STUDY TITLE:

Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Data Requirement:
40 CFR § 158.640 Product Performance
(OPPTS Guideline Reference 96-12)

Study Director:
Roger A. Baldwin, Ph.D.
University of California, Davis—Wildlife Specialist

Investigator:
Ryan Meinerz
University of California, Davis—Staff Research Associate II

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Performing Laboratory:
Department of Wildlife, Fish, and Conservation Biology
University of California, Davis

Laboratory Project Identification:
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Sponsor:
Liphatech, Inc.
3600 W. Elm Street
Milwaukee, WI 53209

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STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality, on any basis whatsoever, is made for any information contained in this document. I acknowledge that information not designated as within the scope of FIFRA §10(d)(1)(A), (B), or (C) and which pertained to a registered or previously registered pesticide is not entitled to confidential treatment and may be released to the public, subject to the provisions regarding disclosure to multinational entities under FIFRA 10(g).

Company:	Liphatech, Inc.
Sponsor & Submitter:	Kelly Bornhofer
Title:	Testing Facility Management Executive Director of Corporate Compliance
Signature:	Kelly Bornhofer
	Date: 10/1/18

GOOD LABORATORY PRACTICE STATEMENT

This study meets the requirements of 40 CFR Part 160, with the following exceptions:

1. The measuring cup used to apply the test substance was not inspected or maintained according to the requirements of EPA's Good Laboratory Practice (GLP) standards; however, it was calibrated using a GLP compliant scale.
2. The GPS unit used to plot the treatment and control plots and gather waypoint data was not inspected, maintained, and calibrated according to the requirements of EPA GLP standards
3. The clock(s) or cell phone(s) used to report time at the study sites were not inspected, maintained, and calibrated according to the requirements of EPA GLP standards.
4. The weather data gathered from Weather App as reported in the raw data is not known to be inspected, maintained, and calibrated according to the requirements of EPA GLP standards.
5. Some pages from the investigators' field notebook were not maintained according to the requirements of EPA GLP standards.
6. Some raw data sheets were not maintained according to the requirements of EPA GLP standards.
7. The Mechanical Bait Spreader (Solo 421-S, Newport News, VA) was not inspected or maintained according to the requirements of EPA GLP Standards; however, it was calibrated using a GLP compliant scale.
8. The measuring wheel used to measure the swath lengths was not inspected, maintained or calibrated according to the requirements of EPA GLP standards.

Sponsor: & Submitter Kelly Bornhofer **Date:** 10/1/18

Title: Testing Facility Management
Executive Director
Corporate Compliance
Liphatech, Inc.

Signature: Kelly Bornhofer

Study Director: Roger A. Baldwin, Ph.D. **Date:** Sept 14, 2018

Title: Wildlife Specialist
University of California, Davis

Signature: Roger Baldwin

QUALITY ASSURANCE STATEMENT

The report for this study has been reviewed by the Quality Assurance Unit of Liphatech, Inc. in accordance with the Good Laboratory Practices standards as set forth in 40 CFR 160.35(b)(6) and (7). The Quality Assurance Unit also has conducted the following inspections of the field testing sites used in this study and all findings were reported to the Study Director (Roger A. Baldwin) and Testing Facility Management/Sponsor/Submitter (Kelly Bornhofer). All raw data for this project, as well as the original final report will be archived in a filing cabinet in the Liphatech, Inc. Archives.

Phase Inspected	Date(s) of Inspection	Date Reported to Study Director	Date Reported to Management
Study Inspection	April 18 – 19, 2018	April 20, 2018	April 20, 2018
Raw Data Review	September 6, 2018	September 7, 2018	September 7, 2018
Draft Report	September 6, 2018	September 7, 2018	September 7, 2018

A final review of all the data and records on September 19, 2018, indicates that the final report as submitted accurately reflects the raw data and study as it was conducted in the field.

Kylli Paavola
Quality Assurance Unit
Liphatech, Inc.

October 1, 2018
Date

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ABSTRACT

Columbian ground squirrels (*Urocitellus columbianus*) are a major pest to agriculture and natural resource areas throughout western portions of Montana. First-generation anticoagulant rodenticides, such as chlorophacinone, are often considered one of the most efficacious and cost effective methods for controlling ground squirrel species. Currently there is a Special Local Needs (FIFRA section 24c) registration for an oat formulation of Rozol® for controlling Columbian ground squirrels in Montana. We tested a winter wheat formulation, Rozol Pocket Gopher Bait (0.005% chlorophacinone), via bait station and broadcast applications to determine its utility at controlling Columbian ground squirrels. Our results indicated 84–90% mortality of a treated ground squirrel population via bait station application; we observed little impact of broadcast applications on ground squirrel populations. Reasons for low efficacy are unclear but may be due to insufficient amounts of bait available for consumption in the treatment area, treatment timing, weather, competition with other food resources, and/or difficulty locating the small green bait seeds given the rapid growth of abundant green vegetation at the study site. We did not observe any non-target mortality during this baiting trial, regardless of the application strategy, nor did we observe any ground squirrel carcasses above ground following bait application. There appears to be much promise for Rozol Pocket Gopher Bait for Columbian ground squirrel control when applied via bait stations given the observed high efficacy and low nontarget risk. Further testing is needed to develop effective strategies for broadcast applications.

INTRODUCTION

Rodenticides are the most commonly used and practical technique for controlling large populations of Columbian ground squirrels (*Urocitellus columbianus*); they are among the most effective tools as well (Askham 1985). First-generation anticoagulants (e.g., chlorophacinone) are often the preferred rodenticide for ground squirrels given the availability of an antidote, their low toxicity which limits primary and secondary toxicity concerns, and their relatively low cost (Hornbaker and Baldwin 2010). There is a Special Local Needs (FIFRA section 24c) registration for an oat formulation of Rozol. However, a federally-labeled, Section 3 first-generation anticoagulant bait based on a winter wheat carrier is lacking for Columbian ground squirrel control in Montana. The existing SLN for the oat formulation could be replaced by a section 3 registration with EPA for a winter-wheat-based bait. As such, we established a study to test the efficacy of Rozol Pocket Gopher Bait for Columbian ground squirrel control following both bait station and broadcast applications. The data included in this report will be used to support the Section 3 registration of this product for controlling the Columbian ground squirrel.

MATERIALS AND METHODS

Test Material

The test material (Rozol Pocket Gopher Bait Lot#: 94062-1; EPA Registration Number: 7173-184) was manufactured by Liphatech, Inc., in Milwaukee, WI (EPA Establishment Number: 7173-WI-1). The concentration of the active ingredient was verified at 0.0059% chlorophacinone (CAS Registry Number: 3691-35-8; see Appendix for Certificate of Analysis). The test material was stored in ambient warehouse temperatures in dark high-density polyethylene plastic pails identical to commercial packaging and was removed only when applying the bait.

Study Area

This field trial was completed on property owned by Ed Alexander, located outside of Frenchtown, MT in Missoula County (Fig. 1). The study area was comprised of pastured alfalfa (Fig. 2). The elevation of the study site was approximately 3,050 ft with rainfall averaging around 15 inches annually. Slopes on the study plot were flat.

Study Timeframe

Pre-treatment counts began April 18, 2018. Bait was applied to the ground April 24, 2018 – Experimental Day 0. Carcass searches went through May 15, 2018, Experimental Day 21.

Survey Methods

We established three plots within the study area: 1) bait station, 2) broadcast, and 3) a control. All plots were located in areas of high ground squirrel activity. The primary criterion for selecting sites was the need for a minimum of 25 ground squirrels present in the survey area. The bait station and broadcast survey plots were square and 1.0 acre in size. The control survey plot was also square, but was 1.5 acres in size to ensure ≥25 ground squirrels within the survey area. We marked all plots with colored flagging around the perimeters. We then marked a buffer zone that extended for 100 feet in all directions beyond the perimeter of the survey plot with additional colored flagging. The buffer zone was only used for bait application and

nontarget hazard surveys. All plots were separated by a minimum distance of 400 feet between outer buffer zone boundaries to minimize the potential of individuals moving between plots. Both pre-treatment and post-treatment ground squirrel population surveys were completed using direct and indirect methods (visual counts and plugged burrow openings, respectively).

Visual count surveys were conducted on days with low wind and no precipitation to reduce the impact that weather might have on ground squirrel activity. We originally planned to conduct counts on days with ≤50% cloud cover, but quickly realized after conversations with local farmers that consistently low cloud cover were not all that common during the study period. As such, we submitted an amendment that allowed us to conduct counts during periods with more extensive cloud cover. We believed this would not impact ground squirrel counts, as ground squirrels would definitely be active during these days given how common they are (i.e., they could not afford to not be aboveground foraging when they have such a short timeframe with which to put on weight, as well as rear offspring). This in fact appeared to be the case, as illustrated with days of substantial ground squirrel activity even when cloud cover was above 50% (e.g., Appendix F for broadcast applications).

Pre-treatment visual counts were taken for a total of 3 consecutive days and concluded 3–4 days prior to the application of bait. We conducted an early post-treatment count to monitor efficacy over time, as well as to determine if additional treatment time was required. This initial post-treatment count was initiated on Day 8, and was conducted for up to 3 consecutive days. A final post-treatment count (also taken over 3 consecutive days) was initiated on Day 14 to determine final efficacy values. All visual counts were taken from a vehicle well outside the survey plot. The commencement of visual counts was delayed 10 minutes after the observer's arrival at the plot to minimize the effects of human disturbance. After the 10-minute interval elapsed, counts commenced using the aid of binoculars. Two separate sets of counts were taken each day of visual count indexing with one set occurring in the morning and a second set occurring in the evening. Within each set, a total of five different 2-minute scans of the 1 to 1.5-acre survey plot were conducted to quantify the number of visible ground squirrels on the plot. A 5-minute interval occurred between each of the 2-minute scans. All morning scans occurred between 8:35–11:05, while evening scans ranged from 14:40–16:50. Special attention was paid to not double-count squirrels during the 2-minute scan. We used the maximum number of ground squirrels counted as the population estimate for the plot.

Active burrow index values within survey plots were determined both pre- and post-treatment. Burrows were considered active if freshly excavated soil was evident. Active burrows were then flagged, numbered, and covered completely with loose soil. Roughly 48 hours after they were covered, each flagged burrow was checked to see if it was reopened. If the burrows that had been covered with loose soil were open 48 hours later, they were considered active. The pre-treatment count of active burrows was completed 0–1 days prior to bait application in the treatment and corresponding control plots. The post-treatment count of active burrows was initiated two days following the completion of final visual count surveys.

Bait Station Application

Bait stations followed the standard upside-down T-shape design typically used for bait application for many ground squirrel species (Fig. 3). The top portion of the bait station was

made of 24 to 26 inches of 2-inch PVC pipe that was topped with an end cap. The length of the station was made of 3-inch PVC pipe, with a total length of 42 to 44 inches. Bait stations were established throughout the survey plot and buffer zone following a 7 × 7 pattern with bait stations separated by roughly 68 feet (Fig. 2). Nine bait stations were housed within the survey plot; the remaining stations were all located in the buffer area. All bait stations were secured to metal posts to reduce the likelihood that other wildlife would knock the stations over.

Application of bait was made immediately following the completion of the pre-treatment census. For filling bait stations, we used a calibrated 1-cup dry measuring cup. For calibration, we filled the measuring cup to the top (leveled off) and measured the weight three separate times. We determined the average weight across all three measurements for use in determining weight applied to each respective bait station. Using this measuring cup, we applied bait to each bait station until we had applied approximately 2 lbs per bait station. We compared this amount to the total amount of bait applied to all bait stations to verify the accuracy of this approach. An uninterrupted supply of bait was provided until signs of bait consumption ceased. We checked bait stations every 1–3 days for bait consumption and recorded the number of cups and weight of added bait. At the end of the baiting period, we weighed the amount of bait remaining in each bait station to determine the total amount of bait removed during the bait application period. There was no placebo bait placed in the control plot.

Broadcast Application

Before initiating the field portion of this project, we calibrated a mechanical bait spreader (Solo 421-S, Newport News, VA) in order to establish the appropriate settings needed to achieve an application rate of 10 pounds of bait per swath acre when operated in field conditions. The standardization procedures used helped ensure the spreader dispensed an approximately uniform swath width and discharge rate. Swath width was determined by walking over a flat surface at a rate of 2.5 feet per sec (150 feet per minute) while cranking the mechanical bait spreader 60 rotations in 60 seconds. Measurements were then taken of the width of the spread of the pellets (ignoring extra width resulting from bouncing pellets). This process was repeated three times and then averaged. From this, we calculated the area covered during a bait application using the following equation:

Equation 1: Swath width (ft) × transect length (ft) = Area covered (sq ft)

where swath width equaled the average width of a bait-application swath when applied moving at 2.5 feet per second, and transect length equaled the length of the transect where bait was broadcast.

The approximate discharge rate was then determined by cranking the mechanical bait spreader 60 rotations in 60 seconds while standing over a large tarp, which collected all bait that was discharged while cranking. Weight of the discharged bait was recorded. A total of three measurements were taken and then averaged.

We determined application rate as follows:

Equation 2: $$\frac{\text{Discharge rate (lbs)}}{\text{Area covered (sq ft)}} = \text{Application rate (lbs/sq ft)}$$

We expressed this value on a “per acre” basis as follows:

Equation 3: Application rate (lbs/sq ft) × 43,560 sq ft/acre = Application rate (lbs/acre)

This allowed us to estimate the amount of bait that would be applied over the study site based on the total transect length of applications.

Prior to application, both the plot and the surrounding buffer zone were examined for the locations of burrows. Linear transects were then flagged in locations where burrows were present. The length of each transect varied and was determined by the location of burrows. There was no pre-determined number of transects for the study. The flagged transect locations were then mapped and were used in all rounds of treatments.

The first application of bait was made on the day of completion of the pre-treatment active burrow index. We treated all burrow openings that appeared to be active (e.g., showed signs of fresh soil around entrance, no cobwebs or detritus found in burrow opening, etc.) inside of the pre-flagged transects, with applications occurring within both the survey plot and buffer zone. Since burrows were not distributed consistently throughout the plot, bait was broadcast only in those areas where burrows were present. Special care was taken to keep a constant rate of speed while walking as well as to maintain a constant cranking speed on the spreader. No placebo bait was applied in the control plots.

When starting field applications, the initial weight of bait was recorded before the first application was made to the broadcast plot. Final weight was recorded after the last application to the broadcast plot. This allowed us to determine the total weight of application for comparison to the average weights derived through our calibration efforts to determine if we were applying bait at the proper rate. This process was again repeated 4 and 9 days after the initial application to ensure that ground squirrels consumed bait across multiple days over the duration of the study period.

Non-Target Species Surveys

A methodical carcass search was completed daily starting on Day 5 of the study, continuing through Day 21, except for Day 17 for which we were not able to access the site due to road flooding. The area of the carcass search extended throughout each study plot. Both target and nontarget species carcasses were recorded if observed. We noted any raptors and corvids that were present on the study site throughout the project.

We also placed four remote-triggered cameras (Bushnell Trophy Cam HD Aggressor Low Glow, Bushnell Outdoor Products, Overland Park, KS) in each plot. Each was placed toward the edge of each cardinal direction of the monitoring plot, with the camera facing inward to attempt to capture potential predators and scavenging events. We documented any potential predatory species observed with the cameras.

Efficacy Calculation

Natural changes in population size and rodent activity can occur irrespective of the application of a rodenticide, thereby potentially biasing results from baiting trials. To account for this

possibility, we tested for differences in the proportion of burrows that were active during burrow counts during pre- and post-treatment survey periods in the control plot using Fisher's exact test (Zar 1999). If a significant difference was observed, we applied a correction factor that accounted for changes in control plots following O'Connell and Clark (1992). If no difference was observed, we calculated efficacy using the following equation:

Equation 4: $$\frac{(\%\text{ burrows open pre} - \%\text{ burrows open post})}{\%\text{ burrows open pre}} \times 100 = \%\text{ Efficacy}$$

where "% burrows open pre" = the proportion of burrow systems reopened ~48 hours after covering with loose soil following the pre-treatment period; and "% burrows open post" = the proportion of burrow systems reopened ~48 hours after covering with loose soil following the post-treatment period. We also tested for differences in the proportion of burrow systems reopened between pre- and post-treatment periods for the treatment plot using Fisher's exact test (Zar 1999).

We assessed efficacy using maximum ground squirrel counts using the following equation:

Equation 5: $$\frac{(\text{max GS count pre} - \text{max GS count post})}{\text{max GS count pre}} \times 100 = \%\text{ Efficacy}$$

where "max GS count pre" = the maximum number of ground squirrels observed in the survey plot over the 3-day pre-treatment observation period; and "max GS count post" = the maximum number of ground squirrels observed in the survey plot over the 3-day post-treatment observation period.

Natural changes in population size can influence visual counts as well. However, we were not able to statistically test for differences in control sites pre- and post-treatment as we have only one maximum value. Therefore, we determined that we would apply a correction factor if we observed a >20% change in maximum ground squirrel counts from the pre-treatment to the final post-treatment survey period in the control plot. The correction factor for this study was calculated following O'Connell and Clark (1992):

Equation 6: $$\frac{\text{Maximum number of GS pre-treatment (treated plot)}}{\text{Maximum number of GS pre-treatment (control plot)}} = \frac{\text{Expected maximum number of GS if no treatment applied to treated plot}}{\text{Maximum number of GS post-treatment (control plot)}}$$

Equation 7: $$\frac{\text{Maximum number of GS post-treatment (treated plot)}}{\text{Expected maximum number of GS if no treatment applied to treated plot}} \times 100 = \text{adjusted \% remaining}$$

Equation 8: 100 – adjusted % remaining = % adjusted efficacy

where "GS" = ground squirrel and "adjusted % remaining" = the proportion of the original ground squirrel population in the treatment plot that remains following treatment application. Following U.S. EPA standards, we considered population reductions of ≥ 70% efficacious and worthy of registration.

RESULTS

Bait Station Bait Application

We observed a consistent amount of bait within the one-cup dry measuring cup during the calibration process ($\bar{x}$ = 182.2 g; SE = 1.6) suggesting that this was an effective method for applying bait to the bait stations. The amount of bait removed during this study totaled 19.17 kg, which was similar to the estimated weight (18.35 kg) based on our use of a measuring cup (Table 1). This equated to 4.99 kg/acre or 11.00 lbs/acre for the entire treatment area.

Broadcast Bait Application

We calculated an average swath width of 9.0 ft (SE = 0.1) and an average discharge rate of 143.4 g/minute (SE = 6.9) or 0.316 lbs/minute (SE = 0.015) after three trial runs. During calculation of discharge rate, the flow-rate lever was placed at setting 3. Given this discharge rate and swath width, if we walked application transects at a speed of 2.5 ft/second, we would approximate our target application rate of 10 lbs/acre (actual rate = 10.19 lbs/acre).

Bait was applied to a total of 26 transects within the broadcast application plot, with a total measured length of these transects at 2,288 ft. Bait was broadcast on three separate dates: 1) April 24, 2018, 2) April 28, 2018, and 3) May 3, 2018. The total amount of bait applied during each application was similar (April 24 = 2.27 kg or 5.01 lbs, April 28 = 2.09 kg or 4.60 lbs, May 3 = 2.33 kg or 5.14 lbs). All three applications were all well within 10% of our target goal of 10 lbs/acre (April 24 = 10.59 lbs/swath acre, April 28 = 9.71 lbs/swath acre, May 3 = 10.89 lbs/swath acre).

Efficacy

We counted a maximum of 27, 29, and 25 ground squirrels on the bait station, broadcast, and control plots during the pre-treatment period (Table 2). We observed a substantial reduction (28.0%) in ground squirrel numbers in the control plot post-treatment, so we adjusted efficacy values for our treatment plots accordingly (Table 2). Adjusted efficacy values indicated a substantial reduction of ground squirrels from the bait station plot after both the first (74.7%) and final (89.7%) post-treatment counts (Table 2). We did not observe any substantial reduction in ground squirrel numbers on the broadcast plot (adjusted efficacy ≤13.8%) indicating little impact of broadcast applications during this study (note that we halted the counts for the broadcast plot after the first day of our initial post-treatment count given that the large number of ground squirrels observed already exceeded the number that we could count to meet the 70% efficacy threshold).

The proportion of burrow systems reopened during our burrow count census was similar for the control plot during the pre- and post-treatment periods (Fisher's exact test, P = 0.771; Table 3). As such, no adjustment was made for efficacy values derived from burrow counts for the

treatment plots. We observed a significant reduction in reopened burrow systems pre- and post-treatment for the bait station plot (Fisher's exact test, $P < 0.001$), but not for the broadcast plot (Fisher's exact test, $P = 1.000$). Observed efficacy was 84.1% for the bait station plot, and 1.2% for the broadcast plot (Table 3).

Nontarget Observations

We conducted thorough carcass searches throughout the study to remove any potential nontarget threats through secondary poisoning but found none. We only observed two photos of predators on our plots, both in the bait station plot: a fox (*Vulpes* spp.) and a coyote (*Canis latrans*). We occasionally observed raptors and corvids in the area during ground squirrel visual counts, but we did not observe them during carcass counts, nor did we ever observe any bird species feeding on grain or carcasses in or outside of study plots.

DISCUSSION

Both ground squirrel counts (efficacy = 89.7%) and burrow counts (efficacy = 84.1%) indicated substantial efficacy from bait station applications. Bait stations have long proven to be an effective strategy for managing a variety of ground squirrel species (Askham 1994, Marsh 1994, Whisson and Salmon 2009). They may even work relatively well for ground squirrel species that frequently focus on green foods given that bait stations provide an abundant food source in a concentrated location. This was particularly relevant for this study given that bait application occurred in an area with abundant alfalfa, which is often a preferred food for various ground squirrel species (Whisson et al. 1999, Johnson-Nistler et al. 2005). It bears noting that we observed a 28.0% decrease in the number of ground squirrels observed on the control plot during this study. Reasons why are unclear, but could be due to dispersal out from the initial core area. Regardless, it had little impact on our efficacy values for the bait station plot, as adjusted and unadjusted values only ranged from 89.7% to 92.6%. As such, the use of this formulation of Rozol 0.005% chlorophacinone winter wheat bait in bait stations should provide a valuable tool for Montana farmers and ranchers looking to manage Columbian ground squirrels

We did not observe similar results with broadcast applications. The amount of bait applied may be one potential factor, as less bait was applied and subsequently available for consumption when applied via a broadcast approach (bait station = 42.3 lbs, broadcast = 14.7 lbs). One strategy to potentially increase efficacy could be to increase the overall amount of bait that is applied per acre (for example, applying at a rate of 20 lbs/swath acre). A second option could be to apply bait multiple times at two-day intervals. This would provide more bait and may prove to be more efficacious. A similar approach was effective with spot treatments for California ground squirrels when using 0.005% diphacinone (Baroch 1996), and might be worth pursuing for broadcast applications of Rozol bait.

At our study site, abundant green vegetation was available for consumption. Green vegetation is generally preferred by Columbian ground squirrels (Askham 1994). Furthermore, this vegetation was thick enough toward the end of the study to almost completely conceal the grain following application (Fig. 4). This is a potential concern, as we started the study as soon as all ground squirrels were active aboveground, thereby implying a very limited window of opportunity for bait application in similar settings. The application window may be greater in traditional

rangelands with less competing food sources, so there may be a greater opportunity for success in these habitats. Further investigation is needed to help address this question. This is an important consideration given that broadcast applications are often the preferred method for applying bait for Columbian ground squirrel control (S. Vantassel, Montana Department of Agriculture., *pers. comm*). Coming up with an effective broadcast application strategy would likely be of great assistance to Montana farmers and ranchers plagued by damaging ground squirrel populations.

It bears noting that we did not observe any dead ground squirrels or nontarget species during carcass searches. As has been reported in other studies (e.g., Hegdal et al. 1986) it appears that most ground squirrels died within their burrows after consuming the bait. The fact that we did not see any nontarget species foraging in the treated plots also suggests that consumption of the bait by other species was minimal or did not occur at all. The cameras also did not record any predation of intoxicated squirrels by avian or mammalian species. This low or nonexistent nontarget exposure, combined with the relatively low risk associated with first-generation anticoagulants used in field applications (Hornbaker and Baldwin 2010), suggests that the tested Rozol 0.005% chlorophacinone winter wheat bait applied via bait station should not only be an effective control option, but should also provide a safe application option. Further testing via broadcast applications is needed to increase its utility.

ACKNOWLEDGMENTS

We thank Ed Alexander for access to his property and cooperation during this study. We also thank Michael Brownell for assisting in site selection. Funding for this project was provided by Liphatech, Inc.

LITERATURE CITED

Askham, L. R. 1985. Effectiveness of two anticoagulant rodenticides (chlorophacinone and bromadiolone) for Columbian ground squirrel (*Spermophilus columbianus*) control in eastern Washington. Crop Protection 4:365–371.

Askham, L. R. 1994. Franklin, Richardson, Columbian, Washington, and Townsend ground squirrels. Pages 159–163 *in* S. E. Hyngstrom, R. M. Timm, and G. E. Larson, editors. Prevention and Control of Wildlife Damage. University of Nebraska Cooperative Extension, United States Department of Agriculture-Animal and Plant Health Inspection Service-Animal Damage Control, and Great Plains Agricultural Council-Wildlife Committee.

Baroch, J. A. 1996. Field efficacy of diphacinone grain baits used to control the California ground squirrel. Proceedings of the Vertebrate Pest Conference 17:127–132.

Hegdal, P. L., K. A. Fagerstone, T. A. Gatz, J. F. Glahn, and G. H. Matschke. 1986. Hazards to wildlife associated with 1080 baiting for California ground squirrels. Wildlife Society Bulletin 14:11–21.

Hornbaker, V., and R. A. Baldwin. 2010. Impact on vertebrate IPM practices from EPA's rodenticide risk mitigation decision. Proceedings of the Vertebrate Pest Conference 24:191–194.

Marsh, R. E. 1994. Belding's, California, and rock ground squirrels. Pages 151–158 *in* S. E. Hyngstrom, R. M. Timm, and G. E. Larson, editors. Prevention and Control of Wildlife Damage. University of Nebraska Cooperative Extension, United States Department of Agriculture-Animal and Plant Health Inspection Service-Animal Damage Control, and Great Plains Agricultural Council-Wildlife Committee.

Johnson-Nistler, C. M., J. E. Knight, and S. D. Cash. 2005. Considerations related to Richardson's ground squirrel control in Montana. Agronomy Journal 97:1460–1464.

O'Connell, R. A., and J. P. Clark. 1992. A study of acrolein as an experimental ground squirrel burrow fumigant. Proceedings of the Vertebrate Pest Conference 15:326–329.

Whisson, D. A., S. B. Orloff, and D. L. Lancaster. 1999. Alfalfa yield loss from Belding's ground squirrels in northeastern California. Wildlife Society Bulletin 27:178–183.

Whisson, D. A., and T. P. Salmon. 2009. Assessing the effectiveness of bait stations for controlling California ground squirrels (*Spermophilus beecheyi*). Crop Protection 28:690–695.

Zar, J. H. 1999. Biostatistical analysis. Prentice-Hall, Inc., Upper Saddle River, New Jersey.

TABLES

Table 1. Total bait (Rozol® Pocket Gopher Bait—0.005% chlorophacinone) added (Bait filled) to or removed (Bait left) from 49 bait stations (Station) throughout the duration of our Columbian ground squirrel study during spring 2018 in Missoula County, MT. Bait additions were calculated through the use of a calibrated measuring cup, while total bait left over at the end was measured through direct measurement of weight of remaining grain. Totals provided at the end of the study are based on estimated applied weight via the calibrated measuring cup (Est tot), as well as the amount directly measured via weight of bait tubs before and after bait application (Meas tot).

