



# **Butte County Mosquito and Vector Control District**

5117 Larkin Road • Oroville, CA 95965-9250  
Phone: 530-533-6038 • Fax: 530-534-9916  
[www.BCMVCD.com](http://www.BCMVCD.com)

**Matthew C. Ball**  
Manager

## **AGENDA**

### ***Regular Meeting of the Board of Trustees of the Butte County Mosquito and Vector Control District***

(BCMVCD) Board Room, 444 Otterson Drive, Chico, CA 95928. The Board of Trustees is committed to making its proceedings accessible to all citizens. Individuals with special needs should call District staff at 530-533-6038 or 530-342-7350, Monday through Thursday, 6:00 a.m. to 4:30 p.m. to request disability-related modifications/accommodations or to request materials in alternate formats. All requests for special accommodation and/or alternative format documents must be made 48 hours prior to the meeting.

1. **Regular Board of Trustees Meeting Time:** 4:00 PM **Date:** March 8, 2023
2. **Call to Order** – 4:00 PM Roll Call
3. **Persons Wishing to Address the Board on Items Not on the Agenda (limit to 5 minutes):**
4. **Approval of Minutes of the Meeting of:** February 8, 2023
5. **Persons Wishing to Address the Board Pertaining to Closed Session Matters:**
6. **Closed Session Announcement (District Legal Counsel Present):** N/A
7. **Reports: (7.1)**
- 7.1 **District Manager's Report**

The District Manager will provide a brief report on current District business and activities. The District Manager will also report on District employees, meetings attended, and current projects.

8. **Policy Matters: (8.1 – 8.3)**
- 8.1 **Consider a Special Service Agreement between Deer Creek Resources and the District**

The Board will be asked to consider a special service agreement between Deer Creek Resources and the District for aerial surveillance of potential mosquito-breeding sources. Ron O'Hanlon and Associates no longer offers this service.

- 8.2 **District Manager Requests Annual Performance Evaluation**

Per the conditions of the Employment Agreement between the District and District Manager, the manager must remind and request an annual performance evaluation. The employment agreement states, "3. *The Board shall, in April of each year of the Agreement term, meet and confer with the Manager on the issue of his job performance. The Board shall prepare a written evaluation of the Manager's performance, which shall be delivered to, and discussed with, the Manager.*" The Board and District Manager will meet in closed session at April's Board Meeting to discuss the evaluation. At the June 14, 2017, regular meeting of the Board of Trustees, the Board unanimously approved to discontinue the use of the District Manager evaluation form and to discuss the District Manager's performance again verbally during closed session at which point, a Trustee will be appointed to draft a letter summarizing the verbal evaluation for the District Manager.

**8.3 *District Manager Requests One-Year Contract Extension***

The Board will be asked to consider if it would like to extend the current employment agreement with the District Manager. Should the Board want to proceed, consideration for a one-year contract extension will be held during the April Board meeting. Per the conditions of the Employment Agreement between the District and District Manager, the manager must request a one-year contract extension.

**9. *Topic of the Month:***

The Board will watch a presentation on an overview of the District's aerial operations.

**10. *Approve Payment of The Bills:***

The Board will be asked to review the demands made upon the District for the past month and consider approving the payment of the bills.

**11. *Personnel:* N/A**

**12. *Correspondence:***

The Board will review a letter written by District Manager Matthew C. Ball to the Board of Trustees.

**13. *Other Business:***

The Board will be asked to return their completed Form 700 Statement of Economic Interest as required by the Fair Political Practices Commission.

**14. *Persons Wishing to Address the Board Pertaining to Closed Session Matters:***

**15. *Closed Session Matters (District Legal Counsel Not Present):* N/A**

**16. *Adjournment:* (Next Regular Meeting of the BCMVCD Board of Trustees is April 12, 2023)**

***Regular Minutes of the Board of Trustees of the Butte County Mosquito and Vector Control District Meeting held February 8, 2023***

**Members Present:** Michael Barth, Darlene Fredericks, Assistant Secretary Bruce Johnson, Vice President Dr. Larry Kirk, Philip LaRocca, Secretary Melissa Schuster, President Bo Sheppard, and Carl Starkey.

**Members Excused:** Dr. Albert Beck.

**Members Absent:** Chuck Reynolds.

**Also Present:** District Manager Matt Ball, Assistant Manager Aaron Lumsden, Administrative Manager Maritza Sandoval, Entomologist Amanda Bradford, and Vector Ecologist/ Fish Biologist Ryan Rothenwander.

