



# ADA COUNTY PEST ABATEMENT DISTRICT

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## 2022 Annual Report

Chris Culley, Division Coordinator

Desireé Keeney, Deputy Director

1/13/2022

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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 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 control Pocket gophers and yellow-bellied marmots efficiently and effectively throughout Ada County in landscaping, yards, gardens, vineyards, pastures, fields and crops.

## Training and Education

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

- ✓ Safety
- ✓ Ada County Policies
- ✓ On-site Training,
- ✓ Seminar Trainings for Pesticide Applicator License Recertification Credits

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

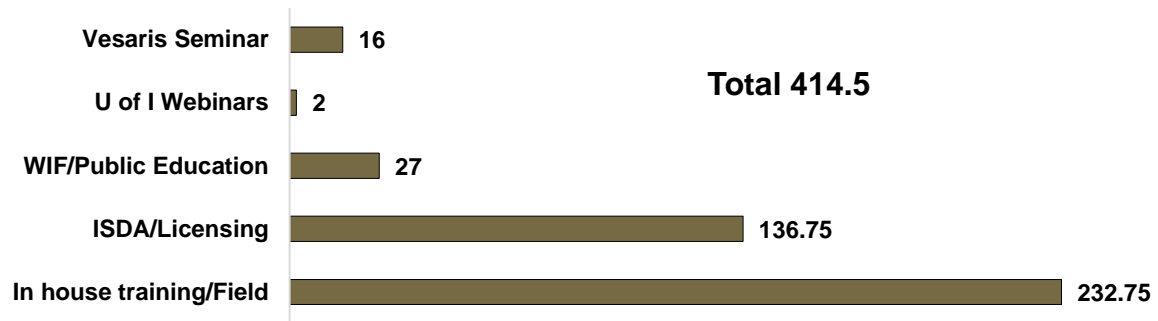


Figure 1: Training hours by seminars attended in 2022 by full-time and seasonal staff.

## Pest Abatement 2022 Operations

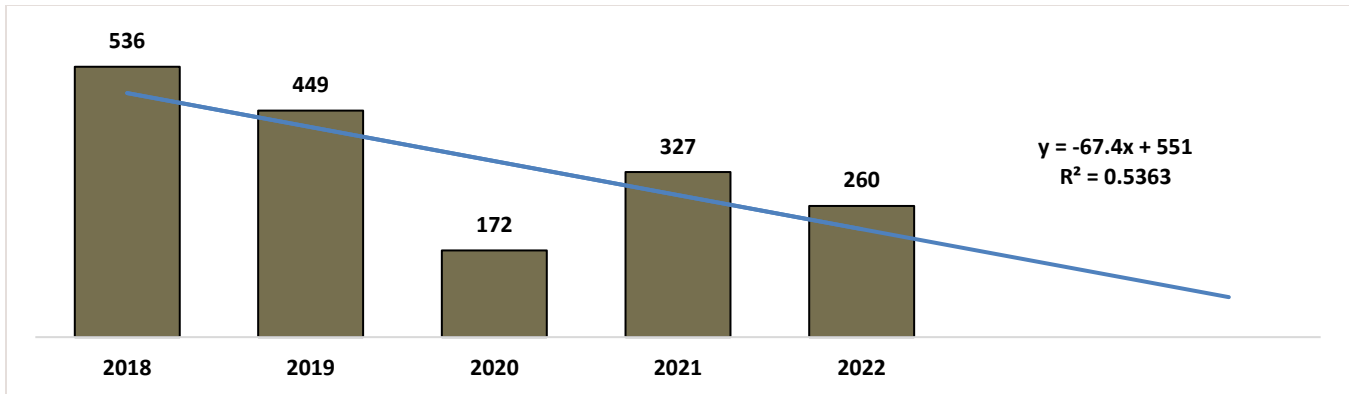
ACPAD started training and field work at the end of February. Out of 198 workdays in the 2022 season, there were 18 inclement-weather days in the spring (too rainy, snowy and/or muddy) and 24 total inclement weather days for the season. ACPAD was able to complete field work on 89% of the days in the treatment season (February 22<sup>nd</sup> to November 18<sup>th</sup>). During inclement weather delays, crews retrieved traps set the day before from field locations where conditions allowed. Partial production days—where typical work functions were impacted by weather, soil conditions, or other environmental factors—were not included in the total number of non-production days.

