought that I was from an Agricultural Commissioner in the central valley. He occasionally works with the Agricultural Commissioner. He made an herbicide application of Roundup within the last couple months to weeds (annual bluegrass and spurge) on the ground on his side of the fence. He has also sprayed morning glory vine coming from underneath the fence. He did not spray her plants. He is "frustrated" and concerned about the "aggressive" nature of the large elm tree on [redacted] property. He suspects the roots are on his side of the fence and could damage his foundation. The tree's quick growth and "aggressive branching blocks his and his neighbor's view". He and [redacted] had an arrangement where an arborist came to prune the trees to control the height and the branching onto his property. The trees were pruned by the arborist twice over the 6 years he has lived there. He stopped getting them trimmed two years ago. The trees required trimming too often and it was expensive. He prunes the branches on his side of the property, but he know[redacted] will "get angry" if he prunes into her side. Not pruning the branches worries him, "they could pose a fire risk or fall in a storm and damage his property". Two years ago, [redacted] "called the cops" on him regarding the damage she noticed on her trees and accused him of spraying them. [redacted] denied the claim and asked the cops what he could do about the tree's branches on her side of the fence. The cops referred him to code enforcement who said they did not handle private property disputes. He asked about the tree posing a fire hazard and code enforcement forwarded his concern to the fire department. Last week he received another call from the cops about the damage to her trees. He is frustrate[redacted] chooses to go to the authorities and does not wish to talk with him directly about his concerns. He called and left her a message in hopes they can discuss this issue. He is not the only neighbor with

concerns. The neighbor to the south of her has had to prune her side and other neighbors have complained about the trees blocking their view. [redacted] asked "if an application of a contact herbicide to the branches on his side of the fence from [redacted] tree is OK".

I told him I did not believe that would be acceptable to apply a contact herbicide to plants belonging to someone else that grew into his property due to Title 3 of the *California Code of Regulations Section 6616 (3CCR 6616) Consent to Apply*. I told him I would do some research and get back to him. He also asked to get a copy of the finished report for his records.

9/12/2018 1600 Hours
I called [redacted] and explained he will need to fill out a public records request form once the investigative report is complete to get a copy. I also explained that per the *3CCR Section 6616 Consent to Apply*, he cannot make a pesticide application to another person's property without their permission. [redacted] trees are her property, therefore no herbicide application can be made without her consent. I asked [redacted] where he applied the Roundup, what the weather conditions were that day, and if any tree roots were present on his side of the fence. What [redacted] said is summarized as follows:

> He applied the *Roundup* (glyphosate) to weeds in his walkway and garden about 3 feet from the fence about 5 weeks ago. The weather was sunny and calm with a light breeze. He did not see any exposed tree roots. The comment he made previously about the elm tree roots damaging his property, was just a suspicion. He has not seen the actual roots, but there is some uplifting on his cement patio and thought the roots may be responsible.

[redacted] asked how long it would take until the report was ready and I told him I would keep him updated.

9/13/2018 0826 hours
[redacted] called to let me know we have permission to enter his property and take photos from his side of the fence. He also asked if we had already been out to see [redacted] trees. I told him we had. He asked what the damage looked like. I told him it appeared to be consistent with herbicide damage. [redacted] asked if we normally take samples in these kinds of situations and I explained we can, but it all depends on when the product was sprayed and type of active ingredient that was used. I explained we are working with DPR to get directions on how to proceed and if samples are necessary. Each active ingredient has a half-life of how long it will last in the environment and we will need direction from the laboratory before proceeding.
What [redacted] said is summarized as follows:

> He does not think his spraying could have drifted and caused damage t[redacted] trees due to the fence separating their yards. He used to have a shrub, adjacent to the elm, that he removed because it died last spring. He noticed the damage started with dieback on the middle and top and then the whole thing dried up. He was not sure if what was damaging [redacted] trees also killed his shrub. When we come by his house we will notice there is a dead branch on the tree next to the elm that has been there for the past two years and [redacted] has never pruned it off. The tops of her trees burnt back last summer due to hot

weather. His backyard is not locked, and someone could enter at anytime when they are not there. The house is their vacation home and him and his wife are only there every other weekend or so. There are other neighbors frustrated with [redacted] trees and if it was intentionally damaged it could have been someone accessing her trees through his backyard.

9/13/2018 0919 Hours
I sent an email to Yee with a summary of my conversation with [redacted] and asked if we should proceed with samples. Yee responded asking for further information regarding the distance of the application to the damaged trees and details on the weather conditions from 5 weeks ago.

9/13/2018 1200 Hours
I called [redacted] asking what herbicide was used 5 weeks ago, the rate, and if he remembered what date and time he made the application. What [redacted] said is summarized as follows:

He thinks he used a product called *Compare N Save* glyphosate 41%, not *Roundup*. He will be at the Morro Bay house this weekend and will check the herbicides and let me know. He used a 1.5 to 2 oz rate in his 1-gallon hand sprayer. He sprays for weeds about every month but does not use very much, he only needs to mix up a gallon a couple times a year. He made the application on either a Saturday or Sunday before 10 am or in the afternoon between 3-5pm, he did not remember exactly when. Those are the normal days he is at the house and the normal times he would make the application because the wind dies down during at those times. If we go out and take photos from his side of the fence, we will see that everything on his side is green except that one dead branch that died two years ago.

9/13/2018 1530 Hours
I called and left a message for [redacted] wanting to let her know we were still attempting to take samples and I would keep her updated. I also asked her to inform me what would be the best way to receive her photos. I let her know we can receive them via Dropbox, Google Docs, or another cloud-based file sharing account or she can email them or burn them to a disc.

9/14/2018 1622 Hours
[redacted] called and left a message for me that she will not be home until after 4pm the following Monday due to an appointment and to let her know if we plan on coming by.

9/17/2018 1613 Hours
I contacted [redacted] to let her know we had not heard back from DPR about taking samples. I told her I would let her know as soon as we heard back. She said she thinks someone spoke to her neighbor, [redacted] because he had called and left her a message over the weekend. I confirmed we did speak with [redacted] last week. She asked if he admitted to spraying her plants and I said no, but he did say he uses herbicides on his own yard. [redacted] said to let her know if we plan on taking samples because she is going to submit the samples she collected.