1. The Regular Meeting of the Board of Trustees of the Butte County Mosquito and Vector Control District held on February 8, 2023, at 444 Otterson Drive, Chico, CA 95928.
2. The February 8, 2023, Butte County Mosquito and Vector Control District regular meeting of the Board of Trustees was called to order at 4:00 PM by President Sheppard.
3. Seeing and hearing no persons wishing to address the Board on items not on the agenda, President Sheppard proceeded to request approval of the minutes.
4. After review, it was then moved by Member Johnson, seconded by Member Kirk, and passed unanimously with a vote of 8 ayes and 0 nays to approve the minutes of the Board of Trustees meeting held January 11, 2023, as written.
5. No persons wishing to address the Board on closed session matters.
6. No closed session matters needing legal counsel.
7. Reports (7.1 – 7.2)
- 7.1 Under item 7.1 of reports, District Manager's Report, the District Manager reported that on January 12, 2023, the District completed the monthly staff meeting and all vehicle inspections. The District's Safety Committee met on this date.

The District was closed on January 16, 2023, in observance of Dr. Martin Luther King Jr. Day.

On January 19, 2023, District management met virtually with representatives of Matsom & Isom to discuss current projects, evaluate the past month, and to plan for upcoming projects. Also on this date, the District discovered a natural gas leak at the Oroville facility. PG&E was on site to determine the leak was on the District's side of the main and shut the gas off. The District Manager reported the leak had been repaired and that the gas lines had been replaced due to their age, the material of the lines, and the possibility of other leaks. There also were plumbing issues, where multiple reoccurring clogs kept backing up the lines. The lines have been cleared, scoped, and all appear to be functioning correctly.

On January 24, 2023, all District staff received defensive driver's training. The training was free of charge and provided by the District's insurer, the VCJPA.

On January 25, 2023, the District Manager met with Butte County Public Health's (BCPH) new Epidemiologist. Linda Lewis left BCPH last summer to work with CDPH. This meeting was set up by BCPH's Director.

On January 26, 2023, District management attended the Sac Valley Region meeting. The meeting covered the upcoming MVCAC Board meeting and action items, received reports from industry, CDPH, MVCAC committees, and other districts.

District management and laboratory staff attended the MVCAC Annual Conference January 30 through February 1, 2023. The conference was educational, informative, and well worth attending. Many training sessions on operations, invasive Aedes, vector-borne disease, public relations, and much more.

The District Manager discussed an upcoming desired building project and presented some of the information gathered to date. After some discussion it was the Boards direction to reach out to an architecture firm to form a scope of work sheet that companies could bid on and to include a project manager to oversee the project.

Per the Board's direction at the January 11, 2023, Board meeting, the District Manager reported to the Board of the findings of the District's legal counsel and VCJPA's opinion on the District owning and possibly operating an automated external defibrillator (AED). It was the Board's direction to purchase two AED's. One to be installed at the Chico Substation and the second to be installed at the Oroville facility.

The District Manager reminded the Board that the District will be closed on February 13, 2023, in observance of Lincoln's Birthday and on February 20, 2023, in observance of President's day.

- 7.2 Under item 7.2 of reports, the Vector Ecologist/Fish Biologist reviewed the 2022 Annual Report. The Board reported it was pleased with the report and the new look.

After this final item of reports, President Sheppard asked the District Manager to proceed to policy matters.