ACPAD typically assigns field crews to 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 February 28<sup>th</sup> to November 18<sup>th</sup> (week numbers 9-46 for a total 37 weeks), completing a total number of 2,072 work orders<sup>1</sup> (an increase of 7% from 2021) and treating less in estimated 4,452.39 acres<sup>2</sup> using bait, smoke cartridges and/or traps ( $n_{2021}=5,602.19$  acres).

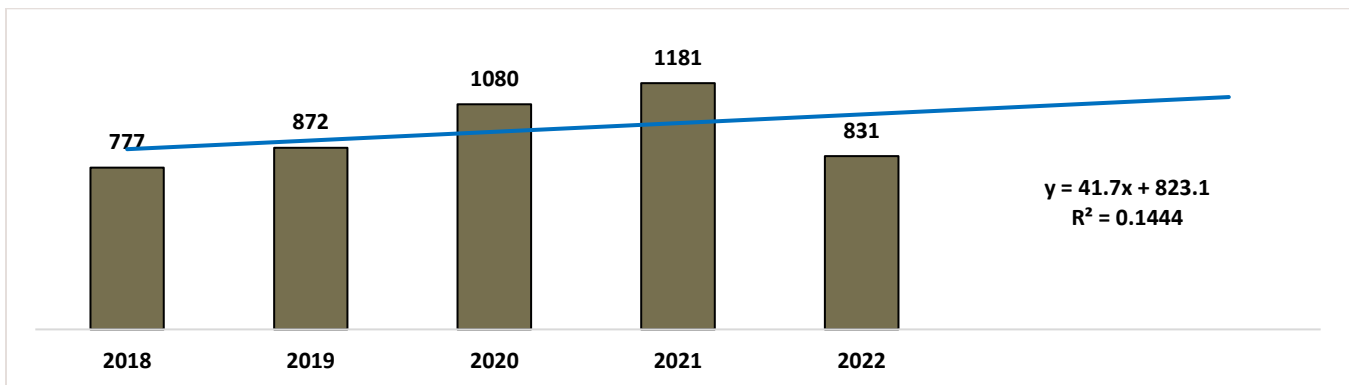
In 2022, there was a 12% increase to 3,469 total treatments completed. ACPAD received 2,620 phone calls and web forms which resulted in 2,252 work orders created (an average of 250 work orders per month), an increase of 8% from 2021. Most of the remaining phone calls and web forms were treatment requests for pest species that ACPAD does not treat (e.g., voles), or were from citizens residing outside of the Pest Abatement District. In 2022, ACPAD received fewer new clients than previous years. (Fig.2). ACPAD saw a decrease in existing client call-ahead requests in 2022 (Fig.3).

<sup>1</sup> A map of all work orders by count can be found in Appendix 1.1

<sup>2</sup> A map of acres treated can be found in Appendix 1.2



**Figure 2:** The above chart depicts the decline in total new pest clients over the last five years.



**Figure 3:** The above chart shows a steady increase for requested call-ahead or notifications before inspection & treatments by year apart from 2022.

### Pocket Gophers (*Thomomys species*)

Requests for Pocket gopher control comprised 94.3 % of all work orders that ACPAD received in 2022. Out of an estimated 4,452.39 total acres treated, 96.5% of those acres were for Pocket gopher treatments while the remaining treated acres were for rock chuck control. As treatments for Pocket gophers, field service crews set a total of 11,315 DK-1 traps (with 3,719 Pocket gophers caught), used 697 smoke cartridges, applied 243.76 lbs. of strychnine bait, and applied 116.65 lbs. of zinc phosphide pellets.

There were 8 billable work orders, with the majority being for Meridian Parks (62.5%). Barber Dam used to be a billable work order but was transitioned to non-billable in 2022, please see discussion/conclusion summary for more information. Efforts to control Pocket gophers at Barber Dam were increased in the 2022 season. ACPAD prioritized Pocket gopher treatments at Barber Dam due to infrastructure concerns with burrowing pocket gophers threatening the integrity of the hill side. The Barber Dam project generated 20 work orders created resulting in 34 treatments at the dam, an increase in work orders by 85% from 2021 (see map and photos, Appendix 1.3). ACPAD applied 5 oz. of strychnine bait, used 2 smoke cartridges, and set 103 DK-1 traps (resulting in 28 caught pocket gophers) in biweekly treatments from March to November. In total, ACPAD spent 17 hours for actual treatment time and 30 total hours for all applicators treating Barber Dam, not including time traveled or inspection time (which is not calculated at this time by the new ALAMO program tracking for ACPAD workorders). The treatments at Barber Dam will be an ongoing effort due to the overgrowth in vegetation at the adjacent properties. Infestation rates are minimal with an average of 1-2 pocket gophers caught per treatments when utilizing traps (see Figure 4).