9/19/2018 1250 Hours
[redacted] called me, what he said is summarized as follows:

> The name of the two glyphosate herbicides he has at his house in Morro Bay are *Spectracide* and *Eliminator*. He did not have any *Compare N Save* 41% glyphosate, as he originally thought. When he was at his house this last weekend he observed that the Elm tree on the north end of [redacted] yard had some browning and dry leaves. This damage was not there two weeks ago when him and his wife were there last. He will be back this coming weekend and he will check the progress of the damage again.

9/19/2018 1340 Hours
I called [redacted] to tell her DPR declined to process any suspect samples we could take. However, if she would still like to process her own samples I could forward her the websites of two labs. [redacted] told me she did want to send her own samples. She also said her arborist knows a lawyer in San Francisco and she would like to pursue legal action against [redacted] She said she believes he will keep causing her trees damage unless she takes action. She asked if she will be getting a report documenting this incident, I told her she will have access to a copy upon completion. She asked if we thought the damage was caused by herbicides. I told her, Hall and I agreed the damage we observed appeared similar and could have been caused by an herbicide, specifically glyphosate. I emailed [redacted] the name of the two labs: Primus Labs and Fruit Growers Laboratory, Inc.

9/20/2018
I looked up the names of the herbicides said he had. *Eliminator* has 41% glyphosate as the active ingredient. *Spectracide* is a combination of several different active ingredients: diquat dibromide (for a "burndown" mode of action), fluazifop-p-butyl (a selective grass killing mode of action), and dimethylamine salt of dicamba (a broadleaf plant auxin type killing mode of action).

I left a message for [redacted] letting him know Hall and I will be taking pictures from his side of the fence tomorrow. I also asked him to check the labels of the *Spectracide* since the label I found did not have glyphosate as an active ingredient. [redacted] called me back and said it was fine to stop by tomorrow morning and he would send me a picture of the herbicide labels tomorrow afternoon when he gets to the house.

9/21/2018 0845 hours
Hall and I went to [redacted] house and took photos of [redacted] trees from his side of the fence. Approaching [redacted] backyard there is a localized section on the lower south section that has less damage but the upper section is very damaged and most damage starts about 3 feet from the south corner of [redacted] **(see Attachment L, photo taken from [redacted] backyard of [redacted] Elm, facing West)** Hall and I observed significant deterioration to the elm tree starting from the fence to about 3 feet in from where the south corner of [redacted] property begins **(see Attachment M, photo of [redacted] elm tree from [redacted] backyard facing Southwest).** Severe deterioration throughout the canopy primarily faces [redacted] side of the fence line. [redacted] acacia suffers the same **(See Attachment N, photo of [redacted]**

elm, acacia and loquat tree's from [redacted] backyard facing Northwest). Most of the top branches and leaves of the elm and acacia are brown and dead. The serious decline and degradation we observed from [redacted] side is extensive, affecting even larger portions of the elm tree than we had observed from [redacted] yard. The south-west and south-east sides of the elm tree facing those neighboring properties, did not have any injury **(again see Attachment L, photo of live portion of elm furthest from fence line)**. The acacia has dead and deteriorating leaves and branches again primarily facing [redacted] home **(See Attachment O, photo of dying acacia tree from [redacted] yard facing West)**. The acacia's deterioration matches the same type as the elm. Most of these injuries appear old and looks to have occurred one to two years ago. The injury and damage are still ongoing, appearing in the newest growth. The acacia is showing some new growth in the damaged section, but it is severely stunted and distorted. The acacia's leaves, like the elm are chlorotic, narrowed and malformed with shortened internodes causing "leaf stacking" and "witches'-broom" growth patterns. The loquat tree in the north corner of ; backyard has a small area of brown and dead leaves on the top about 12 to 15 feet up on the southeast facing side. The north side of the loquat tree facing [redacted] and [redacted] neighboring property did not have any damage **(again see Attachment N, photo of [redacted] backyard looking Northwest)**. All three tree's injuries and damage faced [redacted] property with the elm and acacia the worst and the loquat having very little [redacted] plants and groundcover in the north and south corner of his yard appear to be undamaged except for around the irrigation and pavers, which [redacted] admitted to spraying as part of his regular yard maintenance **(see Attachments P, Q, and R, photos of sprayed areas of [redacted] back yard)**. A large section of [redacted] backyard had no landscaping being entirely paved in concrete and we noted a nearby blue tarp **(See Attachment S, photo of [redacted] concrete area of backyard facing Northwest)**.

We parked in front of [redacted] home and took a picture looking towards the front of her home and the back of [redacted] house facing East. This view showed the overall damage to the acacia and elm and allowed us to estimate the original size of the trees **(see Attachment T, photo facing East of [redacted] trees and estimated loss of canopy)**.

9/24/2018 0753 Hours

[redacted] sent an email to me with pictures of his two pesticide containers containing the herbicide he had sprayed at his house. The products were *Spectracide Weed & Grass Killer Concentrate 2*, EPA Reg. # 9688-265-8845 **(see Attachment U & V [redacted] photos of *Spectracide Weed & Grass Killer Concentrate 2* container's primary display panel and closeup of active ingredients)** and *Eliminator Weed & Grass Killer Super Concentrate*, EPA Reg. # 71995-7-AA-59144 **(See Attachment W & X, photos of *Eliminator Weed & Grass Killer Super Concentrate* container's primary display panel and closeup of active ingredients)**. I noted the active ingredients for *Spectracide Weed & Grass Killer Concentrate 2* are: 2.3% diquat dibromide, 1.15% fluazifop-p-butyl, and 0.77% dicamba, dimethylamine salt. The active ingredients for *Eliminator Weed & Grass Killer Super Concentrate* is 41% glyphosate.

I contacted the State of California DPR, Pesticide Registration asking them for copies of the registered pesticide labels of the above pesticides had provided me.

9/25/2018 1356 Hours
Yee emailed me to let me know that this type of complaint falls out of the County Agricultural Commissioner's jurisdiction and should be referred to the local police department. **(See Attachment Y, Environmental Scientist Yee's email, dated 9/25/2018)**. The Agricultural Commissioner disagreed, and Hall and I were instructed to proceed with the investigation, including our department noting any violations or possible violations and to provide copies of the report to the Morro Bay Police Department and the County District Attorney when completed.

