ADA COUNTY
PEST ABATEMENT
DISTRICT

2021 Annual Report

Chris Culley, Division Coordinator

Desireé Keeney, Deputy Director

12/9/2021

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https://adacounty.id.gov/weedpestmosquito/

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Mission Statement

The mission of the Ada County Pest Abatement District (ACPAD) is to abate Pocket Gophers and Yellow-bellied marmots ~~(Rock chucks)~~ that threaten agriculture or infrastructure, while providing value and outstanding service to the taxpayers who reside within the district.

District History

On March 26th, 1962 the Ada County Gopher Program was established. It was a cooperative project among Ada County, the various canal companies, the U.S. Fish and Wildlife Service and property owners of Ada County. On December 19th, 1968 the Pest Abatement District was created inside the Ada County boundaries, which excluded the municipalities of Boise City, Meridian, Kuna, Garden City, and later Eagle and Star.

Pest Control Management and Staff

Adam Schroeder, Director
Desireé Keeney, Deputy Director
Chris Culley, Division Coordinator
Diana Beahm, Administration Specialist II

Additional Staff: Up to 15 seasonal employees; one full-time GIS Analyst (shared with Noxious Weed Control and Mosquito Abatement District); four full-time administration staff (shared with Noxious Weed Control and Mosquito Abatement District).

ACPAD Methods

ACPAD provides pest abatement services to the landowners residing within the district for the charges they pay toward the special taxing district levy. ACPAD also provides for-hire pest abatement services for tax-exempt properties such as federal, state, and local governments, schools, and churches. ACPAD staff will visit a property, determine the best control methods, and work with property owners to abate the pests using integrated pest management (IPM) methods. ACPAD strives to efficiently and effectively control Pocket gophers and Y~~y~~ellow-bellied marmots (commonly known as rock chucks) throughout Ada County in landscaping, yards, gardens, vineyards, pastures, fields and crops.

Training and Education

ACPAD ~~implemented~~ tested applicators on~~a~~ pesticide label comprehension ~~test~~ during the startup of the season to ensure ~~our applicators~~they ~~had~~ read and understood current rodenticide product labels. ACPAD conducts annual training for applicators and field workers on the following:

- ✓ Safety
- ✓ Ada County Policies

This is done via:

- ✓ On-site Training,
- ✓ Seminar Trainings for Pesticide Applicator License Recertification Credits

This season we completed a total of 730 hours of training and education.

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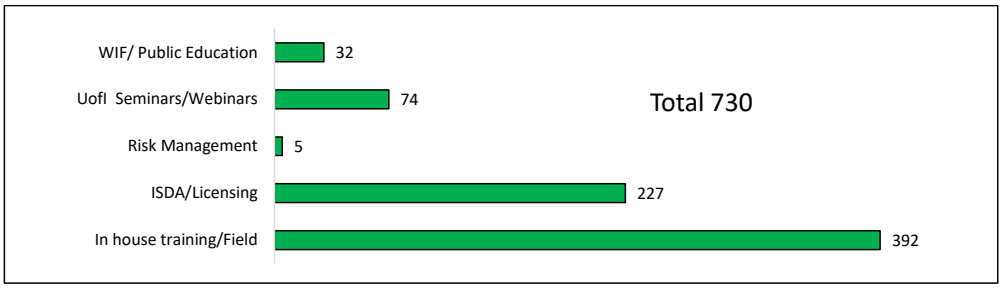

Figure 1: Training hours by seminars attended in 2021 by full-time and seasonal staff.

Pest Abatement 2021 Operations

The 2021 pest abatement season began on March 8th and ended on November 24th for a total of 184 workdays. ~~ACPAD started training and field work the beginning of March.~~ Early in the ~~spring season~~spring, there were 12 inclement-weather days~~ in the spring~~ (too rainy, snowy, and/or muddy to perform operations) and 35 in total for the season. ~~(n=184 workdays).~~ Overall, ACPAD was able to complete field work on 81% of the days in the treatment season ~~(March 8th to November 24th)~~. During inclement weather delays, crews were able to retrieve traps from field locations set the ~~prior~~ day prior~~before~~ ~~and~~, or crews performed regular operations in specific areas of the district where environmental conditions allowed for continued trapping or baiting ~~where the environmental conditions allowed in certain areas of the district~~. ~~I'm not understanding what is being said by this sentence. On bad weather days were you still able to treat aforementioned areas or were you just pulling traps from day before as listed earlier in statement and this retrieval contingent on the allowed environmental conditions?~~ Partial production days, where environmental factors only allowed the crews to perform regular operations in specific areas, ~~The partial production days (this would be attributed to working in areas of district allowed based on the variables of weather, soil conditions and geographic zones)~~ were not included in the total number of non-production days.