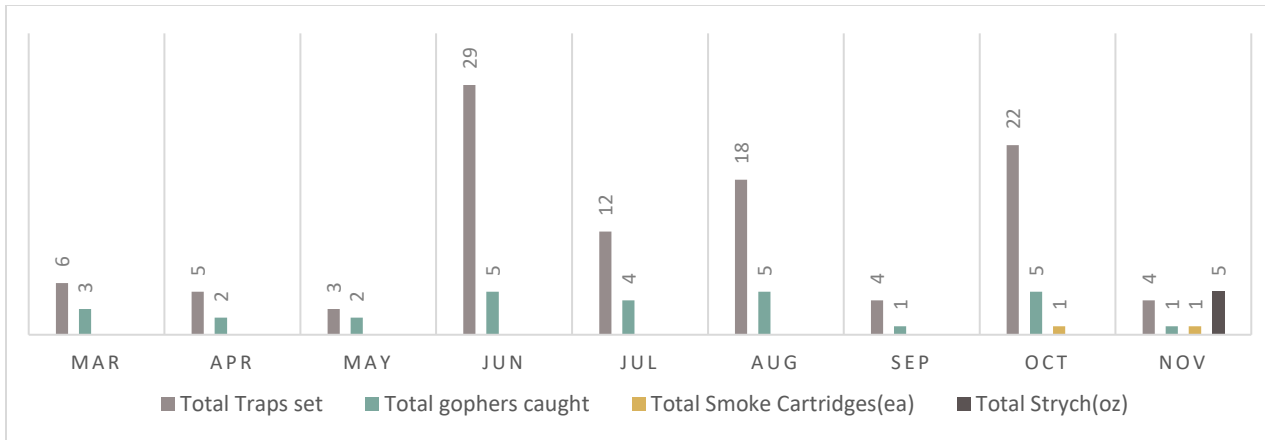


Figure 4: The chart above shows the cumulative treatments per month at Barber Dam in 2022.

### Yellow-bellied marmots (*Marmota flaviventis*)

The Rover crew inspected and treated 118 properties this season with an estimated 156.98 treated acres for Yellow-bellied marmots, also known as rock chucks. This was roughly half of the acres treated in 2021 (n=320.93). Work orders were received for 31 weeks, beginning on February 24<sup>th</sup> and ending on September 26<sup>th</sup>, with many treatment requests received in June (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 2016-2018. The increase in mid to low infestations observed in 2019-2022 can be attributed to the reduction of heavy and mid infested properties over time that now populate the lower range categories as rock chuck populations decrease on treated properties. Data for infestation levels was not recorded if there was an absence of rock chucks, or if rock chucks were not the target species.