9/28/2018 915 Hours
I emailed [redacted] acknowledging I had received his email and Hall and I had looked at the trees, observing a significant amount of damage to the elm and acacia and some damage on the loquat. I told him the type and pattern of damage is consistent with herbicide injury.

9/28/2018 1256 Hours
I called [redacted] and asked her if she knew the dollar amount of the approximate damage to her trees. What she told me is summarized as follows:

> She had been doing some research and was having some trouble coming up with a value, she will ask an arborist she knows for assistance. She received a voicemail from [redacted] denying he sprayed her trees and he also asked if they could get the trees topped again. [redacted] also mentioned she will email me the pictures she had taken of her trees showing the damage over the last two years.

10/2/2018 1550 Hours
I received an email back from Morro Bay Police Department with a copy of [redacted] incident reports from 5/10/2016 and 9/06/2018 **(See Attachment Z, Morro Bay Police Department's CFS Event Detail for 5/10/2016 and 9/06/2018)**. On May 10, 2016 at 16:39 hours [redacted] reported to the Morro Bay Police Department that who lives directly behind her home, was trying to kill her trees on her property. [redacted] provided the location of [redacted] home and that it was his weekend vacation home and he was not currently there. Officer Painter met [redacted] at her home and determined it was a civil mater. [redacted] indicated she may call the police back when [redacted] returned. About 28 months later, on September 6, 2018 at 16:28 hours [redacted] again called the Morro Bay Police Department claiming [redacted] was spraying her trees with herbicides and may be killing them. [redacted] house was at [redacted] Officer Flores responded and contacted [redacted] who claimed in Flores report that "he has not sprayed any herbicides and her tree just may by dying from lack of care" (quotations are mine). Officer Flores responded that he provided [redacted] with different options.

I received from DPR Pesticide Registration copies of the labels for [redacted] *Spectracide* herbicide **(see Attachment AA, Spectracide Weed & Grass Killer, EPA REG. No. 9688-265-8845, six pages)** and [redacted] *Eliminator* herbicide **(see Attachment BB, Eliminator Weed and Grass Killer Super Concentrate, EPA REG. No. 71995-7-59144, eight pages).**

10/3/2018 0840 Hours
I sent an email t[redacted]sking him what rate he applied the Spectracide and the Eliminator and if he normally tank mixes the two or if he uses them separately.

10/3/2018 0915 Hours
I spoke to [redacted] neighbor at [redacted] Avenue [redacted] lives in a two-story house to the [redacted] What she told me is summarized as follows:

> She is familiar with the damage on [redacted] trees and is aware of the accusations [redacted] has brought against [redacted] She knows the issues between [redacted] nd [redacted] have been going on for years. [redacted] has not seen or heard anything about how the damage happened. A couple years ago the police came to talk to [redacted] but she has not heard from them since. She is familiar with [redacted] and stated, "with her, if it is not one thing it is another". [redacted] had an unpleasant run in with [redacted] a while back. [redacted] irrigation accidentally broke in her backyard and affected some of her neighbors, including [redacted] In response, [redacted] angrily confronted [redacted] about it. [redacted] has never had issues with [redacted] rees. She knows her neighbors have big trees and they have never been a concern. [redacted] rusts [redacted] with anything pesticide related. He has helped her with her plants and has fertilized her hydrangeas. She thinks it is a shame that this conflict had to happen and hopes it gets resolved.

I asked if it would be alright to contact her in the future if we had any further questions and she agreed. I said I would need to speak with the other neighbors and she told me that the neighbor on the other side of [redacted] Avenue, did not live in the area and was not home today. I went to [redacted] immediate neighbors at [redacted] Avenue but there was no answer at either house. I discovered that [redacted] immediate neighbors also do not live in the area.

10/3/2018 1010 hours
[redacted] alled me letting me know he uses the *Spectracide* and *Eliminator* separate at a 1.5 to 2 oz rate for both products because they are the same concentration of glyphosate. I informed him the *Spectracide* is not a glyphosate product but has three other, different active ingredients: diquat dibromide, fluazifop-p-butyl, and dicamba-dimethylamine salt. [redacted] said he was not aware of and thought they both had glyphosate as the active ingredient. He said he will check the containers again when he visits his Morro Bay home this weekend. [redacted] says he is hoping this investigation can get wrapped up soon and wanted to know if I could tell him anything about the progress. I told him we are still following up with some loose ends and I was unable to tell him anything else. He mentioned again how surprised he was the last time he was at the house and how brown the elm tree appeared. He stated the damage he observed on the weekend of September 22nd was not there when he had visited previously.

10/8/2018 0933 Hours
[redacted] left a message, what he said is summarized as follows:

> He read the label for the *Spectracide* and realized it was a different formulation than glyphosate. He does tank mix the *Spectracide* and *Eliminator* together during the cold weather to improve the efficacy of the glyphosate. He always applies the products at the rate listed on the label. The rate on the *Spectracide* label is 3 to 7 oz per gallon.

10/11/2018 1130 Hours
Tom Morgan, Deputy Agricultural Commissioner, and Yee spoke on the phone. After reviewing the case again Yee agreed, because this suspected vandalism complaint involves a pesticide, it does fall under the County Agriculture Commissioner jurisdiction to investigate. Yee said we are to proceed with the investigation as follows:

> DPR will not approve our sampling for pesticides. Hall and I should follow normal procedures with any further evidence collecting and submit a draft of the report to DPR for review. After the investigative report is complete we will be referring this case to the Morro Bay Police Department for any further investigation.

10/12/2018 1049 Hours
[redacted] called, he wanted to know if I had received his voicemail from Monday and if the investigation was almost done. He wanted to know if we were taking samples and said he felt it would be "overkill" to do so. [redacted] also mentioned he had talked to the city and he found out [redacted] hired an arborist. I told him we were still working on the investigation and I would let him know when it would be finished.

10/16/2018 1000 Hours
Morgan received a voicemail from Jahan Motakef, Enforcement Branch Supervisor with DPR. What he said is summarized as follows:

> This incident involves a suspected misuse of a pesticide and the intentional damage to property. This is considered vandalism and falls out of our jurisdiction to sample. This investigation should be referred to the police. If the police decide to proceed with sampling, we will work with them as needed.