ACPAD ~~typically assigns~~assigned field crews to designated service areas throughout the county (Northeast, Northwest, Southeast, Southwest and Rover) for the treatment of Pocket gophers and Yellow-bellied marmots. The crews ran from March 8th to November 24th (week numbers 10-47) for a total 37 weeks. ~~),~~ They complete~~d~~~~ing~~ a total ~~number~~ of 1,944 work orders[1] (a decrease of 18% from last year) and treate~~d~~~~ing~~ ~~less in~~an estimated 5,602.19 acres[2] using bait, smoke cartridges and/or traps (a 27% reduction from the treated acreage in 2020~~n$_{2020}$=7,654 acres~~). ~~This is confusing~~

ACPAD completed 3,102 site visits (and accompanying invoices) in 2021, which was a 26% increase from 2020~~The total number of site visits and work completed (invoices) from the total work orders requested was 3,102, an increase of 26% from 2020~~. ~~-~~ A total of 2,429 phone calls and web forms regarding ACPAD services were received (a 13% decrease from 2020) which generated 1,944 work orders. Most of the remaining phone calls and web forms received were treatment requests for voles and other species not covered under Ada County's pest abatement program, or from residents that did not reside within the Pest Abatement District. ~~There was a 13% decrease from 2020 compared to 2021 with an estimated 2,429 phone calls/web forms~~

[1] A map of all work orders by count can be found in Appendix 1.1
[2] A map of acres treated can be found in Appendix 1.2

~~resulting in 1,944 work orders created (an avg. 216 work orders/month). Most of the remaining phone calls and web forms were treatment requests for voles or and other species not covered under Ada County's pest abatement program, or were from submitted by out-of-district non-district residents within the city limits requesting pest control services.~~ Fewer new clients requested ACPAD services in 2021 from previous years (with the exception of 2020, see *Fig. 2*).~~In 2021, ACPAD received a decrease or reduction of less new clients when compared to than previous years but an increase from with the exception of 2020 where an increase (*Fig.2*); of the current clients can be seen (*Fig. 2*).~~ ACPAD ~~has~~ continued to see an increase in client call-ahead requests (*Fig 3*).~~ This growth is reflected in figure 3. since 2016 (*Fig.3*).~~

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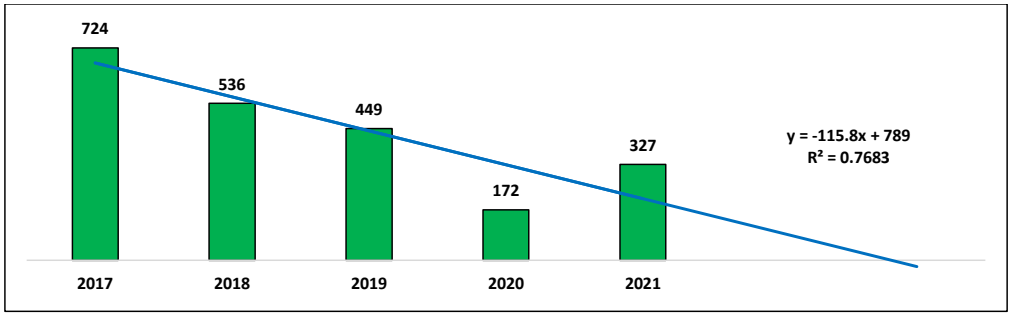


Figure2: The above chart depicts the decline in total new Pest Abatement District~~pest~~ clients over the last five years.