	Bait filled (g)						Bait left (g)	
Station	24-Apr	26-Apr	28-Apr	29-Apr	1-May	3-May	5-May	Tot removed
1	907.2				182.2	182.2	23.0	1,248.6
2	907.2						675.3	231.9
3	907.2			182.2	364.4		660.0	793.8
4	907.2				364.4	182.2	724.5	729.3
5	907.2		364.4				736.3	535.3
6	907.2			182.2			742.9	346.5
7	907.2	546.6	364.4	364.4	182.2		642.1	1,722.7
8	907.2	182.2			182.2		756.2	515.4
9	907.2	182.2					966.6	122.8
10	907.2						731.4	175.8
11	907.2	364.4	182.2	182.2			790.6	845.4
12	907.2	182.2	182.2		182.2		827.3	626.5
13	907.2				182.2		579.2	510.2
14	907.2			364.4			1,125.0	146.6
15	907.2						809.1	98.1
16	907.2	182.2					1,030.3	59.1
17*	907.2						871.0	36.2
18*	907.2			182.2			998.7	90.7
19*	907.2						783.2	124.0
20	907.2						673.7	233.5
21	907.2						823.4	83.8
22	907.2	182.2		364.4			773.0	680.8
23	907.2						828.1	79.1
24*	907.2						866.1	41.1
25*	907.2	182.2					952.5	136.9
26*	907.2						808.4	98.8
27	907.2		182.2				916.9	172.5
28	907.2	182.2		364.4	364.4	182.2	857.1	1,143.3
29	907.2	182.2	182.2	182.2	364.4		627.4	1,190.8
30	907.2						854.6	52.6
31*	907.2						707.0	200.2
32*	907.2						782.7	124.5
33*	907.2						591.1	316.1
34	907.2						766.2	141.0
35	907.2		182.2				1,087.4	2.0
36	907.2		182.2				720.0	369.4
37	907.2						731.0	176.2
38	907.2						631.2	276.0
39	907.2						796.2	111.0

40	907.2						632.3	274.9
41	907.2					182.2	57.5	1,031.9
42	907.2			364.4			806.2	465.4
43	907.2						769.8	137.4
44	907.2						814.1	93.1
45	907.2						719.7	187.5
46	907.2	182.2					999.8	89.6
47	907.2						761.2	146.0
48	907.2						697.6	209.6
49	907.2		182.2	182.2	182.2	182.2	499.4	1,136.6
Est tot	44,452.8	2,550.8	2,004.2	2,915.2	2,550.8	911.0	37,024.3	18,360.5
Meas tot	45,354.4	2,360.5	2,151.2	2,845.0	2,538.5	941.2	37,024.3	19,166.5

* Bait stations located within the survey plot

Table 2. The maximum number of Columbian ground squirrels observed on control, bait station, and broadcast application plots pre- and post-application of 0.005% chlorophacinone treated wheat grain (Rozol® Pocket Gopher Bait), as well as associated efficacy values for these applications during spring 2018 in Missoula County, MT. Two post-application periods were observed: Post 1 = initiated 8-days following initial application, Post 2 = initiated 14-days following initial application. Unadjusted efficacy values are based on raw data; adjusted efficacy values factored in the drop in ground squirrel numbers for the control site during the two post-treatment periods (see Methods section for additional detail).

	No. ground squirrels			Unadjusted efficacy		Adjusted efficacy	
	Pre	Post 1	Post 2	Post 1	Post 2	Post 1	Post 2
Control	25	22	18	12.0%	28.0%	0.0%	0.0%
Bait station	27	6	2	77.8%	92.6%	74.7%	89.7%
Broadcast	29	22	23	24.1%	20.7%	13.8%	-10.2%

Table 3. The number of Columbian ground squirrel burrow systems surveyed (Plugged), the number of surveyed burrow systems reopened 48-hours post-plugging (Reopened), the percentage of surveyed burrow systems reopened (Percent) during pre- and post-treatment survey periods, and the associated percent efficacy of the tested substance (Rozol® Pocket Gopher Bait—0.005% chlorophacinone) for the control, bait station, and broadcast treatment plots in Missoula County, MT, during spring 2018.

	Pre-treatment			Post-treatment			
	Plugged	Reopened	Percent	Plugged	Reopened	Percent	Efficacy
Control	35	28	80.0%	30	23	76.7%	4.1%
Bait station	50	42	84.0%	30	4	13.3%	84.1%
Broadcast	60	52	86.7%	35	30	85.7%	1.2%

FIGURES

Figure 1. The location of the field site used in this study.

Figure 2. Pastured alfalfa present on study area. Bait stations are shown in the background. Bait stations were separated by ~68 ft.

Figure 3. Example of bait station used in this study.

Figure 4. Example of thick vegetation present toward the end of the study. This may have impeded both the desire and ability of ground squirrels to forage for bait applied via a broadcast application.

APPENDICES

A. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the bait station treatment plot during the pre-treatment visual count survey.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (ºF)	Wind (mph)	Cloud cov (%)	observed
18 April, 2018	1	8:40	32	2	0	12
18 April, 2018	1	8:47	32	2	0	20
18 April, 2018	1	8:54	32	2	0	21
18 April, 2018	1	9:01	32	2	0	27
18 April, 2018	1	9:08	32	2	0	19
18 April, 2018	1	14:50	50	0	Hazy	7
18 April, 2018	1	14:57	50	0	Hazy	8
18 April, 2018	1	15:04	50	0	Hazy	8
18 April, 2018	1	15:11	50	0	Hazy	6
18 April, 2018	1	15:18	50	0	Hazy	9
19 April, 2018	2	8:47	34	1	0	15
19 April, 2018	2	8:54	34	1	0	11
19 April, 2018	2	9:01	34	1	0	21
19 April, 2018	2	9:08	34	1	0	22
19 April, 2018	2	9:15	34	1	0	20
19 April, 2018	2	14:48	58	1	5	5
19 April, 2018	2	14:55	58	1	5	4
19 April, 2018	2	15:02	58	1	5	10
19 April, 2018	2	15:09	58	1	5	8
19 April, 2018	2	15:16	58	1	5	4
20 April, 2018	3	8:40	39	2	5	12
20 April, 2018	3	8:47	39	2	5	17
20 April, 2018	3	8:54	39	2	5	23
20 April, 2018	3	9:01	39	2	5	19
20 April, 2018	3	9:08	39	2	5	20
20 April, 2018	3	14:48	61	1	0	10
20 April, 2018	3	14:55	61	1	0	15
20 April, 2018	3	15:02	61	1	0	17
20 April, 2018	3	15:09	61	1	0	16
20 April, 2018	3	15:16	61	1	0	17
					Maximum:	**27**
					Range:	**4-27**
					Mean:	**14.1**
					SE:	**1.2**

B. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the bait station treatment plot during the first post-treatment visual count survey. All observations recorded on the morning of post-treatment survey Day 1 (identified by placing in italics and underlining) were removed from analyses given that rainfall fell that afternoon.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (°F)	Wind (mph)	Cloud cov (%)	observed
1 May, 2018	*1*	*8:50*	*43*	*5*	*100*	*5*
1 May, 2018	*1*	*8:57*	*43*	*5*	*100*	*3*
1 May, 2018	*1*	*9:04*	*43*	*5*	*100*	*3*
1 May, 2018	*1*	*9:11*	*43*	*5*	*100*	*3*
1 May, 2018	*1*	*9:18*	*43*	*5*	*100*	*2*
2 May, 2018	2	8:50	42	2	40	1
2 May, 2018	2	8:57	42	2	40	3
2 May, 2018	2	9:04	42	2	40	4
2 May, 2018	2	9:11	42	2	40	6
2 May, 2018	2	9:18	42	2	40	6
2 May, 2018	2	14:40	57	9	100	4
2 May, 2018	2	14:47	57	9	100	1
2 May, 2018	2	14:54	57	9	100	3
2 May, 2018	2	15:01	57	9	100	2
2 May, 2018	2	15:08	57	9	100	2
3 May, 2018	3	8:50	45	3	0	2
3 May, 2018	3	8:57	45	3	0	2
3 May, 2018	3	9:04	45	3	0	5
3 May, 2018	3	9:11	45	3	0	3
3 May, 2018	3	9:18	45	3	0	5
3 May, 2018	3	14:40	64	4	20	4
3 May, 2018	3	14:47	64	4	20	4
3 May, 2018	3	14:54	64	4	20	1
3 May, 2018	3	15:06	64	4	20	2
3 May, 2018	3	15:13	64	4	20	1
4 May, 2018	4	9:00	53	2	30	2
4 May, 2018	4	9:07	53	2	30	4
4 May, 2018	4	9:14	53	2	30	4
4 May, 2018	4	9:21	53	2	30	4
4 May, 2018	4	9:28	53	2	30	3
4 May, 2018	4	14:50	66	0	40	3
4 May, 2018	4	14:57	66	0	40	3
4 May, 2018	4	15:04	66	0	40	2
4 May, 2018	4	15:11	66	0	40	4
4 May, 2018	4	15:18	66	0	40	2
					Maximum:	**6**
					Range:	**1-6**
					Mean:	**3.1**
					SE:	**0.3**

C. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the bait station treatment plot during the final post-treatment visual count survey.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (ºF)	Wind (mph)	Cloud cov (%)	observed
8 May, 2018	1	8:35	48	0	Hazy	0
8 May, 2018	1	8:42	48	0	Hazy	0
8 May, 2018	1	8:49	48	0	Hazy	0
8 May, 2018	1	8:56	48	0	Hazy	1
8 May, 2018	1	9:03	48	0	Hazy	1
8 May, 2018	1	14:40	60	0	40	0
8 May, 2018	1	14:47	60	0	40	1
8 May, 2018	1	14:54	60	0	40	0
8 May, 2018	1	15:01	60	0	40	0
8 May, 2018	1	15:08	60	0	40	1
9 May, 2018	2	8:40	54	0	100	0
9 May, 2018	2	8:47	54	0	100	1
9 May, 2018	2	8:54	54	0	100	0
9 May, 2018	2	9:01	54	0	100	1
9 May, 2018	2	9:08	54	0	100	1
9 May, 2018	2	14:40	69	1	100	1
9 May, 2018	2	14:47	69	1	100	1
9 May, 2018	2	14:54	69	1	100	0
9 May, 2018	2	15:01	69	1	100	1
9 May, 2018	2	15:08	69	1	100	1
10 May, 2018	3	9:10	48	2	100	0
10 May, 2018	3	9:17	48	2	100	2
10 May, 2018	3	9:24	48	2	100	2
10 May, 2018	3	9:31	48	2	100	1
10 May, 2018	3	9:38	48	2	100	1
10 May, 2018	3	14:40	65	0	50	0
10 May, 2018	3	14:47	65	0	50	0
10 May, 2018	3	14:54	65	0	50	1
10 May, 2018	3	15:01	65	0	50	1
10 May, 2018	3	15:08	65	0	50	0
					Maximum:	**2**
					Range:	**0-2**
					Mean:	**0.6**
					SE:	**0.1**

D. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the broadcast treatment plot during the pre-treatment visual count survey. All observations recorded on the afternoon of pre-treatment Day 1 (identified by placing in italics and underlining) were removed from analyses given a lack of data for the morning session.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (°F)	Wind (mph)	Cloud cov (%)	observed
18 April, 2018	*1*	*15:35*	*50*	*2*	*20*	*13*
18 April, 2018	*1*	*15:42*	*50*	*2*	*20*	*-*
18 April, 2018	*1*	*15:49*	*50*	*2*	*20*	*18*
18 April, 2018	*1*	*15:56*	*50*	*2*	*20*	*20*
18 April, 2018	*1*	*16:03*	*50*	*2*	*20*	*19*
19 April, 2018	2	9:30	37	1	10	29
19 April, 2018	2	9:37	37	1	10	25
19 April, 2018	2	9:44	37	1	10	28
19 April, 2018	2	9:51	37	1	10	26
19 April, 2018	2	9:58	37	1	10	18
19 April, 2018	2	15:32	59	2	5	15
19 April, 2018	2	15:39	59	2	5	19
19 April, 2018	2	15:46	59	2	5	24
19 April, 2018	2	15:53	59	2	5	22
19 April, 2018	2	16:00	59	2	5	21
20 April, 2018	3	9:22	40	2	0	28
20 April, 2018	3	9:29	40	2	0	27
20 April, 2018	3	9:36	40	2	0	28
20 April, 2018	3	9:43	40	2	0	23
20 April, 2018	3	9:50	40	2	0	24
20 April, 2018	3	15:33	63	1	0	20
20 April, 2018	3	15:40	63	1	0	17
20 April, 2018	3	15:47	63	1	0	14
20 April, 2018	3	15:54	63	1	0	15
20 April, 2018	3	16:01	63	1	0	17
21 April, 2018	4	9:40	39	3	0	19
21 April, 2018	4	9:47	39	3	0	24
21 April, 2018	4	9:54	39	3	0	27
21 April, 2018	4	10:01	39	3	0	19
21 April, 2018	4	10:08	39	3	0	25
21 April, 2018	4	3:40	59	4	0	18
21 April, 2018	4	3:47	59	4	0	18
21 April, 2018	4	3:54	59	4	0	22
21 April, 2018	4	4:01	59	4	0	21
21 April, 2018	4	4:08	59	4	0	20
					Maximum:	**29**
					Range:	**14-29**
					Mean:	**21.8**
					SE:	**0.8**

E. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the broadcast treatment plot during the first post-treatment visual count survey. All observations recorded on the morning of Day 1 (identified by placing in italics and underlining) were removed from analyses given that rainfall fell that afternoon. We halted counts after Day 2 given that the maximum number of observed ground squirrels already exceeded the number that could be observed to result in an efficacy value of ≥70%.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (ºF)	Wind (mph)	Cloud cov (%)	observed
1 May, 2018	*1*	*9:45*	*43*	*4*	*100*	*4*
1 May, 2018	*1*	*9:52*	*43*	*4*	*100*	*7*
1 May, 2018	*1*	*9:59*	*43*	*4*	*100*	*5*
1 May, 2018	*1*	*10:06*	*43*	*4*	*100*	*4*
1 May, 2018	*1*	*10:13*	*43*	*4*	*100*	*7*
2 May, 2018	2	9:45	42	2	30	6
2 May, 2018	2	9:52	42	2	30	6
2 May, 2018	2	9:59	42	2	30	7
2 May, 2018	2	10:06	42	2	30	7
2 May, 2018	2	10:13	42	2	30	8
2 May, 2018	2	15:22	59	10	80	6
2 May, 2018	2	15:29	59	10	80	7
2 May, 2018	2	15:36	59	10	80	8
2 May, 2018	2	15:43	59	10	80	17
2 May, 2018	2	15:50	59	10	80	18
					Maximum:	**18**
					Range:	**6-18**
					Mean:	**9.0**
					SE:	**1.4**

F. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the broadcast treatment plot during the final post-treatment visual count survey.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (ºF)	Wind (mph)	Cloud cov (%)	observed
8 May, 2018	1	9:18	50	0	30	18
8 May, 2018	1	9:25	50	0	30	9
8 May, 2018	1	9:32	50	0	30	15
8 May, 2018	1	9:39	50	0	30	10
8 May, 2018	1	9:46	50	0	30	10
8 May, 2018	1	15:23	63	0	50	15
8 May, 2018	1	15:30	63	0	50	12
8 May, 2018	1	15:37	63	0	50	17
8 May, 2018	1	15:44	63	0	50	14
8 May, 2018	1	15:51	63	0	50	16
9 May, 2018	2	9:30	57	0	100	8
9 May, 2018	2	9:37	57	0	100	12
9 May, 2018	2	9:44	57	0	100	5
9 May, 2018	2	9:51	57	0	100	8
9 May, 2018	2	9:58	57	0	100	9
9 May, 2018	2	15:25	70	2	90	17
9 May, 2018	2	15:32	70	2	90	14
9 May, 2018	2	15:39	70	2	90	18
9 May, 2018	2	15:46	70	2	90	18
9 May, 2018	2	15:53	70	2	90	16
10 May, 2018	3	9:54	48	2	75	13
10 May, 2018	3	10:01	48	2	75	17
10 May, 2018	3	10:08	48	2	75	17
10 May, 2018	3	10:15	48	2	75	23
10 May, 2018	3	10:22	48	2	75	12
10 May, 2018	3	15:24	67	0	30	12
10 May, 2018	3	15:31	67	0	30	13
10 May, 2018	3	15:38	67	0	30	20
10 May, 2018	3	15:45	67	0	30	16
10 May, 2018	3	15:52	67	0	30	15
					Maximum:	**23**
					Range:	**5-23**
					Mean:	**14.0**
					SE:	**0.7**

G. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the control plot during the pre-treatment visual count survey.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (ºF)	Wind (mph)	Cloud cov (%)	observed
19 April, 2018	1	10:15	41	1	0	15
19 April, 2018	1	10:22	41	1	0	17
19 April, 2018	1	10:29	41	1	0	19
19 April, 2018	1	10:36	41	1	0	18
19 April, 2018	1	10:43	41	1	0	16
19 April, 2018	1	16:15	60	2	10	14
19 April, 2018	1	16:22	60	2	10	22
19 April, 2018	1	16:29	60	2	10	6
19 April, 2018	1	16:36	60	2	10	8
19 April, 2018	1	16:43	60	2	10	18
20 April, 2018	2	10:10	46	1	0	8
20 April, 2018	2	10:17	46	1	0	19
20 April, 2018	2	10:24	46	1	0	14
20 April, 2018	2	10:31	46	1	0	13
20 April, 2018	2	10:38	46	1	0	16
20 April, 2018	2	16:15	64	0	0	17
20 April, 2018	2	16:22	64	0	0	12
20 April, 2018	2	16:29	64	0	0	20
20 April, 2018	2	16:36	64	0	0	25
20 April, 2018	2	16:43	64	0	0	14
21 April, 2018	3	10:24	43	0	0	10
21 April, 2018	3	10:31	43	0	0	13
21 April, 2018	3	10:38	43	0	0	17
21 April, 2018	3	10:45	43	0	0	13
21 April, 2018	3	10:52	43	0	0	11
21 April, 2018	3	16:22	61	2	0	14
21 April, 2018	3	16:29	61	2	0	19
21 April, 2018	3	16:36	61	2	0	18
21 April, 2018	3	16:43	61	2	0	21
21 April, 2018	3	16:50	61	2	0	22
					Maximum:	**25**
					Range:	**6-25**
					Mean:	**15.6**
					SE:	**0.8**

H. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the control plot during the first post-treatment visual count survey. All observations recorded on the morning of Day 1 (identified by placing in italics and underlining) were removed from analyses given that rainfall fell that afternoon.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (°F)	Wind (mph)	Cloud cov (%)	observed
1 May, 2018	*1*	*10:30*	*45*	*2*	*100*	*4*
1 May, 2018	*1*	*10:37*	*45*	*2*	*100*	*8*
1 May, 2018	*1*	*10:44*	*45*	*2*	*100*	*9*
1 May, 2018	*1*	*10:51*	*45*	*2*	*100*	*10*
1 May, 2018	*1*	*10:58*	*45*	*2*	*100*	*6*
2 May, 2018	2	10:30	45	3	30	10
2 May, 2018	2	10:37	45	3	30	11
2 May, 2018	2	10:44	45	3	30	12
2 May, 2018	2	10:51	45	3	30	9
2 May, 2018	2	10:58	45	3	30	11
2 May, 2018	2	16:15	56	10	100	11
2 May, 2018	2	16:22	56	10	100	13
2 May, 2018	2	16:29	56	10	100	12
2 May, 2018	2	16:36	56	10	100	13
2 May, 2018	2	16:43	56	10	100	14
3 May, 2018	3	10:05	52	3	0	17
3 May, 2018	3	10:12	52	3	0	15
3 May, 2018	3	10:19	52	3	0	17
3 May, 2018	3	10:26	52	3	0	11
3 May, 2018	3	10:33	52	3	0	6
3 May, 2018	3	16:10	67	7	15	14
3 May, 2018	3	16:17	67	7	15	16
3 May, 2018	3	16:24	67	7	15	18
3 May, 2018	3	16:31	67	7	15	13
3 May, 2018	3	16:38	67	7	15	16
4 May, 2018	4	10:10	56	1	45	15
4 May, 2018	4	10:17	56	1	45	16
4 May, 2018	4	10:24	56	1	45	19
4 May, 2018	4	10:31	56	1	45	22
4 May, 2018	4	10:38	56	1	45	20
4 May, 2018	4	16:10	68	0	40	17
4 May, 2018	4	16:17	68	0	40	17
4 May, 2018	4	16:24	68	0	40	20
4 May, 2018	4	16:31	68	0	40	14
4 May, 2018	4	16:38	68	0	40	14
					Maximum:	**22**
					Range:	**6-22**
					Mean:	**14.4**
					SE:	**0.7**

I. Prevailing environmental conditions and the number of Columbian ground squirrels counted on the control plot during the final post-treatment visual count survey.

Survey details			Environmental conditions			Number
Date	Day	Time	Temp (ºF)	Wind (mph)	Cloud cov (%)	observed
8 May, 2018	1	10:00	54	1	20	7
8 May, 2018	1	10:07	54	1	20	13
8 May, 2018	1	10:14	54	1	20	12
8 May, 2018	1	10:21	54	1	20	10
8 May, 2018	1	10:28	54	1	20	9
8 May, 2018	1	16:10	66	0	75	15
8 May, 2018	1	16:17	66	0	75	8
8 May, 2018	1	16:24	66	0	75	10
8 May, 2018	1	16:31	66	0	75	12
8 May, 2018	1	16:38	66	0	75	13
9 May, 2018	2	10:20	58	6	100	8
9 May, 2018	2	10:27	58	6	100	12
9 May, 2018	2	10:34	58	6	100	9
9 May, 2018	2	10:41	58	6	100	6
9 May, 2018	2	10:48	58	6	100	13
9 May, 2018	2	16:10	73	4	100	9
9 May, 2018	2	16:17	73	4	100	9
9 May, 2018	2	16:24	73	4	100	12
9 May, 2018	2	16:31	73	4	100	12
9 May, 2018	2	16:38	73	4	100	8
10 May, 2018	3	10:37	50	0	50	17
10 May, 2018	3	10:44	50	0	50	13
10 May, 2018	3	10:51	50	0	50	15
10 May, 2018	3	10:58	50	0	50	9
10 May, 2018	3	11:05	50	0	50	13
10 May, 2018	3	16:10	67	0	40	14
10 May, 2018	3	16:17	67	0	40	16
10 May, 2018	3	16:24	67	0	40	11
10 May, 2018	3	16:31	67	0	40	18
10 May, 2018	3	16:38	67	0	40	14
					Maximum:	**18**
					Range:	**6-18**
					Mean:	**11.6**
					SE:	**0.6**

SUPPLEMENTARY FILES

PROTOCOL

Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Data Requirement
40 CFR §158.640, Product Performance
(OPPTS Guideline Reference 96-12)

Performing Laboratory
Department of Wildlife, Fish, and Conservation Biology
University of California, Davis

Laboratory Project Identification
LTI Study Number 18009

Sponsor
Liphatech, Inc.
3600 W. Elm Street
Milwaukee, WI 53209

LTI Study Number 18009

1. Test Substance:

   Rozol Pocket Gopher Bait, EPA Reg. No. 7173-184, containing 0.005% chlorophacinone active ingredient (CAS registry no. 3691-35-8), to be manufactured at Liphatech, Inc., in Milwaukee WI (EPA Establishment number 7173-WI-1). The test substance is a mixture, which has not been assigned a unique Chemical Abstract Service Registry Number. The test substance bait will be characterized, using a validated analytical method, and a certificate of analysis will be issued before it is used. Analytical method will be included in the final report. The test substance bait has been demonstrated to be stable in storage at ambient conditions, and no special storage conditions are necessary to preserve the identity, strength, purity, and stability of the test substance (MRID 45426901). The test substance will be stored at ambient temperature, and the storage conditions will not be recorded.

   The amount of test substance will be documented when received at the start of the study, before and after each treatment during the study, and at the end of the study, using a GLP–validated scale.

2. Sponsor:
   Liphatech, Inc.
   3600 W. Elm Street
   Milwaukee, WI 53209

3. Study Director:
   Roger A. Baldwin, Ph.D.
   Wildlife Specialist
   Department of Wildlife, Fish, and Conservation Biology
   One Shields Ave.
   University of California, Davis
   Davis, CA 95616

4. Study Personnel:
   Ryan Meinerz, M.S.
   Research Associate
   Department of Wildlife, Fish, and Conservation Biology
   One Shields Ave.
   University of California, Davis
   Davis, CA 95616

5. Study Timetable:
   Proposed Start Date: March 2018
   Proposed Termination Date: June 2018

6. Scope:
   The objective of this field study is to demonstrate the efficacy of Rozol Pocket Gopher Bait (EPA Reg. No. 7173-184), in controlling Columbian ground squirrels (*Urocitellus columbianus*), applied by broadcast baiting and in bait stations.

7. Test System:
   Species: Columbian Ground Squirrel (*Urocitellus columbianus*)

   Justification: Columbian Ground Squirrels are common pests of agricultural crop areas, orchards, forested areas, dikes, rangeland and pastures. Their elaborate burrow systems and feeding activities result in forage loss and damage to agricultural equipment. Ground squirrels are known to be a vector of diseases that can infect humans. Because they are considered a pest of public health concern, field efficacy data is required by the U.S. EPA as a condition of registration for pesticide products labeled for their control.

Age: This study will utilize wild ground squirrels of unknown age and unknown age distribution within the population tested.

Sex: Males and females, with sex ratios as they occur in the natural population that inhabit the test sites.

Body weights: Body weights of live or dead ground squirrels will not be measured during this trial.

Number: Test sites will be selected to contain at least 25 individuals.

Route of Administration: The test substance will be applied in bait stations and by broadcast baiting, as described in this protocol.

Duration: The test duration will depend on the length of time needed for ground squirrels to acclimate to and feed on the bait, and for the anticoagulant to induce a lethal effect. Multiple applications over several weeks will be needed, for a test duration of approximately 21 - 28 days.

GLP Compliance: This study will be conducted in accordance with EPA Good Laboratory Practice (GLP) Standards for FIFRA (Federal Insecticide, Fungicide and Rodenticide Act) as defined in 40 CFR Part 160, as much as possible. Independent Quality Assurance inspections will be made during the field trial consistent with GLP requirements. Data and Records will be collected and kept using procedures consistent with GLP. Any deviations from GLP standards will be identified in the final report.

Data recording: Study personnel will utilize printed data sheets found in the appendices and if necessary create and complete a field trial notebook that will be maintained in compliance with GLP guidelines for record-keeping.

Deviations from and amendments to this protocol: Any deviation from the protocol will be documented, stating the reasons for the action(s) and the likely consequences of the action(s). Planned changes to the protocol will be documented in the form of protocol amendments. All deviations and amendments will be reported to the Study Director and Sponsor so that corrective action can be recommended and documented. The Study Director and Sponsor representative will sign all protocol deviations and amendments.