Morgan will be discussing with Marc Lea, Assistant Agricultural Commissioner, Marty Settevendemie, Agricultural Commissioner, and the Morro Bay Police Department on how to proceed.

10/16/2018 1030 Hours
I calle[redacted] to ask about receiving her photographs and if she had an estimate of the damage that we can include in our report. What she told me I summarize as follows:

> She has the pictures saved in a file that she can burn to a CD and mail to our office. She has been researching online and working with an arborist on coming up with an estimate

for the damage. The arborist with Greenvale Tree Company, had come out last week to look at her trees. He observed that the trees were under stress and he suspected root rot and the trees appeared to have been sprayed with a plant growth regulator. is working with her on what to sample for and will be putting together a report on his observations also received a letter from Morro Bay Code Enforcement that registered a complaint with the City of Morro Bay regarding her trees contacted Morro Bay code enforcement and found out that she can grow her trees and is only allowed to prune what grows onto his side of the fence.

I received contact information from and left him a message. agreed to send me a copy of report once she receives it.

10/22/18 1440 Hours

arborist of Greenvale Tree Company returned my call. What he said I summarize as follows:

It is hard to make an exact diagnosis because the damage on the trees was old and a "jumble of symptoms". The trees "had fiddlenecking and curling of the leaves on the backside of the elm along the shared fence line". Many of the leaves were crispy and dry. He suspects a plant growth regulator (PGR) was applied first, followed by glyphosate. The branches facing Garispe's property had been recently trimmed back. Stier "suspects applied a PGR to the trees from his side of the fence at that time". Stier observed the internode spacing on the branches of the elm were closer together and leaves were smaller on the branches facing property versus the leaves on the branches facing property. The small leaf size, short internodes, leaf curling and fiddleneck damage are distinct PGR symptoms. These symptoms could also be a result of an herbicide similar to 2,4-D or triclopyr. The burning damage is not characteristic of a PGR application but if a PGR concentration was mixed incorrectly or too much was applied, burning damage could result. suspects glyphosate may have been applied as well because it is the most readily available to homeowners. Glyphosate is less likely to have caused the burning damage on the leaves of woody plants unless it was applied in a large amount. Burning damage is more likely to occur with an herbicide such as 2,4-D or triclopyr versus glyphosate. Since works in the agriculture industry he would possibly have access to other products in addition to glyphosate. Diseases could cause similar damage and did find some mycelium (fungal growth) under the bark of the elm tree. However, because there were so many plants and trees affected in yard, a disease is unlikely to be the cause. He suspects the mycelium he found, and any disease the trees are suffering from, is "a secondary problem". just returned from a conference where he met and spoke with a couple businesses that did pesticide residue testing. The companies said, due to the amount of time that has lapsed, it would be unlikely to get a viable result from a sample that was sent in. He advised to speak to to let him know she is working with an arborist and that should hopefully prevent any future issues. agreed to send me a copy of his report once it is completed.

10/23/2018 1000 Hours
Morgan spoke with Commander Jody Cox of the Morro Bay Police Department. Commander Cox said in these types of neighbor disputes, without a witness or direct evidence connecting the respondent to the alleged vandalism, there is not much the police can do. At this time the evidence may be circumstantial, and it may be hard to build a case. Commander Cox and his investigative team will review the report once complete and their department will follow up as needed.

10/26/2018 0900 Hours
The responsibility of this report was given to me, Rusty Hall, Agricultural Inspector Biologist III. It had been 45 days (six weeks) since our last visit to [redacted] backyard. Since symptoms of herbicide injury may be delayed by days or weeks, Daum and I agreed to revisit [redacted] backyard to document any further worsening of her plants, recording additional or continuing symptoms, if any.

We contacted [redacted] and obtained permission to reenter her back yard. On arrival we checked [redacted] abutilon since it would be the fastest growing plant and would show any continuing damage from an herbicide the soonest. The red flowering abutilon was growing distorted new and old leaves **(see Attachment CC, photo of McFarlin's red abutilon and new growth affected)**. The newest leaves were narrowed and twisting with the older leaves have upward and inward cupping when they should be overall flat. Her other abutilons showed the same type of damage. This type of growth pattern matches auxin type herbicides which act as a plant growth regulator (PGR). Dicamba, one of the active ingredients in *Spectracide Weed & Grass Killer Concentrate 2* is an auxin type herbicide and would cause this type of damage **(see Attachment DD, publication A4161, University of Wisconsin Extension "*Soybean Injury from Dicamba*" four pages & Attachment EE, July 19, 2018 publication University of Nebraska-Lincoln "*Understanding Growth Regulator Herbicide Injury*", six pages).** Her pittosporum damage was worse. The pittosporum's new growth had stunted, chlorotic narrow leaves with extremely short internodes matching "witch-brooming" growth patterns. The pittosporum's new growth pattern was so distorted that it did not look like the original plant **(see Attachments FF & GG, photos, closeup of [redacted] pittosporum sp. with "witch-brooming").** We examined [redacted] other red abutilon located under her elm tree. This abutilon had worse damage than [redacted] previous red flowering abutilon **(see Attachment HH, red flowering abutilon with burns and deformed new growth)**. This abutilon had more burn locations and spots and since our last visit. Now entire sections of the leaves had died and were missing. Chemical burns on the leaf tips had worsened. The leaves burn patterns match a foliage-acting liquid desiccant which destroys green plant tissue. Diquat is a foliage-acting liquid desiccant and is found i[redacted] *Spectracide Weed & Grass Killer Concentrate* 2. Like the other abutilon, this one also had deformed new growth matching the other one. The fern seen on 9-11-2018 with burn spots had worsened with foliage now burned back and leaflets brown and missing and this was primarily to the newer, more sensitive growth at it's growing tip. Some fern leaves were not affected **(see Attachment II, photo of fern leaf below and near [redacted] elm)**. We took a photograph of [redacted] Acacia tree having the sun behind it that showed a

clear difference of dead foliage nearest and towards [redacted] property **(see Attachment JJ, photo of [redacted] acacia tree showing [redacted] side vs [redacted].** We examined a geranium plant at the base of [redacted] elm. The geranium's newest growth had distorted leaves, stunted in growth with upward cupping leaves, shorted internodes causing leaf stacking and "witch-brooming" **(see Attachment KK and LL, photos of [redacted] geranium new growth with deformed leaves and closeup).**

