

Mission Statement: To protect the health and socio-economic well being of the citizens of Twin Falls County from harmful vectors and pests, employing environmentally sound abatement practices.

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Cover Photo; Treating Black Fly Larvae in Salmon Falls Creek near Balance Rock in December.

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## Report to Twin Falls County Pest Abatement District Board of Trustees

<u>How to read this report:</u> Much background information is contained in this report and is similar from year to year, new or updated information is marked with an \* in order to streamline reading for repeat readers of this report.

## Introduction

\*This was the seventh season of operation for Twin Falls County Pest Abatement District (TFCPAD). This season started with an early spring, no major flood events and a warm extended fall. We maintained our primary focus of using an Integrated Pest Management approach to control larva of Black Flies and Mosquitoes. The staff consisted of one full-time manager, a newly hired full time technician and during the summer two full-time seasonal employees and a summer intern from CSI. A part-time office administrator helps out with board meetings.

## Geographic Area

The TFCPAD primarily conducts work inside Twin Falls County. The county contains approximately 1,232,000 acres. Twin Falls County has a population of 77,230 (2010 Census). Work is targeted to the areas that will produce the best results for the time and money spent.

Surveillance and subsequent treatment areas for Black Fly control consisted of most moving waters in Twin Falls County: The Twin Falls Canal system which contains 110 miles of major canals and over 1,000 miles of laterals, the Salmon Falls Canal System which has over 300 miles of main and lateral canals, and the Roseworth Canal System which contains over 10 miles of main and lateral canals. In addition, portions of coulee drainage streams, Rock Creek, Deep Creek, Cedar Draw, Dry Creek, Salmon Falls Creek, and the Snake River received some treatment. The Milner Irrigation Canal System was also treated; this system originates in Twin Falls County, runs through Cassia County, then returns into Twin Falls County and contains over 25 miles of canal.

Mosquito Control work was conducted mainly in the more populous areas of the county. Priority in treatments was given to residential areas, locations where historically West Nile Virus was found and recreational or high public use areas. Mosquito monitoring conducted during the season further helped to focus our work where it was most needed. In general, the Snake River was the dividing line for treatments, but a few areas in adjacent counties were treated when we treated along the Snake River due to their direct impact on Twin Falls County. Clearlake's Homeowners Association and the area near Centennial Park are some examples.

In addition to our work inside Twin Falls County, some limited surveillance work was conducted in Jerome, Gooding, Cassia, Lincoln and Minidoka County. This also provided some mosquito samples which were tested for West Nile Virus (WNV).

## 1. Collaborative Agreements

We have welcomed partnerships and the sharing of information and resources in order to fulfill our mission. All parties worked with previously continued in provide assistance. Some of the more significant collaborators are noted.

\*Idaho Department of Health and Welfare provided WNV testing supplies as well as grant money for mosquito surveillance through a grant. The state lab also provided confirmative virus testing.

The Twin Falls Canal Company, Salmon Falls Canal Company, and Milner Irrigation District, North Side Canal, Idaho Power and USGS provided canal information, water flow rates, and data and access to their waterways for treatments.

Clearlake's Homeowners Association contracted to have mosquito surveillance and control. This resulted in treatments that benefited Twin Falls County residents in adjacent area as well as the homeowner's association.

71 Cattleman's Association members partnered with us to treat water sources in areas of concern for sage grouse. We provided product and training, and they provided the manpower to treat these remote locations with the goal of reducing WNV incidence in sage grouse. Members of this organization operate in both Twin Falls and Owyhee Counties

\*INEBRE intern; New this year we partnered with College of Sothern Idaho who administered the INEBRE (Idea Network of Biomedical Research Excellence) Intern program. Their goal is getting students involved with collaborative research especial in the biology and public health fields. The Intern received pay through the grant program, field and lab experience from us and we got some extra help. It was a great deal all the way around, and we are planning on this for next year.

#### 2. Surveillance

**2.1 Black Fly** (BF) adult surveillance (Also known as Biting Black Flies and Buffalo Gnats.) is conducted using the same traps and methods that are used for adult mosquito's surveillance. The traps are not intended to remove or catch all the BF, rather they provide a measurable comparison from year to year and from site to site.

\*Primary reasons for treatment of BF populations are to reduce the economic impact to livestock and reduce the potential for transmitting viral Vesicular Stomatitis virus (VSV). No VSV was detected in Idaho this year however it was found in several western states.



Photo 1. Black Fly adults on horse ear.