8. Experimental Design:

Study plots: The treated and control plots will be selected to contain at least 25 ground squirrels for each plot. To prevent immigration of ground squirrels from outside the treated plot during the trial, a treated buffer zone will extend at least 100 feet beyond the treated plot. Buffer zones will be treated with the test bait on the same day and with the same application method as the treated core area. Treated and control plots will be separated by a minimum distance of 400 feet between outer buffer zone boundaries to ensure that individuals cannot move between plots. The entire area treated with the test substance will not exceed 10 acres.

Control and treated plots, with buffer zones, will be mapped using GPS, showing area of coverage, location and orientation, with significant features affecting ground squirrel movement identified. Habitat type and vegetation cover will be described.

Census of study plots: Two independent census methods will be used on all treated and control plots. A "Visual Count Index" will be the direct census method used to represent ground squirrel populations (see Appendix A). An "Active Burrow Index" will be the confirmatory census method (see Appendix B). Both census methods will be used before and after the bait application period, with the Visual Count Index taken before the Active Burrow Index. Pre-treatment censuses will be completed within the 5 days prior to initial application of the bait. All three plots will be censused with both methods. Censuses using the Visual Count Index will be initiated between days 5 to 7 to help determine if a third bait application will be needed. If inclement weather conditions prevent normal squirrel activity, censuses will be taken as soon as weather conditions stabilize. The censuses of the control plot will be taken within 24 hours before or after the censuses of the treated plots. All censuses will be taken at approximately the same time of day.

Environmental Conditions: A non-GLP weather station will be used at the study site to record daily precipitation, wind speed, and temperature throughout the duration of the study.

Timing of application to maximize bait effectiveness: Because males emerge from hibernation sooner than females, to establish breeding territories, grain bait application shall begin no sooner than 2 weeks post ground squirrel emergence. In Montana, ground squirrel emergence can occur mid-February to early March. Bait application will begin as soon as possible following total population emergence, and pre-treatment census. Grain baits are most readily consumed after emergence, but prior to spring green-up.

Bait application: The first application of the bait will be made no more than 5 days following the completion of the pre-treatment census, and the day of bait application will be Day 0 of the study.

Application methods and rates:

a) Bait stations: Application of the test substance bait will be made no more than 5 days following the completion of the pre-treatment census, and the day of initial bait application will be indicated as Day 0 of the study. Bait will be applied in bait stations that are separated by 50 to 100 feet following a grid pattern throughout the entire treatment and buffer zone, unless part of this area is unoccupied by ground squirrels. No bait stations will be deployed in areas unoccupied by ground squirrels. All bait stations will be assigned a number, GPS'd, and plotted on a map. Bait levels in stations will be checked and refilled every 1 to 3 days and a minimum of 2 lbs. of bait will be available per bait station.

b) Broadcast baiting: This study will investigate the efficacy resulting from a ground broadcast application approach where bait is broadcast at a rate of 10 pounds of bait per treated swath acre, with a second application at the same rate made 4 to 7 days following the first application. A third application may be made 4 to 7 days following the second application if a 70% decline in squirrel activity is not observed. This will yield up to a total of no more than 30 pounds of bait applied per swath acre, using a commercial spreader according to the Standard Operating Procedure in Appendix C.

Carcass Searches: A methodical carcass search of the treated and control plots will be conducted daily, beginning on day 5 of the study and continuing until no carcasses are found for several days following the termination of the study.

The carcass search area will cover the treated plots and associated buffer zones, and the control plot, and may extend up to 100 feet in all directions beyond the boundaries of the plots and buffer zones, but may be smaller when limited by natural boundaries or property access. Carcass searches will be conducted along marked or flagged transect lines that completely cover the baited area. Transect lines must be no more than 200 feet (about 60 meters) apart, and should be considerably less if searches are conducted in more densely vegetated sites. The carcass search transects will be recorded with GPS on plot maps. Transect lines may be traveled on foot or by vehicle at a rate not to exceed 4 mph. The species, sex, age (adult vs. juvenile), time of recovery and condition of the carcass (intact or scavenged) will be recorded. Animals discovered on the surface in a moribund (intoxicated) condition will be recorded as such, but will not be euthanized and removed. Trail cameras will be set up to monitor carcasses for scavenging. Any signs of scavenging will be described, pictures taken, and if a scavenging event is observed, the species. In the event that multiple carcasses are located, 5 to 10 will be collected and stored frozen for possible later residue analysis.

Non-target Observations: Visual observations of species other than Columbian Ground Squirrels will be recorded before, during, and after the treatment period, within the plots and in the surrounding areas visible from the plots. Observations of raptors and avian scavengers within and above the plots will be recorded. Species will be identified and their behavior.

noted. Any non-target mortalities will be collected, frozen, and reported to Liphatech for further instructions.

9. Calculation and Evaluation of Results for Efficacy Determination:

The census methods used in this study are intended to index the population in each treated plot and the control plot. For each plot and each method, the pre-treatment index value will be compared to the post-treatment one using the formula:

$$\% \text{ change} = \frac{\text{Pre-treatment value} - \text{Post-treatment value}}{\text{Pre-treatment value}} \times 100$$

A positive number indicates a decrease in population, while a negative number indicates an increase in population. The bait application method will be considered effective if it results in a reduction of ≥70% of the ground squirrels in the treatment plot.

10. Standard Operating Procedures (SOPs):

SOP/Method No. Title

ADM – 4 Personnel GLP Requirement
ADM – 5 Raw Data
ADM – 6 Substance Distribution Log
ADM – 8 GLP Organization Chart & Signatures
ADM – 9 Study Director
ADM – 11 Principal Investigator
ADM – 12 Amendments and Deviations
ADM – 17 Training
ADM – 20 Significant Figures
AL – 33 Verification, Maintenance, and Operation of the Ohaus Adventurer AX8201N/E Balance

11. List of Records to be Maintained:

A. Protocol, Deviations and Amendments
B. Data records including:
   a. Study site plot maps
   b. Bait procurement, batch ID#, date of formulation/delivery
   c. Quantity of bait applied per treatment plot
   d. Local weather data
   e. Visual Count Index data sheets
   f. Active Burrow Index data sheets
   g. Broadcast baiting application data sheets
   h. Carcass search data sheets
   i. Non-target observations

12. Data Retention:

The study protocol, deviations and amendments, field notes, record sheets, and all other original raw paper and electronic data will be retained by Liphatech, Inc. Original data, or copies thereof, will be available at Liphatech, Inc. to facilitate the auditing of the study during its progress and before acceptance of the final report. All original paper data generated by Liphatech, Inc. and the final report will be retained in the archives of Liphatech, Inc. for the period specified by regulation.

13. Reporting of Results:

The final report will contain, but not be limited to, a description of the site, objective and procedures, a summary of the results, calculation of efficacy, and discussion of the results.

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14. Regulatory Compliance and Quality Assurance:

This study will be conducted in accordance with applicable EPA Pesticide Programs GLP Standard (40 CFR 160), and any deviations from applicable GLP requirements will be documented and reported.

15. Protocol Approval:

Kelly Bornhofer, Sponsor Representative — 3/23/18 Date

Roger A. Baldwin, Study Director — 2-28-18 Date

Appendix A: Visual Count Index Standard Operating Procedure

The Visual Count Index obtained by this procedure represents the ground squirrel activity on a specific plot (treated plot or control plot) at specific times in both the morning and afternoon. The Visual Count Index is to be conducted before the Active Burrow Index on all plots. The pre-treatment Visual Count index will be taken on at least 5 days prior to application of the bait. An intra-treatment index will be initiated 5 to 7 days after the initial bait application to determine if a third application is needed. The post-treatment index will be taken on at least 3 of 7 consecutive days, and will be initiated within 7 to 14 days of the cessation of the final bait application. If inclement weather conditions disrupt the normal activity of the ground squirrels, the post-treatment index will be taken as soon as weather conditions stabilize. Count schedule will be as follows:

Each Visual Count Index census event will be taken according to the following procedure:

1. The census will be conducted on a day with low wind (below approximately 25 mph) and no more than approximately 50% cloud cover; general weather conditions will be recorded.

2. The observer will get in place at the observation point in order to begin the census count at approximately the same time every day, to take advantage of the squirrels' activity patterns.

3. The observer will park in a vehicle in a predetermined viewing point for each plot and remain in a vehicle. The vehicle will be used as a blind from which to count the squirrels with the aid of binoculars. If we cannot use a vehicle at the observation point (i.e., no road access), some other structure will be used to serve as a blind. The observation point should be marked, flagged, and GPS location recorded at the pre-treatment index, so the same observation point can be used for the post-treatment index.

4. The observer will delay the start of the first scan for at least 10 minutes after arriving at the site, in order to minimize effects of human disturbance (acclimation period).

5. The observer will make one 2-minute scan across the census plot to quantify the number of visible ground squirrels in each plot.

6. Subsequent scans will begin approximately 5 minutes after the initiation of the previous scan. .

7. A minimum of 5 scans (or counts) will be completed for each census plot.

8. Special attention must be taken to not double-count squirrels moving about on a plot during a single scan.

9. Note weather factors or other disturbances that may affect the squirrels' activities.

If possible, counts should be performed by the same individual during all pre- and post-census periods on any given plot.

The Visual Count Index that is recorded and reported for calculating efficacy will be the highest number of squirrels observed at either the morning or afternoon scans on any of the 3 count days.

Ryan Baldwin
Study Director

2-28-18
Date

Kelley Bornhoeft
Sponsor Representative

3/23/18
Date

LTI Study Number 18009

Visual Count Index Record

Plot ID: _____ Date _____

This is a: ___ treated plot (treatment type: _____) ___ control plot

Study Day Number: _____

Morning survey: Time of sunrise: _____Time of arrival at plot: _____

Temperature: _____ wind: _____ sky: _____

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: _____ Scan 1 count: _____

Scan 2 time begin: _____ Scan 2 count: _____

Scan 3 time begin: _____ Scan 3 count: _____

Scan 4 time begin: _____ Scan 4 count: _____

Scan 5 time begin: _____ Scan 5 count: _____

Wildlife observed /notes:_____

_____

_____

Performed by: _____ Date: _____

****

Evening survey: Time of sunset: _____ Time of arrival at plot: _____

Temperature: _____ wind _____ sky: _____

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: _____ Scan 1 count: _____

Scan 2 time begin: _____ Scan 2 count: _____

Scan 3 time begin: _____ Scan 3 count: _____

Scan 4 time begin: _____ Scan 4 count: _____

Scan 5 time begin: _____ Scan 5 count: _____

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: _____

Wildlife observed /notes: _____

_____

_____

Performed by: _____ Date: _____

Appendix B: Standard Operating Procedure for Active Burrow Index

Active Burrow Index

The Active Burrow Index will be the confirmatory census method used. A burrow will be considered "Active' if freshly excavated dirt or other signs of activity (track, fresh trails) are evident. All burrows discovered will be plotted on the site map. Active Burrow Index activities are to be performed after Visual Count Index activities have been completed for the monitoring period.

The pre-treatment index will be completed no more than 5 days prior to application of the bait. The post-treatment index will be initiated following the completion of the Visual Count Index. The following census procedure will be used to determine the Active Burrow Index representing the squirrel activity on a specific plot at a specific time. Each Active Burrow Index event will consist of 2 activities, taken according to the following procedure:

1. Using the map developed for the specific plot, burrows will be marked with a numbered flag approximately 2 feet from the burrow entrance. At least 30 burrows will be marked and plugged on each plot. If there are more than 30 burrows on the plot, a transect line(s) through the plot may be established and burrows along the transect line(s) may be used for this Active Burrow Index.

2. Burrows will be plugged with a shovel full of soil. Approximately 1/4 cubic foot of soil will be inserted into the burrow (corresponding to a full scoop from a commercial garden spade shovel). The burrow opening must be completely closed and the soil must be lightly tamped with the foot, so more soil may be needed.

4. Either all active burrows, or all active burrows along the transect line(s), will be marked or plugged until a minimum of 30 burrows have been plugged.

5. Approximately 48 hours after plugging the burrows, the plot will be walked to observe and record if plugged burrows have been re-opened. If a burrow seems to have been re-opened from the outside by squirrel activity, it should not be included in the re-opened count. If a non-target animal is determined responsible for opening the burrow, note this on the data sheet and then exclude that burrow from the index.

Kryn Baldwin — Study Director

2-28-18 — Date

Kelly Bornhofen — Sponsor Representative

3/23/18 — Date

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: ____________________

This is a: ___ treated plot (treatment type: ____________) ___ control plot

This is a: ___ pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing	48 Hour re-opening
Burrow closing: Date: ________	48 Hour re-opening: Date: ________
Taken by: ____________	Taken by: ____________
Time: ________ Temp: ______	Time: ________ Temp: ______
Wind: ____________	Wind: ____________
Precipitation: ____________	Precipitation: ____________
Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**
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Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**
Flag # _____	**___ closed ___ re-opened ____________**

Wildlife observed /notes: ____________________

____

____

Performed by: ____________________ Date: ____________

LTI Study Number 18009

Appendix C: Standard Operating Procedure for Use of Commercial Bait Spreader

A mechanical bait spreader will be used to apply bait to control ground squirrels in this study. The spreader will be calibrated by the following procedure in order to establish the approximate settings needed to deliver the bait at a rate approximating the desired application rate of 10 pounds per acre, when operated in field conditions in accordance with the manufacturer's instructions. However, the application rate from a hand-held spreading device is variable, and cannot be relied upon to accurately reflect the actual amount of bait dispensed. Therefore, **the actual amount of bait applied to a plot will be determined by weighing of the bait.**

This calibration procedure will be used by the operator to set the spreader control devices so that bait is dispensed at an approximately uniform swath width and discharge rate. The applicator will make a determination of their planned application swaths based on the known locations of burrows within the plot, and the planned application swaths will be diagramed on a plot map. The length of the planned application swaths will be measured with the measuring wheel prior to application. The aggregate length of the swaths x swath width information will be used to calculate the actual bait application.

The performance of the commercial bait spreader will be calibrated prior to the first use, and again following any damage, repair or adjustment made to the device, according to the following procedure:

1. Determine "swath width":
   Determine the "swath width" of the application when the spreader is operated under expected conditions of use.
   - Conduct test on a relatively flat surface where the pellet application pattern can be determined.
   - Set spreader flow rate lever and flow limiter stop as appropriate.
   - Load a known weight of grain into hopper and replace hopper lid.
   - Walk at an approximate rate of 2.5 feet per second (150 feet per minute), holding the spreader at the normal height it will be when used, and turning the crank at ~60 rpm (expected range of 55-65 rpm).
   - Observe and measure the width of the resulting application swath, but do not include the extra width that results from any bouncing or rolling of the grain after they hit the surface.

2. Determine approximate discharge rate:
   The approximate application rate will be used by the applicator to help them make an approximately uniform distribution of bait, at an approximate rate of 10 pounds per acre, as they walk along the pre-determined application swath.
   - Place spreader on a tarp that is large enough to capture the entire amount of pellets discharged.
   - Set the flow rate lever and stop device, and record settings.
   - Turn dispensing crank handle for ~60 revolutions in 60 seconds (1 revolution per second) to discharge the grain in the hopper onto the catch tarp.
   - Weigh and record amount of discharged material, and calculate the discharge rate in pounds per 60 revolutions.
   - Adjust the flow rate lever and stop device as necessary to achieve the desired discharge rate, then repeat this procedure.

3. Sample calculation to determine the desired discharge rate:
   An operator walking at 150 feet per minute, turning the crank handle 60 rpm, and discharging bait to a swath width of 20 feet, will apply bait to an area of 3,000 square feet in one minute.
   - This 3,000 square foot area is 0.06887 acres (1 acre = 43,560 square feet).
   - To achieve the desired application rate of 10 pounds per acre, this 0.06887 square foot area should receive 0.6887 pounds of bait.
   - The described calibration process should be repeated until the spreader's flow rate lever and stop device have been adjusted to deliver 0.6887 pounds of bait when it is cranked 60 times in one minute.

Ryan Baldwin — Study Director

2-28-18 — Date

Kelly Bornhofen — Sponsor Representative

3/23/18 — Date

LTI Study Number 18009

Rozol Bait Broadcast Application Record

Plot ID: _____

Applicator name: _____

Application method / device ID: _____

Date of application: _____ Bait lot #: _____

Time application started: _____ Time completed: _____

For broadcast applications: attach plot diagram showing application swaths as flagged, measured and recorded on Broadcast Application Rate Record (attached).

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Total net weight (lbs) of bait applied to plot ..... _____

Scale ID and serial number: _____

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

LTI Study Number 18009

Bait Spreader Calibration Record

Date: _____ Spreader ID and Serial #: _____

Scale ID and Serial #: _____

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

Swath width determination (not including bouncing or rolling of grain)

Pass #	Width measured	Comments	By
1			
2			
3			
average			

Discharge rate determination from 60 crank rotations in 60 seconds

Trial #	Flow rate lever setting	Weight of discharged grain	By
1			
2			
3			
average			

Target application rate: 10 pounds per acre (43,560 square feet).

Distance covered walking ~150 feet per minute (~2.5 feet per second): ~150 feet

Area covered: ~150 feet × average swath width of _____ feet = _____sq. ft.

Application rate: Discharge rate _____ / Area covered _____ sq ft. = _____lbs/sq ft.

Expressed as "per acre" rate: Application rate _____lbs/sq ft.×43,560 = _____lbs/acre

Based on the calibration recorded on this page, the spreader flow rate lever setting should be used to achieve an application rate of approximately 10 pounds of bait per acre, walking at approximately 2.5 feet per second and rotating the spreader crank handle at approximately 1 rotation per second: _____

LTI Study Number 18009

Broadcast Application Rate Calculation Record

Plot ID: _____

Date measurements are made: _____

Using the plot application/swath diagram showing planned application pattern, determine area to which this weight of bait was applied, by measuring the actual length of the application swaths as marked by flags and indicated on the attached Plot diagram, as measured using a measuring wheel.
(the measuring wheel is not calibrated or maintained according to GLP requirements).

Swath number recorded on plot diagram	Measured length of swath	Performed by
Total:	Total:	

Swath width used in area calculation: _____ feet
(from Bait Spreader Calibration Record dated _____)

Swath width x total length of swaths applied to plot: _____ sq. ft.

Total net weight of bait applied to plot: _____ pounds
(from Rozol Bait Application Record dated _____)

Calculated application rate: _____ pounds / sq feet

"per acre" rate: Application rate _____ lbs/sq ft.×43,560 = _____ lbs/acre

LTI Study Number 18009

Appendix D: Standard Operating Procedure for Bait Stations

Customized bait stations will be constructed to resemble an inverted "T". These bait stations will be constructed from 2- and 3-inch PVC pipe. The length of the station will be approximately 36-40 inches (3-inch diameter), while the height will be approximately 24 inches (2-inch diameter). A removable cap will be placed at the top of each station to allow filling of bait. These stations will be placed 50 to 100 feet apart, as measured with the measuring wheel if practical, within treatment and buffer areas following a grid pattern. The size of the treatment plot and buffer area will be dependent on the density of squirrels at a given site, but will be a maximum of 8.5 acres in size. The goal will be to find a site with at least 25 ground squirrels in the treatment plot area. The bait stations will be wired to 3-foot fence posts to stabilize these stations and prevent unwanted spilling.

Upon initiation of the baiting program, a minimum of 2.0 lbs of bait will be applied to each bait station. The level of the station filled by this amount of bait will be marked with a permanent marker. These stations will then be checked at least every 1 to 3 days to determine if additional bait is required. If additional bait is added, a calibrated measuring cup will be used to refill the bait stations up to the permanent marker line. The amount (number of cups) added will be recorded for each bait station. Bait will continue to be supplied to each bait station until consumption of bait ceases or until completion of the study. Upon completion of the study, the remaining bait in each station will be weighed and the amount remaining will be subtracted from the amount applied to calculate the total weight of bait applied to the entire plot.

We will then be able to identify the number of lbs of Rozol Bait applied per acre by using the following equation:

$$\text{Lbs per acre} = \frac{\text{Total weight of bait applied}}{\text{Number of acres of plot}}$$

Study Director — Date: 2-28-18

Sponsor Representative — Date: 3/23/18

LTI Study Number 18009

Rozol Bait Station Application Record

Plot ID: _____

Applicator name: _____

Application method / device ID: _____

Date of application: _____ Bait lot #: _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Pail no. _____ Weight start _____ finish_____ net _____

Total net weight (lbs) of bait applied to plot ..... _____

Scale ID and serial number: _____

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

LTI Study Number 18009

Rozol Bait Station Application Beginning of Study Record

Plot ID: _____ Applicator name: _____

Bait lot #: _____

Date of application: _____ Time started: _____ Time completed: _____

Attach plot diagram showing bait station location

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Bait station #: _____ Amount (lbs) Added: _____

Total net amount (lbs) of bait applied to plot: ..... _____

Wildlife observed /notes: _____

_____

_____

_____

LTI Study Number 18009

Measuring/ Application Cup Calibration Record

Date: _____ Performed by: _____

Scale ID and Serial #: _____

Rozol Bait lot # used: _____ (and returned to pail after use)

Bait Cup ID: _____
Description of cup:

Check to confirm steps of calibration:

Steps	Trial A	Trial B	Trial C
Scale verification	_____	_____	_____
Scale tared	_____	_____	_____
Empty cup placed on scale and tared	_____	_____	_____
Bait added to cup and leveled off	_____	_____	_____

Bait Cup ID: _____	**Weight _____ (units)**
Trial A	
Trial B	
Trial C	
Average	

LTI Study Number 18009

Rozol Bait Station Re-fill Application Record

Plot ID: _____ Applicator name: _____

Bait lot #: _____

Date of application: _____ Time started: _____ Time completed: _____

Attach plot diagram showing bait station location

Bait station #: _____ Amount (cups) Added: _____
Bait station #: _____ Amount (cups) Added: _____
Bait station #: _____ Amount (cups) Added: _____
Bait station #: _____ Amount (cups) Added: _____
Bait station #: _____ Amount (cups) Added: _____
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Bait station #: _____ Amount (cups) Added: _____
Bait station #: _____ Amount (cups) Added: _____
Bait station #: _____ Amount (cups) Added: _____
Bait station #: _____ Amount (cups) Added: _____
Bait station #: _____ Amount (cups) Added: _____

Total net amount (cups) of bait applied to plot: ..... _____

Total net weight (oz. or lbs.) of bait applied to plot _____

(# cups x weight of calibrated cup = total net weight applied)

Wildlife observed /notes: _____

_____

_____

_____

LTI Study Number 18009

Rozol Bait Station Remaining at End of Study Record

Plot ID: _____ Applicator name: _____

End of Study Date: _____ Bait lot #: _____

Attach plot diagram showing bait station location

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Bait station #: _____ Weight finish _____

Total net weight (lbs) remaining at the end of the Study : _____

Wildlife observed /notes: _____

_____

_____

Calculated total weight of Rozol Bait applied =
Net Weight of Bait Applied – Net Weight Remaining = _____

Calculated lbs/acre = $\frac{\text{Total weight of Rozol Bait applied}}{\text{\# of acres of treatment plot}}$ = _____

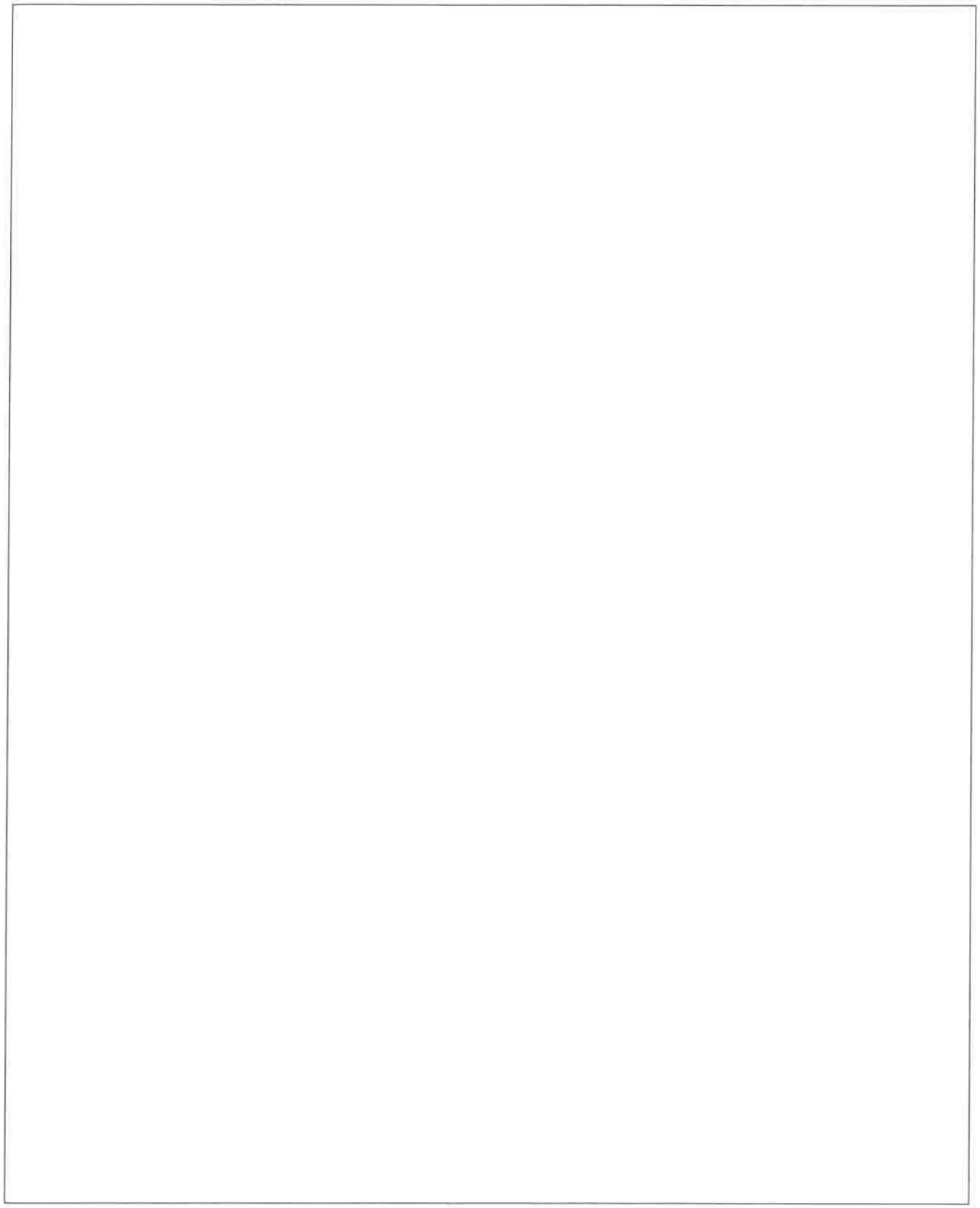
Scale ID and serial number: _____

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

LTI Study Number 18009

Site Map

Plot ID: _____



LTI Study Number 18009

Carcass Search Record

Plot ID: ______________________________

Date of search: ________ Time of search: ________ Day ______ of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
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______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
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______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: ______________________ Date: ______________

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 4/2/2018 **Study Number:** 18009

Amendment or Deviation (circle one) Number:

Protocol or SOP (circle one) SOP Name and Number:

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
Section 8, subsection 'Environmental Conditions' of the protocol states, "*A non-GLP weather station will be used at the study site to record daily precipitation, wind speed, and temperature throughout the duration of the study.*"

We will not use a weather station, but will instead rely upon weather data collected daily from "Weather App".

Justification:
Upon further consideration, a weather station was deemed unnecessary to document general weather conditions at the study site. We instead used weather data collected daily from "Weather App". This will be sufficient to document daily weather conditions during the study.