8. Policy matters (8.1 – 8.3)

- 8.1 Under item 8.1 of policy matters, the Board was asked to consider amendments to Personnel Policy, Policy #7085, Health Benefit Plan. District management is continuing its review of the District's Policy Manual in sections in their efforts to correct typos, make updates to match current processes, and make recommended updates as needed. It was then moved by Member Kirk, seconded by Member Schuster, and it was passed unanimously with a vote of 8 ayes 0 nays to approve and adopt Personnel Policy, Policy #7085, Health Benefit Plan.
- 8.2 Under item 8.2 of policy matters, the Board will be asked to consider amendments to Personnel Policy, Policy #7090, Retirement, Unemployment Insurance, Deferred Compensation. It was then moved by Member Johnson, seconded by Member Starkey, and it was passed unanimously with a vote of 8 ayes 0 nays to approve and adopt Personnel Policy, Policy #7090, Retirement, Unemployment Insurance, Deferred Compensation.
- 8.3 Under item 8.3 of policy matters, time was set aside to allow the Board of Trustees to complete the Form 700 Statement of Economic Interest as required by the Fair Political Practices Commission.
9. Under topic of the month, the District's Entomologist gave a presentation on mosquito traps used by the District's laboratory.
10. After reviewing the demands made upon the District for the past month, it was then moved by Member LaRocca, seconded by Member Johnson, and passed unanimously with a vote of 8 ayes 0 nays to authorize checks numbered 51954 through 52084 be signed and distributed. Expenditures for the month totaled \$346,346.88.
11. No items under personnel to report.
12. No items under correspondence to report.
13. Under other business the District Manager highlighted the District's amazing staff.
14. No persons wishing to address the Board pertaining to closed session matters.
15. No closed session matters not warranting legal counsel.
16. President Sheppard announced adjournment at 5:03 PM and concluded by stating that the next regular meeting of the BCMVCD Board of Trustees would meet at 4:00 PM on March 8, 2023, at the Chico Substation's Board Room at 444 Otterson Drive, Chico, CA 95928.

Respectfully submitted,

Melissa Schuster,  
Secretary

On February 9, 2023, the District completed the monthly staff meeting and all vehicle inspections. The District's Safety Committee met on this date.

The District was closed on February 13, 2023, in observance of Lincoln's Birthday and on February 20, 2023, in observance of President's Day.

On February 14, 2023, District management met virtually with representatives of Matsom & Isom to discuss current projects, evaluate the past month, and to plan for upcoming projects.

On February 15, 2023, District management met with a representative of Russell Gallaway Associates Inc. to walk the District grounds to review the building extension project and hear a review of the project details.

On February 16, 2023, District management provided a tour of the Oroville facility and provided an overview of operations to newly hired Shasta MVCD personnel.

On February 23 and 24, 2023, the Administrative Manager attended the VCJPA Annual Conference. The conference was educational, informative, and as always well worth attending. The District again had plumbing issues. The clogged lines were cleared free of debris, scoped with a camera to ensure flow left District grounds, and during the inspection a broken pipe was discovered. The District had the clogs cleared and the broken pipe has been fixed.

The District Manager will report to the Board that the District will own two automated external defibrillators (AEDs). One AED will be located at the Oroville office and the other will be located at the Chico Substation when they arrive.

March 1, 2023

Aaron Lumsden  
Butte County Mosquito & Vector Control District  
5117 Larkin Road  
Oroville, CA 95965

Dear Aaron,

Our proposal for the 2023 West Nile Green Pool Survey is attached and we welcome the opportunity to develop a program for the Butte County Mosquito & Vector Control District. We are confident that Deer Creek Resources (DCR) is equipped to survey and detect all green ponds and pools within BCMVCD's priority areas of Butte County.

Established in 2011, DCR's core business supplies mapping and technical specialists to incident command teams managing major wildfire incidents. We also create a wide variety of mapping products using geographical information systems (GIS), aerial imaging and old-school cartographic know-how.

DCR's proposal for the 2023 contract reflects aerial surveys of approximately 140,000 acres in the District and identifying an estimated 600 green pools/ponds. This number is based on the 629 green pools found in the 2022 survey.

DCR's proposal includes creating a GIS layer of existing pools and ponds within the district, conducting aerial surveillance to detect and map green pools and delivering paper and digital maps of target pools to Butte Mosquito.

We are confident in our ability to collect target pool data for BCMVCD and able to deliver imagery which matches the resolution shown in the proposal samples.

The pages that follow provide a detailed description of our services. Thank you for your consideration and please contact us directly with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Zeke Lunder". The signature is fluid and cursive, with a long horizontal stroke at the end.