The 2015 VSV outbreak in the United States began April 29, 2015. To date, a total of eight hundred nineteen (819) VSV-affected premises (New Jersey serotype) have been confirmed or suspected in eight (8) U.S. states; Arizona (36 premises in 3 counties), Colorado (437 premises in 35 counties), Nebraska (38 premises in 10 counties), New Mexico (52 premises in 13 counties), South Dakota (50 premises in 7 counties), Texas (4 premises in 4 counties), Utah (56 premises in 8 counties), and Wyoming (146 premises in 10 counties). Currently, there were 13 premises remaining under quarantine in 3 states (Colorado, Nebraska, and Texas) as of January1, 2015.

<u>Simulium</u> *vittatum* is the predominate species found throughout the county. It generally does not bite humans; it prefers to feed on livestock and is a concern because of its potential for disease transmission and its negative effect on livestock behavior. When people notice Black Flies swarming in their face, it is generally this species.

<u>Simulium</u> *bivittatum* is a very small species of BF that has a similar lifecycle and habitat preferences to Simuliun *vittatum*, but bites people as well as animals. They are smaller and harder to see, and are general more numerous in the west end of the county. Locals often refer to them as no-see-ums.

- **2.2 Black Fly larval** surveillance in canals primarily took place with yellow sample ropes hung in the waterways. A six-inch section of the rope was marked off and larvae found on that section were monitored. Other waterways were also monitored by pulling up vegetation and looking at it and rocks for larva presence. In fluctuating river and stream flows, the BF Larva move around a great deal in the stream searching out optimum attachment sites, rendering the rope surveys not as effective. Some waterways are surveyed year round. Surveillance was done in order to find BF Larva, to guage larval stage and growth so treatment could be conducted where needed and at optimum larval stage.
- **2.3 Mosquito surveillance** for larva was conducted by dipping for larva in standing water sources such as ponds and water retention areas. Work primarily focused around the more populated parts of the county; however, any standing water encountered was sampled whenever possible. Chart 1. Adult Mosquito catch
- \*Adult mosquito trapping was conducted on a weekly basis during the season (April 4 to Oct 13). Traps used a light and CO2 produced by dry ice or a CO2 cylinder to attract the mosquitoes. Traps were set in the evening and retrieved the following day. A total of 213 trap nights produced a total of 3,202 female mosquitoes that were identified to species as a part of this surveillance. (This number excludes data where traps failed or where efforts were being duplicated as well as traps from surrounding counties.) This trapping provided mosquitoes for West Nile Virus (WNV) testing as well as feedback on treatment results and needs. Testing of mosquitoes this year was conducted in-house with confirmation testing of results being done by the state health lab. Using data from previous years, we conducted surveillance in three ways:

**Targeted** surveillance of high-priority areas.

Random sampling to locate new areas in need of treatment.

**Abundance** trapping to provide a look at populations over time.

# 2015 Trapped Female mosquito Species shown as % of Total catch.

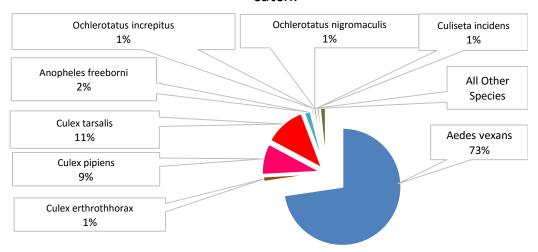


Figure 1. 2015 total by species.

Using data from previous years and state guidelines we have established a Twin Falls County specific operations guide and treatment thresholds and procedures. These guidelines were followed regarding trap counts of certain mosquito species and when a high number were caught, traps were reset to help determine if the population was rising or falling and to evaluate the effectiveness of our treatment efforts. The goal was to find potential problem areas quickly so that we could maintain key mosquito species population numbers below the threshold where disease is easily transmitted. These guidelines are reviewed and updated with the new data as needed.

#### 2.4 West Nile Virus Testing

\*West Nile Virus is considered endemic in Idaho. Our goal is to reduce the likelihood of virus transmission by limiting its primary vector in Twin Falls County: the <u>Culex tarsalis</u> & <u>Culex pipiens</u> mosquitoes. We test mosquitoes regularly as part of our surveillance. This year 131 pools of mosquitoes were tested in-house as part of routine surveillance. TFCPAD uses a rapid immunochromatographic system for screening samples (referred to as a RAMP test). It provides quick and accurate testing of samples. In some cases, samples fall within a range where additional testing is required; when needed, the state lab provided confirmative testing.

\*Results of RAMP test: Two positive mosquito pools were found on August 17 in traps set between Twin Falls and Kimberly. No additional positives were found.