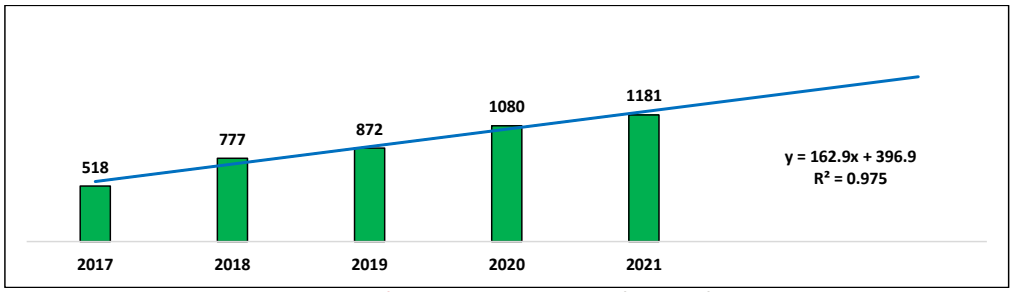


Figure 3: The above chart shows a steady increase in~~for~~ requested call~~s~~-ahead or notifications before inspection~~s~~ & treatments ~~by year apart from 2021~~.

Pocket Gophers (*Thomomys* species)

Requests for Pocket gopher abatement comprised 93% of all work orders in 2021. ~~From the publicly requested work orders completed in 2021, 93% of all work orders were for the control of Pocket gophers.~~ There were 7 billable work orders, mostly attributed to work completed at~~with the majority being for~~ Barber Dam (*Fig.4*). ~~Out of an estimated 5,721 total acres treated,~~ 94.4% of ~~those~~ the estimated 5,721 acres treated were ~~for~~ Pocket gopher treatments, while the remaining treated acres were for rock chucks ~~make sure to reference in the beginning of document that Yellow Bellied Marmots are also referred to as rock chucks~~. Field service crews set a total of 10,738 DK-1 traps and caught 3,730 Pocket gophers., They also used 1,240 smoke cartridges, applied 183.35 lbs. of strychnine bait, and applied 67.65 lbs. of zinc phosphide pellets.

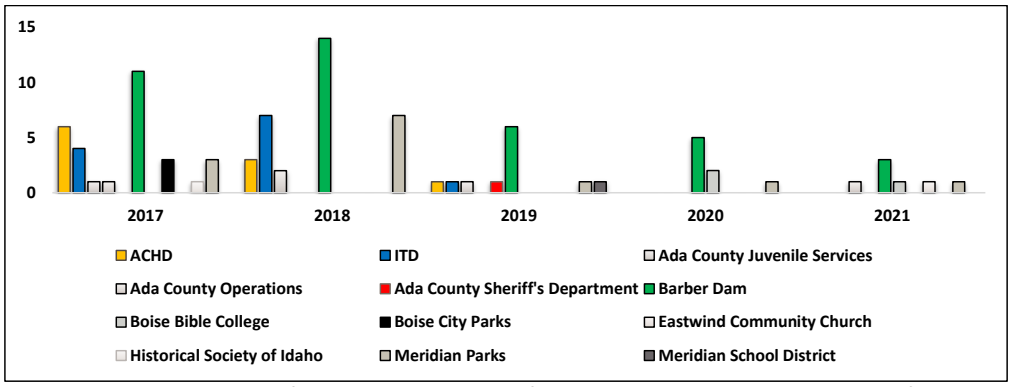


Figure 4: This chart shows total count of billable work orders completed from 2017 to 2021. In 2017, there were 30 requests from external public agencies, 33 in 2018, 12 in 2019, 8 in 2020 and 7 in 2021.

Yellow-bellied marmots (*Marmota flaviventRris*)

The Rover crew inspected and treated 172 properties this season with an estimated 320.93 treated acres for Yellow-bellied marmots, or (rock chucks), also known as rock chucks. This was more than doubled the acreage treated from 2019 acres treated (n=219.46 acres) and just under the acreage treated in 2020. Work orders were received for 33 weeks, beginning on February 25th, and ending on October 21st, with and many the most treatment requests were received in March (*Fig.5*). Infestation levels were recorded in ranges, and the effectiveness of control methods were determined by monitoring populations throughout the season. Figure 6 shows an overall reduction in rock chuck abundance and infestations on individual properties from 2017-2021 20176-2018 is it 2016 or 2017? Graph does not reflect 2016. However, in 2019-2021, there was an increase in 2019-2021 in "mid" -andto -"low" infestations recorded that can be attributed from to to the reduction in infestation levels at the "heavy" and "mid" infested properties being reduced over time, moving them to into the lower range categories (i.e., a property that was once "extreme" or "heavily" infested are isis nowww categorizedreduced to as a "mid" or "low" infestation levels property). Data for infestation levels was not recorded if there was an absence of rock chucks, or if rock chucks were not the target species.