We took cuttings from [redacted] Acacia tree. We cut small branches to sample furthest from [redacted] property representing normal growth and then cuttings from the side of the tree facing and nearest [redacted] property representing abnormal and damaged leaves and branches. Back at the office we took photographs of these samples for a side by side comparison **(see Attachment MM, photo, [redacted] acacia tree, sample cuttings from opposing sides).**

We took cuttings from [redacted] elm tree. We cut small branches to sample furthest from [redacted] property representing normal growth and then cuttings from the side of the tree facing and nearest [redacted] roperty representing abnormal and damaged leaves and branches. Back at the office we took photographs of these samples for a side by side comparison **(see Attachment NN, photo, samples cut from [redacted] elm from opposing sides).** Both the acacia and elm showed stunted yellow (chlorotic) leaves, shortened internodes and stunted branches causing "witch-brooming".

For clarity we took photograph's of [redacted] abutilon leaves with a background to show how the damage had progressed and worsened since our 9-11-2018 visit. This was both the top and bottom of the same leaves showing stunting, burn spots and missing portions, yellowing, distorted growth with parallel veins **(see Attachment OO and PP, top and back views of abutilon leaves).**

I reviewed both of [redacted] herbicide labels; the *Spectracide Weed & Grass Killer* and *Eliminator Weed and Grass Killer Super Concentrate.* I found the following label statements on *Spectracide Weed & Grass Killer*: Italics are mine for distinction and clarity.

On page 2 under *"WHAT TO EXPECT"* - four pictures of a plantain weed showing before and after the plantain had been sprayed. The pictures show gradual injury and has the statement *"EXPECTED VISUAL SYMPTOMS: Leaves yellowing, then curling, twisting, wilting and shriveling."*
On page 3 under "DIRECTIONS FOR USE" – *Do NOT use for spot weed treatment in lawns, since Spectracide® Weed & Grass Killer Concentrate kills all green plants, including lawn grasses.*
On page 3 under "WHERE TO USE" – *GENERAL WEED CONTROL: Use only along fences, paths, patios, sidewalks, curbs and driveways, and around ornamentals trees, shrubs, flower beds and plantings around buildings. Use for trimming and edging landscapes.*
On page 4 under "HOW TO APPLY" - • *Protect desirable plants with a piece of plastic or cardboard.* • *If desirable plants are accidentally sprayed, wash plants with water immediately.*

I found the following statements on [redacted] ***Eliminator Weed and Grass Killer Super Concentrate.*** Again, the italics are mine for distinction and clarity.
On page one, the product's primary (front) display panel - *"Kills the Root" "Kills the Toughest Weeds & Grasses".*
On page three, under "PRODUCT FACTS" – *KILLS Almost all annual and perennial weeds, grasses and other unwanted plants.*
On page three, under "HOW TO USE" - *Important: Eliminator® Weed & Grass Killer Super Concentrate is an all-purpose weed and grass killer which will kill almost all plants contacted. If necessary, use cardboard or plastic to shield desirable plants. If plants are accidentally sprayed, rinse off immediately with water. Spray to evenly wet the weed.*
On page five, under "WHERE TO USE" – Do NOT use for spot weed control in lawns since *Eliminator® Weed and Grass Killer Super Concentrate kills all green plants, including lawn grass.*

I received by mail, [redacted] photographs that she claimed to have taken around the first part of May 2016. Her photographs appear to be primarily of her acacia tree showing brown and possibly dead foliage with [redacted] home and their shared fence in some of them **(see Attachment QQ, RR and SS, [redacted] 12 photographs, three pages four photos each).**

11/30/2018 0901 Hours
I sent [redacted] and email asking her for a copy any estimates of damage to her trees, shrubs and lawn. I informed her that I had also left a message for of Greenvale Tree Company and had not heard from him [redacted] responded on December 7, 2018 that she was busy at work but intended to contact her arborist **(see Attachment TT, response to my email dated 11/30/2018).**

5/3/2019
[redacted] nor her arborist provided me a report or an estimated cost of replacing her trees. For the reader to make a clear side by side comparison to her damaged plants to plants showing normal growth I went to a nearby nursery to take photographs for contrast **(see Attachment UU, VV, WW and XX, four photographs of a nursery geranium, red flowering abutilon and a top and side view of a pittosporum respectively).**

Summary of the Damage Related to the Herbicides Mode of Action

Dicamba and plant growth regulators (PGRs) are all pesticides (economic poisons) under the subcategory of herbicides (economic plant poisons). Herbicides are classified (grouped) by their mode of action causing plant death or the type of plant damage. Dicamba, 2,4-D are all active ingredients in the same mode of action group (*Group 4*). Dicamba is one of the active ingredients in Garispe's herbicide *Spectracide Weed and Grass Killer Concentrate 2* **(again see Attachment AA**). Herbicides in this group act as a plant hormone or growth regulator, disrupting and distorting plant cell growth in the newly forming stems and leaves causing malformation, disfigurement, distortion and then (unless a sublethal dose) death (**again refer to Attachment DD & EE**). Glyphosate (*Group 9*) can also cause malformation and distortion in sublethal doses and can remain

in surviving plants for several years continuing to cause "carry-over" damage, injuring the plant each season **(see Attachment YY *Diagnosing Long and Short-Term Effects of Herbicides on Trees by Hannah Mathers PhD.* ten pages, under "Group 9" on page 7)** and **(see Attachment ZZ University of Kentucky, *Scouting Guide for Problems of Apple, Glyphosate Injury,* two pages)** and **(see Attachment AAA, University of Hawaii at Manoa Cooperative Extension Service *Glyphosate Herbicide Injury to Coffee*, "Primary disease symptoms" with associated photographs, five pages)** and **(Attachment BBB: additional documents providing herbicide "mode of action" and diagnostic plant injury information, 8 pages).** Diquat and paraquat are both in herbicide Group 22 and have the same mode of action and injury symptoms by way of direct tissue destruction and necrosis. This occurs anywhere on the plant it touches **(see again Attachment BBB, image 15.4, page 7)** and is similar when compared plant injuries referred to in **photo Attachments G, I, HH, OO and PP**.