Mosquito species identification also lets us know what type of habitat to look for, and if we were dealing with a potential vector of disease or just a nuisance mosquito. Vectors of disease generally bite, lay eggs and then feed again. These repeat feedings transmit the disease. Nuisance species bite, lay eggs and die and are not likely to spread disease. Most nuisance species are in flood water areas and most

disease vectors come from more permanent standing water. Trap results can be used in planning when and where to work to reduce potential disease vectors before they become a problem.

\* Figure 1. shows the population distribution of trapped female mosquitos in TFC. *Culex tarsalis* and *Culex pipiens* are the two species likley to carry WNV. Culex are most often found in ponds and various containers. *Culex pipiens* most often come from storm drains and small containers of water in areas where people live. A dry summer favors <u>Culex</u> species mosquitoes. Adults overwinter as pregnant females, emerging in the spring ready to lay eggs in small ponds or containers. Flooding events favor other species whose eggs lie dormant in the soil waiting for the right flood conditions to hatch. This year's data show a high total <u>Aedes vexans</u> catch of over 73% of our total catch. Many of these mosquitoes came from along the river when flows flucuated flooding shallow areas along the river corridor. (Keep in mind the river is the county border and we do not treat all of this coridor.) Dry summers also tend to concentrate birds who may have WNV at the limited watersources allowing for a higher infection rate of mosquitoes. This summer's warm fall resulted in mosquitoes late into the season. Figure 2 shows all mosquito species caught combined. In general if we keep this average below 50 per trap night at the peak we have very little public complaint and reduced WNV transmision.

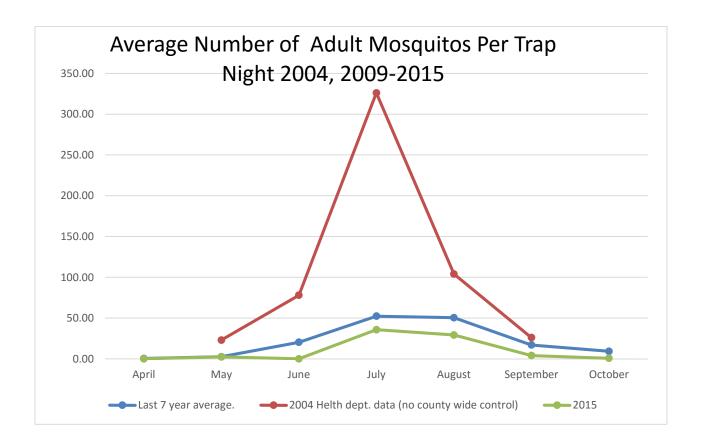
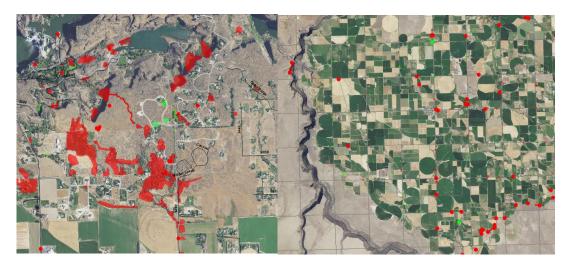


Figure 2: Includes 2004 data from health department during which no control work was conducted; remainder is TFCPAD data.

# 3. Mapping

Graphic Information System (GIS) units were used to provide accurate records of treatment locations, to measure treatment areas, and to record this information for future use. The GIS units allow for field recording of data, field review of previous work and mapping of all treatments. The GIS tracks how long products are effective for and changes color when it's approaching time to inspect it again.



Map 1. Screen shot from GIS map to give an idea of how mosquito production sites are mapped and tracked. On the left is a closer shot of the area south of Shoshone Falls, it is zoomed in to show the actual areas that were treated for mosquito larva. The map on the right is a zoomed out shot showing treatment sites in Castleford area.

## 4. Source Reduction

Educational efforts to reduce potential pest habitat has been an important part of our public education campaign. This can be one on one education with homeowners, speaking to groups or working with schools. The biggest impact we are having in source reduction is through educational effort. We cannot find and treat every potential breeding site, but when landowners know what to

look for they help immensely by draining or flushing standing water. The species of concern for WNV are short range flyers which is why preventing mosquito production in backyards is so important.

TFCPAD helped promote a Tire Amnesty day and conducted public education as part of this day. Southern Idaho Solid Waste offers two tire amnesty days per year



across the region. TFCPAD promotes the spring day in the media as removal of discarded tires

greatly reduces container habitat for certain species of mosquitoes. No direct cost for tire disposal is incurred by TFCPAD.