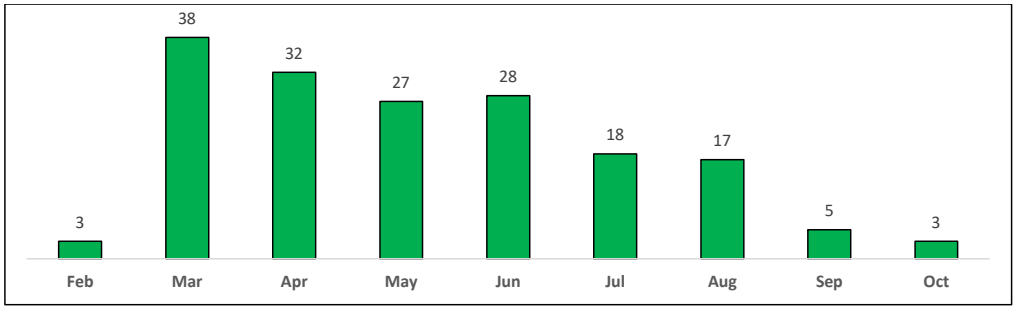
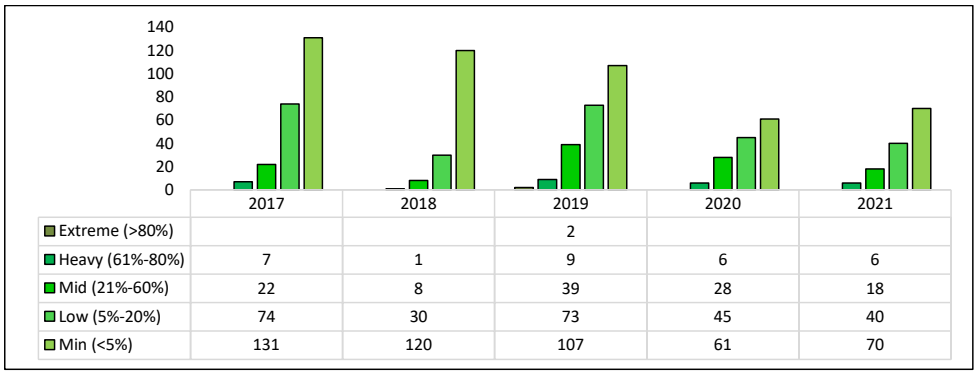


Figure 5: The chart above shows the total number of rock chuck treatment requests by month for 2021.



	2017	2018	2019	2020	2021
Extreme (>80%)			2		
Heavy (61%-80%)	7	1	9	6	6
Mid (21%-60%)	22	8	39	28	18
Low (5%-20%)	74	30	73	45	40
Min (<5%)	131	120	107	61	70

Figure 6: The chart above shows a decrease over time in infested properties as well as shows infestation levels by count of work orders since 2017 in rock chucks.

Projects

ALAMO

~~This season~~ACPAD continued the implementation of ~~the pest department continued using~~ a new internal software program, Abatement Logistics and Mapping Operations (ALAMO), for all record keeping, mapping, scheduling, and field data collection in the 2021 season. Training and implementation started ~~immediately~~ in late February with a revised field application. ALAMO was spear-headed by ~~our~~ the Ada County IT and GIS team using software from ESRI, ~~an~~ the ArcGIS and Field Maps developer. This project is ~~still~~ ongoing ~~and not complete~~ at the time of ~~the this~~ this report.~~;~~ A ~~a~~ll data used for this report is ~~in this report are is~~ preliminary and dependent on ~~the~~ the accuracy of ALAMO records.