The damage we observed on [redacted] trees and plants were a result of multiple types of herbicides. This conclusion is based on the following:

1. The damage we observed in yard affected various plant species that was isolated to the foliage. This was only along a shared fence between [redacted] and [redacted] houses (as seen in the attachment photos). The patterns of damage were not environmentally caused by lack care such as water-stress which would show effects equally on all the plants. Nor was it a disease from a fungus, virus or bacteria which most are host specific and would affect only a certain single host plant. Any plants sickened by an economic poison such as glyphosate could be compromised and be vulnerable to any additional environmental stress or secondary infections leading to further decline and death. The degree of herbicide damage and survivability of a plant depends on multiple variables such as its size (tree vs a single grass blade), the leaf's ability to absorb the herbicide due to natural waxy water barriers (loquat leaf surface vs grass leaf surface), concentration of the herbicide (ratio to the water as the carrier) and amount of herbicide coming into contact with the plant (one leaf vs all the leaves and on both sides).
2. The types of damage observed on [redacted] grass, shrubs and trees are consistent with injury caused by the active ingredients found in [redacted] *Spectracide* and *Eliminator* **(see 3. table below).**
3.

Spectracide Weed & Grass Killer Concentrate 2 active ingredients	***Eliminator Weed & Grass Killer Super Concentrate*** active ingredients
2.3% Diquat dibromide	41% Glyphosate.
1.15% Fluazifop-p-butyl	
0.77% Dicamba, Dimethylamine salt	

   a. Glyphosate and diquat dibromide are "non-selective" herbicides that kill both grasses and broad leaf plants, glyphosate by absorption and shutting down the enzymes needed for essential plant metabolites and diquat by simple tissue destruction. Fluazifop-p-butyl is a selective herbicide that only kills grasses. Dicamba is a selective synthetic auxin (plant growth hormone) type herbicide killing only broadleaf plants. Garispe's *Spectracide Weed & Grass Killer*

Concentrate, with its these three active ingredients is formulated to kill or damage all plants.

b. Glyphosate and dicamba are specifically systemic herbicides that will absorb into plant tissues and translocate throughout the plant. Dicamba is a "synthetic auxin". An auxin is a plant hormone. Synthetic auxins' mode of action is a PGR type herbicide in *Group 4* characterized by twisting, cupping of the leaves and distorted growth **(refer again to Attachment AA)**. Acute glyphosate injury will appear as leaf chlorosis and can cause a slow dieback of the plant within a couple weeks of exposure. Sublethal doses of glyphosate, due to the persistence and longevity of glyphosate within the plant, creates chronic damage to developing plant tissue and can show up months to years after the initial exposure. "Leaf stacking" (short internodes), leaf narrowing, chlorosis (yellowing by lack of chlorophyll) and smaller, stunted distorted leaves are clear symptoms of injury and is diagnostic **(again see Attachments YY, ZZ and AAA)** . These distinctive symptoms of herbicide damage characteristic of a unique plant growth pattern and survival response. It is forensically diagnostic and is called "witch-brooming" or "witches' broom". It is very rare in nature. It is impossible for a pittosporum, acacia and an elm to develop these symptoms at the same time **(as seen again in photos Attachments with witch-brooming D, FF, GG, MM, NN)**. Witches'-brooming appears on the plant as stunted, chlorotic, narrow or distorted new growth. The type of forensic damages we observed are:

   i. Witch-brooming is occurring on the elm tree, acacia tree and the Pittosporum sp. under the acacia tree. [redacted] arborist, stated [redacted] trees had small leaves, short internodes, leaf curling and "fiddleneck" damage (witch-brooming) due to distinct PGR injury. Due to the age of regrowth and extent of branch and tree limb death this herbicide damage was from the past possibly the result of the suspected exposure from 2016 **(as seen again in photos Attachments D, O, MM & NN)** plausibly corresponding to [redacted] first alleged complaint of an herbicide application and damage to the Morro Bay Police Department on May 10, 2016.

   ii. Cupping and distorted new growth on the geranium and the Yellow and Red Flowering Abutilon **(as seen again in photo Attachments G, H, I & CC)** especially to the newer growth at the plants' tips is much more recent and ongoing and caused by the dicamba. This evidence very likely corresponds to [redacted] second alleged complaint of an herbicide application and damage to the Morro Bay Police Department on September 6, 2018 [redacted] admitted to tank mixing *Spectracide* (containing dicamba) and *Eliminator* together during the cold weather to improve the efficacy of the glyphosate **(see [redacted] statement on 10/8/2018)**.

c. Contact herbicides, such as diquat dibromide and fluazifop-p-butyl, are relatively short lived in a plant and will only affect parts of the plant they come into direct contact. Tender plants would be the most affected. The types of damage associated with contact herbicides will depend on how the plant is exposed.

Necrotic and chlorotic leaf spotting could be a result of an indirect exposure (e.g. splashing, dripping, etc.) causing collateral damage **(see again Attachment BBB, Diagnosis of Herbicide Damage to Crops, photograph 15.4 "Paraquat damage to rhubarb spray drift")** and compare to **Attachments G, I, FF, MM, NN and FF .** Examples we observed of this type of damage are:

i. Recent leaf necrosis and dieback on parts of the loquat, acacia, elm and possibly the loquat tree.

ii. The necrotic leaf spots on the red and yellow flowering abutilons and fern under the damaged elm tree canopy **(see again Attachment G, I, FF, MM, NN & GG)**. The necrotic dead spots to the abutilon leaves and fern most likely came from herbicide spray collecting on overhead spray plant foliage then dripping onto the plants below. These drops would be a relatively large, carrying more of the herbicide when compared to a very small, single fine spray droplet. The large droplet would concentrate a large amount of herbicide onto a small area, becoming further concentrated upon evaporation to cause complete tissue destruction, eventually chemically burning holes in the leaves. Gravity will also move drops of diluted liquid herbicide to the lower leaf tips and edges (depending on the leaf's orientation) collecting there and concentrating by evaporation causing burns and dead plant tissue (**see again Photograph XX**). This is especially true for diquat dibromide, a chemical designed specifically to chemically burn plant tissue in the correct concentrations and coverage. ***Spectracide Weed & Grass Killer Concentrate 2*** has diquat dibromide 2.3% as an active ingredient. Diquate interacts with sunlight to cause tissue damage. Plants in the shade would have symptoms delayed which prompted a second visit to [redacted] property. These necrotic spots can only be from the result of a more recent application (within hours to weeks) because the brown dead tissue was remaining and has not yet sluffed off which would cause missing parts of the leaf or holes. This newer damage was ongoing, having become worse on our second visit to [redacted] backyard. This evidence also plausibly corresponds to the timing of [redacted] second alleged complaint of an herbicide application and damage to the Morro Bay Police Department on September 6, 2018.