Educational Public Service Announcements were produced and aired during the summer months on local radio and TV stations to educate people about backyard mosquitoes. Eliminating mosquito habitat when possible is the best way to eliminate mosquitoes.

## 5. Larval Control

Almost all control efforts were targeted towards the larval stage of both mosquitoes and black flies. At this stage of the lifecycle they are confined to a smaller nursery and treatment is safe and effective. Studies suggest that larviciding 1,000 acres is the equivalent of adult control on 72,000 Acres. (Larvicide Logic educational publication, Valent USA 2013) With Black Flies, there is no efficient way to control adults without treating large geographic areas. A mile of river with good Black Fly habitat can produce over 1 billion black flies per day; hence it is best to treat the source.

Our primary larvicide is Bti ( Bacillus thuringienisiis v. israelensis) which is a product of a natural soil bacteria. When refined it produces multiple protein crystals that when consumed, react with the alkaline gut of a mosquito or black fly resulting in larval death. There is no secondary toxicity, or recycling of the product. It has little to no effect on non target species and does not persist in the environment. Black Fly Larvae were treated using Bti in a solution applied to moving water. Mosquito larvae were treated with Bti spread over still water. Larval stage, quantity and water temperature were monitored to determine treatment intervals and application rates.

#### 5.1 Black Fly

Black fly reproduction continues even during the winter. Larvae grow slowly, but have a special adaption triggered by the cold that allows them to emerge as adults and immediately lay eggs without feeding or mating during warmer winter days. Although black fly numbers can increase in overwintering habitats, the winter also provides an opportunity to get an early start on black fly management for the following



season. During the winter, canals are dry and the overwintering habitat is limited, so winter treatments can greatly reduce populations. Overwintering larvae that emerge as adults during the spring disperse and colonize canals. By reducing the number of black flies that first emerge during the spring we expect to reduce the overall population for the year. During years with typical water flow rates, the winter is one of the most cost-effective times to treat. See figure 4 for the dramatic change in populations following the start of winter treatments.

Flight range for Black Flies is 10-20 miles. A treatment program targeting black flies in Twin Falls County that included winter treatments gave excellent results. However, the ability of black flies to disperse long distances complicates management efforts since adults can immigrate to our area from untreated breeding sites outside the County. Despite our best efforts we will have higher numbers of black flies late summer and fall due to immigration from untreated areas outside of the county. Black fly control is best accomplished on a regional level by targeting the larvae in canals and rivers before they hatch.

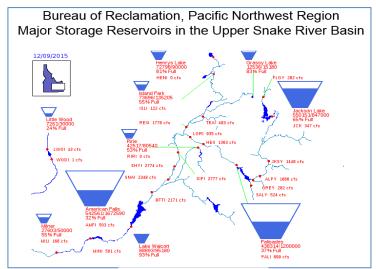


Figure 3 Teacup diagram

\*The Snake River is one of the largest overwintering habitats in our area, and by treating the river we are able to reduce the numbers of black flies that would otherwise colonize canals, which benefits the entire region. As we have in the past, TFCPAD is still sampling for larvae in the canal systems and treating when appropriate. Over 1,000 individual applications of Bti were conducted for black fly control

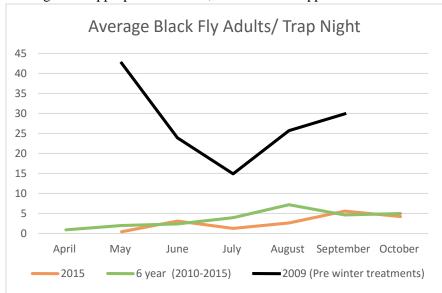


Figure 4 Black Fly catch per trap night.

in 2015. By monitoring both BF larval stage and river flow rates we are able to time treatments to get the best results. Flow rates in the Snake River at Twin falls depend a lot on what is happening upstream. Figure 3 shows the snake river storage system. In addition to irrigation flow releases, some water is released for flood control and salmon recovery. This all impacts costs to treat as well as Black Fly

## 5.2 Mosquito

Mosquito larvae were controlled in several ways. Early in the season catch basins, storm drains, and some water retention ponds were treated using one of several slow release products. Altosid, Naturlar, and Four Star products were all used. Products lasted form 45-180 days depending on the type of location treated. The slow release formula allows these early season treatments to last during the summer. These treatments are designed to work so that even when the water dries up the product remains ready for the next time the catch basin fills with water. This treatment is ideal for storm drains where we do not have the man power to check and treat each one at intervals during the summer. Over 1,000 storm drains were treated in Twin Falls County by TFCPAD. In addition, product is supplied to the local municipalities to use for the retreatment of drains when they are cleaned during the summer. All products used in treatments are listed on the TFCPAD website tfcpad.org.