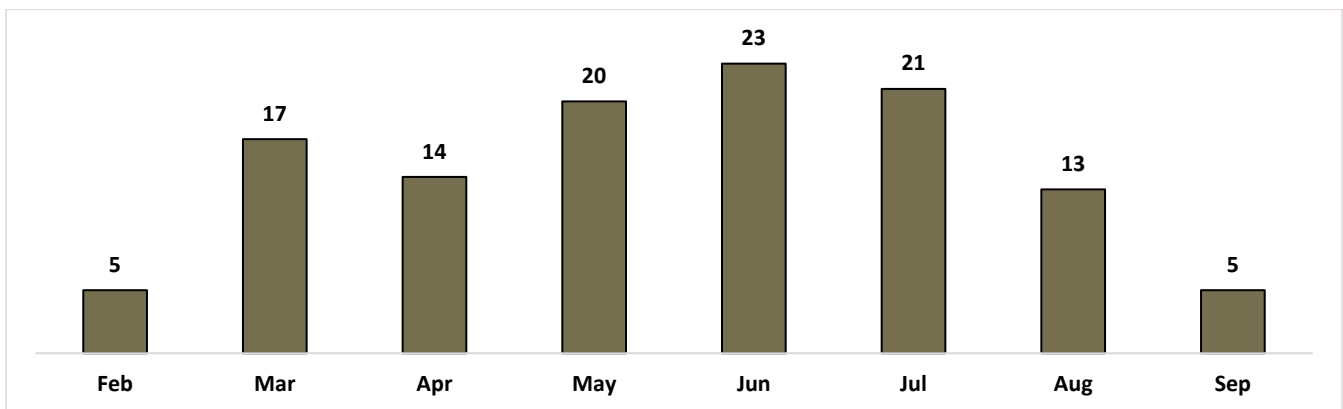
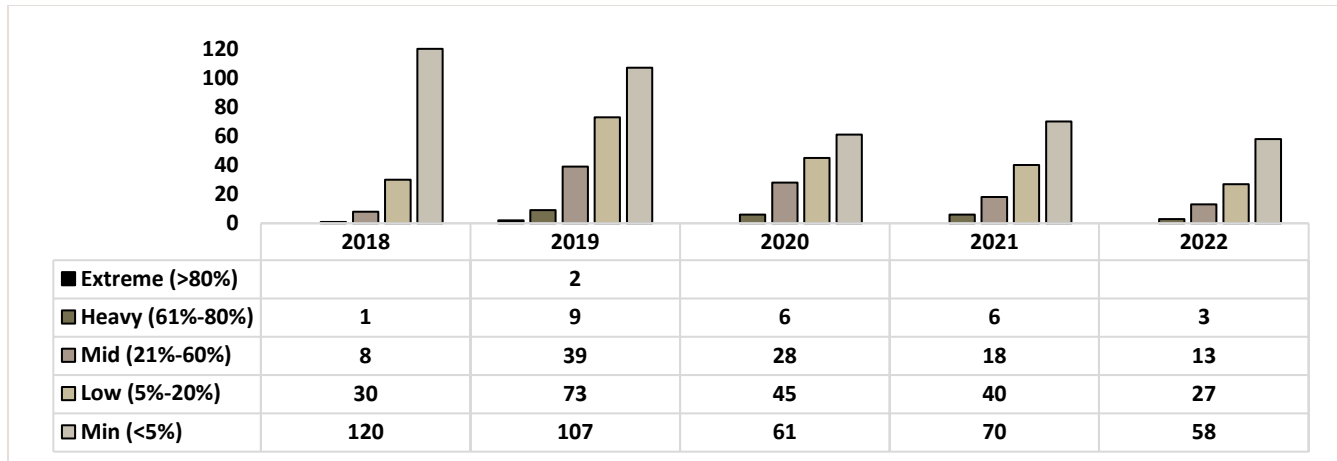


Figure 5: The chart above shows the total number of rock chuck treatment requests by month for 2022.



**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 2018 in rock chucks.

## Projects

### ALAMO

This season, the pest department continued to implement the Abatement Logistics and Mapping Operations (ALAMO) internal software program for all record keeping, mapping, scheduling, and field data collection. Training and implementation began immediately in late February with ongoing improvements to the field application. ALAMO is spear-headed by the Ada County IT and GIS teams using software from ESRI—the ArcGIS and Field Maps developer. The field application of ALAMO is almost complete for ACPAD, pending the final adjustments for reporting and data query needs. All data in this report is preliminary and dependent on current ALAMO records.

### Fifth crew

ACPAD continued to utilize a fifth crew in 2022 to decrease the backlog caused by the increase in call-ahead orders and requests for manual trapping. ACPAD strives to treat properties within 10 days of the generation of work orders. This goal takes time to reach in any given season due to the higher incidence of bad weather days, potential staffing issues, and the backlog of requests for service early in the season. In 2019, ACPAD achieved a response time of 10 days or less in May but did not reach the goal until the beginning of August in 2020. The goal was reached by June in 2021 but took until September to reach in 2022. The delay in reaching a response time of 10 days or less was likely due to a staffing shortage and an increase in work orders (*Fig. 7, 8 & 9*).