d. The exact herbicide which could have caused the dead patch in the lawn could have been a result of a non-selective herbicide such as glyphosate or diquat dibromide or the selective grass herbicide afluazifop-p-butyl or any combination of these three herbicides. A single grass blade by itself is very tender and much more sensitive to herbicides than would be a large tree such as [redacted] elm or acacia **(also see "Baby's Tears", *Soleirolia spp.* reference below)** and would be killed. The pattern of the dead lawn matches and lines up to the gap in the foliage between [redacted] loquat, elm and acacia which correlates to an herbicide spray directed from [redacted] side of the fence **(see again Attachment C, photograph of dead spot in the lawn).**

Herbicide damage can occur from either a direct application to a plant or by drift. Damage and injury to [redacted] plants was caused by a direct herbicide application. We based this conclusion on the following reasons:

1. [redacted] periodically performed spot treatment applications around his pavers, spray emitters, and on the weeds in his garden with a 1-gallon hand pump sprayer. It is highly unlikely that the extent, type and pattern of damage observed on [redacted] trees would have occurred from drift by his low volume and precise hand-wand application **(see again Attachments P through R)**.
2. [redacted] plants and groundcover did not have any herbicide damage symptoms. If the damage on [redacted] trees was caused by a drift incident his recent application, there would have been injury to his surrounding plants as well. [redacted] established groundcover is "Baby's Tears", *Soleirolia spp.*, which is a very sensitive and very tender plant. *Soleirolia spp.* would have shown any recent herbicide damage from drifting or overspray. [redacted] spray precision can be seen in his recent herbicide application around his drip and spray emitters. He was capable to be precise enough to avoid damage to the surrounding, adjacent ground cover of Baby's Tears **(See again Attachments P-R)**. As [redacted] has stated, the fence itself is a barrier. A tarp placed over his desirable plants, and washing them with water immediately afterward as instructed on the *Spectracide Weed and Grass Killer Concentrate* label (**See again the *Spectracide Weed and Grass Killer Concentrate 2* label under "How to Apply" Attachment AA and *Eliminator Weed & Grass Killer Super Concentrate* label under "How To Use" Attachment BB**), would have prevented any herbicide drift damage to his plants from an overhead spray directed to trees. A blue plastic tarp was seen on site in back yard **(see again Attachment N & S 9/21/2018 photographs, lower right corners)**. The extensive widespread amount of damage present on trees, plants and lawn would not have been a result of accidental drift from the type of application [redacted] routinely performed from his one-gallon hand-held pump sprayer.
3. The overall pattern of damage, taken in its entirety, matches a directed above and over the top of the fence application with herbicide landing on the elm, acacia and pittosporum with enough sprayed material to collect and drip onto [redacted] smaller plants below the top of the fence. The worst damage was to portions of the trees and plants that grew above the top of the fence. The plants and lawn below the trees suffered accompanying damage due to collateral drift, runoff and dripping.

Motive

[redacted] ad motives to spray [redacted] trees. I based this conclusion on the following reasons:

1. [redacted] stated he is frustrated with [redacted] trees along their shared fence [redacted] stated he want[redacted] trees trimmed back to control the height and branching on his side of the fence **(see again [redacted] statements on 9/12/2018)**. Both [redacted] and [redacted] stated they had an agreement and to share the cost to get the trees trimmed. [redacted] stated he stopped agreeing to participate in sharing the cost for trimming her trees about two years ago because it was too frequent and was too expensive. This coincided with [redacted] timeline with her first report of herbicide damage to the Morro Bay Police Department in May of 2016. [redacted] had also asked our department if an

application of a contact herbicide to the branches o[redacted]rees on his side of the fence is acceptable **(see again[redacted]statements on 9/12/2018).**

2. [redacted]admitted his frustrations regarding the size and "aggressive nature" and "quick growth" of[redacted] elm tree.[redacted]stated the elm tree blocks his and his neighbors' views. This is most likely his views of the Pacific Ocean and of Morro Rock[redacted] stated he is worried about potential property damage because he believes her trees pose "a fire risk", a falling hazard and had suspected root damage to his cement patio.[redacted] wants the tree removed.[redacted] frustrations are supported by his complaints to the Morro Bay Code Enforcement and the Morro Bay fire department.
3. The current damage to the elm and acacia tree now benefits[redacted]with an improved second story view of Morro Rock and the Pacific Ocean from his two windows and his balcony **(see again photograph Attachment T)** and permanently removes his half of the expected payment to[redacted]for the shared arborist's trimming. It also increases his leverage to persuade the Morro Bay code enforcement and fire department to act against[redacted] trees due to his safety concerns the trees dead and dying branches.

Conclusion

The type, extent and thoroughness of the damage and symptoms observed to elm tree, acacia tree, pittosporum sp., lawn, abutilons, fern and the geranium is consistent with abiotic damage caused by contact herbicides versus environmental factors affecting an entire plant (e.g. lack of water, heat stress, etc.). No diseases such as downy or powdery mildew or insects such as mite or aphid damage was observed. According to[redacted]arborist , the elm had a fungus under the bark caused by the tree's weakened condition and was considered "a secondary problem". A past application or applications of herbicide(s) caused sublethal damage to the acacia and the elm and one pittosporum shrub showing old dead branches, distorted leaves and diagnostic witch-brooming. More recent damage is to[redacted]grass lawn, abutilons, fern and geranium shrub. The shrubs would recover but the dead portion of the lawn would have to be replanted. All these plants are closest t[redacted] home and along his shared fence with[redacted] The locality of each plant's damage and injury is specific to being nearest to[redacted] fence and did not occur to shrubs and/or their foliage that were furthest from[redacted] fence.[redacted]plant injuries matched[redacted]*Spectracide Weed & Grass Killer "EXPECTED VISUAL SYMPTOMS"* of *"Leaves yellowing, then curling, twisting, wilting and shriveling"*. This pattern of damage and injury indicates the herbicides came from the direction of[redacted] property.