Kelly Bornhofen 4/11/2018
Sponsor Date

Ryan Baldwin April 10, 2018
Study Director Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 4/13/2018 **Study Number:** 18009

Amendment or Deviation (circle one) Number: 2

Protocol or SOP (circle one) SOP Name and Number: Appendix A: Visual Count Index SOP

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
Item 1 states "The census will be conducted on a day with low wind (below approximately 25 mph) and no more than approximately 50% cloud cover; general weather conditions will be recorded". We are removing the cloud cover stipulation, but we are now including a stipulation that counts will not be conducted when precipitation falls.

Justification:
Upon consultation with local ranchers, they indicated that rarely would there be days where cloud cover was <50% during the study period. As such, we are removing this cloud cover stipulation. The precipitation limitation was previously inferred with the cloud cover stipulation. Now that this has been removed, we needed to clearly indicate that counts will not occur when precipitation falls. To summarize, limitations on visual counts will now include only wind speed (must be below approximately 25 mph) and precipitation (counts will not be conducted if precipitation is falling).

Kelly Boorhofer — April 16, 2018
Sponsor — Date

Kryn Baldwin — April 13, 2018
Study Director — Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 9/11/2018 **Study Number:** 18009

Amendment or **Deviation (circle one) Number:**

Protocol or **SOP (circle one) SOP Name and Number:**

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
Section 9, subsection 'Calculation and Evaluation of Results for Efficacy Determination' of the protocol provides a standard calculation for efficacy, but it does not include correction equations should we observe a substantial change in ground squirrel numbers in the control plot. We ended up needing a correction factor for efficacy values derived from ground squirrel counts.

Justification:
We noted a substantial reduction in ground squirrel counts within the control plot during the post-treatment 1 and 2 counts. Therefore, we added a well-accepted correction factor to account for this control-plot reduction in ground squirrel counts in the broadcast and bait station plots.

Kelly Bornhafer 10/1/18
Sponsor Date

Ryan Baldwin September 11, 2018
Study Director Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 5/2/2018 **Study Number:** 18009

Amendment or Deviation (circle one) Number:

Protocol or SOP (circle one) SOP Name and Number:

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
Section 8, subsection 'Census of study plots' of the protocol states, "*Censuses using the Visual Count Index will be initiated between days 5 to 7 to help determine if a third bait application will be needed.*"

We initiated the Visual Count Index on Day 8.

Justification:
Rainfall kept us from being able to initiate the counts during the desired timeframe. We were forced to push back our counts by one day. This should have little to no impact on the final measure of efficacy.

Kelly Boorhofer 5/3/2018
Sponsor Date

Kym Baldwin May 2, 2018
Study Director Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 5/15/2018 **Study Number:** 18009

Amendment or Deviation (circle one) Number:

Protocol or SOP (circle one) SOP Name and Number:

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
Section 8, subsection 'Carcass Searches' of the protocol states, "*A methodical carcass search of the treated and control plots will be conducted daily, beginning on day 5 of the study and continuing until no carcasses are found for several days following the termination of the study.*"

We were not able to conduct a carcass search on May 11.

Justification:
River flooding forced closure of the access road to the property. This kept us from being able to conduct the carcass search for one day. It is possible that we may have missed a carcass because we missed that day, but this seems relatively unlikely given that no carcasses were found during our subsequent searches.

Kelly Bonnhofer 5/16/18

Sponsor Date

Roger Baldwin May 15, 2018

Study Director Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 9/11/2018 **Study Number:** 18009

Amendment or (Deviation) (circle one) Number:

Protocol or (SOP) (circle one) SOP Name and Number: Appendix A: Visual Count Index SOP

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
We recorded ground squirrel counts on the morning of May 1, 2018, but not that afternoon. This resulted in morning counts for bait station, broadcast, and control plots over 4 days (see Appendices B, E, and H).

Justification:
We experienced rainfall during the afternoon of May 1, 2018. Therefore, all data for May 1 was excluded from analyses.

Kelly Bornhofen 10/1/18
Sponsor Date

Ryan McMunn September 11, 2018
Study Director Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 9/11/2018 **Study Number:** 18009

Amendment or (Deviation) (circle one) Number:

Protocol or (SOP) (circle one) SOP Name and Number: Appendix A: Visual Count Index SOP

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
We recorded ground squirrel counts on the afternoon of April 18, 2018, but not that morning. This resulted in afternoon counts for the broadcast plot over 4 days (see Appendix D). Additionally, we missed one count during this same session.

Justification:
We had to halt counts briefly given a need to converse with a neighbor about the project. Furthermore, we were not able to get a morning count completed for April 18, 2018 given timing constraints. As such, data collected from April 18, 2018 were not included in analyses.

Kelly Bornhofen — 10/1/18
Sponsor — Date

Ryan Baldwin — September 11, 2018
Study Director — Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 9/11/2018 **Study Number:** 18009

Amendment or (Deviation) (circle one) Number:

Protocol or (SOP) (circle one) SOP Name and Number: Appendix A: Visual Count Index SOP

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
We recorded ground squirrel counts for only one day during the first post-treatment visual count survey.

Justification:
We halted counts after one day as the results from that count already meant that we would not be able to attain a reduction in ground squirrel numbers of ≥70%. This meant that a third bait application was needed, so we went ahead with that application.

Kelly Bornhofen 10/1/18

Sponsor Date

Study Director September 11, 2018

Study Director Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 9/11/2018 **Study Number:** 18009

Amendment or (Deviation) (circle one) Number:

(Protocol) or SOP (circle one) SOP Name and Number:

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
Section 8, subsection 'Carcass Searches' of the protocol states, "*Trail cameras will be set up to monitor carcasses for scavenging.*" This implies that the cameras will be operated for the duration of the project post bait application. However, we removed the cameras on Day 15, 5 days before the completion of carcass searches.

Justification:
When we arrived on site on Day 15, we noted that almost all cameras were pulled out of the ground by someone. Therefore, we decided to officially remove the cameras given a perceived threat of loss of the cameras through destruction or theft. This removal of cameras is not believed to have had any notable impact on our ability to detect nontarget consumption of carcasses given that very few were ever noted in photos to begin with, and almost all mortalities appear to have occurred before this timeframe.

Kelly Bornhofen 10/1/18
Sponsor Date

Ryan Baldwin September 11, 2018
Study Director Date

GLP STUDY AMENDMENT / DEVIATION

Date Effective: 9/12/2018 **Study Number:** 18009

Amendment or Deviation (circle one) Number:

Protocol or SOP (circle one) SOP Name and Number: SOP AL-33

Study Title: Field Efficacy of Chlorophacinone Wheat Bait for Control of Columbian Ground Squirrels (*Urocitellus columbianus*) by Broadcast and Bait Station Application

Distribution:
Study Director
Quality Assurance

Amendment/Deviation:
Although we did complete verification that the scale was accurate, we did not properly fill in the raw data sheets.

Justification:
We have documented evidence throughout the raw data sheets that verification of accuracy of the scale was completed throughout the study. Additionally, although written verification of the scale was not provided the day the calibration occurred, the overall weights applied to the study plots were done on a verified scale, so we are confident in the amounts and rates applied.

Kelly Bornhoft 10/1/18

Sponsor Date

Kym Baldwin September 12, 2018

Study Director Date

LIPHATECH
GROUPE DE SANGOSSE

3600 West Elm Street
Milwaukee, WI 53209
Tel: 414/351 1476
Fax: 414/247 8166

CERTIFICATE OF ANALYSIS

PRODUCT NAME:	Rozol Pocket Gopher Bait		
LOT NUMBER:	94062-1	**TECHNICAL REFERENCE:**	602601
MANUFACTURING DATE:	2/8/2018	**DATE OF ANALYSIS:**	2/8/2018

ASSAY	**SPECIFICATION**		**RESULTS**
	Lower Limit	**Upper Limit**	
Chlorophacinone Assay	40 mg/kg	60 mg/kg	58.87 mg/kg

DATE OF ISSUE:	2/12/2018	**CONCLUSIONS:**	Pass

Melissa L. Zobel

Melissa L. Zobel
Quality Control Manager

2-12-18

Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Rachel Callies
Liphatech, Inc.
3600 W. Elm St.
Milwaukee, WI 53209

MAY 19 2009

Dear Ms. Callies:

Subject: Labeling Amendment to Rozol Pocket Gopher Bait
EPA Registration No. 7173-184
Submission Date: March 27, 2009

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. Additionally, the submitted label is in compliance with the Agency's revised May 28, 2008 *"Risk Mitigation Decision for Ten Rodenticides"*. A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment. If you have any questions regarding this label, please contact Jennifer Gaines at (703) 305-5967.

Sincerely yours,

John Hebert
Product Manager (07)
Insecticide-Rodenticide Branch
Registration Division (7505P)

ROZOL® POCKET GOPHER BAIT

FOR THE CONTROL OF POCKET GOPHERS ONLY

This product may only be used to control pocket gophers in manual, below-ground applications.

Active Ingredient: chlorophacinone	0.005%
Inert Ingredients	99.995%
Total	100.000%

EPA Reg. No. 7173-184 EPA Est. No. 7173-WI-1

KEEP OUT OF REACH OF CHILDREN

CAUTION: See side panel for additional precautionary statements.

(Liphatech Logo)
Liphatech, Inc.
3600 W. Elm Street
Milwaukee, WI 53209
(414) 351-1476

ACCEPTED
MAY 19 2009
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide Registered under EPA Reg. No. 7173-184

Net Weight: 1 pound up to 50 pounds

Optional Marketing Statements:
*This product not registered for sale or use in Alaska, Hawaii, North Carolina or Pennsylvania.
*Treats approximately 8 Burrows. (For 2# size only.)

Side Panel:

PRECAUTIONARY STATEMENTS

Hazard to Humans and Domestic Animals

CAUTION: May be harmful if swallowed or absorbed through the skin because this product reduces the clotting ability of blood and causes bleeding. Keep away from children, domestic animals and pets. Do not get in eyes, on skin, or on clothing. Any person who retrieves carcasses or unused bait following application of this product must wear gloves. All handlers, (including applicators,) must wear long sleeved shirt and long pants, shoes plus socks, and gloves.

User Safety Requirements: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco or using the toilet and change into clean clothing.

FIRST AID: Have this label with you when obtaining treatment advice. **If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. **If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **If on skin or clothing:** Take off contaminated clothing. Rinse skin with plenty of cool water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: Contains, chlorophacinone, an anticoagulant. For humans that have ingested this product, or have obvious poisoning symptoms (bleeding) or prolonged prothrombin times, give Vitamin K_1 by intramuscular or oral administration. Check prothrombin time every 3 days until values return to normal.

TREATMENT FOR PET POISONING: If animal eats bait, call veterinarian at once.

NOTE TO VETERINARIAN: Anticoagulant Chlorophacinone: For animals ingesting bait and/or showing poisoning signs (bleeding or elevated prothrombin times), give Vitamin K_1.

ENVIRONMENTAL HAZARDS: This product is toxic to fish and wildlife. Dogs and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten the bait. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes. Runoff also may be hazardous to aquatic organisms in water adjacent to treated areas.

ENDANGERED SPECIES CONSIDERATIONS: Do not use this product within prairie dog towns in the range of the black-footed ferret without first contacting endangered species specialists, U.S. Fish and Wildlife Service, Denver Regional Office. This pesticide should not be used within one mile of active dens of the San Joaquin Kit Fox in the following California counties: Kern, Kings, Fresno, San Luis Obispo, Merced, Monterey, Santa Barbara, Ventura, Tulare, and San Benito. Prior to use, contact endangered species specialists at the California Department of Fish and Game or the U.S. Fish and Wildlife Service, Portland Regional Office for recommendations.

WARRANTY: To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of product when such use and/or handling is contrary to label instructions.

Side Panel:

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. **READ THIS LABEL** and follow all use directions and use precautions.

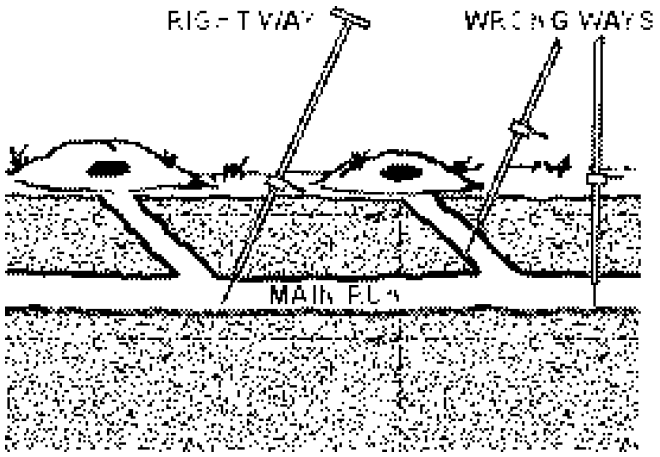
USE RESTRICTIONS: Use only to control pocket gophers (*Thomomys* spp. and *Geomys* spp.) on lawns, golf courses, alfalfa fields, rangeland, orchards and groves, and non-crop areas. Bait must be applied directly into pocket gophers' burrow systems. Only apply bait underground. Apply only for the sites, pests and application methods specified on this label.

Application Directions: Burrowing pocket gophers throw out low, fan-shaped mounds on either side of their underground tunnel. These lateral tunnels coming to the surface are on the flat side of the fan and these holes plugged with loose soil.

Treatment: Can be made in one or both of the following ways.

1. With a long-handled tablespoon, carefully remove the plug on the flat side of the fan. Carefully insert 1/2 cup of bait as far down into the hole as possible. Re-close the opening, using care to not to cover the bait with soil.
2. Using a metal rod, probe 6–12 inches deep to locate the main tunnel. Consult diagram below for location to probe. Drop 1/2 cup of bait into the tunnel and cover the hole so light will not enter the tunnel system.

Consult Federal and State rodent control bulletins for a full discussion of pocket gopher burrowing habits. Make 2–3 treatments per burrow system. Wearing gloves, immediately bury dead animals and spilled bait found on soil surface. Maintain a constant supply of bait in the burrow system for as long as there is gopher activity. Do not apply bait on surface of soil.



The right and the wrong ways to use a probe for poisoning gophers are shown above. Be sure that bait is in the main runway - not in the laterals or imbedded in the bottom of the runway.

STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage or disposal. **Pesticide Storage:** Store in original container in a cool, dry place inaccessible to children and pets. **Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Handling:** This is a nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or dispose of empty container in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 4-18-18

This is a: X treated plot (treatment type: Bait Station) ___ control plot

Study Day Number: 1 (Visual Count #1)

Morning survey: Time of sunrise: 6:44 AM Time of arrival at plot: 8:30 AM

Temperature: 32°F wind: 2 mph sky: Clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 8:40 AM Scan 1 count: 12

Scan 2 time begin: 8:47 AM Scan 2 count: 20

Scan 3 time begin: 8:54 AM Scan 3 count: 21

Scan 4 time begin: 9:01 AM Scan 4 count: ① ~~27~~ -1m (27)

Scan 5 time begin: 9:08 AM Scan 5 count: 19

Wildlife observed /notes: Couple Crows in plot during scan 4

Performed by: [signature] Date: 4-18-18

****

Evening survey: Time of sunset: 20:30 Time of arrival at plot: 2:40 Pm

Temperature: 50°F wind Calm sky: Hazy

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 2:50 Pm Scan 1 count: 7

Scan 2 time begin: 2:57 PM Scan 2 count: 8

Scan 3 time begin: 3:04 Pm Scan 3 count: 8

Scan 4 time begin: 3:11 Pm Scan 4 count: 6

Scan 5 time begin: 3:18 Pm Scan 5 count: 9

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 27

Wildlife observed /notes: 5 deer outside plot Running by from Scan 2:3

Performed by: [signature] Date: 4-18-18

① 27 - citation error [signature]

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 4-19-18

This is a: X treated plot (treatment type: Bait Stations) ___ control plot

Study Day Number: Visual Count #2 for this plot

Morning survey: Time of sunrise: 6:42 Am Time of arrival at plot: 8:37 Am

Temperature: 34°F wind: 1 mph sky: Clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 8:47 AM Scan 1 count: 15

Scan 2 time begin: 8:54 AM Scan 2 count: 11

Scan 3 time begin: 9:01 Am Scan 3 count: 21

Scan 4 time begin: 9:08 AM Scan 4 count: 22

Scan 5 time begin: 9:15 Am Scan 5 count: 20

Wildlife observed /notes: Deer in neighboring field Not impacting activity

Performed by: [signature] Date: 4-19-18

****

Evening survey: Time of sunset: 20:31 Time of arrival at plot: 2:38 PM

Temperature: 58°F wind 1 mph sky: 5% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 2:48 PM Scan 1 count: 5

Scan 2 time begin: 2:55 PM Scan 2 count: 4

Scan 3 time begin: 3:02 PM Scan 3 count: 10

Scan 4 time begin: 3:09 PM Scan 4 count: 8

Scan 5 time begin: 3:16 PM Scan 5 count: 4

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 22

Wildlife observed /notes: Owner dragging pasture about 1000 ft from plot
2 Vultures overhead btwn scan 4 & 5

Performed by: [signature] Date: 4-19-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 4-20-18

This is a: X treated plot (treatment type: Bait Station) ___ control plot

Study Day Number: 3rd count pretreatment

Morning survey: Time of sunrise: 6:40 Am Time of arrival at plot: 8:30 Am

Temperature: 39°F wind: 2mph sky: 5% cc

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 8:40 Am Scan 1 count: 12

Scan 2 time begin: 8:47 Am Scan 2 count: 17

Scan 3 time begin: 8:54 Am Scan 3 count: (23)

Scan 4 time begin: 9:01 Am Scan 4 count: 19

Scan 5 time begin: 9:08 Am Scan 5 count: 20

Wildlife observed /notes: _____

Performed by: [illegible] Date: 4-20-18

****

Evening survey: Time of sunset: 20:33 Time of arrival at plot: 2:38 PM

Temperature: 61°F wind 1mph sky: Clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 2:48 Pm Scan 1 count: 10

Scan 2 time begin: 2:55 PM Scan 2 count: 15

Scan 3 time begin: 3:02 PM Scan 3 count: 17

Scan 4 time begin: 3:09 PM Scan 4 count: 16

Scan 5 time begin: 3:16 PM Scan 5 count: 17

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 23

Wildlife observed /notes: owner shooting squirrels adjacent to property on hill across the canal.

Performed by: [illegible] Date: 4-20-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 5-1-18

This is a: X treated plot (treatment type: Bait Station) ___ control plot

Study Day Number: 7

Morning survey: Time of sunrise: _____ Time of arrival at plot: 8:40 Am

Temperature: 43°F wind: 5mph sky: Overcast

Observation location: (Mark or flag location for repeatability) ✓

Scan 1 time begin: 8:50 Am Scan 1 count: 5

Scan 2 time begin: 8:57 Am Scan 2 count: 3

Scan 3 time begin: 9:04 Am Scan 3 count: 3

Scan 4 time begin: 9:11 Am Scan 4 count: 3

Scan 5 time begin: 9:18 Am Scan 5 count: 2

Wildlife observed /notes: _____

Performed by: MM Date: 5-1-18

****

Evening survey: Time of sunset: _____ Time of arrival at plot: _____

Temperature: _____ wind _____ sky: _____

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: _____ Scan 1 count: _____

Scan 2 time begin: _____ Scan 2 count: _____

Scan 3 time begin: _____ Scan 3 count: _____

Scan 4 time begin: _____ Scan 4 count: _____

Scan 5 time begin: _____ Scan 5 count: _____

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: _____

Wildlife observed /notes: _____

Performed by: MM Date: 5-1-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 5-2-18

This is a: X treated plot (treatment type: Bait Station) ___ control plot

Study Day Number: 8

Morning survey: Time of sunrise: 6:20 Am Time of arrival at plot: 8:40 Am

Temperature: 42°F wind: 2 mph sky: 40% cc

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 8:50 Am Scan 1 count: 1

Scan 2 time begin: 8:57 Am Scan 2 count: 3

Scan 3 time begin: 9:04 Am Scan 3 count: 4

Scan 4 time begin: 9:11 Am Scan 4 count: 6

Scan 5 time begin: 9:18 Am Scan 5 count: 6

Wildlife observed /notes: _____

Performed by: [illegible] Date: 5-2-18

****

Evening survey: Time of sunset: 20:49 Time of arrival at plot: 2:30 Pm

Temperature: 57°F wind 9 mph sky: Overcast

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 2:40 Pm Scan 1 count: 4

Scan 2 time begin: 2:47 Pm Scan 2 count: 1

Scan 3 time begin: 2:54 Pm Scan 3 count: 3

Scan 4 time begin: 3:01 Pm Scan 4 count: 2

Scan 5 time begin: 3:08 Pm Scan 5 count: 2

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 6

Wildlife observed /notes: _____

Performed by: [illegible] Date: 5-2-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 5-3-18

This is a: X treated plot (treatment type: Bait Station) ___ control plot

Study Day Number: 9

Morning survey: Time of sunrise: 6:18 Am Time of arrival at plot: 8:40 Am

Temperature: 45°F wind: 3mph sky: Clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 8:50 am Scan 1 count: 2

Scan 2 time begin: 8:57 Am Scan 2 count: 2

Scan 3 time begin: 9:04 Am Scan 3 count: 5

Scan 4 time begin: 9:11 AM Scan 4 count: 3

Scan 5 time begin: 9:18 AM Scan 5 count: 5

Wildlife observed /notes: 3 bald eagles in area when arrived at plot

Performed by: AM Date: 5-3-18

****

Evening survey: Time of sunset: 20:49 Time of arrival at plot: 2:30 Pm

Temperature: 64°F wind 4mph sky: 20% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 2:40 Pm Scan 1 count: 4

Scan 2 time begin: 2:47 Pm Scan 2 count: 4

Scan 3 time begin: 2:54 Pm Scan 3 count: 1

Scan 4 time begin: 3:06 Pm Scan 4 count: 2

Scan 5 time begin: 3:13 Pm Scan 5 count: 1

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 5

Wildlife observed /notes: ___

Performed by: AM Date: 5-3-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 5-4-18

This is a: Y treated plot (treatment type: Bait Station) ___ control plot

Study Day Number: 10

Morning survey: Time of sunrise: 6:17 Am Time of arrival at plot: 8:50 Am

Temperature: 53°F wind: 2 mph sky: 30% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 9:00 Am Scan 1 count: 2

Scan 2 time begin: 9:07 Am Scan 2 count: 4

Scan 3 time begin: 9:14 Am Scan 3 count: 4

Scan 4 time begin: 9:21 Am Scan 4 count: 4

Scan 5 time begin: 9:28 Am Scan 5 count: 3

Wildlife observed /notes: ___

Performed by: NM Date: 5-4-18

****

Evening survey: Time of sunset: 20:52 Time of arrival at plot: 2:40 Pm

Temperature: 66°F wind Calm sky: 40% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 2:50 pm Scan 1 count: 3

Scan 2 time begin: 2:57 Pm Scan 2 count: 3

Scan 3 time begin: 3:04 Pm Scan 3 count: 2

Scan 4 time begin: 3:11 Pm Scan 4 count: 4

Scan 5 time begin: 3:19 Pm Scan 5 count: 2

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 4

Wildlife observed /notes: ___

Performed by: NM Date: 5-4-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 5-8-18

This is a: x treated plot (treatment type: ~~Protector~~ Bait Station - KW 5-8-18 (2)) ___ control plot

Study Day Number: 14

Morning survey: Time of sunrise: 6:11 Am Time of arrival at plot: 8:25 Am

Temperature: 48°F wind: Calm sky: Hazy overcast

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 8:35 Am Scan 1 count: Ø

Scan 2 time begin: 8:42 Am Scan 2 count: Ø

Scan 3 time begin: 8:49 Am Scan 3 count: Ø

Scan 4 time begin: 8:56 Am Scan 4 count: 1

Scan 5 time begin: 9:03 Am Scan 5 count: 1

Wildlife observed /notes: _____

Performed by: KW Date: ~~5-8~~ 9 Am 5-8-18

****

Evening survey: Time of sunset: 20:56 Time of arrival at plot: 2:30 Pm

Temperature: 60°F wind CALM sky: 40% cc

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 2:40 PM Scan 1 count: Ø

Scan 2 time begin: 2:47 PM Scan 2 count: 1

Scan 3 time begin: 2:54 PM Scan 3 count: Ø

Scan 4 time begin: 3:01 PM Scan 4 count: Ø

Scan 5 time begin: 3:08 PM Scan 5 count: 1

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: (1) 1

Wildlife observed /notes: _____

Performed by: KW Date: 5-8-18

(1) citation error KW

(2) citation error KW

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 5-9-18

This is a: ✓ treated plot (treatment type: Bait Station) ___ control plot

Study Day Number: 15

Morning survey: Time of sunrise: 6:10 Am Time of arrival at plot: 8:30 Am

Temperature: 54°F wind: calm sky: overcast

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 8:40 Am Scan 1 count: Ø

Scan 2 time begin: 8:47 Am Scan 2 count: 1

Scan 3 time begin: 8:54 Am Scan 3 count: Ø

Scan 4 time begin: 9:01 Am Scan 4 count: 1

Scan 5 time begin: 9:08 AM Scan 5 count: 1

Wildlife observed /notes:

Performed by: NM Date: 5-9-18

****

Evening survey: Time of sunset: 20:59 Time of arrival at plot: 2:30 Pm

Temperature: 69°F wind 1 mph sky: overcast

Observation location: (Mark or flag location for repeatability)

Scan 1 time begin: 2:40 Pm Scan 1 count: 1

Scan 2 time begin: 2:47 Pm Scan 2 count: 1

Scan 3 time begin: 2:54 Pm Scan 3 count: Ø

Scan 4 time begin: 3:01 Pm Scan 4 count: 1

Scan 5 time begin: 3:08 Pm Scan 5 count: 1

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 1

Wildlife observed /notes:

Performed by: NM Date: 5-9-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 2 Date 5-10-18

This is a: ✓ treated plot (treatment type: bait station) ___ control plot

Study Day Number: 6

Morning survey: Time of sunrise: 6:08Am Time of arrival at plot: 9:00Am

Temperature: 48°F wind: 2 mph sky: Overcast - some fog/lenses

Observation location: (Mark or flag location for repeatability) ✓

Scan 1 time begin: 9:10 Am Scan 1 count: Ø

Scan 2 time begin: 9:17 Am Scan 2 count: 2

Scan 3 time begin: 9:24 Am Scan 3 count: 2

Scan 4 time begin: 9:31 Am Scan 4 count: 1

Scan 5 time begin: 9:38 Am Scan 5 count: 1

Wildlife observed /notes: Later start due to dense fog

Performed by: RM Date: 5-10-18

****

Evening survey: Time of sunset: 21:00 Time of arrival at plot: 2:30Pm

Temperature: 65°F wind Calm sky: 50% LC

Observation location: (Mark or flag location for repeatability) ___

Scan 1 time begin: 2:40 Pm Scan 1 count: Ø

Scan 2 time begin: 2:47 Pm Scan 2 count: Ø

Scan 3 time begin: 2:54 Pm Scan 3 count: 1

Scan 4 time begin: 3:01 Pm Scan 4 count: 1

Scan 5 time begin: 3:08 Pm Scan 5 count: Ø

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 2

Wildlife observed /notes: ___

Performed by: RM Date: 5-10-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 4-18-18

This is a: X treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: 1 Pretreatment

Morning survey: Time of sunrise: _____ Time of arrival at plot: _____

Temperature: _____ wind: _____ sky: _____

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: _____ Scan 1 count: _____

Scan 2 time begin: _____ Scan 2 count: _____

Scan 3 time begin: _____ Scan 3 count: _____

Scan 4 time begin: _____ Scan 4 count: _____

Scan 5 time begin: _____ Scan 5 count: _____

Wildlife observed /notes: NO AM SCANS!!