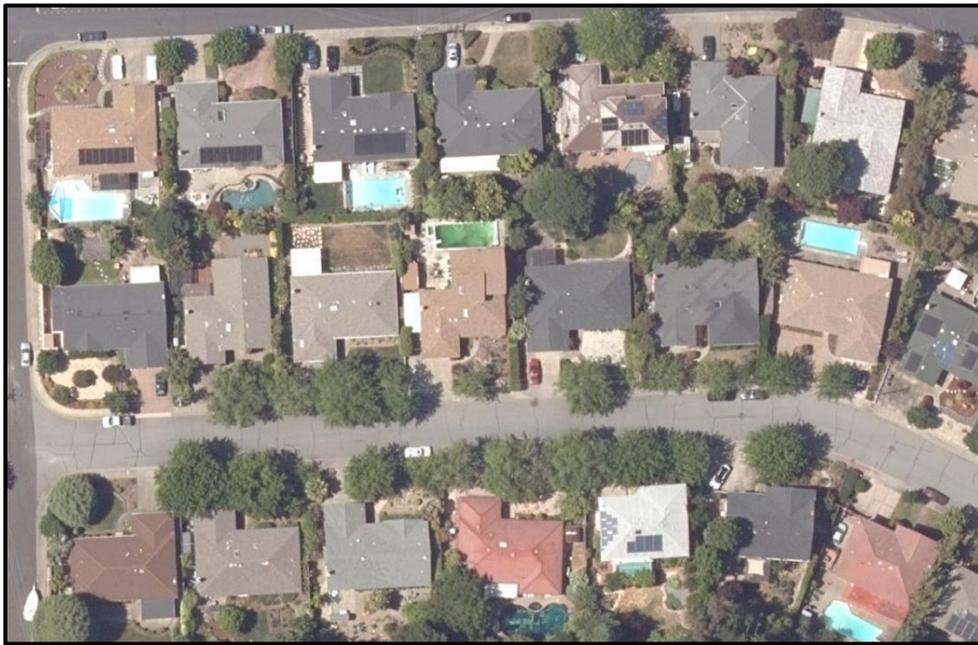
Zeke Lunder, Director  
Deer Creek Resources

**PROPOSAL TO DETECT  
BUTTE COUNTY SWIMMING POOLS  
FOR MOSQUITO ABATEMENT**

**2023 West Nile Green Pool Survey Program**

**Submitted by:**

**Deer Creek Resources  
Chico, California**



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## **Project Goal**

This aerial imaging project will identify and map neglected or “green” pools and ponds within Butte County. A green body of water is indicative of a lack of chlorine and left untreated could become a mosquito breeding ground. Deer Creek Resources (DCR) will collect and analyze high resolution, multi-spectral aerial imagery to detect the presence of green surface water and then overlay the target pools within a GIS to identify residential land parcels for Butte County Mosquito & Vector Control District (Butte Mosquito).

## **Scope of Project**

DCR will conduct aerial surveillance of pools and ponds within the Butte County Mosquito & Vector Control District. DCR will coordinate with Butte Mosquito to designate the boundaries of the project area to be surveyed, the selection criteria for target pools and ponds, priority areas and the schedule of work. DCR shall provide all labor, transportation, tools and materials necessary to perform the work, with the exception of Butte Mosquito-provided property.

Butte Mosquito will provide GIS base layers designating Butte Mosquito boundaries and assessor parcels within the project area. Butte Mosquito will provide aircraft and pilot for aerial surveys under a memorandum of understanding with Butte County Sheriff’s Office (BSCO). If necessary, DCR will provide a pilot and aerial platform at a rate of \$300 per hour.