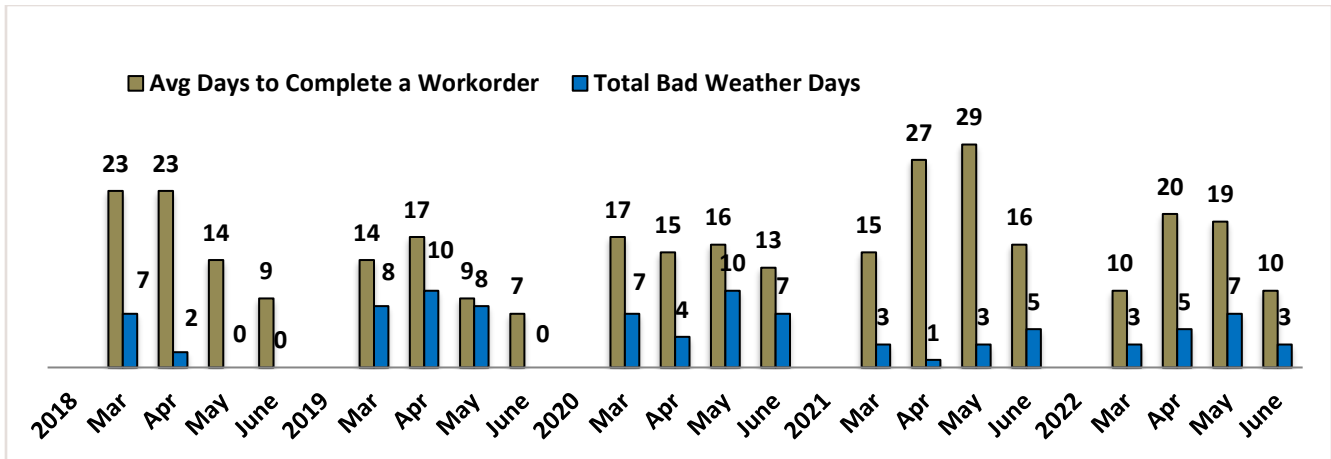


Figure 7: The chart above depicts the average response time in spring from call to completion with lost days due to inclement weather 2018-2022.

ACPAD completed an average of 14,412 work hours per year from 2016 to 2019, which decreased 18% to an average of 11,882 work hours per year in 2020 and 2021 due to COVID-19 and staffing shortages. In 2022, this trend continued and resulted in a further reduction to 10,968 hours worked. This also directly relates to the response time of getting to properties within 10 days or less which (see on Figure 8).

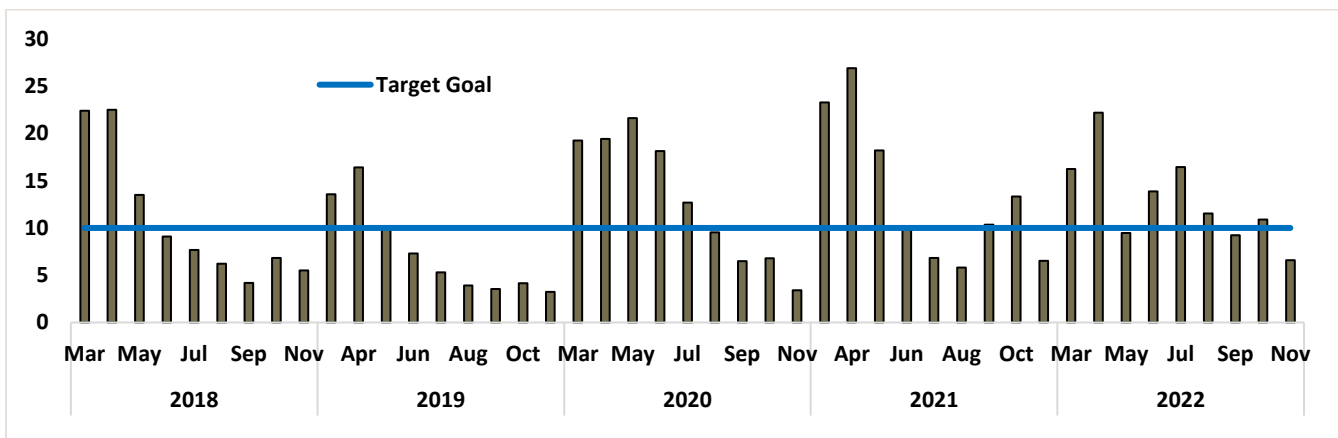


Figure 8: Average response time (from service order request to completion), in days, relative to ACPAD response goal, 2018-2022.