Performed by: Ryan Date: 4-18-18

****

Evening survey: Time of sunset: 20:30 Time of arrival at plot: 3:25 Pm

Temperature: 50°F wind 2 mph sky: Hazy with 15-20% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 3:35 Pm Scan 1 count: 13

Scan 2 time begin: 3:42 Pm Scan 2 count: NO Scan - talked to neighbor with gun

Scan 3 time begin: 3:49 Pm Scan 3 count: 18 - didn't get through whole plot

Scan 4 time begin: 3:56 Pm Scan 4 count: ~~20~~ Am 20

Scan 5 time begin: 4:03 Pm Scan 5 count: 19

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 20

Wildlife observed /notes: at around 3:40pm Neibor seen with a gun on property line about to shoot squirrels. Informed her of study and to not shoot here

Performed by: Ryan Date: 4-18-18

Ryan 4-18-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 4-19-18

This is a: x treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: Visual Count 1

Morning survey: Time of sunrise: 6:42 AM Time of arrival at plot: 9:20 AM

Temperature: 37°F wind: 1mph sky: 10% cc

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 9:30 AM Scan 1 count: (29)

Scan 2 time begin: 9:37 AM Scan 2 count: 25

Scan 3 time begin: 9:44 AM Scan 3 count: 28

Scan 4 time begin: 9:51 AM Scan 4 count: 26

Scan 5 time begin: 9:58 AM Scan 5 count: 18

Wildlife observed /notes: _____

Performed by: [signature] Date: 4-19-18

****

Evening survey: Time of sunset: 20:31 Time of arrival at plot: 3:22 PM

Temperature: 59°F wind 2mph sky: 5% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 3:32 PM Scan 1 count: 15

Scan 2 time begin: 3:39 PM Scan 2 count: 19

Scan 3 time begin: 3:46 PM Scan 3 count: 24

Scan 4 time begin: 3:53 PM Scan 4 count: 22

Scan 5 time begin: 4:00 PM Scan 5 count: 21

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 29

Wildlife observed /notes: Owner dragging posts outside of plot

Performed by: [signature] Date: 4-19-18

[signature] 4-19-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 4-20-18

This is a: X treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: Visual Count 3 - Pretreatment

Morning survey: Time of sunrise: 6:40 AM Time of arrival at plot: 9:12 AM

Temperature: 40°F wind: 2 mph sky: Clear

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 9:22 AM Scan 1 count: 28

Scan 2 time begin: 9:29 AM Scan 2 count: 27

Scan 3 time begin: 9:36 AM Scan 3 count: 28

Scan 4 time begin: 9:43 AM Scan 4 count: 23

Scan 5 time begin: 9:50 AM Scan 5 count: 24

Wildlife observed /notes: Owner Ed came out spoke about dragging and shooting. He will be shooting a lot in hills very far from plots, separated by canal. Not shooting in any pastures and not near any study areas.

Performed by: MM Date: 4-20-18

****

Evening survey: Time of sunset: 20:33 Time of arrival at plot: 3:23 PM

Temperature: 63°F wind 1 mph sky: Clear

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 3:33 PM Scan 1 count: 20

Scan 2 time begin: 3:40 PM Scan 2 count: 17

Scan 3 time begin: 3:47 PM Scan 3 count: 14

Scan 4 time begin: 3:54 PM Scan 4 count: 15

Scan 5 time begin: 4:01 PM Scan 5 count: 17

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 28

Wildlife observed /notes: Owner Shooting Squirrels outside and away from plot across a canal.

Performed by: MM Date: 4-20-18

MM 4-20-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 4-21-18

This is a: X treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: Visual Count 3 - Pretreatment

Morning survey: Time of sunrise: 6:39 Am Time of arrival at plot: 9:30 Am

Temperature: 39°F wind: 3mph sky: Clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 9:40 Am Scan 1 count: 19

Scan 2 time begin: 9:47 Am Scan 2 count: 24

Scan 3 time begin: 9:54 Am Scan 3 count: (27)

Scan 4 time begin: 10:01 Am Scan 4 count: 19

Scan 5 time begin: 10:08 Am Scan 5 count: 25

Wildlife observed /notes: _____

Performed by: MM Date: 4-21-18

****

Evening survey: Time of sunset: 20:34 Time of arrival at plot: 3:30 Pm

Temperature: 59°F wind 4mph sky: Clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 3:48 Pm Scan 1 count: 18

Scan 2 time begin: 3:47 Pm Scan 2 count: 18

Scan 3 time begin: 3:54 Pm Scan 3 count: 22

Scan 4 time begin: 4:01 Pm Scan 4 count: 21

Scan 5 time begin: 4:08 Pm Scan 5 count: 20

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 27

Wildlife observed /notes: _____

Performed by: MM Date: 4-21-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 5-1-18

This is a: X treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: 7

Morning survey: Time of sunrise: 621 am Time of arrival at plot: 9:35 Am

Temperature: 43° wind: 4mph sky: Overcast

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 9:45 Am Scan 1 count: 4

Scan 2 time begin: 9:52 Am Scan 2 count: 7

Scan 3 time begin: 9:59 Am Scan 3 count: 5

Scan 4 time begin: 10:06 Am Scan 4 count: 4

Scan 5 time begin: 10:13 Am Scan 5 count: 7

Wildlife observed /notes: _____

Performed by: AM Date: 5-1-18

****

Evening survey: Time of sunset: 20:48 Time of arrival at plot: _____

Temperature: _____ wind _____ sky: _____

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: RAIN Scan 1 count: _____

Scan 2 time begin: _____ Scan 2 count: _____

Scan 3 time begin: _____ Scan 3 count: _____

Scan 4 time begin: NO Scan 4 count: Counts

Scan 5 time begin: _____ Scan 5 count: _____

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: _____

Wildlife observed /notes: _____

Performed by: AM Date: 5-1-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 5-2-18

This is a: X treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: 8

Morning survey: Time of sunrise: 6:20 Am Time of arrival at plot: 9:35 Am

Temperature: 42°F wind: 2 mph sky: 30% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 9:45 Am Scan 1 count: 6

Scan 2 time begin: 9:52 Am Scan 2 count: 6

Scan 3 time begin: 9:59 Am Scan 3 count: 7

Scan 4 time begin: 10:06 Am Scan 4 count: 7

Scan 5 time begin: 10:13 Am Scan 5 count: 8

Wildlife observed /notes: _____

Performed by: [signature] Date: 5-2-18

****

Evening survey: Time of sunset: 20:44 Time of arrival at plot: 3:12 pm

Temperature: 59°F wind 10 mph sky: 80% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 3:22 pm Scan 1 count: 6

Scan 2 time begin: 3:29 pm Scan 2 count: 7

Scan 3 time begin: 3:36 pm Scan 3 count: 8

Scan 4 time begin: 3:43 pm Scan 4 count: 17

Scan 5 time begin: 3:50 pm Scan 5 count: 18

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 18

Wildlife observed /notes: _____

Performed by: [signature] Date: 5-2-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 5-8-18

This is a: X treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: 14

Morning survey: Time of sunrise: 6:11Am Time of arrival at plot: 9:08Am

Temperature: 50°F wind: Calm sky: 30%cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 9:18Am Scan 1 count: 18

Scan 2 time begin: 9:25Am Scan 2 count: 9

Scan 3 time begin: 9:32Am Scan 3 count: 15

Scan 4 time begin: 9:39Am Scan 4 count: 10

Scan 5 time begin: 9:46Am Scan 5 count: 10

Wildlife observed /notes: Bald eagle flying overhead before scan 2

Performed by: LM Date: 5-8-18

****

Evening survey: Time of sunset: 20:57 Time of arrival at plot: 3:13Pm

Temperature: 63°F wind Calm sky: 50%cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 3:23Pm Scan 1 count: 15

Scan 2 time begin: 3:30Pm Scan 2 count: 12

Scan 3 time begin: 3:37Pm Scan 3 count: 17

Scan 4 time begin: 3:44Pm Scan 4 count: 17

Scan 5 time begin: 3:51Pm Scan 5 count: 16

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 18

Wildlife observed /notes: ___

Performed by: LM Date: 5-8-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 5-9-18

This is a: X treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: 15

Morning survey: Time of sunrise: 6:10 Am Time of arrival at plot: 9:20 Am

Temperature: 57°F wind: CA/m sky: Overcast

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 9:30 Am Scan 1 count: 8

Scan 2 time begin: 9:37 Am Scan 2 count: 12

Scan 3 time begin: 9:44 Am Scan 3 count: 5

Scan 4 time begin: 9:51 Am Scan 4 count: 8

Scan 5 time begin: 9:58 Am Scan 5 count: 9

Wildlife observed /notes: All cameras were knocked over / pulled out. Seems they were done on purpose. Pulled cameras from field at every plot

Performed by: [illegible] Date: 5-9-18

****

Evening survey: Time of sunset: 20:59 Time of arrival at plot: 3:15 PM

Temperature: 70°F wind 2 mph sky: 90% c

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 3:25 PM Scan 1 count: 17

Scan 2 time begin: 3:32 PM Scan 2 count: 14

Scan 3 time begin: 3:39 PM Scan 3 count: 18

Scan 4 time begin: 3:46 PM Scan 4 count: 18

Scan 5 time begin: 3:53 PM Scan 5 count: 16

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 18

Wildlife observed /notes: ___

Performed by: [illegible] Date: 5-9-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 4 Date 5-10-18

This is a: Y treated plot (treatment type: Broadcast) ___ control plot

Study Day Number: 16

Morning survey: Time of sunrise: 6:08Am Time of arrival at plot: 9:44Am

Temperature: 48°F wind: 2mph sky: 75%cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 9:54Am Scan 1 count: 13

Scan 2 time begin: 10:01Am Scan 2 count: 17

Scan 3 time begin: 10:08Am Scan 3 count: 17

Scan 4 time begin: 10:15Am Scan 4 count: 23

Scan 5 time begin: 10:22Am Scan 5 count: 12

Wildlife observed /notes:

Performed by: MM Date: 5-10-18

****

Evening survey: Time of sunset: 21:00 Time of arrival at plot: 3:14 PM

Temperature: 67°F wind 0Alm sky: 30%cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 3:24 PM Scan 1 count: 17

Scan 2 time begin: 3:31 PM Scan 2 count: 13

Scan 3 time begin: 3:38 PM Scan 3 count: 20

Scan 4 time begin: 3:45 PM Scan 4 count: 16

Scan 5 time begin: 3:52 PM Scan 5 count: 15

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 23

Wildlife observed /notes:

Performed by: MM Date: 5-10-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 4-19-18

This is a: ___ treated plot (treatment type: _____) X control plot

Study Day Number: Visual Count 1

Morning survey: Time of sunrise: 6:42 Am Time of arrival at plot: 10:05 Am

Temperature: 41°F wind: 1mph sky: Clear

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 10:15 Am Scan 1 count: 15

Scan 2 time begin: 10:22 Am Scan 2 count: 17

Scan 3 time begin: 10:29 Am Scan 3 count: 19

Scan 4 time begin: 10:36 Am Scan 4 count: 18

Scan 5 time begin: 10:43 Am Scan 5 count: 16

Wildlife observed /notes: _____

Performed by: MM Date: 4-19-18

****

Evening survey: Time of sunset: 20:31 Time of arrival at plot: 4:05 Pm

Temperature: 60°F wind 2mph sky: 10% Cc

Observation location: (Mark or flag location for repeatability) ✓

Scan 1 time begin: 4:15 Pm Scan 1 count: 14

Scan 2 time begin: 4:22 Pm Scan 2 count: (22)

Scan 3 time begin: 4:29 Pm Scan 3 count: 6

Scan 4 time begin: 4:36 Pm Scan 4 count: 8

Scan 5 time begin: 4:43 Pm Scan 5 count: 18

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 22

Wildlife observed /notes: 5 deer in plot upon Arrival

Area outside plot dragged prior to Arrival

4 more deer entered plot btwn scans 3 & 4 ② 4 total deer in plot

Performed by: MM Date: ~~4-18-18~~ ① MM

① 4-19-18 MM (notation error)

② btwn Scan 2:3 (notation error) MM 4-19-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 4-20-18

This is a: ___ treated plot (treatment type: _____) x control plot

Study Day Number: Pre-treatment Count 2

Morning survey: Time of sunrise: 6:40 Am Time of arrival at plot: 10:00 Am

Temperature: 46°F wind: 1 mph sky: Clear

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 10:10 Am Scan 1 count: 8

Scan 2 time begin: 10:17 Am Scan 2 count: 19

Scan 3 time begin: 10:24 Am Scan 3 count: 14

Scan 4 time begin: 10:31 Am Scan 4 count: 13

Scan 5 time begin: 10:38 Am Scan 5 count: 16

Wildlife observed /notes: _____

Performed by: MM Date: 4-20-18

****

Evening survey: Time of sunset: 20:33 Time of arrival at plot: 4:05 Pm

Temperature: 64°F wind Calm sky: Clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 4:15 Pm Scan 1 count: 17

Scan 2 time begin: 4:22 Pm Scan 2 count: 12

Scan 3 time begin: 4:29 Pm Scan 3 count: 20

Scan 4 time begin: 4:36 PM Scan 4 count: (25)

Scan 5 time begin: 4:43 Pm Scan 5 count: 14

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 25

Wildlife observed /notes: _____

Performed by: MM Date: 4-20-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 4-21-18

This is a: ___ treated plot (treatment type: _____) X control plot

Study Day Number: Pre treatment Count #3

Morning survey: Time of sunrise: 6:39Am Time of arrival at plot: 10:14Am

Temperature: 43°F wind: Calm sky: clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 10:24 Am Scan 1 count: 10

Scan 2 time begin: 10:31 Am Scan 2 count: 13

Scan 3 time begin: 10:38 Am Scan 3 count: 17

Scan 4 time begin: 10:45 Am Scan 4 count: 13

Scan 5 time begin: 10:52 Am Scan 5 count: 11

Wildlife observed /notes: _____

Performed by: MM Date: 4/21/18

****

Evening survey: Time of sunset: 20:34 Time of arrival at plot: 4:12 pm

Temperature: 61°F wind 2mph sky: Clear

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 4:22 Pm Scan 1 count: 14

Scan 2 time begin: 4:29 Pm Scan 2 count: 19

Scan 3 time begin: 4:36 Pm Scan 3 count: 18

Scan 4 time begin: 4:43 Pm Scan 4 count: 21

Scan 5 time begin: 4:50 Pm Scan 5 count: (22)

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 22

Wildlife observed /notes: _____

Performed by: MM Date: 4/21/18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 5-1-18

This is a: ___ treated plot (treatment type: _____) ✓ control plot

Study Day Number: 1

Morning survey: Time of sunrise: _____ Time of arrival at plot: 10:20Am

Temperature: 45°F wind: 2mph sky: overcast

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 10:30Am Scan 1 count: 4

Scan 2 time begin: 10:37Am Scan 2 count: 8

Scan 3 time begin: 10:44Am Scan 3 count: 9

Scan 4 time begin: 10:51Am Scan 4 count: 10

Scan 5 time begin: 10:58Am Scan 5 count: 6

Wildlife observed /notes: Seagles Soaring overhead before Scan 5

Performed by: _____ Date: _____

****

Evening survey: Time of sunset: _____ Time of arrival at plot: _____

Temperature: _____ wind _____ sky: _____

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: _____ Scan 1 count: _____

Scan 2 time begin: _____ Scan 2 count: _____

Scan 3 time begin: _____ Scan 3 count: _____

Scan 4 time begin: _____ Scan 4 count: _____

Scan 5 time begin: _____ Scan 5 count: _____

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: _____

Wildlife observed /notes: _____

Performed by: _____ Date: 5-1-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 5-2-18

This is a: ___ treated plot (treatment type: _____) ✓ control plot

Study Day Number: 8

Morning survey: Time of sunrise: 6:20 AM Time of arrival at plot: 10:20 AM

Temperature: 45°F wind: 3 mph sky: 30% cc

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 10:30 AM Scan 1 count: 10

Scan 2 time begin: 10:37 AM Scan 2 count: 11

Scan 3 time begin: 10:44 AM Scan 3 count: 12

Scan 4 time begin: 10:51 AM Scan 4 count: 9

Scan 5 time begin: 10:58 AM Scan 5 count: 11

Wildlife observed /notes: _____

Performed by: [signature] Date: 5-2-18

****

Evening survey: Time of sunset: 20:49 Time of arrival at plot: 4:05 pm

Temperature: 56°F wind 10 mph sky: Overcast

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 4:15 PM Scan 1 count: 11

Scan 2 time begin: 4:22 PM Scan 2 count: 13

Scan 3 time begin: 4:29 PM Scan 3 count: 12

Scan 4 time begin: 4:36 PM Scan 4 count: 13

Scan 5 time begin: 4:43 PM Scan 5 count: 14

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 14

Wildlife observed /notes: _____

Performed by: [signature] Date: 5-2-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 5-3-18

This is a: ___ treated plot (treatment type: _____) X control plot

Study Day Number: 9

Morning survey: Time of sunrise: 6:18 Am Time of arrival at plot: 9:55 Am

Temperature: 52°F wind: 3 mph sky: clear

Observation location: (Mark or flag location for repeatability) ✓

Scan 1 time begin: 10:05 AM Scan 1 count: 17

Scan 2 time begin: 10:12 Am Scan 2 count: 15

Scan 3 time begin: 10:19 Am Scan 3 count: 17

Scan 4 time begin: 10:26 Am Scan 4 count: 11

Scan 5 time begin: 10:33 Am Scan 5 count: 8

Wildlife observed /notes: _____

Performed by: JM Date: 5-3-18

****

Evening survey: Time of sunset: 20:51 Time of arrival at plot: 4:00 PM

Temperature: 67°F wind 7 mph sky: 15% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 4:10 Pm Scan 1 count: 14

Scan 2 time begin: 4:17 PM Scan 2 count: 16

Scan 3 time begin: 4:24 PM Scan 3 count: 18

Scan 4 time begin: 4:31 PM Scan 4 count: 13

Scan 5 time begin: 4:38 PM Scan 5 count: 16

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 18

Wildlife observed /notes: _____

Performed by: JM Date: 5-3-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 5-4-18

This is a: ___ treated plot (treatment type: _____) X control plot

Study Day Number: 10

Morning survey: Time of sunrise: 6:17Am Time of arrival at plot: 10:00Am

Temperature: 56°F wind: 7mph sky: 45% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 10:10Am Scan 1 count: 15

Scan 2 time begin: 10:17Am Scan 2 count: 16

Scan 3 time begin: 10:24Am Scan 3 count: 19

Scan 4 time begin: 10:31Am Scan 4 count: 22

Scan 5 time begin: 10:38Am Scan 5 count: 20

Wildlife observed /notes: _____

Performed by: KM Date: 5-4-18

****

Evening survey: Time of sunset: 20:52 Time of arrival at plot: 4:0PM

Temperature: 68°F wind CALM sky: 40% cc

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 4:10Pm Scan 1 count: 17

Scan 2 time begin: 4:17Pm Scan 2 count: 17

Scan 3 time begin: 4:24Pm Scan 3 count: 20

Scan 4 time begin: 4:31Pm Scan 4 count: 14

Scan 5 time begin: 4:38Pm Scan 5 count: 14

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 22

Wildlife observed /notes: _____

Performed by: MW Date: 5-4-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 5-8-18

This is a: ___ treated plot (treatment type: _____) X control plot

Study Day Number: 14

Morning survey: Time of sunrise: 6:11Am Time of arrival at plot: 9:50Am

Temperature: 54°F wind: 1mph sky: 20%cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 10:00Am Scan 1 count: 7

Scan 2 time begin: 10:07Am Scan 2 count: 13

Scan 3 time begin: 10:14Am Scan 3 count: 12

Scan 4 time begin: 10:21Am Scan 4 count: 10

Scan 5 time begin: 10:28Am Scan 5 count: 9

Wildlife observed /notes: _____

Performed by: NM Date: 5-8-18

****

Evening survey: Time of sunset: 20:57 Time of arrival at plot: 4:00pm

Temperature: 66°F wind Calm sky: 75%cc

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 4:10pm Scan 1 count: 15

Scan 2 time begin: 4:17pm Scan 2 count: 8

Scan 3 time begin: 4:24pm Scan 3 count: 10

Scan 4 time begin: 4:31pm Scan 4 count: 12

Scan 5 time begin: 4:36pm Scan 5 count: 13

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 15

Wildlife observed /notes: _____

Performed by: NM Date: 5-8-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 5-9-18

This is a: ___ treated plot (treatment type: _____) ✓ control plot

Study Day Number: 15

Morning survey: Time of sunrise: 6:10Am Time of arrival at plot: 10:10Am

Temperature: 58°F wind: 1mph sky: Overcast

Observation location: (Mark or flag location for repeatability) Mg

Scan 1 time begin: 10:20Am Scan 1 count: 8

Scan 2 time begin: 10:27Am Scan 2 count: 12

Scan 3 time begin: 10:34Am Scan 3 count: 9

Scan 4 time begin: 10:41 Am Scan 4 count: 6

Scan 5 time begin: 10:48Am Scan 5 count: 13

Wildlife observed /notes: Cameras were yanked out of ground by Someone. Removed them from study due to theft concerns

Performed by: AM Date: 5-9-18

****

Evening survey: Time of sunset: 20:59 Time of arrival at plot: 4:00pm

Temperature: 73°F wind 4 mph sky: Overcast

Observation location: (Mark or flag location for repeatability) _____

Scan 1 time begin: 4:10pm Scan 1 count: 9

Scan 2 time begin: 4:17pm Scan 2 count: 9

Scan 3 time begin: 4:24pm Scan 3 count: 12

Scan 4 time begin: 4:31pm Scan 4 count: 12

Scan 5 time begin: 4:38pm Scan 5 count: 8

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 13

Wildlife observed /notes: _____

Performed by: AM Date: 5-9-18

LTI Study Number 18009

Visual Count Index Record

Plot ID: 6 Date 5-10-18

This is a: ___ treated plot (treatment type: _____) ✓ control plot

Study Day Number: 10

Morning survey: Time of sunrise: 6:08Am Time of arrival at plot: 10:27Am

Temperature: 50°F wind: Calm sky: 50% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 10:37Am Scan 1 count: 17

Scan 2 time begin: 10:44 Am Scan 2 count: 13

Scan 3 time begin: 10:51 Am Scan 3 count: 15

Scan 4 time begin: 10:58 AM Scan 4 count: 9

Scan 5 time begin: 11:05 Am Scan 5 count: 13

Wildlife observed /notes: _____

Performed by: [signature] Date: 5-10-18

****

Evening survey: Time of sunset: 21:00 Time of arrival at plot: 4:00Pm

Temperature: 67°F wind CAlm sky: 40% cc

Observation location: (Mark or flag location for repeatability) X

Scan 1 time begin: 4:10PM Scan 1 count: 14

Scan 2 time begin: 4:17 Pm Scan 2 count: 16

Scan 3 time begin: 4:24 PM Scan 3 count: 11

Scan 4 time begin: 4:31 Pm Scan 4 count: 14

Scan 5 time begin: 4:38Pm Scan 5 count: 14

Official result for the day is the highest number of squirrels recorded at either the morning or evening survey: 16

Wildlife observed /notes: _____

Performed by: MM Date: 5-10-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 2

This is a: X treated plot (treatment type: Bait Station) ___ control plot

This is a: X pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing: Date: 4-21-14

Taken by: Ryan

Time: 8:30 AM Temp: 41°F

Wind: 7 mph

Precipitation: None

48 Hour re-opening: Date: 4-23-14

Taken by: Ryan

Time: 8:30 AM Temp: 50°F

Wind: 3 mph

Precipitation: None

Flag # 1	X closed	___ re-opened
Flag # 2	___ closed	X re-opened
Flag # 3	___ closed	X re-opened
Flag # 4	___ closed	X re-opened
Flag # 5	___ closed	X re-opened
Flag # 6	___ closed	X re-opened
Flag # 7	X closed	___ re-opened
Flag # 8	___ closed	X re-opened
Flag # 9	___ closed	X re-opened
Flag # 10	___ closed	X re-opened
Flag # 11	___ closed	X re-opened
Flag # 12	___ closed	X re-opened
Flag # 13	___ closed	X re-opened
Flag # 14	___ closed	X re-opened
Flag # 15	X closed	___ re-opened
Flag # 16	___ closed	X re-opened
Flag # 17	___ closed	X re-opened
Flag # 18	X closed	___ re-opened
Flag # 19	___ closed	X re-opened

Wildlife observed /notes: ___

Performed by: Ryan Date: 4-23-14

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 2

This is a: X treated plot (treatment type: Bait Station) ___ control plot

This is a: X pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing: Date: 4-21-18 | 48 Hour re-opening: Date: 4-23-18

Taken by: Ryan | Taken by: Ryan

Time: 8:30 AM Temp: 41°F | Time: 8:30 AM Temp: 50°F

Wind: 7mph | Wind: 3mph

Precipitation: None | Precipitation: None

Flag # 20	___ closed	X re-opened
Flag # 21	___ closed	X re-opened
Flag # 22	___ closed	X re-opened
Flag # 23	___ closed	X re-opened
Flag # 24	X closed	___ re-opened
Flag # 25	___ closed	X re-opened
Flag # 26	___ closed	X re-opened
Flag # 27	___ closed	X re-opened
Flag # 28	___ closed	X re-opened
Flag # 29	___ closed	X re-opened
Flag # 30	___ closed	X re-opened
Flag # 31	___ closed	X re-opened
Flag # 32	___ closed	X re-opened
Flag # 33	___ closed	X re-opened
Flag # 34	___ closed	X re-opened
Flag # 35	___ closed	X re-opened
Flag # 36	X closed	___ re-opened
Flag # 37	___ closed	X re-opened
Flag # 38	X closed	___ re-opened

Wildlife observed /notes: _____

Performed by: Ryan Date: 4-23-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 2

This is a: X treated plot (treatment type: Bait Station) ___ control plot

This is a: X pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing	48 Hour re-opening
Date: 4-21-18	Date: 4-23-18
Taken by: Ryan	Taken by: Ryan
Time: 8:30am Temp: 41°F	Time: 8:30 AM Temp: 50°F
Wind: 7mph	Wind: 3mph
Precipitation: None	Precipitation: None

	Burrow closing	48 Hour re-opening
Flag # 39	X closed	___ re-opened
Flag # 40	___ closed	X re-opened
Flag # 41	___ closed	X re-opened
Flag # 42	___ closed	X re-opened
Flag # 43	___ closed	X re-opened
Flag # 44	___ closed	X re-opened
Flag # 45	___ closed	X re-opened
Flag # 46	___ closed	X re-opened
Flag # 47	___ closed	X re-opened
Flag # 48	___ closed	X re-opened
Flag # 47	___ closed	X re-opened
Flag # 50	___ closed	X re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened

Wildlife observed /notes: ____

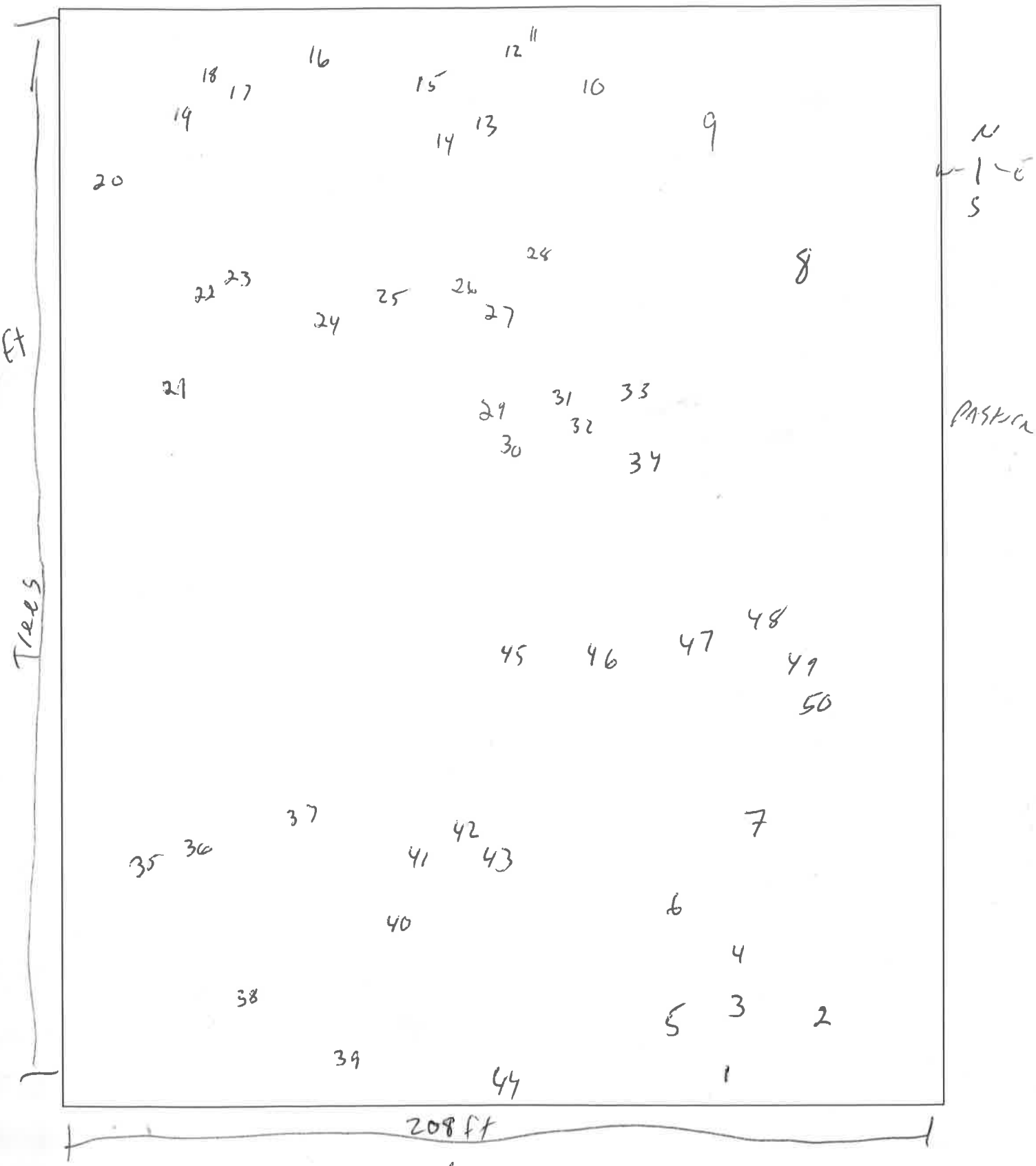
Performed by: Ryan Date: 4-23-18

LTI Study Number 18009

Pasture

Site Map

Plot ID: 2 Burrow Card Location Pre Treatment 4-23-18 AM



Dirt Road / Fence

AM 4-23-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 2

This is a: X treated plot (treatment type: Bait Station) ___ control plot

This is a: ___ pre-treatment X post-treatment 1 ___ post-treatment 2

Burrow closing: Date: 5-12-18 | 48 Hour re-opening: Date: 5-14-18

Taken by: MM | Taken by: MM

Time: 8:30 am Temp: 52°F | Time: 8:30 am Temp: 55°F

Wind: 2 mph | Wind: Calm

Precipitation: None | Precipitation: None

Flag # 1	X closed	___ re-opened
Flag # 2	X closed	___ re-opened
Flag # 3	X closed	___ re-opened
Flag # 4	X closed	___ re-opened
Flag # 5	X closed	___ re-opened
Flag # 6	X closed	___ re-opened
Flag # 7	X closed	___ re-opened
Flag # 8	___ closed	X re-opened
Flag # 9	___ closed	X re-opened
Flag # 10	X closed	___ re-opened
Flag # 11	X closed	___ re-opened
Flag # 12	X closed	___ re-opened
Flag # 13	X closed	___ re-opened
Flag # 14	X closed	___ re-opened
Flag # 15	X closed	___ re-opened
Flag # 16	___ closed	X re-opened
Flag # 17	X closed	___ re-opened
Flag # 18	X closed	___ re-opened
Flag # 19	X closed	___ re-opened

Wildlife observed /notes: ___

Performed by: MM Date: 5-14-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 2

This is a: X treated plot (treatment type: Bait Station) ___ control plot

This is a: ___ pre-treatment X post-treatment 1 ___ post-treatment 2

Burrow closing	48 Hour re-opening
Date: 5-12-14	Date: 5-14-18
Taken by: MM	Taken by: MM
Time: 8:30 Am Temp: 52°F	Time: 8:30 Am Temp: 55°F
Wind: 2 mph	Wind: Calm
Precipitation: None	Precipitation: None

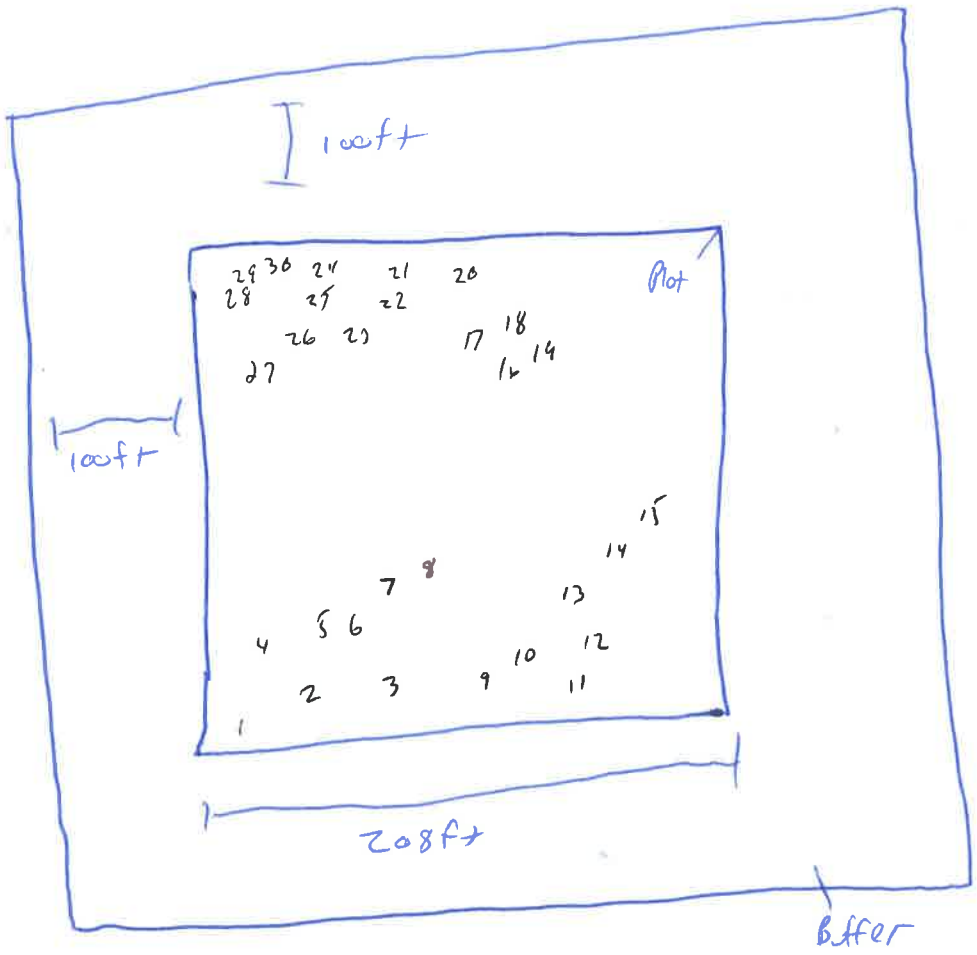
	Burrow closing	48 Hour re-opening
Flag # 20	X closed	___ re-opened
Flag # 21	X closed	___ re-opened
Flag # 22	X closed	___ re-opened
Flag # 23	X closed	___ re-opened
Flag # 24	X closed	___ re-opened
Flag # 25	X closed	___ re-opened
Flag # 26	X closed	___ re-opened
Flag # 27	X closed	___ re-opened
Flag # 28	X closed	___ re-opened
Flag # 29	X closed	___ re-opened
Flag # 30	___ closed	X re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened

Wildlife observed /notes: _____

Performed by: MM Date: 5-14-18

Site Map

Plot ID: 2 · Active Burrow Locations Post Treatment



5-14-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 20m 4

This is a: X treated plot (treatment type: Broadcast) ___ control plot

This is a: X pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing: Date: 4-22-18	48 Hour re-opening: Date: 4-24-18
Taken by: RYAN	Taken by: RYAN
Time: 9:30 Am Temp: 46°F	Time: 9:30 Am Temp: 52°F
Wind: 2mph	Wind: 3mph
Precipitation: None	Precipitation: None

Flag # 1	___ closed	X re-opened
Flag # 2	___ closed	X re-opened
Flag # 3	___ closed	X re-opened
Flag # 4	___ closed	X re-opened
Flag # 5	___ closed	X re-opened
Flag # 6	___ closed	X re-opened
Flag # 7	___ closed	X re-opened
Flag # 8	___ closed	X re-opened
Flag # 9	___ closed	X re-opened
Flag # 10	___ closed	X re-opened
Flag # 11	___ closed	X re-opened
Flag # 12	___ closed	X re-opened
Flag # 13	___ closed	X re-opened
Flag # 14	X closed	___ re-opened
Flag # 15	___ closed	X re-opened
Flag # 16	___ closed	X re-opened
Flag # 17	___ closed	X re-opened
Flag # 16	___ closed	X re-opened
Flag # 19	X closed	___ re-opened

Wildlife observed /notes: _____

Performed by: Ryan Date: 4-24-18

(1) 4 - notation error RM 4-24-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 4

This is a: X treated plot (treatment type: Broadcast) ___ control plot

This is a: X pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing:	48 Hour re-opening:
Date: 4-22-18	Date: 4-24-18
Taken by:	Taken by: Ryan
Time: 9:30 Am Temp: 46°F	Time: 9:30 Am Temp: 52°F
Wind: 2 mph	Wind: 3 mph
Precipitation: None	Precipitation: None

Flag # 20	___ closed	X re-opened
Flag # 21	___ closed	X re-opened
Flag # 22	___ closed	X re-opened
Flag # 23	___ closed	X re-opened
Flag # 24	___ closed	X re-opened
Flag # 25	___ closed	X re-opened
Flag # 26	___ closed	X re-opened
Flag # 27	___ closed	X re-opened
Flag # 28	___ closed	X re-opened
Flag # 29	X closed	___ re-opened
Flag # 30	___ closed	X re-opened
Flag # 31	___ closed	X re-opened
Flag # 32	___ closed	X re-opened
Flag # 33	___ closed	X re-opened
Flag # 34	___ closed	X re-opened
Flag # 35	X closed	___ re-opened
Flag # 36	___ closed	X re-opened
Flag # 37	___ closed	X re-opened
Flag # 38	___ closed	X re-opened

Wildlife observed /notes: _____

Performed by: Ryan Date: 4-24-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: Y

This is a: X treated plot (treatment type: Broadcast) ___ control plot

This is a: Y pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing: Date: 4-22-18

Taken by: Ryan

Time: 9:30 AM Temp: 46°F

Wind: 2mph

Precipitation: NONE

48 Hour re-opening: Date: ~~4-24-18~~ (1) AM

Taken by: Ryan

Time: 9:30 AM Temp: 52°F

Wind: 3mph

Precipitation: NONE

Flag # 39	___ closed	Y re-opened
Flag # 40	___ closed	Y re-opened
Flag # 41	___ closed	X re-opened
Flag # 42	___ closed	Y re-opened
Flag # 43	___ closed	X re-opened
Flag # 44	___ closed	Y re-opened
Flag # 45	___ closed	X re-opened
Flag # 46	___ closed	Y re-opened
Flag # 47	___ closed	Y re-opened
Flag # 48	___ closed	X re-opened
Flag # 49	___ closed	X re-opened
Flag # 50	___ closed	X re-opened
Flag # 51	___ closed	X re-opened
Flag # 52	X closed	___ re-opened
Flag # 53	___ closed	X re-opened
Flag # 54	___ closed	T re-opened
Flag # 55	___ closed	T re-opened
Flag # 56	___ closed	T re-opened
Flag # 57	T closed	___ re-opened

Wildlife observed /notes: ___

Performed by: Ryan Date: 4-24-18

1- 4-24-18 notation error RM

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: Y

This is a: X treated plot (treatment type: Broadcast) ___ control plot

This is a: X pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing	48 Hour re-opening
Date: 4-22-18	Date: 4-24-18
Taken by: Ryan	Taken by: Ryan
Time: 9:30am Temp: 40°F	Time: 9:30Am Temp: 52°F
Wind: 2 mph	Wind: 3mph
Precipitation: None	Precipitation: None

Flag #	closed	re-opened	
58	X	___	
59	X	___	
66	___	X	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	
	___	___	

Wildlife observed /notes: ______

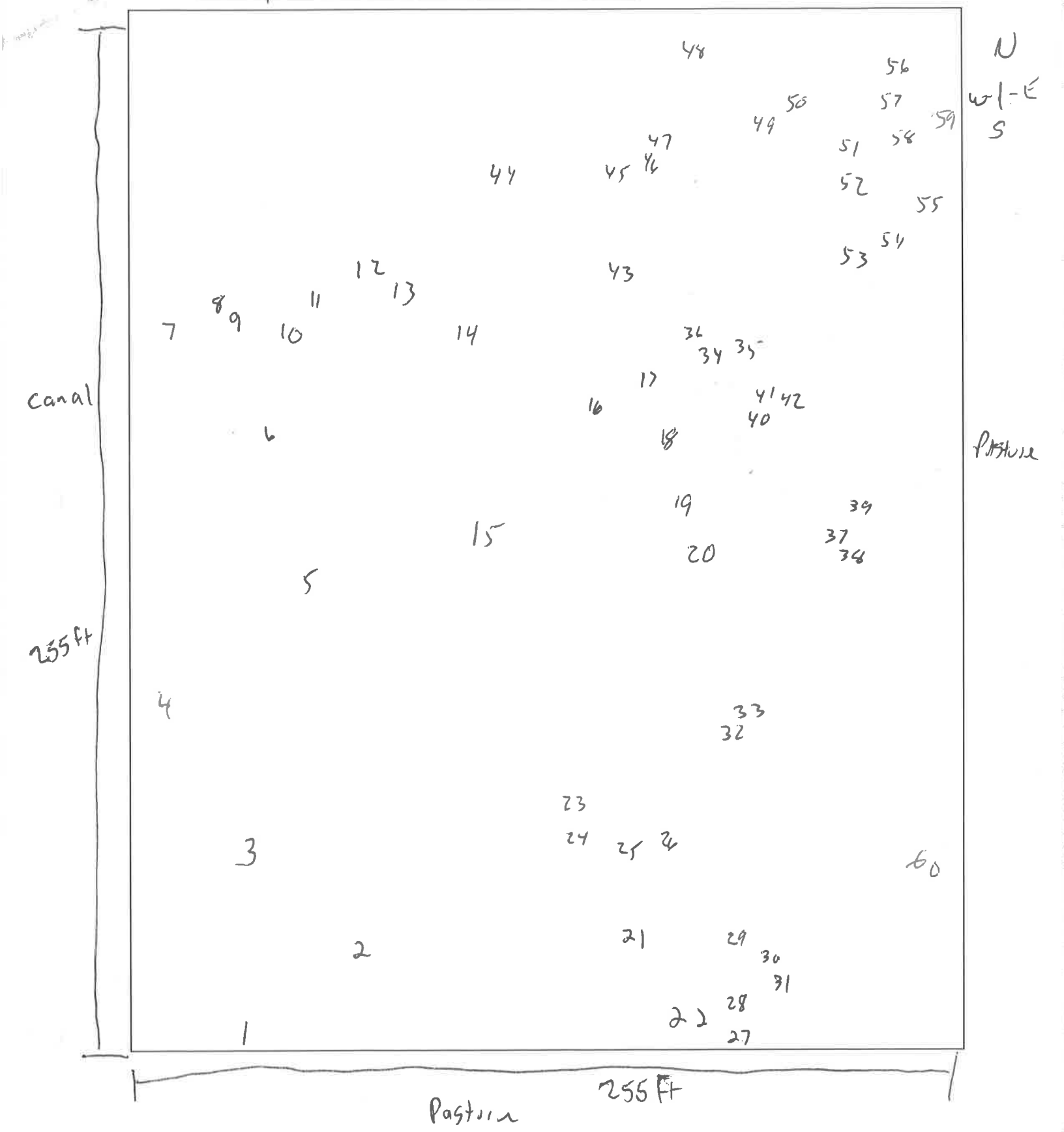
Performed by: Ryan Date: 4-24-18

Hills

LTI Study Number 18009

Site Map

Plot ID: 4 - Burrow Count Locations Pre-treatment 4/22/14



RM 4-22-14

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 4

This is a: ✓ treated plot (treatment type: Broadcast) ___ control plot

This is a: ___ pre-treatment ✓ post-treatment 1 ___ post-treatment 2

Burrow closing	48 Hour re-opening
Date: 5-12-18	Date: 5-14-18
Taken by: NH	Taken by: NH
Time: 9:30 AM Temp: 56°F	Time: 9:30 AM Temp: 59°F
Wind: 3 mph	Wind: Calm
Precipitation: None	Precipitation: None

Flag # 1	___ closed	✓ re-opened
Flag # 2	___ closed	✓ re-opened
Flag # 3	___ closed	✓ re-opened
Flag # 4	___ closed	✓ re-opened
Flag # 5	___ closed	✓ re-opened
Flag # 6	✓ closed	___ re-opened
Flag # 7	✓ closed	___ re-opened
Flag # 8	___ closed	✓ re-opened
Flag # 9	___ closed	✓ re-opened
Flag # 10	___ closed	✓ re-opened
Flag # 11	___ closed	✓ re-opened
Flag # 12	___ closed	✓ re-opened
Flag # 13	___ closed	✓ re-opened
Flag # 14	___ closed	✓ re-opened
Flag # 15	✓ closed	___ re-opened
Flag # 16	___ closed	✓ re-opened
Flag # 17	___ closed	✓ re-opened
Flag # 18	___ closed	✓ re-opened
Flag # 19	___ closed	✓ re-opened

Wildlife observed /notes: _____

Performed by: NH Date: 5-14-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 4

This is a: ✓ treated plot (treatment type: Broadcast) ___ control plot

This is a: ___ pre-treatment ✓ post-treatment 1 ___ post-treatment 2

Burrow closing: Date: 5-12-18
Taken by: AM
Time: 9:30 am Temp: 56°F
Wind: 3mph
Precipitation: None

48 Hour re-opening: Date: 5-14-18
Taken by: AM
Time: 9:30 am Temp: 59°F
Wind: Calm
Precipitation: None

Flag # 20	___ closed	✓ re-opened
Flag # 21	___ closed	✓ re-opened
Flag # 22	✓ closed	___ re-opened
Flag # 23	___ closed	✓ re-opened
Flag # 24	___ closed	✓ re-opened
Flag # 25	___ closed	✓ re-opened
Flag # 26	___ closed	✓ re-opened
Flag # 27	___ closed	✓ re-opened
Flag # 28	___ closed	✓ re-opened
Flag # 29	___ closed	✓ re-opened
Flag # 30	___ closed	✓ re-opened
Flag # 31	✓ closed	___ re-opened
Flag # 32	___ closed	✓ re-opened
Flag # 33	___ closed	✓ re-opened
Flag # 34	___ closed	✓ re-opened
Flag # 35	___ closed	✓ re-opened
Flag # ___	___ closed	___ re-opened
Flag # ___	___ closed	___ re-opened
Flag # ___	___ closed	___ re-opened

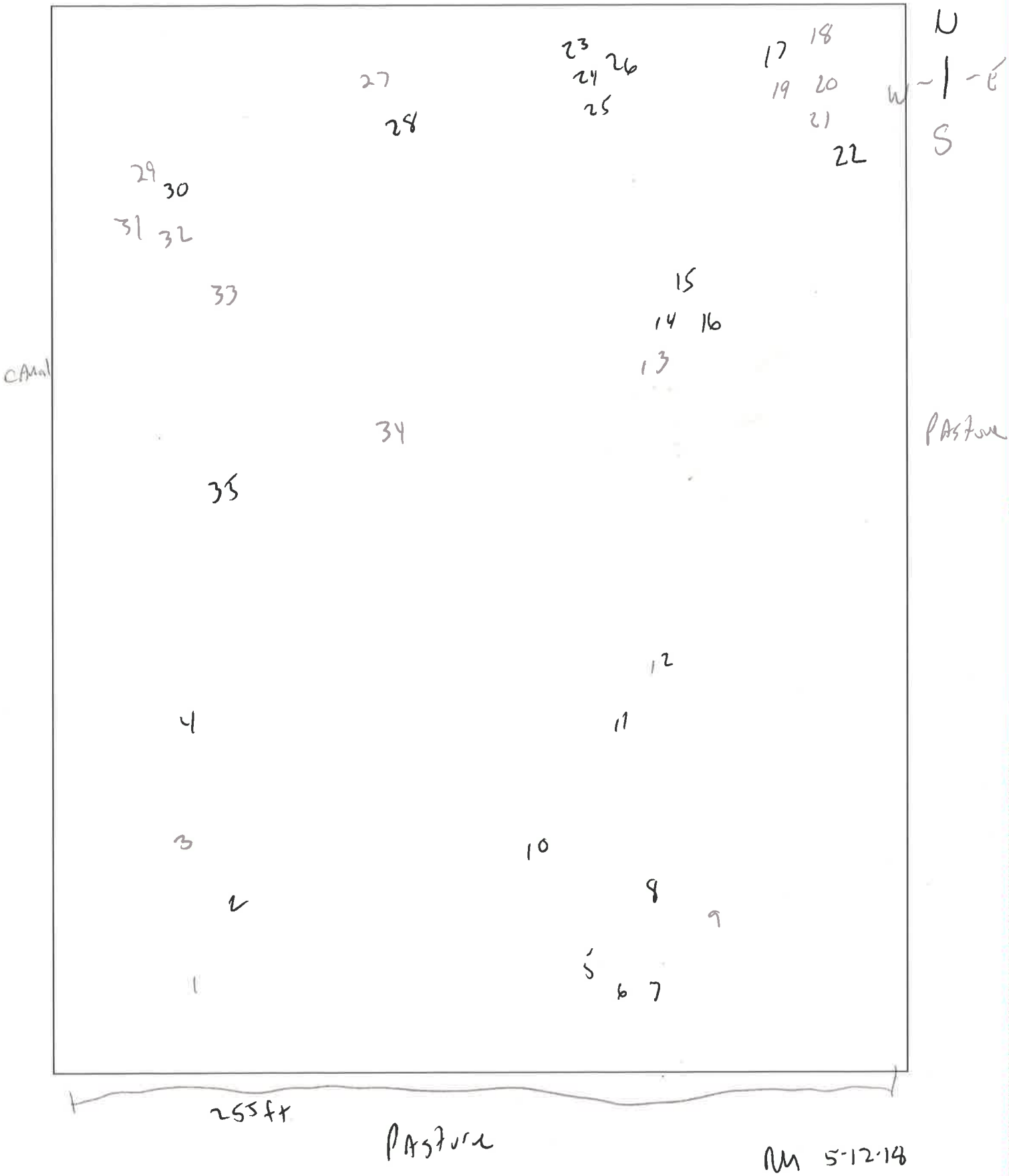
Wildlife observed /notes: ___

Performed by: AM Date: 5-14-18

LTI Study Number 18009

Site Map

Plot ID: 4 Burrow Count Locations - Post Treatment



RM 5-12-14

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 6

This is a: ___ treated plot (treatment type: _____) X control plot

This is a: X pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing	48 Hour re-opening
Date: 4-22-18	Date: 4-24-18
Taken by: LM	Taken by: LM
Time: 11:00 AM Temp: 50°F	Time: 11:00 AM Temp: 54°F
Wind: 3 mph	Wind: 3mph
Precipitation: None	Precipitation: None

	Burrow closing	48 Hour re-opening
Flag # 1	___ closed	X re-opened
Flag # 2	___ closed	X re-opened
Flag # 3	___ closed	X re-opened
Flag # 4	___ closed	X re-opened
Flag # 5	X closed	___ re-opened
Flag # 6	___ closed	X re-opened
Flag # 7	___ closed	X re-opened
Flag # 8	___ closed	X re-opened
Flag # 9	___ closed	X re-opened
Flag # 10	X closed	___ re-opened
Flag # 11	___ closed	X re-opened
Flag # 12	X closed	___ re-opened
Flag # 13	___ closed	X re-opened
Flag # 14	___ closed	X re-opened
Flag # 15	___ closed	X re-opened
Flag # 16	___ closed	X re-opened
Flag # 17	___ closed	X re-opened
Flag # 18	___ closed	X re-opened
Flag # 19	X closed	___ re-opened

Wildlife observed /notes: _____

Performed by: LM Date: 4-24-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: ______

This is a: ___ treated plot (treatment type: ______) ✓ control plot

This is a: ✓ pre-treatment ___ post-treatment 1 ___ post-treatment 2

Burrow closing	48 Hour re-opening
Date: 4-22-18	Date: 4-24-18
Taken by: dl	Taken by: dl
Time: 11:00AM Temp: 50°F	Time: 11:00 Temp: 54°F
Wind: 3mph	Wind: 3mph
Precipitation: None	Precipitation: None

Flag #	closed	re-opened	
20		✓	
21		✓	
22		✓	
23		✓	
24		✓	
25		✓	
26	✓		
27		✓	
28		✓	
29		✓	
30		✓	
31		✓	
32		✓	
33	✓		
34	✓		
35		✓	
		✓ ① — c.e. RM	No burrows here RM 4-24-18
		✓	
		✓	