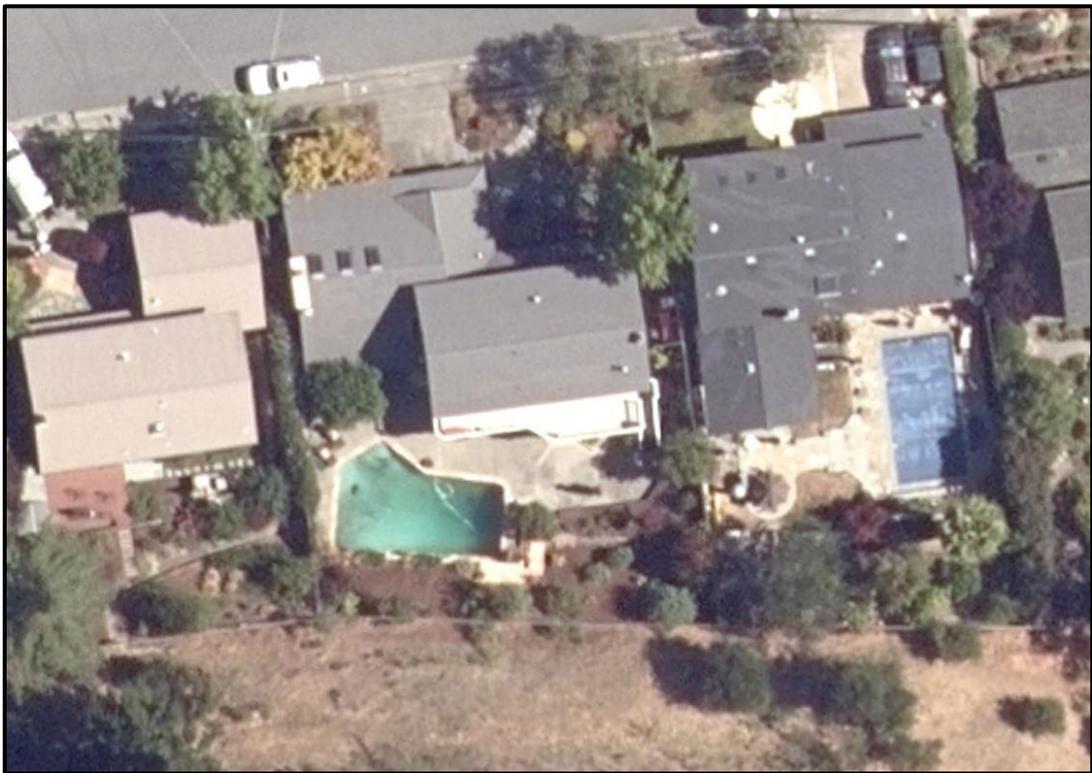
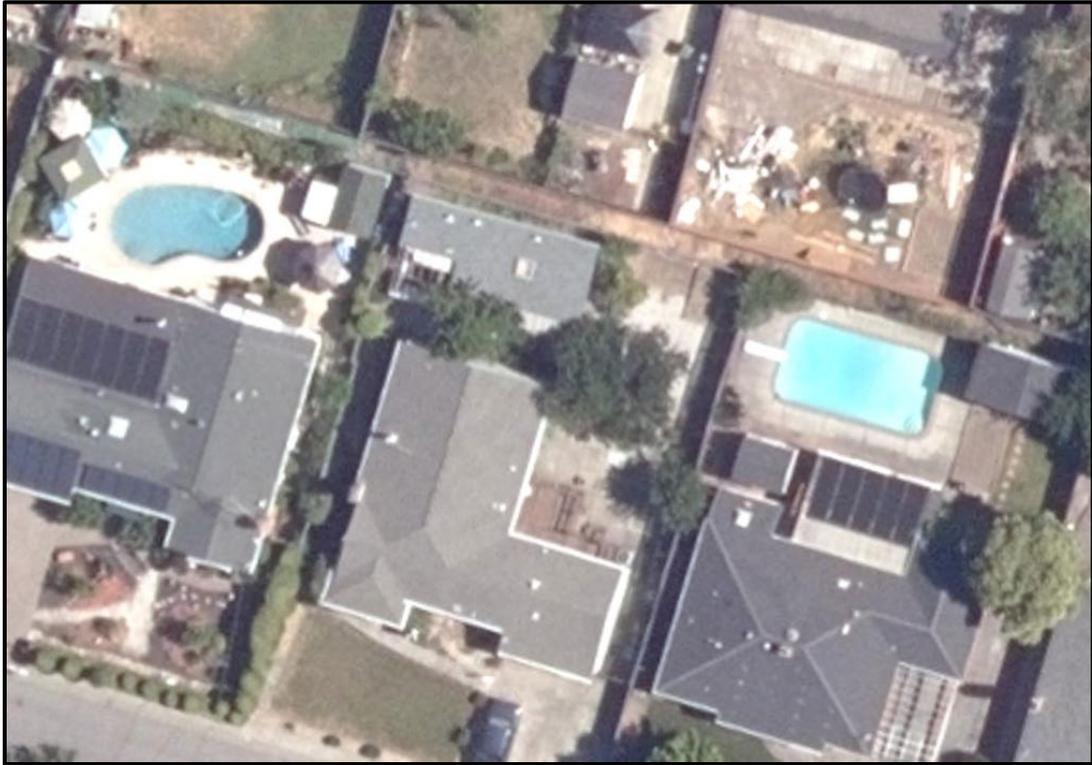
## **DCR Process**

In previous years, Ron O’Hanlon performed this survey for Butte Mosquito by flying in BSCO’s Bell 206B helicopter and manually taking images of target pools with a zoom lens. While this allowed O’Hanlon to deliver high resolution images at approximately two inches per pixel, his manual target pool identification and mapping process were very time consuming.