Fifth crew

ACPAD continued with a fifth crew this year to decrease the backlog caused by increasing call-ahead orders and requests for manual trapping. In 2019 ACPAD achieved a response time of 10 days or less ~~in~~ by May~~,~~. ~~whereas~~ In 2020 ~~the~~ that goal was not met until the beginning of August~~;~~. ~~H~~~~owever, in 2021,~~ This was improved to June in 2021, which is closer to previous years' time frames~~. likely due to~~ Staffing shortage, COVID-19 pandemic and troubleshooting of new software in the field daily (*Fig. 7, 8 & 9*) are attributing factors for delays in 2020 and 2021.

From ~~2016~~ 2017 to 2019, there was an average of 14,412 hours worked ~~per year~~ annually. ~~however~~ In 2020 and 2021 there was a decrease of 18% for an average of 11,882 hours ~~was~~ worked. This decrease is due to COVID-19 and staffing shortages~~. This also~~ which directly relates to ~~the~~ response time and ~~of~~ getting to properties within 10 days or less ~~which can be~~ as seen ~~on~~ in Figure 8.

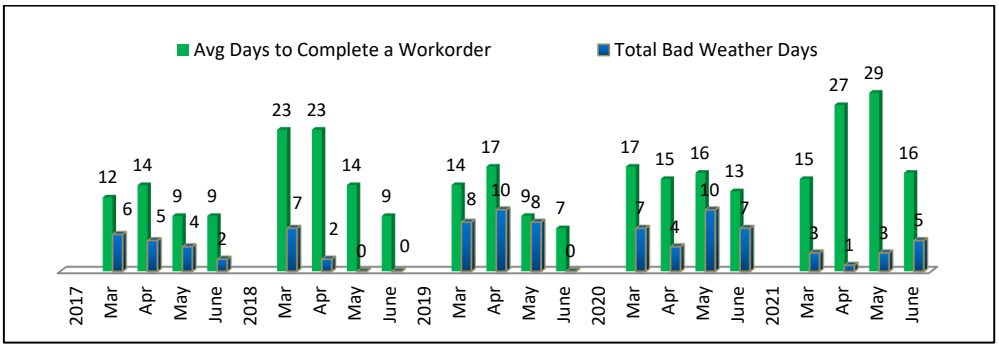


Figure 7: The chart above depicts the average response time in spring from call to completion with lost days due to inclement weather 2017-2021.

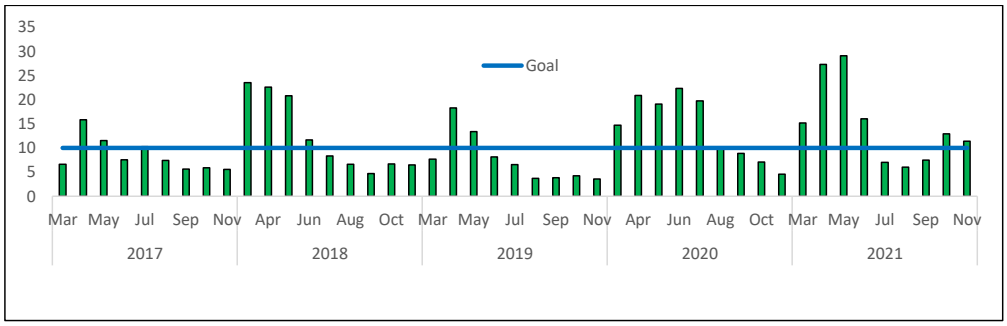


Figure 8: Average response time (from service order request to completion), in days, relative to ACPAD response goal, 2017-2021.

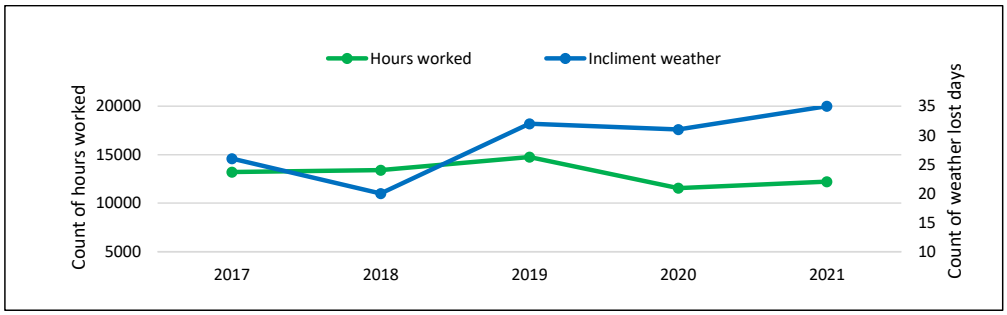


Figure 9: The chart above depicts the total hours worked per year with lost days to inclement weather.