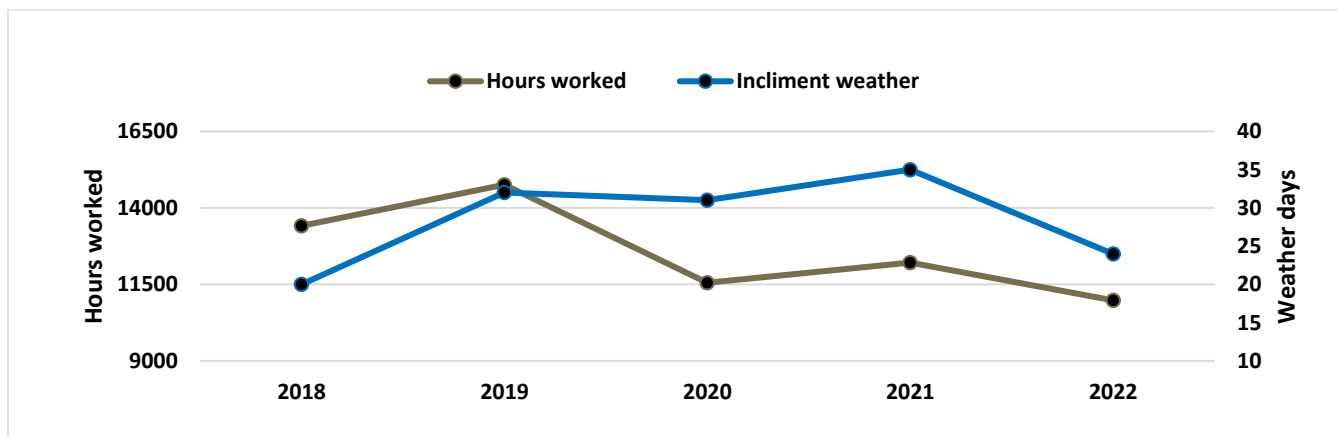


Figure 9: The chart above depicts the total hours worked per year with lost days to inclement weather.



## Conclusion

ACPAD began the season with in-house training and then moved to field training and public service requests in March. Due to inclement weather delays, short staffing, and the ongoing development of the ALAMO field program in 2022, ACPAD was not able to reach a response time of 10 days or less most the season (see Figure 8). ACPAD successfully caught Pocket gophers in 30% of all traps set, which was a 5% decrease from previous years' catch rates, but within the average range. During the 2022 season, pocket gopher abundance was generally normal and on the same pest district properties as 2021. Additionally, the infestation rates of both Pocket gophers and rock chucks have declined every year, and pest species abundance decreased on a greater number of properties. This is likely attributed with successful continuous control efforts over the last 5 years and is depicted in the frequency of client call-ins (see map on Appendix 1.1). ACPAD service requests stayed approximately the same from 2021 to 2022, with a range of 16 to 12 respectively and averaging 2 workorders per requested parcel in 2022.

Staffing shortages have been a problem since the COVID-19 pandemic, but ACPAD overcame these challenges with assistance from a decrease in public service requests, informational call-ins and acres treated. Rock chuck treatments decreased by over 50% from previous years in 2022. There were also fewer properties treated for rock chucks, which could be due to an increase in treatments on larger acreage properties and/or a difference in reporting with the new software program, ALAMO. This discrepancy will be reviewed and analyzed further in the next 3 years to determine the cause of the decline in requests for rock chuck treatments or to see if the rock chuck population was simply smaller in 2022.

In the iterative process of implementing the field application of ALAMO, setbacks were minimal in 2022. The pest crew leads continued to test and troubleshoot any upgrades or changes within the in-field software program and returned with feedback when necessary.

The number of billed clients that ACPAD creates work orders for continues to steadily decline. Historically, ACPAD roughly averaged 19 billed clients per year, which reduced to 9 service requests per year in the last 3 years. In 2022, ACPAD received only 8 work orders, with most of the requests coming from the City of Meridian.

Barber Dam used to be a billed account, but in 2022, ACPAD was asked to manage pocket gopher infestations under the County purview and not bill. In the past, ACPAD would treat the dam weekly or biweekly, averaging 14 work orders per year before 2019. In 2019, the Barber Dam grounds caretaker changed, along with management of the grounds and the average requests for service dropped to 4.5 per year. Ada County and Barber Dam asked ACPAD to manage the pocket gophers to help ensure infrastructural integrity in 2022. The field crews visited biweekly, an increase from administering treatments "as requested" in previous years. Despite the relatively low Pocket gopher infestation levels at the Barber Dam site, staff time must be devoted to maintaining low pest infestation levels under ACPAD mission objectives. The change in grounds management at Barber Dam led to an increase in the prevalence of noxious and nuisance weeds along with erosion issues as determined in a site inspection by the ACPAD Division Coordinator and Director. ACPAD has been asked to respond to quarterly inspections performed by Central Power River, who oversees the management of the dam. There have been documented comments on their reports stating animal burrowing is causing integral issues and that ACPAD is not doing enough. However, when inspected by our experts, the issue is not burrowing animals, but noxious weeds, slope and erosion issues, and deer and wildlife tracks causing the issues observed. Additionally, the site is a high-risk site and can be hazardous for crews to treat dependent on the ground stability and recent weather patterns. This location and special treatment for work should be reviewed for the 2023 season for best management practices specific to this site, costs, and safety for ACPAD staff.