DCR’s intent is to mount a camera array on BSCO’s Cessna 182 fixed wing plane to capture 4-band imagery and evidence images at approximately six inches per pixel. The 4-band imagery will be used to create a false-color orthomosaic map of the surveyed areas. This data will allow for larger swaths to be identified at a time, saving considerable flight time, and providing highly accurate target pool data to Butte Mosquito. DCR is developing capabilities to provide three-inch pixel imagery that may be available for subsequent surveys.

Examples of six inch per pixel imagery follow.

Six Inches Per Pixel:



## Statement of Work

The 2023 West Nile Green Pool Survey Program be divided into three tasks:

1. Create GIS layer of existing pools and ponds within the Butte County Mosquito & Vector Control District. Butte Mosquito will provide and export GIS data from NearMap.
2. Conduct aerial survey using 4-band aerial imagery to detect green pools and deliver six inch per pixel photos of target pools.
3. Prepare documentation of aerial survey findings to be delivered as paper and digital maps in PDF and Esri GIS formats.

### Task 1: Create GIS Layer

Obtain 2022 GIS layer of points showing locations of pools and ponds from Butte Mosquito. DCR will update the 2022 parcel data with information from the latest Butte County Assessors Parcel GIS to obtain physical addresses for each point. Final coordinates will match GIS layers used by Butte Mosquito.

### Task 2: Conduct Aerial Survey

DCR shall acquire aerial photos for survey areas identified by Butte Mosquito. DCR intends to use BCSO's Cessna 182 fixed wing plane under the MOU with Butte Mosquito, equipped with our imaging array.

DCR and Butte Mosquito will meet to determine the survey extent, prioritize the flight order, and schedule the 2023 program. A tentative map of the areas to be surveyed and a flight plan is based on prior years' work and is included in Appendix A. The total area of the survey areas is approximately 140,000 acres.

This proposal is based on flights planned to start the week of April 15, 2023. Aerial surveys will consist of three days spaced over a three-week period, weather and BCSO availability permitting. This will allow time to process target data within one week of each flight. One flight will target Chico and Hamilton City (Zone 1), a second flight will target Paradise, Butte Valley and Cherokee (Zone 2), and a third flight will target Oroville, Biggs and Gridley (Zone 3).

The total estimated flight time is 16 hours. That includes four-hour flights for both flight zones 1 and 2, and eight hours for flight zone 3. Flight zone three may require one long day broken into two flights or two separate days. Flights should be limited to 3-4 hours to ensure that adequate hard drive space and battery life is available.

Flight line maps will be prepared to cover each zone. Flight lines and existing pool GIS data will be loaded into GPS to direct pilots. Entire flight paths will be captured via our imaging system and synchronized to a GPS device to facilitate georeferencing. Surveilled images and GPS data will be downloaded and backed up at the end of each day's flight operations.

### Task 3: Prepare Documentation

Reports associated with the 2023 West Nile Green Pool Survey Program will include maps of the target pools and ponds identified, the flight route for each zone, a GIS layer of target green pools/ponds, and photo documentation of each target pool/pond with photos and identifying information.

All hard copies will be provided within one week following flight operations for up to 100 targets. When more than 150 targets are mapped on a flight, an additional day will be allowed per 50 targets.

DCR will provide:

1. **Maps:** Target pool/pond locations maps, and maps displaying route flown while conducting green pool surveillance.
2. **Operations crew data sheets for field visits:** One hardcopy data sheet will be prepared for each green pool or pond identified during the aerial survey displaying two photos—an overview and a zoomed in view with a resolution of six inches per pixel. Data sheets will include target pool ID number, assessor parcel number and physical address. An example is provided in Appendix B.
3. **GIS Layers:** One point layer will contain an inventory of existing pools and ponds with attributes including target pool ID number, assessor parcel number and physical address. A second point layer will contain locations of the pools and ponds that meet the Butte Mosquito criteria for field visits with attributes including pool ID number, GPS coordinates, assessor parcel number, physical address, date of survey, overview and zoomed photos, and type of pool/pond for each point.