Conclusion

ACPAD began the season with in-house training and then moved to field training and services in March. Due to inclement weather delays, short staffing, and a new field program again this year, we were not able to reach a response time of 10 days or less until June (*Fig. 8*). ACPAD had an overall 35% success catch rate (Pocket gophers trapped), which was a 4% decrease from previous years' catch rates, but in the normal annual range. During the 2021 season, pocket gopher abundance was ~~generally~~ normal, with 60% more pocket gophers trapped on pest district properties than 2020. Additionally, the infestation rates of the pest species are lowering every year and more properties had less pest species abundance likely attributed with successful continuous control efforts over the last 5 years. This can ~~also~~ be visualized in our frequency of client call ins (see map on Appendix 1.1) decreasing from 2020 to 2021 from a high range of 16 to 12 respectively, averaging 2 workorders per parcel in 2021. This last sentence does not make sense to me. What are you trying to convey? I'm confused… sorry!

With a decrease in public service requests, informational call-ins and acres treated prior, ACPAD optimized the additional time available to ~~was still able to~~ overcome ~~some~~ challenges including the ~~trying to~~ implementation of a new software program and traversing the changes brought on by the COVID-19 pandemic. ~~the last 2 years.~~ Rock chuck~~s~~ acres ~~were~~ treated ~~less~~ this year decreased ~~than in 2020 and previous years~~ by 57% from 2020. While there were less properties treated, this could be due to larger acreage properties inspected and/or a difference in reporting with the new software program, ALAMO. This should be reviewed and analyzed further in the next 3 years for comparison and to determine if the rock chuck population is decreasing. ~~or if it was just a smaller rock chuck population season.~~

ALAMO setbacks were mostly due to implementation of new field applications and processes throughout the year. The pest crew leads were required ~~would have~~ to test and troubleshoot all ~~the~~ in-field software problems and report their ~~return with the~~ feedback daily. This ~~which~~ increased ~~the~~ work order request response time~~s~~ ~~as well to work orders requests.~~ The COVID-19 pandemic can also be an attributing factor for 2021 setbacks associated with short staffing, training opportunities and professional licensure. ~~also played a part with setbacks for 2021 due to staffing and training opportunities and professional licensing.~~

We experienced a decline in new clients, which is to be expected due to the annexation of district land into city limits (which effectively removes the land from the pest abatement district), but saw an increase from 2020. This sentence is contradicting. What years decreased and was 2020 an exception to documented decline? We ~~see~~ continue to receive phone calls ~~from the public on~~ from "out of district" citizens (?) for services ~~even though they are out of the district or~~ as well as ~~for~~ vole abatement requests. Pocket gophers are prolific pests that will often continue to infest on the non-developed or unmaintained land adjacent to or within the district boundaries. Pocket gopher and rock chuck populations are subject to natural variability from predator-prey relationships, fecundity rates, and other environmental factors and will never be completely eradicated.

ACPAD strives to meet taxpayer demand by becoming more efficient,. This can be acheived by implementing new control efforts through introduced technologies and science, researching and utilizing IPM, and by educating property owners and stakeholders on best management strategies.

Pest Department Goals

Goals for 2021:

1. Improve response time ~~to~~ from public service requests to completion date to fall within 5-10 days by May.

- ✓ Goal: In progress - ACPAD continued to implement multiple crews for larger acreages and infestations this season. With the staffing shortage and COVID-19 pandemic, ACPAD reached 10 days or less by June.