ACPAD experienced a decline in new clients in 2022, which is consistent with expectations due to the annexation of district land into city limits (which effectively removes the land from the pest abatement district). ACPAD

continues to receive phone calls requesting services for pest species not treated by ACMAD (e.g., voles) and calls from people that do not reside in the Pest Abatement District. 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, by implementing new control efforts through introduced technologies and science, researching, utilizing IPM, and by educating property owners and stakeholders on best management strategies.

## Pest Department Goals

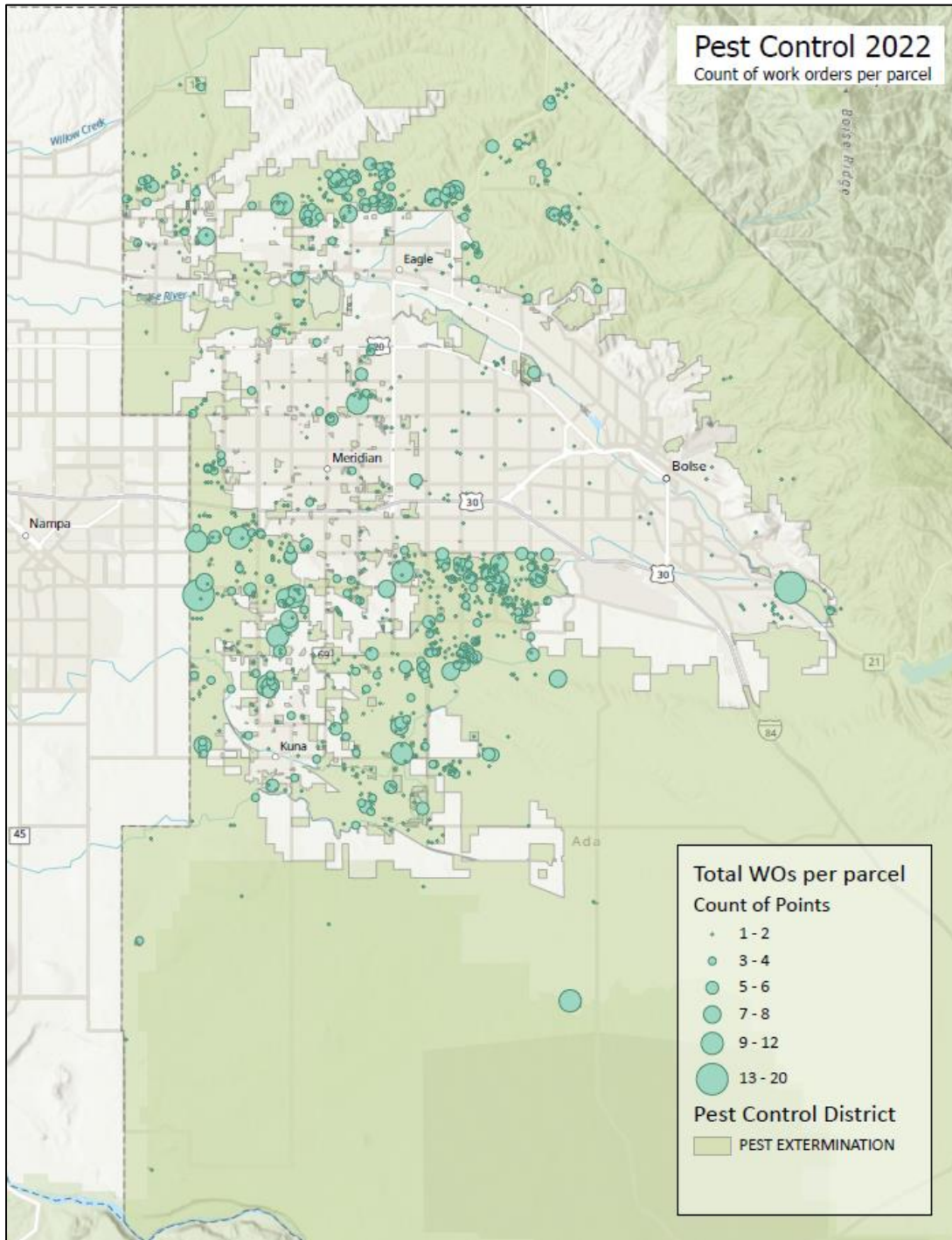
### Goals for 2022:

1. Improve response time to public service requests to completion 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 from the COVID-19 pandemic, ACPAD reached 10 days or less in May, September, and November.
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 the software is new and not yet completed, ACPAD will continue to work with IT into 2023.
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 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.