## **Work Schedule**

The following schedule is based on acceptance of this proposal by March 8, 2023:

**Task 1:** GIS layer of existing ponds and pools to be completed by March 24, 2023

**Task 2:** A planning meeting with Butte Mosquito will take place before March 29, 2023 to finalize work plans and coordinate flight operations. Meeting will also be used to determine if other agencies require notification of flight plans.

Flight operations to begin by the week of April 17, 2023, weather and BCSO availability permitting.

**Task 3:** Reports will be delivered approximately one week after each flight. The first reports will be delivered approximately April 24, 2023 and the final report will be delivered approximately May 8, 2023.

## **Fee Proposal**

2023 West Nile Green Pool Survey Program aerial imaging and documentation preparation will be billed at a rate to not exceed \$20,000.

If it proves to be more cost effective than the BSCO flight arrangement, DCR can contract a pilot and aircraft at \$300 per hour. This is a total per hour cost including fuel. At an estimated 16 hours of flight time, this will be billed at a rate not exceed \$4,800.

Combined imaging, documentation, and alternate flight costs (if required) will be billed at a rate not exceed \$24,800.



# Appendix B – Example Data Sheet

## Butte Mosquito 2023 West Nile Virus Green Pool Survey

Date: April 12, 2023

Sector: CH-1

Target: 028

412 Westwood Ave.

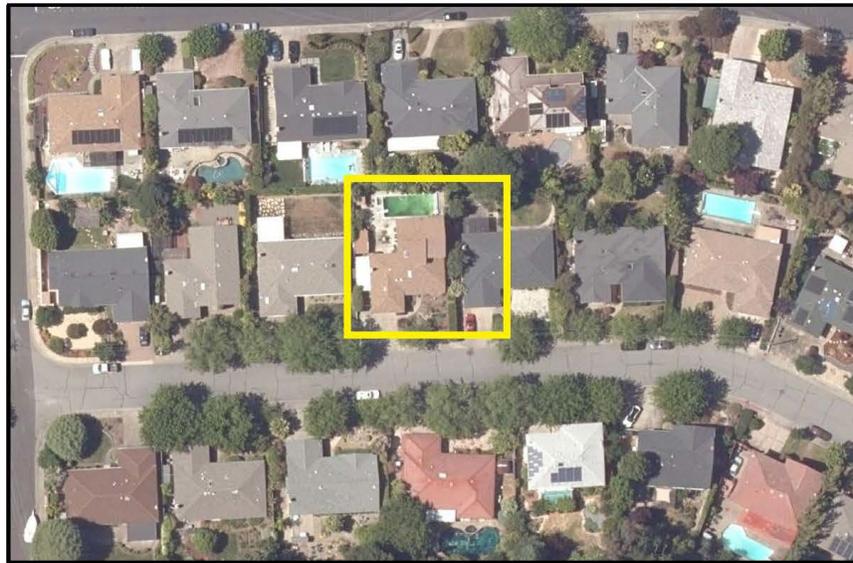
APN: 015-223-987-000

Chico

Latitude: XXXX

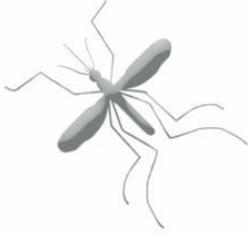
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Longitude: XXXX



NOTES

**CH-1028**



# **BUTTE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT**

***From the Desk of  
District Manager Matthew C. Ball***

March 1, 2023

Butte County Mosquito and Vector Control District  
Board of Trustees  
Attention: President Sheppard  
5117 Larkin Road  
Oroville, CA 95965-9250

***Re: District Manager Contract Extension***

Dear members of the Board of Trustees,

I am writing to request a one-year contract extension to the current employment agreement between the District and myself, the "District Manager." I am satisfied and feel privileged with the current language and terms of the contract. I do not wish to renegotiate terms at this time.

I have and continue to be honored and privileged to serve as your District Manager for the past fifteen years and it is my intention and hope to serve many more. I firmly believe that I have a strong bond and great communication lines with each of you, the District's staff, and the public the District serves. I strongly feel that together, we have completed an abundance of projects and achieved many goals over the past fifteen years, and I am excited to see what we can accomplish in the future.

Looking forward to progressively leading the District for many years to come.

Respectfully,

Matthew C. Ball  
District Manager

mcb