2. Continue Implementation of new software program (ALAMO) for the field service data recording and make recommendations as needed to continue to improve workflow efficiencies.
- ✓ Goal: In progress- ACPAD continued using ALAMO in the beginning of our season. ~~Since~~ Because the software is new and not yet completed, ACPAD will continue to work with IT into 2022.

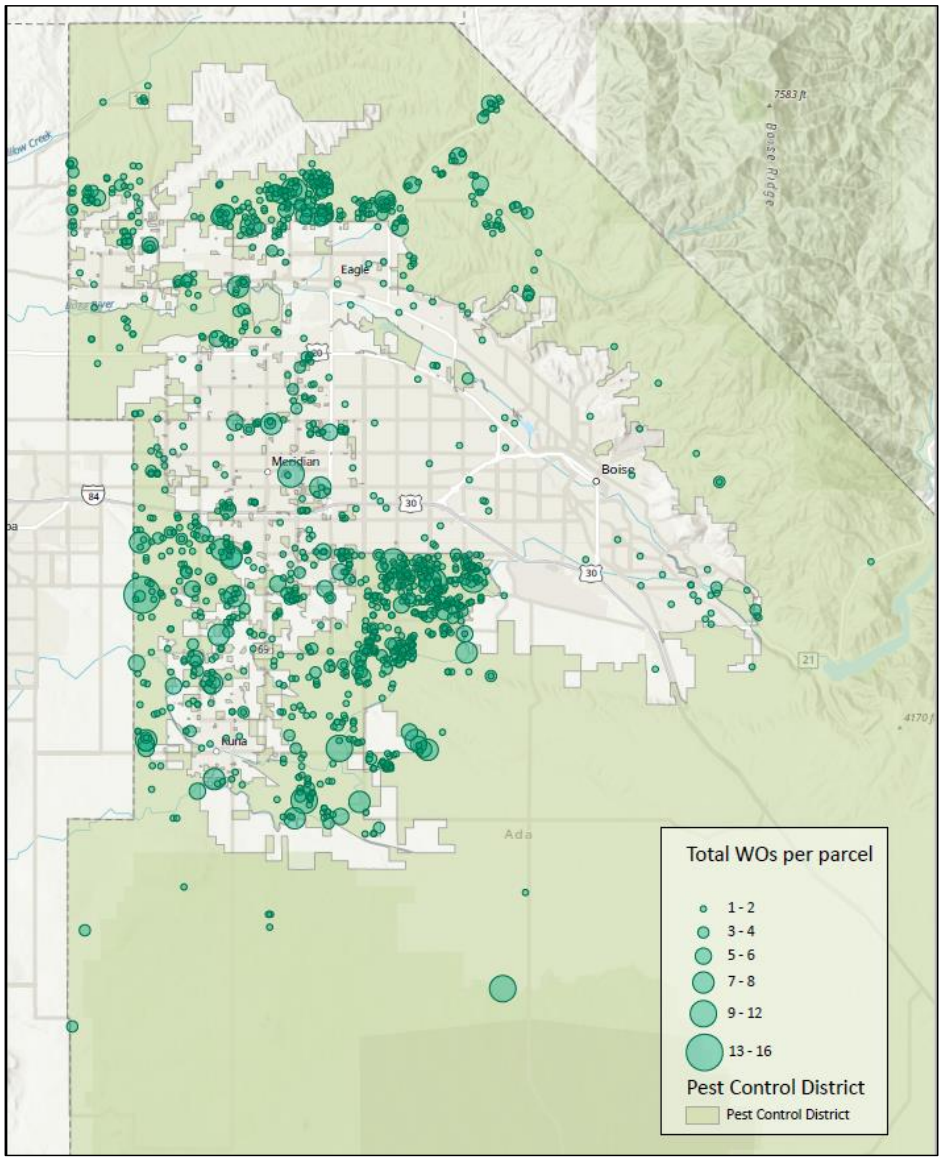
3. Start researching and testing a form of biological control and IPM for Pocket gophers, an example may be by implementing owl boxes and options for services to residents.
- ✓ Goal: In-progress- ACPAD has started a raptor project utilizing barn owls for control of Pocket gophers. There will ~~potentially~~ be three potential phases and ACPAD is currently working on phase one.

4. Complete more public education by assisting the education specialist and assisting in educating landowners about these pests and options for control.
- ✓ Goal: In-progress- ACPAD assisted with our education trailer.