Wildlife observed /notes: ______

Performed by: dl Date: 4-24-18

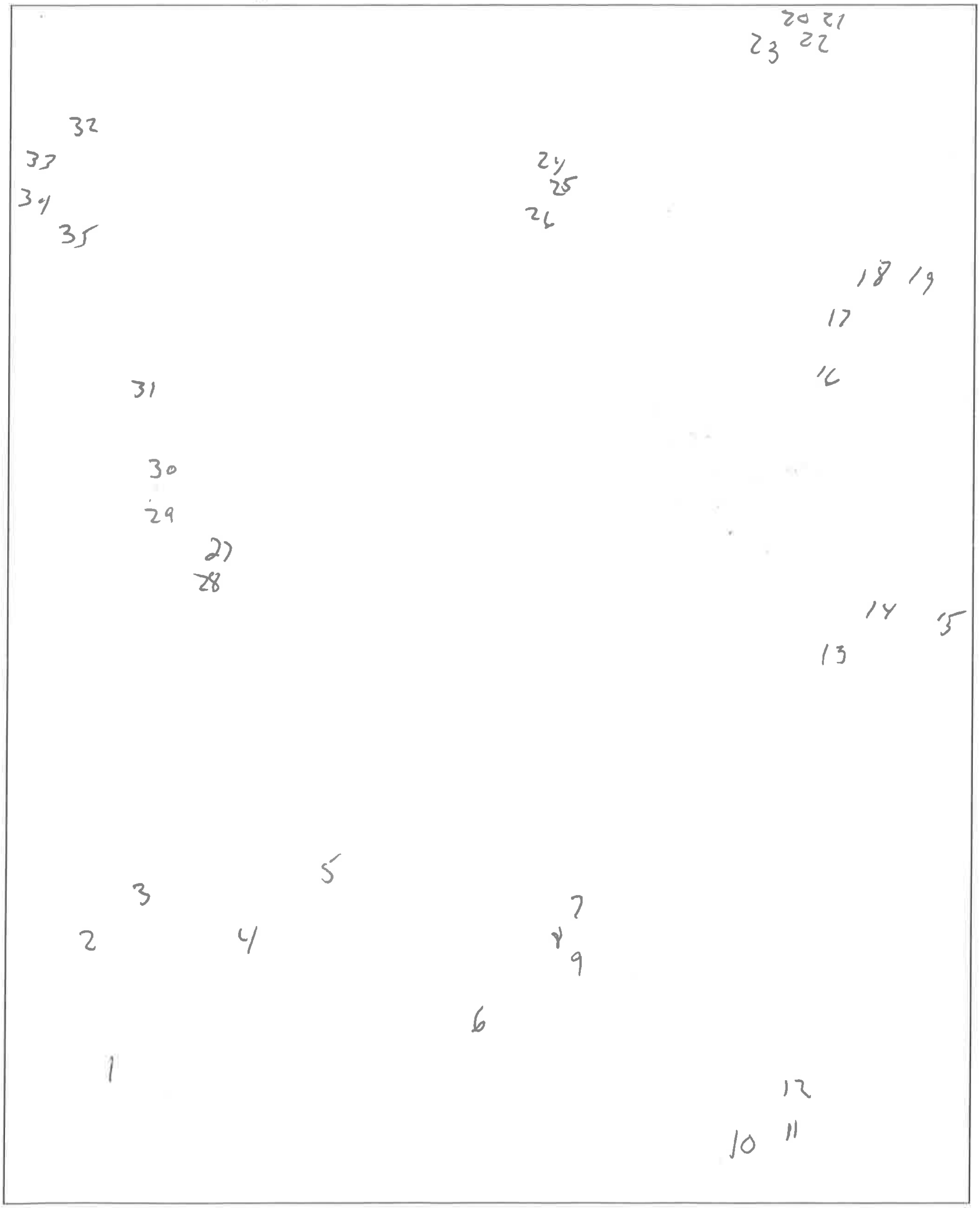
① RM 4-24-18

LTI Study Number 18009

Site Map

N
W – E
S

Plot ID: Plot 6 open burrow locations post treatment



4-24-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 6

This is a: ___ treated plot (treatment type: _____) X control plot

This is a: ___ pre-treatment X post-treatment 1 ___ post-treatment 2

Burrow closing: Date: 5/12-18 | 48 Hour re-opening: Date: 5/14-18

Taken by: NM | Taken by: NM

Time: 10:30AM Temp: 62°F | Time: 10:10 Am Temp: 64°F

Wind: 2 mph | Wind: CALM

Precipitation: None | Precipitation: None

Flag # 1	___ closed	X re-opened
Flag # 2	___ closed	X re-opened
Flag # 3	___ closed	X re-opened
Flag # 4	X closed	___ re-opened
Flag # 5	___ closed	X re-opened
Flag # 6	X closed	___ re-opened
Flag # 7	___ closed	X re-opened
Flag # 8	___ closed	X re-opened
Flag # 9	___ closed	X re-opened
Flag # 10	___ closed	X re-opened
Flag # 11	___ closed	X re-opened
Flag # 12	X closed	___ re-opened
Flag # 13	X closed	___ re-opened
Flag # 14	___ closed	X re-opened
Flag # 15	___ closed	X re-opened
Flag # 16	___ closed	X re-opened
Flag # 17	___ closed	X re-opened
Flag # 18	___ closed	X re-opened
Flag # 19	___ closed	X re-opened

Wildlife observed /notes: _____

Performed by: NM Date: 5-14-18

LTI Study Number 18009

Active Burrow Index Record:

Plot ID: 6

This is a: ___ treated plot (treatment type: _____) ___ control plot

This is a: ___ pre-treatment X post-treatment 1 ___ post-treatment 2

Burrow closing: Date: 5-12-18
Taken by: RM
Time: 10:30 Am Temp: 62°F
Wind: 2 mph
Precipitation: None

48 Hour re-opening: Date: 5-14-18
Taken by: NM
Time: 10:40 Am Temp: 64°F
Wind: Calm
Precipitation: None

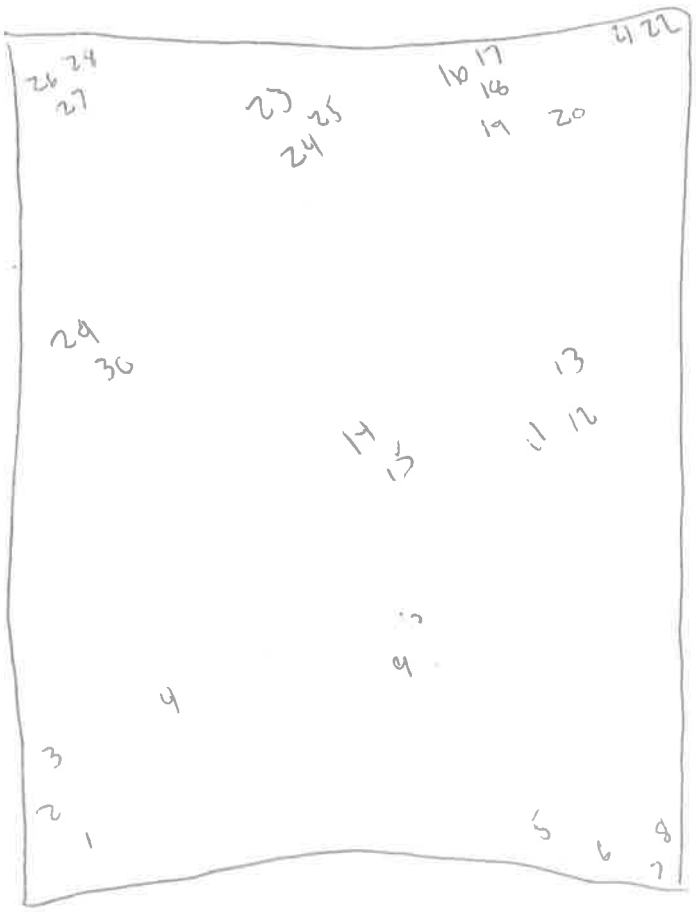
Flag # 20	X closed	___ re-opened
Flag # 21	X closed	___ re-opened
Flag # 22	___ closed	X re-opened
Flag # 23	___ closed	X re-opened
Flag # 24	___ closed	X re-opened
Flag # 25	___ closed	X re-opened
Flag # 26	X closed	___ re-opened
Flag # 27	___ closed	X re-opened
Flag # 28	___ closed	X re-opened
Flag # 29	___ closed	X re-opened
Flag # 30	___ closed	X re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened
Flag # ____	___ closed	___ re-opened

Wildlife observed /notes: _____

Performed by: NM Date: 5-14-18

Plot 6 - open burrow locations post treatment

N
W
E
S



5-15-18

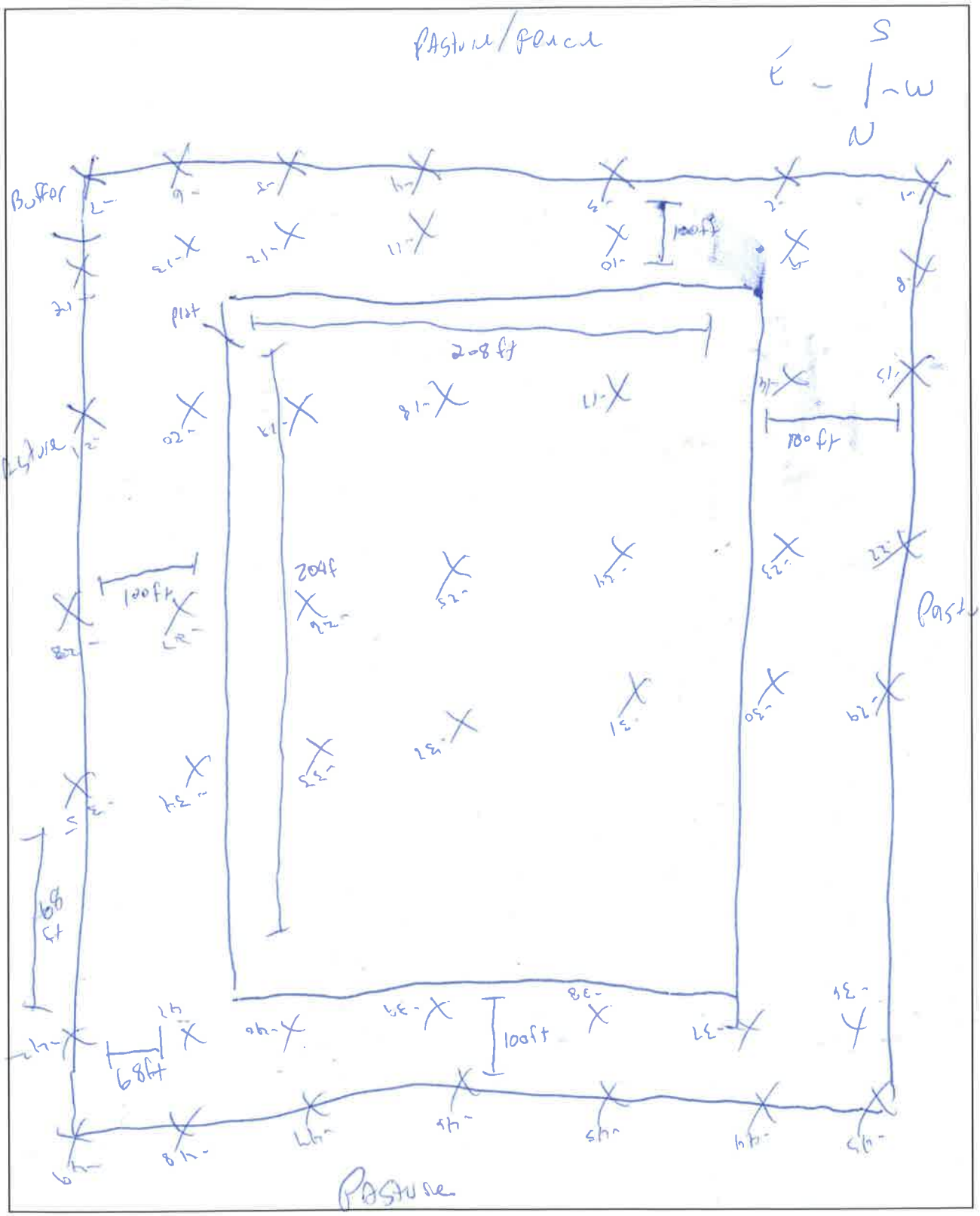
LTI Study Number 18009

Site Map

Bait Station Setup

X = Bait Station Location

Plot ID: 2 4-23-18



4-23-18

LTI Study Number 18009

Measuring/ Application Cup Calibration Record

Date: 4-23-18 Performed by: Ryan

Scale ID and Serial #: BG5043976B

Rozol Bait lot # used: 44A (and returned to pail after use)

Bait Cup ID: 1 cup dry measuring cup labeled
Description of cup: Black

Check to confirm steps of calibration:

Steps	Trial A	Trial B	Trial C
Scale verification	X	X	X
Scale tared	X	X	X
Empty cup placed on scale and tared	X	X	X
Bait added to cup and leveled off	X	X	X

Bait Cup ID: _____	Weight g (units)
Trial A	179.1 g
Trial B	183.3 g
Trial C	184.1 g
Average	182.2 g = .4 lbs

LTI Study Number 18009

Rozol Bait Station Application Beginning of Study Record

Plot ID: 2 Applicator name: Ryan

Bait lot #: 94062-1

Date of application: 4-24-18 Time started: 9:00 Am Time completed: 11:00 Am

Attach plot diagram showing bait station location

Bait station #:	1	Amount (lbs) Added:	2.0 lbs
Bait station #:	2	Amount (lbs) Added:	2.0 lbs
Bait station #:	3	Amount (lbs) Added:	2.0 lbs
Bait station #:	4	Amount (lbs) Added:	2.0 lbs
Bait station #:	5	Amount (lbs) Added:	2.0 lbs
Bait station #:	6	Amount (lbs) Added:	2.0 lbs
Bait station #:	7	Amount (lbs) Added:	2.0 lbs
Bait station #:	8	Amount (lbs) Added:	2.0 lbs
Bait station #:	9	Amount (lbs) Added:	2.0 lbs
Bait station #:	10	Amount (lbs) Added:	2.0 lbs
Bait station #:	11	Amount (lbs) Added:	2.0 lbs ①
Bait station #:	12	Amount (lbs) Added:	2.0 lbs
Bait station #:	13	Amount (lbs) Added:	2.0 lbs
Bait station #:	14	Amount (lbs) Added:	2.0 lbs
Bait station #:	15	Amount (lbs) Added:	2.0 lbs

Total net amount (lbs) of bait applied to plot: ..... 98.0 lbs

Wildlife observed /notes: _____

① 2.0 lbs m 4-24-18

LTI Study Number 18009

Rozol Bait Station Application Beginning of Study Record

Plot ID: 2 Applicator name: Ryan

Bait lot #: 94062-1

Date of application: 4-24-18 Time started: 9:00 AM Time completed: 11:00 AM

Attach plot diagram showing bait station location

Bait station #:	16	Amount (lbs) Added:	2.0 lbs
Bait station #:	17	Amount (lbs) Added:	2.0 lbs
Bait station #:	18	Amount (lbs) Added:	2.0 lbs
Bait station #:	19	Amount (lbs) Added:	2.0 lbs
Bait station #:	20	Amount (lbs) Added:	2.0 lbs
Bait station #:	21	Amount (lbs) Added:	2.0 lbs
Bait station #:	22	Amount (lbs) Added:	2.0 lbs
Bait station #:	23	Amount (lbs) Added:	2.0 lbs
Bait station #:	24	Amount (lbs) Added:	2.0 lbs
Bait station #:	25	Amount (lbs) Added:	2.0 lbs
Bait station #:	26	Amount (lbs) Added:	2.0 lbs
Bait station #:	27	Amount (lbs) Added:	2.0 lbs
Bait station #:	28	Amount (lbs) Added:	2.0 lbs
Bait station #:	29	Amount (lbs) Added:	2.0 lbs
Bait station #:	30	Amount (lbs) Added:	2.0 lbs

Total net amount (lbs) of bait applied to plot: ..... 98.0 lbs

Wildlife observed /notes: _____

RM 4-24-18

LTI Study Number 18009

Rozol Bait Station Application Beginning of Study Record

Plot ID: 2 Applicator name: Ryan

Bait lot #: 94062-1

Date of application: 4-24-18 Time started: 9:00 am Time completed: 11:00 am

Attach plot diagram showing bait station location

Bait station #:	31	Amount (lbs) Added:	2.0 lbs
Bait station #:	32	Amount (lbs) Added:	2.0 lbs
Bait station #:	33	Amount (lbs) Added:	2.0 lbs
Bait station #:	34	Amount (lbs) Added:	2.0 lbs
Bait station #:	35	Amount (lbs) Added:	2.0 lbs
Bait station #:	36	Amount (lbs) Added:	2.0 lbs
Bait station #:	37	Amount (lbs) Added:	2.0 lbs
Bait station #:	38	Amount (lbs) Added:	2.0 lbs
Bait station #:	39	Amount (lbs) Added:	2.0 lbs
Bait station #:	40	Amount (lbs) Added:	2.0 lbs
Bait station #:	41	Amount (lbs) Added:	2.0 lbs
Bait station #:	42	Amount (lbs) Added:	2.0 lbs
Bait station #:	43	Amount (lbs) Added:	2.0 lbs
Bait station #:	44	Amount (lbs) Added:	2.0 lbs
Bait station #:	45	Amount (lbs) Added:	2.0 lbs

Total net amount (lbs) of bait applied to plot: ..... 98.0 lbs

Wildlife observed /notes: _____

_____

_____

_____

RM 4-24-18

LTI Study Number 18009

Rozol Bait Station Application Beginning of Study Record

Plot ID: 2 Applicator name: Ryan

Bait lot #: 94062-1

Date of application: 4-24-18 Time started: 9:00 AM Time completed: 11:00 Am

Attach plot diagram showing bait station location

Bait station #:	46	Amount (lbs) Added:	2.0 lbs
Bait station #:	47	Amount (lbs) Added:	2.0 lbs
Bait station #:	48	Amount (lbs) Added:	2.0 lbs
Bait station #:	49	Amount (lbs) Added:	2.0 lbs
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	
Bait station #:		Amount (lbs) Added:	

Total net amount (lbs) of bait applied to plot: ..... 98.0 lbs

Wildlife observed /notes: No Working field Scale was provided for this Study. All beginning weights are estimates based on Average weight of 1 dry measuring cup of bait. (5 Scoops of bait for each station)
*Actual Amount of bait applied after weighing buckets is 100 lbs compared to my estimate of 98 lbs.

RM 4-24-18

LTI Study Number 18009

Rozol Bait Station Application Record

Plot ID: 2 (Page 1 of 2)

Applicator name: Ryan

Application method / device ID: Bait Station

Date of application: 4-24-18 Bait lot #: 94062-1

Pail no. 10A Weight start 5042.6g finish 514.8g net 4527.8g

Pail no. 29A Weight start 5055.2g finish 510.3g net 4544.9g

Pail no. 44A Weight start 5041.4g finish 514.9g net 4526.5g

Pail no. 19A Weight start 5010.1g finish 503.1g net 4507.0g

Pail no. 23A Weight start 5043.7g finish 473.0g net 4570.7g

Pail no. 31A Weight start 5056.2g finish 500.4g net 4555.8g

Pail no. 50A Weight start 5052.9g finish 519.9g net 4533.0g

Pail no. 30A Weight start 5050.1g finish 510.2g net 4539.9g

Pail no. 41A Weight start 5057.3g finish 516.2g net 4541.1g

Total net weight (lbs) of bait applied to plot ..... 40,846.7g or ~~90~~ (1) lbs

90.1 lbs run 4-24-18

Scale ID and serial number: B6504397 68

Scale verification: **(circle to confirm verification is performed prior to using scale)** (Yes)

(1) - Rounding error Run 4-24-18

Run 4-24-18

LTI Study Number 18009

Rozol Bait Station Application Record

Plot ID: 2 (Page 2 of 2)

Applicator name: Lyon

Application method / device ID: Bait Station

Date of application: 4-24-18 Bait lot #: 91062-1

Pail no. 16A Weight start 5013.9g finish 506.2g net 4507.7g

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Total net weight (lbs) of bait applied to plot ..... 4507.7g or ~~10lbs~~ 9.9lbs (1) LM 4-24-18

Scale ID and serial number: BG504397641

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

(1) Rounding error LM 4-24-18

LM 4.24.18

LTI Study Number 18009

Rozol Bait Station Application Record

Plot ID: 2

Applicator name: Ryan J

Application method / device ID: Bait Station

Date of application: 4-26-18 Bait lot #: 94061-1

Pail no. 36 A Weight start 5050.0g finish 2689.5g net 2360.5g

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Total net weight (lbs) of bait applied to plot ..... ~~5 lbs 3 oz~~ 5.2 lbs (1) RM 4-26-18

Scale ID and serial number: BG504397 68

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

(1) Rounding Error RM 4-26-18

RM 4-26-18

LTI Study Number 18009

Rozol Bait Station Re-fill Application Record

Plot ID: 2 Applicator name: Ryan

Bait lot #: 94062-1

Date of application: 4-26-18 Time started: 9:30Am Time completed: 9:50Am

Attach plot diagram showing bait station location

Bait station #:	7	Amount (cups) Added:	3
Bait station #:	8	Amount (cups) Added:	1
Bait station #:	9	Amount (cups) Added:	1
Bait station #:	11	Amount (cups) Added:	2
Bait station #:	12	Amount (cups) Added:	1
Bait station #:	16	Amount (cups) Added:	1
Bait station #:	22	Amount (cups) Added:	1
Bait station #:	25	Amount (cups) Added:	1
Bait station #:	28	Amount (cups) Added:	1
Bait station #:	29	Amount (cups) Added:	1
Bait station #:	46	Amount (cups) Added:	1
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	

Total net amount (cups) of bait applied to plot: 14

Total net weight (oz. or lbs.) of bait applied to plot 5.6 lbs

(# cups x weight of calibrated cup = total net weight applied)

Wildlife observed /notes: _____

4-26-18 RM

LTI Study Number 18009

Rozol Bait Station Application Record

Plot ID: 2

Applicator name: Ryan

Application method / device ID: Bait Station

Date of application: 4-28-14 Bait lot #: 94061-1

Pail no. 36A Weight start 2689.5g finish 538.3g net 2151.2g

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Total net weight (lbs) of bait applied to plot ..... 4.7 lbs

Scale ID and serial number: B650439764

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

4-28-14 RM

LTI Study Number 18009

Rozol Bait Station Re-fill Application Record

Plot ID: 2 Applicator name: NM

Bait lot #: 94062-1

Date of application: 4-28-18 Time started: 9:30AM Time completed: 9:50AM

Attach plot diagram showing bait station location

Bait station #:	7	Amount (cups) Added:	2
Bait station #:	5	Amount (cups) Added:	2
Bait station #:	11	Amount (cups) Added:	1
Bait station #:	12	Amount (cups) Added:	1
Bait station #:	27	Amount (cups) Added:	1
Bait station #:	35	Amount (cups) Added:	2
Bait station #:	29	Amount (cups) Added:	1
Bait station #:	36	Amount (cups) Added:	1
Bait station #:	49	Amount (cups) Added:	1
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	

Total net amount (cups) of bait applied to plot: 12

Total net weight (oz. or lbs.) of bait applied to plot 4.8 lbs

(# cups x weight of calibrated cup = total net weight applied)

Wildlife observed /notes: _____

4-28-18 NM

LTI Study Number 18009

Rozol Bait Station Application Record

Plot ID: 2

Applicator name: Ryan

Application method / device ID: Bait Station

Date of application: 4-29-18 Bait lot #: 94661-1

Pail no. 12A Weight start 5043.9g finish 2198.9g net 2845g

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Total net weight (lbs) of bait applied to plot 6.3lbs

Scale ID and serial number: B6504397 68

Scale verification: **(circle to confirm verification is performed prior to using scale)** (Yes)

RM 4-29-18

LTI Study Number 18009

Rozol Bait Station Re-fill Application Record

Plot ID: 2 Applicator name: Ryan

Bait lot #: 94062-1

Date of application: 4-29-18 Time started: 9:10 AM Time completed: 9:30 AM

Attach plot diagram showing bait station location

Bait station #: 7 Amount (cups) Added: 2

Bait station #: 6 Amount (cups) Added: 1

Bait station #: 3 Amount (cups) Added: 1

Bait station #: 11 Amount (cups) Added: 1

Bait station #: 14 Amount (cups) Added: 2

Bait station #: 18 Amount (cups) Added: 1

Bait station #: 28 Amount (cups) Added: 2

Bait station #: 32 Amount (cups) Added: 2

Bait station #: 29 Amount (cups) Added: 1

Bait station #: 42 Amount (cups) Added: 2

Bait station #: 49 X ~~~ RM (1) Amount (cups) Added: 1

Bait station #: ______ Amount (cups) Added: ______

Bait station #: ______ Amount (cups) Added: ______

Bait station #: ______ Amount (cups) Added: ______

Bait station #: ______ Amount (cups) Added: ______

Total net amount (cups) of bait applied to plot: 16

Total net weight (oz. or lbs.) of bait applied to plot 6.4 lbs

(# cups x weight of calibrated cup = total net weight applied)

Wildlife observed /notes: Station 7 bait pushed out

(1) 49 - RM - citation error 4-29-18

RM 4-29-18

Bait Station MM 5-1-18

LTI Study Number 18009

Rozol ~~Bait Broadcast~~ Application Record

Plot ID: 2

Applicator name: Ryan

Application method / device ID: Bait Station

Date of application: 5-1-18 Bait lot #: _____

Time application started: 11:10 Am Time completed: 11:30 Am

For broadcast applications: attach plot diagram showing application swaths as flagged, measured and recorded on Broadcast Application Rate Record (attached).

Pail no. 12 A Weight start 2198.9g finish 556.8g net 1642.1g

Pail no. 6 A Weight start 4999.6g finish 4103.2g net 896.4g

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Total net weight (lbs) of bait applied to plot ..... 2538.5g or 5.615 lbs

Scale ID and serial number: B6504 39768

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

Need to Rename Sheet MM

MM 5-1-18

LTI Study Number 18009

Rozol Bait Station Re-fill Application Record

Plot ID: 2 Applicator name: [illegible]

Bait lot #: 94062-1

Date of application: 5-1-18 Time started: 11:10 Am Time completed: 11:30 Am

Attach plot diagram showing bait station location

Bait station #:	1	Amount (cups) Added:	1
Bait station #:	3	Amount (cups) Added:	2
Bait station #:	4	Amount (cups) Added:	2
Bait station #:	7	Amount (cups) Added:	1
Bait station #:	12	Amount (cups) Added:	1
Bait station #:	13	Amount (cups) Added:	1
Bait station #:	8	Amount (cups) Added:	1
Bait station #:	28	Amount (cups) Added:	2
Bait station #:	29	Amount (cups) Added:	2
Bait station #:	49	Amount (cups) Added:	1
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	

Total net amount (cups) of bait applied to plot: 14

Total net weight (oz. or lbs.) of bait applied to plot 5.6 lbs

(# cups x weight of calibrated cup = total net weight applied)

Wildlife observed /notes: _____

_____

_____

_____

[illegible] 5-1-18

Bait station MM 5-3-18

LTI Study Number 18009

Rozol Bait ~~Broadcast~~ Application Record

Plot ID: 2

Applicator name: Ryan

Application method / device ID: Bait Station

Date of application: 5-3-18 Bait lot #: _____

Time application started: 9:20 AM Time completed: 9:40 AM

For broadcast applications: attach plot diagram showing application swaths as flagged, measured and recorded on Broadcast Application Rate Record (attached).