The extensive widespread amount of diagnostic herbicide damage present on[redacted]trees, plants and lawn would not have been a result of accidental drift from the type of application[redacted]erformed from his one-gallon hand-held pump sprayer. With this type of spray equipment[redacted] would be capable of precision applications as shown with his application spray patterns around his water emitters and other spots. There was no collateral damage to his plants, some of which are very tender. He would have avoided the damage by following the herbicide label directions using a tarp to cover and protect his plants during any applications to[redacted] trees and then washing his plants afterward with water per label instructions. One

third of [redacted] side long the fence was concrete, having no plants, which would simplify an overhead application to reach [redacted] trees with his spray from his side.

Statements provided by [redacted] in addition to his gain by avoiding the shared costs of pruning along with improved views from his balcony and windows show he had a motive to deliberately spray her trees and plants with an herbicide. The elm, acacia, and associated landscape showed serious chemical damage, which would cost between $1500 to $3000 for the owner [redacted] to replace.

Summary of Violations and Enforcement

A copy of this investigation will be provided to the Morro Bay Police Department and/or to the San Luis County District Attorney, Environmental Enforcement for violation of California Penal Code §594 for vandalism. Enforcement actions by the San Luis Obispo County Agricultural Commissioner and future amendments to this report will depend on the actions of these agencies.

List of Attachments

Attachments A-K: Photos of [redacted] backyard 9/11/2018 and information.

A: photo of loquat tree leaf burn.
B: photo of acacia half dead next to [redacted] hared fence line.
C: photo of dead grass under acacia's canopy.
D: photo of pittosporum sp. with abnormal growth and witches'-brooms.
E: photo of elm with damage right side and undamaged left side.
F: photo of [redacted] elm & below yellow flowering abutilon with necrotic burn spots.
G: photo o[redacted] red flowering abutilon with necrotic burn spots and distorted growth.
H: photo of [redacted] red flowering abutilon with necrotic burn spots and distorted growth.
I: photo o[redacted] red flowering abutilon with necrotic burn spots and distorted growth.
J: reference diagram of [redacted] nd [redacted] backyards.
K: aerial photo of [redacted] and [redacted] properties.

Attachments L-T: Photos from and of [redacted] property 9/21/2018

L: photo taken from [redacted] backyard of [redacted] elm, facing west.
M: photo of [redacted] elm tree from [redacted] backyard facing southwest.
N: photo of [redacted] elm, acacia and loquat trees fro[redacted] backyard facing northwest.
O: photo of dying acacia tree fro[redacted] yard facing West.
P: photo of sprayed areas of [redacted] back yard.
Q: photo of sprayed areas of [redacted] back yard.

R: photo of sprayed areas of [redacted] back yard.
S: photo of [redacted] concrete area of backyard facing northwest.
T: photo facing east of [redacted] trees and estimated loss of canopy.

Attachments U-BB: Miscellaneous supporting documents

U: photos of *Spectracide Weed & Grass Killer Concentrate 2* container's primary display panel.
V: photos of *Spectracide Weed & Grass Killer Concentrate 2* container closeup of active ingredients.
W: photos of *Eliminator Weed & Grass Killer Super Concentrate* container's primary display panel.
X: photos of *Eliminator Weed & Grass Killer Super Concentrate* closeup of active ingredients.
Y: Environmental Scientist Yee's email, dated 9/25/2018.
Z: Morro Bay Police Department's CFS Event Detail for 5/10/2016 and 9/06/2018.
AA: Spectracide Weed & Grass Killer, EPA REG. No. 9688-265-8845, six pages.
BB: Eliminator Weed and Grass Killer Super Concentrate, EPA REG. No. 71995-7-59144, eight pages.

Attachments CC- PP: Photos from [redacted] property 10-26-2018

CC: photo of [redacted] red abutilon and new growth affected.
DD: publication A4161, University of Wisconsin Extension "*Soybean Injury from Dicamba*" four pages & Attachment.
EE: July 19, 2018 publication University of Nebraska-Lincoln "*Understanding Growth Regulator Herbicide Injury*", six pages.
FF: closeup of [redacted] pittosporum sp. with "witch-brooming".
GG: closeup of [redacted] pittosporum sp. with "witch-brooming".
HH: red flowering abutilon with burns and deformed new growth.
II: photo of fern leaf below and near [redacted] elm.
JJ: photo of [redacted] acacia tree showing [redacted] side vs [redacted]
KK: photo of [redacted] geranium new growth with deformed leaves.
LL: photo of [redacted] geranium new growth with deformed leaves closeup.
MM: photo, [redacted] acacia tree, sample cuttings from opposing sides.
NN: photo, samples cut from [redacted] elm from opposing sides.
OO: top views of [redacted] abutilon leaves.
PP: back views of [redacted] abutilon leaves.

Attachments QQ-BBB: Miscellaneous supporting documents

QQ: [redacted] 4 of 12 photographs.
RR: [redacted] 4 of 12 photographs.
SS: [redacted] 4 of 12 photographs.
TT: [redacted] response to my email dated 11/30/2018.

UU: photo of nursery geranium.
VV: photo of nursery red flowering abutilon.
WW: photo of a top view of a nursery pittosporum.
XX: photo of a side view of a nursery pittosporum.
YY: *Diagnosing Long and Short-Term Effects of Herbicides on Trees by Hannah Mathers PhD.* ten pages, under "Group 9" on page 7.
ZZ: University of Kentucky, *Scouting Guide for Problems of Apple, Glyphosate Injury,* two pages.
AAA: University of Hawaii at Manoa Cooperative Extension Service *Glyphosate Herbicide Injury to Coffee*, "Primary disease symptoms" with associated photographs, five pages.
BBB: additional documents providing herbicide "mode of action" and diagnostic plant injury information, 8 pages.

Cindy Hall Agricultural Inspector/Biologist 9-10-2019.
Report Prepared by (Name & Title) **Date Completed**

Deputy Ag. Commissioner 9/10/2019.
Report Reviewed by (Name & Tile) **Date Reviewed**