Goals for 2022:

1. Improve response time to public service requests to completion within 10 days (from call to close of work order) by May 4th, 2022.
2. Continue using the new software program (ALAMO) for the field service data recording and make recommendations as needed to continue to improve workflow efficiencies.
3. Install one owl box and provide options for future biological control services to residents or as public education tool.
4. Complete and document 25% more public education contacts about pests and options for control.
5. Provide a Rock chuck live trap loan program for landowners.

Appendix 1.1



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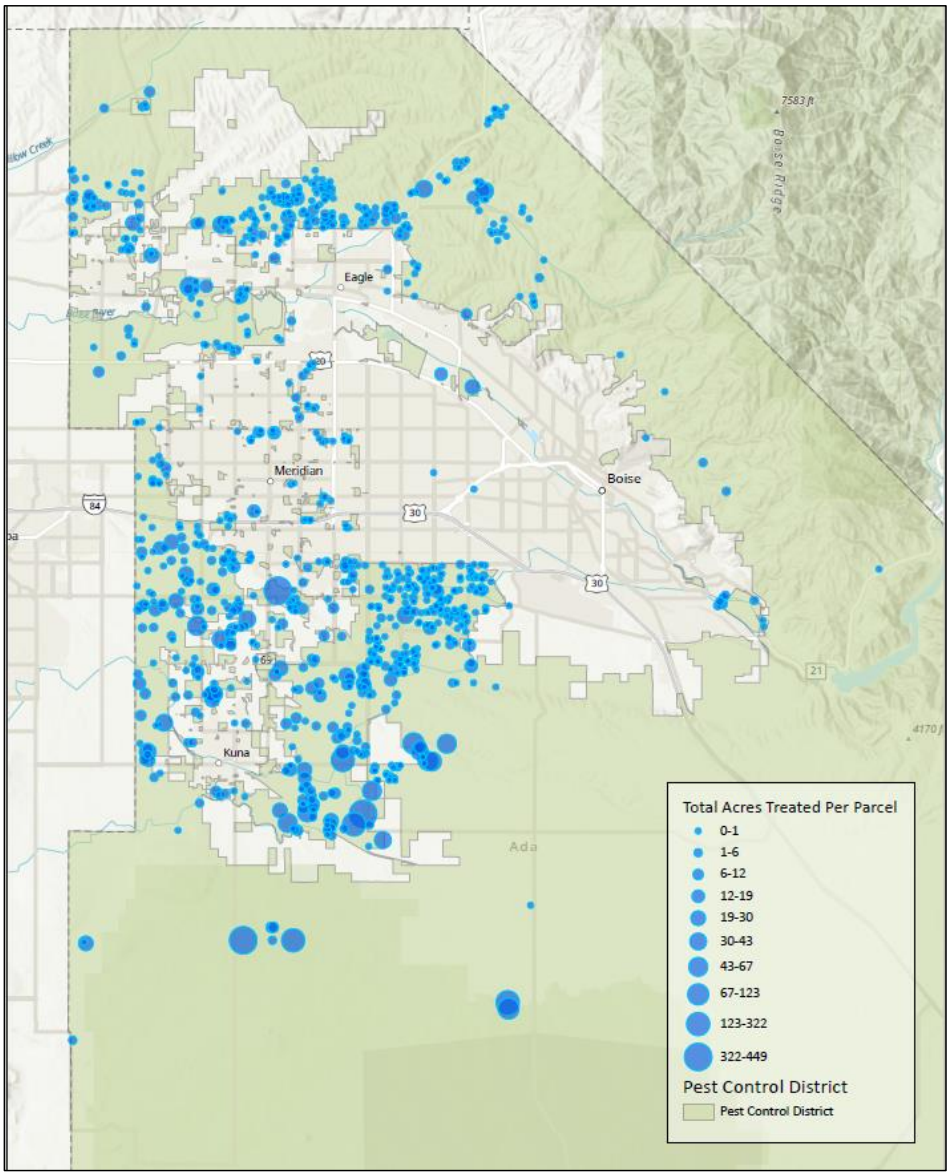
Appendix 1.2



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