Pail no. 6A Weight start 4103.2g finish 3162.0 net 941.2g

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Total net weight (lbs) of bait applied to plot ..... 2.1 lbs

Scale ID and serial number: B650439760

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

(1) - Need to Rename Sheet RM

MM - 5-3-18

LTI Study Number 18009

Rozol Bait Station Re-fill Application Record

Plot ID: 2 Applicator name: Ryan

Bait lot #: 94062-1

Date of application: 5-3-18 Time started: 9:20 AM Time completed: 9:40 AM

Attach plot diagram showing bait station location

Bait station #:	1	Amount (cups) Added:	1
Bait station #:	4	Amount (cups) Added:	1
Bait station #:	28	Amount (cups) Added:	1
Bait station #:	41	Amount (cups) Added:	1
Bait station #:	49	Amount (cups) Added:	1
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	
Bait station #:		Amount (cups) Added:	

Total net amount (cups) of bait applied to plot: 5

Total net weight (oz. or lbs.) of bait applied to plot 2lbs

(# cups x weight of calibrated cup = total net weight applied)

Wildlife observed /notes: _____

RM 5-3-18

LTI Study Number 18009

Rozol Bait Station Remaining at End of Study Record

Plot ID: 2 Applicator name: Ryan

End of Study Date: 5-5-18 Bait lot #: 94062-1

Attach plot diagram showing bait station location

Bait station #:	1	Weight finish	23g
Bait station #:	2	Weight finish	675.3g
Bait station #:	3	Weight finish	660.0g
Bait station #:	4	Weight finish	724.5g
Bait station #:	5	Weight finish	736.3g
Bait station #:	6	Weight finish	742.9g
Bait station #:	7	Weight finish	642.1g
Bait station #:	8	Weight finish	756.2g
Bait station #:	9	Weight finish	966.6g
Bait station #:	10	Weight finish	731.4
Bait station #:	11	Weight finish	790.6g
Bait station #:	12	Weight finish	827.3g
Bait station #:	13	Weight finish	579.2g
Bait station #:	14	Weight finish	1125.0g
Bait station #:	15	Weight finish	809.1g

Total net weight (lbs) remaining at the end of the Study : 10789.5g

Wildlife observed /notes: _____

Calculated total weight of Rozol Bait applied =
Net Weight of Bait Applied – Net Weight Remaining = Notes/Calculations on Last Page

Calculated lbs/acre = Total weight of Rozol Bait applied / # of acres of treatment plot = _____

Scale ID and serial number: B6504 39768

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

RM 5-5-18

LTI Study Number 18009

Rozol Bait Station Remaining at End of Study Record

Plot ID: 2 Applicator name: Ryan

End of Study Date: 5/5/18 Bait lot #: 940621

Attach plot diagram showing bait station location

Bait station #:	16	Weight finish	1030.3g
Bait station #:	17	Weight finish	871.0g
Bait station #:	18	Weight finish	998.7g
Bait station #:	19	Weight finish	783.2g
Bait station #:	20	Weight finish	673.7g
Bait station #:	21	Weight finish	823.4g
Bait station #:	22	Weight finish	773.0g
Bait station #:	23	Weight finish	828.1g
Bait station #:	24	Weight finish	866.1g
Bait station #:	25	Weight finish	952.5g
Bait station #:	26	Weight finish	808.4g
Bait station #:	27	Weight finish	916.9g
Bait station #:	28	Weight finish	857.1g
Bait station #:	29	Weight finish	627.4g
Bait station #:	30	Weight finish	854.6g

Total net weight (lbs) remaining at the end of the Study : 12664.4g

Wildlife observed /notes:

45,354.4g initial - 2360.5g - 2151.2g - 2845.0g - 2538.5g - 941.2g
= 56,190.8g - total Applied

Calculated total weight of Rozol Bait applied =
Net Weight of Bait Applied – Net Weight Remaining = 19,166.5g / 42.3lbs

Calculated lbs/acre = Total weight of Rozol Bait applied (37,024.3g total) / # of acres of treatment plot (42.3lbs / 3.8 acres (408ft x 408ft)) = 11.1 lbs/acre

Scale ID and serial number: b4504397b8

Scale verification: **(circle to confirm verification is performed prior to using scale)** (Yes)

Ryan 5-5-18

LTI Study Number 18009

Rozol Bait Station Remaining at End of Study Record

Plot ID: 2 Applicator name: Ryan

End of Study Date: 5.5.18 Bait lot #: 94062.1

Attach plot diagram showing bait station location

Bait station #:	31	Weight finish	707.0 g
Bait station #:	32	Weight finish	782.7 g
Bait station #:	33	Weight finish	591.1 g
Bait station #:	34	Weight finish	766.2 g
Bait station #:	35	Weight finish	1087.4 g
Bait station #:	36	Weight finish	720.0 g
Bait station #:	37	Weight finish	731.0 g
Bait station #:	38	Weight finish	631.2 g
Bait station #:	39	Weight finish	796.2 g
Bait station #:	40	Weight finish	632.3 g
Bait station #:	41	Weight finish	57.5 g
Bait station #:	42	Weight finish	806.2 g
Bait station #:	43	Weight finish	769.8 g
Bait station #:	44	Weight finish	814.1 g
Bait station #:	45	Weight finish	719.7 g

Total net weight (lbs) remaining at the end of the Study : 10612.4 g

Wildlife observed /notes: _____

Calculated total weight of Rozol Bait applied =
Net Weight of Bait Applied – Net Weight Remaining = 19100.5 g / 42.3 lbs

Calculated lbs/acre = Total weight of Rozol Bait applied / # of acres of treatment plot = 42.3 lbs / 3.8 acres = 11.1 lbs/acre

Scale ID and serial number: BC5043968

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

RM - 5.5.18

LTI Study Number 18009

Rozol Bait Station Remaining at End of Study Record

Plot ID: 2 Applicator name: Ryan

End of Study Date: 5-5-18 Bait lot #: 94062-1

Attach plot diagram showing bait station location

Bait station #:	46	Weight finish	999.8g
Bait station #:	47	Weight finish	761.2g
Bait station #:	48	Weight finish	697.6g
Bait station #:	49	Weight finish	499.4g
Bait station #:		Weight finish	
Bait station #:		Weight finish	
Bait station #:		Weight finish	
Bait station #:		Weight finish	
Bait station #:		Weight finish	
Bait station #:		Weight finish	
Bait station #:		Weight finish	
Bait station #:		Weight finish	
Bait station #:		Weight finish	
Bait station #:		Weight finish	

Total net weight (lbs) remaining at the end of the Study : 2958.0g

Wildlife observed /notes: _____

Calculated total weight of Rozol Bait applied =
Net Weight of Bait Applied – Net Weight Remaining = 19,146.5g 42.3 lbs/acre

Calculated lbs/acre = Total weight of Rozol Bait applied 42.3 lbs = 11.1 lbs/acre
# of acres of treatment plot 3.8 acre

Scale ID and serial number: BC5043764

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

RM 5-5-18

LTI Study Number 18009

Bait Spreader Calibration Record

Date: 4-24-18 Spreader ID and Serial #: Solo Model 425

Scale ID and Serial #: B6504 39 Ded

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

Swath width determination (not including bouncing or rolling of grain)

Pass #	Width measured	Comments	By
1	9ft 0in		
2	8ft 10in		
3	9ft 2in		
average	9ft 0in		

Discharge rate determination from 60 crank rotations in 60 seconds

Trial #	Flow rate lever setting	Weight of discharged grain	By
1	3	129.6g	
2	3	151.8g	
3	3	148.7g ① RM 4-24-18	
average	3	143.4g or .3lbs .316 lbs	

Target application rate: 10 pounds per acre (43,560 square feet).

Distance covered walking ~150 feet per minute (~2.5 feet per second): ~150 feet

Area covered: ~150 feet × average swath width of 9.0 feet = 1350 sq. ft. ② RM 4-24-18

Application rate: Discharge rate .3lbs (⑤ 4-24-18) / Area covered 1350 sq ft. = .00022 (.000234 ④ RM 4-24-18) lbs/sq ft.

(.316 lbs ③ RM 4-24-18)

Expressed as "per acre" rate: Application rate .00022 (.00234) lbs/sq ft.×43,560 = 9.68 (10.193) lbs/acre

Based on the calibration recorded on this page, the spreader flow rate lever setting should be used to achieve an application rate of approximately 10 pounds of bait per acre, walking at approximately 2.5 feet per second and rotating the spreader crank handle at approximately 1 rotation per second: RM

① Rounding Error
② Rounding Error
③ Rounding Error
④⑤ Rounding Error

} KM 4-24-18

RM 4-24-18

LTI Study Number 18009

Broadcast Application Rate Calculation Record

Plot ID: 4 (1st Application) PAGE 1

Date measurements are made: 4-24-18

Using the plot application/swath diagram showing planned application pattern, determine area to which this weight of bait was applied, by measuring the actual length of the application swaths as marked by flags and indicated on the attached Plot diagram, as measured using a measuring wheel.
(the measuring wheel is not calibrated or maintained according to GLP requirements).

Swath number recorded on plot diagram	Measured length of swath	Performed by
1	13 ft	
2	34 ft	
3	97 ft	
4	18 ft	
5	20 ft	
6	69 ft	
7	29 ft	
8	27 ft	
9	92 ft	
10	170 ft	
11	32 ft	
12	36 ft	
13	35 ft	
Total: 26	Total: ~~2434~~ 2,288 ⑥ RM 4-24-18	

Swath width used in area calculation: 9.0 feet
(from Bait Spreader Calibration Record dated 4-23-18) 18 ① RM

Swath width x total length of swaths applied to plot: ~~21,951~~ 20,592 sq. ft. ② RM 4-24-18

Total net weight of bait applied to plot: ~~5.0~~ 5.01 pounds ⑤ RM 4-24-18
(from Rozol Bait Application Record dated 4-24-18) 18 ② RM

Calculated application rate: ~~.00023~~ .000243 pounds / sq feet ⑥ RM 4-24-18

"per acre" rate: Application rate ~~.00023~~ .000243 lbs/sq ft. × 43,560 = ~~9.97~~ 10.59 lbs/acre ⑥ 4-24-18 RM

① RM 4-24-18

⑤ adding error ⑥ adding error ① 4-23-18 - citation error RM
⑦ adding error ⑧ adding error ② 4-24-18 - citation error RM
⑤ adding error - RM 4-24-18

RM 4-24-18

LTI Study Number 18009

Broadcast Application Rate Calculation Record

Plot ID: 4 (1st Application) PAGE 2

Date measurements are made: 4-24-18

Using the plot application/swath diagram showing planned application pattern, determine area to which this weight of bait was applied, by measuring the actual length of the application swaths as marked by flags and indicated on the attached Plot diagram, as measured using a measuring wheel.
(the measuring wheel is not calibrated or maintained according to GLP requirements).

Swath number recorded on plot diagram	Measured length of swath	Performed by
14	25 ft	RM
15	16 ft	RM
16	45 ft	RM
17	15 ft	RM
18	114 ft	RM
19	52 ft	RM
20	47 ft	RM
21	305 ft	RM
22	230 ft	RM
23	105 ft	RM
24	20 ft	RM
25	319 ft	RM
26	344 ft	RM
Total: 26	Total: 2439 ② 4-24-18 RM	RM

2,288

Swath width used in area calculation: 90 feet
(from Bait Spreader Calibration Record dated 4-23-14) ③ 20,592 RM 4-24-18

Swath width x total length of swaths applied to plot: ~~21952~~ sq. ft.

Total net weight of bait applied to plot: ~~5.0~~ pounds
(from Rozol Bait Application Record dated 4-24-14) ④ 5.01 RM 4-24-18

Calculated application rate: ⑤ .000243 RM 4-24-18 pounds / sq feet

⑦ RM 4-24-18

"per acre" rate: Application rate .00023 lbs/sq ft.×43,560 = ⑥ ~~9.92~~ lbs/acre
RM 4-24-18 application color .000243 RM 4-24-18 10.59

① ~~Application~~ color RM 4-24-18 21,951 sq ft

4-24-18 RM

LTI Study Number 18009

Broadcast Application Rate Calculation Record

Plot ID: 4 (2nd Application) PAGE 1

Date measurements are made: 4-24-18 ① / 4-28-18

Using the plot application/swath diagram showing planned application pattern, determine area to which this weight of bait was applied, by measuring the actual length of the application swaths as marked by flags and indicated on the attached Plot diagram, as measured using a measuring wheel.
(the measuring wheel is not calibrated or maintained according to GLP requirements).

Swath number recorded on plot diagram	Measured length of swath	Performed by
1	13 ft	
2	34ft	
3	97ft	
4	18ft	
5	20ft	
6	69ft	
7	29ft	
8	27ft	
9	92ft	
10	170ft	
11	32 ft	
12	36 ft	
13	35ft	
Total: 26	Total: 2439 ② RM - 4-28-18 / 2288	

Swath width used in area calculation: ① RM 4-23-18 9.0 feet
(from Bait Spreader Calibration Record dated ~~4-23-18~~)

Swath width x total length of swaths applied to plot: ~~21,951~~ / 20592 ② 4-28-18 RM sq. ft.

Total net weight of bait applied to plot: 4.6 pounds
(from Rozol Bait Application Record dated 4-28-18)

Calculated application rate: ~~.00021~~ / .000223 ④ - 4-28-18 RM pounds / sq feet

"per acre" rate: Application rate ~~.00021~~ / .000223 ⑥ 4-28-18 RM lbs/sq ft.×43,560 = ~~9.1~~ / 9.71 ⑤ 4-28-18 RM lbs/acre

① citation error RM 4-28-18

②-⑥ adding error RM - 4-28-18

RM 4-28-18

LTI Study Number 18009

Broadcast Application Rate Calculation Record

Plot ID: 4 (2nd Application) PAGE 2

Date measurements are made: 4-24-18 ① RM 4-28-18
28

Using the plot application/swath diagram showing planned application pattern, determine area to which this weight of bait was applied, by measuring the actual length of the application swaths as marked by flags and indicated on the attached Plot diagram, as measured using a measuring wheel.
(the measuring wheel is not calibrated or maintained according to GLP requirements).

Swath number recorded on plot diagram	Measured length of swath	Performed by
14	25 ft	RM
15	16 ft	RM
16	48 ft	RM
17	15 ft	RM
18	114 ft	RM
19	52 ft	RM
20	45 ft	RM
21	305 ft	RM
22	230 ft	RM
23	105 ft	RM
24	20 ft	RM
25	319 ft	RM
26	322 ft	RM
Total: 26	Total:	

Swath width used in area calculation: 9.0 feet
(from Bait Spreader Calibration Record dated 4-23-18) ② RM 4-28-18

Swath width x total length of swaths applied to plot: ~~3195~~ 2952 sq. ft.

Total net weight of bait applied to plot: 4.6 pounds
(from Rozol Bait Application Record dated 4-26-18)

.000223 ③ RM 4-28-18

Calculated application rate: ~~.00021~~ pounds / sq feet

"per acre" rate: Application rate ~~.00021~~ ⑤ RM 4-28-18
.000223 lbs/sq ft.×43,560 = ~~9.1~~ ④ RM 4-28-18
9.71 lbs/acre

① Calculation Error 4-28-18 RM

②-⑤ adding error 4-28-18 RM

RM - 4-28-18

LTI Study Number 18009

Broadcast Application Rate Calculation Record

Plot ID: 4- (3rd Application) PAGE 1

Date measurements are made: 5-3-18

Using the plot application/swath diagram showing planned application pattern, determine area to which this weight of bait was applied, by measuring the actual length of the application swaths as marked by flags and indicated on the attached Plot diagram, as measured using a measuring wheel.
(the measuring wheel is not calibrated or maintained according to GLP requirements).

Swath number recorded on plot diagram	Measured length of swath	Performed by
1	13 ft	
2	34 ft	
3	97 ft	
4	18 ft	
5	20 ft	
6	69 ft	
7	29 ft	
8	27 ft	
9	92 ft	
10	170 ft	
11	32 ft	
12	36 ft	
13	35 ft	
Total: 24	Total: ① m 5-3-18 ~~2439~~ 2052	

Swath width used in area calculation: 9.0 feet
(from Bait Spreader Calibration Record dated 4-23-18) ⑥ m 5-3-18

Swath width x total length of swaths applied to plot: ~~21,951~~ 20592 sq. ft.

Total net weight of bait applied to plot: ~~5.1 lbs~~ ⑤ m 5-3-18 5.14 pounds
(from Rozol Bait Application Record dated 5-3-18)

Calculated application rate: ~~.000250~~ ⑥ m 5-3-18 .000250 ⑦ m 5-3-18 pounds / sq feet

"per acre" rate: Application rate ~~.000252~~ lbs/sq ft.×43,560 = ~~10.1~~ ⑧ m 5-3-18 10.89 lbs/acre

① add. 1) error 5-3-18 m
② -⑥ adding error 5-3-18 m

LTI Study Number 18009

Broadcast Application Rate Calculation Record

Plot ID: 4 (3rd Application) PAGE 2

Date measurements are made: 5-3-14

Using the plot application/swath diagram showing planned application pattern, determine area to which this weight of bait was applied, by measuring the actual length of the application swaths as marked by flags and indicated on the attached Plot diagram, as measured using a measuring wheel.
(the measuring wheel is not calibrated or maintained according to GLP requirements).

Swath number recorded on plot diagram	Measured length of swath	Performed by
14	25 ft	
15	16 ft	
16	48 ft	
17	15 ft	
18	114 ft	
19	52 ft	
20	45 ft	
21	305 ft	
22	230 ft	
23	105 ft	
24	20 ft	
25	319 ft	
26	322 ft	
Total: 26	Total: 2459 ① 5-3-14 2289	

Swath width used in area calculation: 9.0 feet
(from Bait Spreader Calibration Record dated 4-23-14) 20592 ② 5-3-14

Swath width x total length of swaths applied to plot: 21,951 sq. ft.

Total net weight of bait applied to plot: 5.1 ③ 5-3-14 pounds
(from Rozol Bait Application Record dated 5-3-14) 5.14

Calculated application rate: .00023 1000250 ④ 5-3-14 pounds / sq feet

"per acre" rate: Application rate .00023 ⑤ 5-3-14 lbs/sq ft.×43,560 = 10.1 ⑥ lbs/acre
1000250 10.89

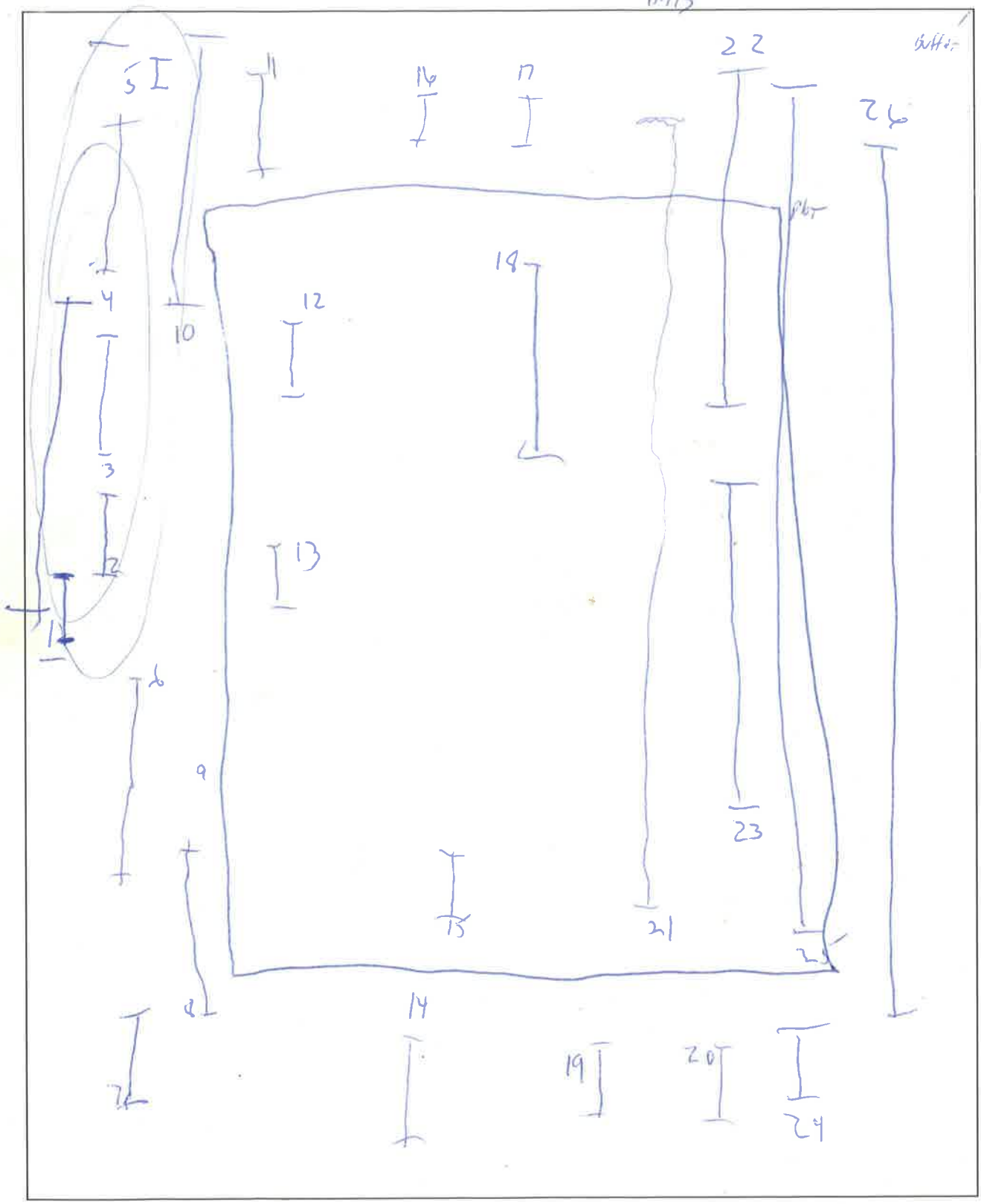
①-⑥ adding errors 5-3-14

LTI Study Number 18009

Site Map

5/3/18 MM

Plot ID: 4- Broadcast Seventh locations - Same used in all 3 treatments



5-3-18 MM

LTI Study Number 18009

Rozol Bait Broadcast Application Record

Plot ID: ~~2~~ ① RM 4-24-18 #4

Applicator name: Ryan

Application method / device ID: Broadcast

Date of application: 4-24-18 Bait lot #: 94062-1

Time application started: 11:00 AM Time completed: 1:00 PM

For broadcast applications: attach plot diagram showing application swaths as flagged, measured and recorded on Broadcast Application Rate Record (attached).

Pail no. 13 A Weight start 5045.3g finish 2772g net 2273.3g

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Total net weight (lbs) of bait applied to plot 5.01lbs

Scale ID and serial number: BG5043976B

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

① citation error Plot # 4 - Run 4

RM 4-24-18

LTI Study Number 18009

Rozol Bait Broadcast Application Record

Plot ID: 4

Applicator name: Ryan

Application method / device ID: Broadcast

Date of application: 4-24-18 Bait lot #: 94062-1

Time application started: 10:00Am Time completed: 11:00Am

For broadcast applications: attach plot diagram showing application swaths as flagged, measured and recorded on Broadcast Application Rate Record (attached).

Pail no. 13 A Weight start 27720g finish 686.7g net 2085.3g

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Total net weight (lbs) of bait applied to plot 4.6lbs

Scale ID and serial number: B650439768

Scale verification: **(circle to confirm verification is performed prior to using scale)** Yes

RM 4-28-18

LTI Study Number 18009

Rozol Bait Broadcast Application Record

Plot ID: 4

Applicator name: RM

Application method / device ID: Broadcast

Date of application: 5-3-18 Bait lot #: 94062-1

Time application started: 12:00Pm Time completed: 12:30Pm

For broadcast applications: attach plot diagram showing application swaths as flagged, measured and recorded on Broadcast Application Rate Record (attached).

Pail no. 14A Weight start 5073.4g finish 2742.7g net ~~2294.7g~~ 2330.7g ② RM 5-3-18

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

Pail no. _____ Weight start _____ finish _____ net _____

① RM 5-3-18
5.06 lbs

Total net weight (lbs) of bait applied to plot ..... ~~5.1~~ lbs

Scale ID and serial number: B650439768

Scale verification: **(circle to confirm verification is performed prior to using scale)** (Yes)

① Rounding Error RM 5-3-18
② Math Error RM 5-3-18

RM 5-3-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 4-29-18 Time of search: 8:00 Am Day 5 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
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______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: MM Date: 4-29-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 4-30-18 Time of search: 8:00am Day 6 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
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______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: JM

Date: 4-30-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-1-18 Time of search: 8:00 Am Day 7 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
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______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: MM Date: 5-1-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-2-18 Time of search: 8:00 Am Day 8 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
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______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: IAM Date: 5-2-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-3-18 Time of search: 8:00 Am Day 9 of study

ID No.	Sex	Age	Condition	Location
	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
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	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: JM Date: 5-3-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-4-18 Time of search: 8:00 Am Day 10 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: AM Date: 5-4-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-5-14 Time of search: 8:00AM Day 11 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: MM Date: 5-5-14

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-6-18 Time of search: 8:00 Am Day 12 of study

ID No.	Sex	Age	Condition	Location
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: [signature] Date: 5-7-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-7-18 Time of search: 8:00 Am Day 13 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: AM Date: 5-7-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-8-18 Time of search: 8:00 am Day 14 of study

ID No.	Sex	Age	Condition	Location
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: AM Date: 5-8-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-9-14 Time of search: 8:00 Am Day 15 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: MM Date: 5-9-14

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-10-18 Time of search: 8:00 Am Day 16 of study

ID No.	Sex	Age	Condition	Location
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: NM Date: 5-10-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-12-18 Time of search: 8:00 Am Day 18 of study

ID No.	Sex	Age	Condition	Location
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: M Date: 5-12-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-13-18 Time of search: 8:00 Am Day 19 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: AM Date: 5-13-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-14-18 Time of search: 8:00 Am Day 20 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: MM Date: 5-14-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 2

Date of search: 5-15-18 Time of search: 8:00 Am Day 21 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: UM Date: 5-15-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 4-29-18 Time of search: 8:30AM Day 5 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

____

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Performed by: AM Date: 4-29-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 4-30-18 Time of search: 8:30 Am Day 6 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: NM Date: 4-30-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-1-18 Time of search: 11:00 AM Day 7 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: JWM Date: 5-1-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-2-18 Time of search: 11:00Am Day 8 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: M Date: 5-2-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-3-18 Time of search: 10:41Am Day 9 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: MM Date: 5-3-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-4-18 Time of search: 10:15 Am Day 10 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: [signature] Date: 5-4-18

LTI Study Number 18009

Carcass Search Record

Plot ID: Y

Date of search: 5-5-18 Time of search: 830Am Day 11 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: WM Date: 5-5-18

LTI Study Number 18009

Carcass Search Record

Plot ID: Y

Date of search: 5-6-18 Time of search: 8:30Am Day 12 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: NM Date: 5-6-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-7-18 Time of search: 8:30 Am Day 13 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: MM Date: 5-7-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-8-14 Time of search: 10:42 AM Day 14 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: WM Date: 5-8-14

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-9-18 Time of search: 11:00AM Day 15 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: WM Date: 5-9-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-10-18 Time of search: 11:15 Am Day 16 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: [illegible] Date: 5-10-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-12-18 Time of search: 6:30 AM Day 18 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: AM Date: 5-12-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-13-18 Time of search: 8:30 am Day 19 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: NM Date: 5-13-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5/14/18 Time of search: 8:30 AM Day 20 of study

ID No.	Sex	Age	Condition	Location
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
____	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: NM Date: 5-14-18

LTI Study Number 18009

Carcass Search Record

Plot ID: 4

Date of search: 5-15-18 Time of search: 8:30 AM Day 21 of study

ID No.	Sex	Age	Condition	Location
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside
______	M F Unk	adult juvenile unk	intact scav intox	treated buffer outside

Wildlife observed /notes on carcasses:

Performed by: AM Date: 5-15-18