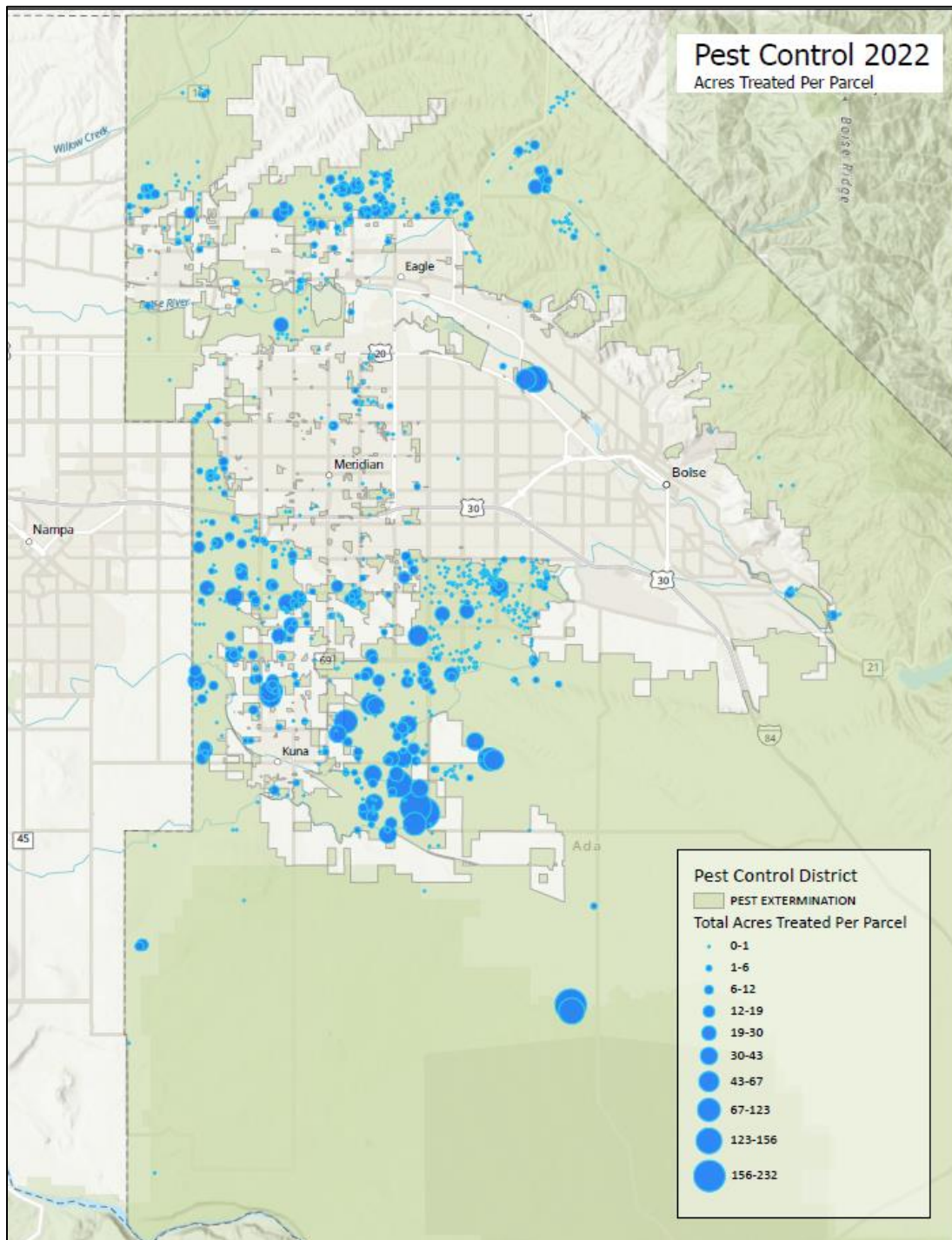
### Goals for 2023:

1. Improve response time to public service requests to completion within 10 days (from call to close of work order) by May 31<sup>st</sup>, 2023.
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, including improving and updating reports.
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



## Appendix 1.2



## Appendix 1.3

### Inspection and Treatment Areas for Barber Dam.

Inspected areas on Barber Dam:

Center points of the inspection polygons (Low-Min Infestations):



Photos: Spring (April)

Post Q3 Inspection (October)