Additional mosquito larval control was conducted by the use of Bti and a Bacillus sphaericus biological larvacide applied to standing water when mosquito larvae were found present. Bs works in much the same way as Bti, it is a natural soil bacteria that is consumed by the larvae. The difference is that it is a live bacterial that when consumed it multiplies inside the mosquito gut eventually killing the mosquito. The mosquito gut ruptures and releases the bacteria for other larva to consume. In areas of high mosquito larva this recycling of the product can make this type of treatments last longer than Bti. The drawback to this is that it costs more than what Bti does and does not work on all species of mosquitoes. A combo product that pairs the two bacteria in order to get 30 days of control has worked well for us; these products come on a loose corn cob granule (CG) and inside a water soluble pouch (WSP). Various methods are used to broadcast this into standing water.

In some areas we use a surface film to treat for mosquitoes. The surface film is a monomolecular film that coats the surface of the water reducing surface tension, preventing pupa mosquitoes from emerging from the water. It can also plug a mosquito larva's breathing tube and suffocate it. The film is

designed to break down rapidly, it is only used where we find pupa.

## 5.3 Bluegill

\*Stocking of Bluegill for mosquito larval control was continued this year. Bluegill were collected in Dierkes Lake. Many of the locations that received fish are seasonal ponds and will need fish every year. The fish have proven to be a valuable part of our Integrated Pest Management approach. As we stock more waters and have more locations to use as sources for fish this part of our program will expand. A number of volunteers helped with fish capture. Based on the public response, this is the public's favorite part of our program. Our ongoing monitoring has



shown that while Bluegill do not remove all the mosquito larvae, they remove a percentage of larvae making our other treatments more effective.

#### 5.4 Pesticide use totals\*

Total quantity is total product applied, not just the active ingredient. Product information can be found on district website.

TFPAD PESTICIDE USE TOTALS						
Product	EPA Reg. #	Quantity Used 2015	Quantity Used 2014	Quantity Used 2013		
Four Star (45 day )	83362-3	346 each	11 each	0 each		
Four Star (90 day)	83362-3	704 each	748 each	2010 each		
Four Star CRG	85685-2	1,555.21 pounds	1409.35 pounds	35.07 pounds		
4 Star (180 day)	83362-3	1,920 each	2,412 each	2,599 each		
Agnique (surface Film)	53263-28	0.08 gallons	4.23 gallons	3.56 gallons		
Agnique WSP	53263-3	198 pouches	78 pouches	189 pouches		
Altosid Briquet (180 day)	2724-421	2,045 each	2,420.00 each	301 each		
Altosid WSP	2724-448	11 pouches	78 pouches	50 pouches		
Vectolex WSP (BS)	73049-20	54 pouches	57 pouches	485 pouches		
Vectobac CG (Bti)	73049-19	121.63 pounds	225.2 pounds	318.15 pounds		
Vectomax CG(BTi,BS)	73049-429	885.07 pounds	4,024.96 pounds	1,642.43 pounds		
Naturlar (180 day)	8329-84	634 each	205 each	1,720.10 each		
Naturlar Granular (30 Day)	8329-83	113.8 pounds	0 pounds	445.33 pounds		
Vectobac 12AS(Bti)	73049-38	6,145.36 gallons	6,542.71 gallons	5,438.78 gallons		
All Pro MBG ( Granular Bti)	7699-92	283.20 pounds	81.63 pound	370.88 pound		
ATSB	Exempt	5 gallons	NA	NA		

\*TFCPAD has a little over 7,000 sites that are inspected and treated as need during the season. Each year new sites are added and some are removed as habitat is modified or eliminated. This number increased rapidly over the first years of our operation, but has now leveled off mostly due to the limits of time and number of employees. Total product use can also vary greatly due to rain events and temperature. This year was a little below average in control product used.

# 6. Control of Adult Mosquito Populations

Our most effective control of adult mosquitoes is accomplished by controlling the larva.

Control of adult mosquitoes through fogging was not conducted. We have 2 emergency aerial contracts in place in the event aerial application is needed.

## \*6.1 Adult mosquito control research

Atractive targeted Sugar Bait (ATSB)



Two trials were conducted this summer using Attractive Targeted Sugar Bait. ATSB was designed to be sprayed on vegetation at adult mosquito resting sites to kill adults. The first trial was to see if it was attractive to honey bees in nectar dearth conditions. This was similar to the trial done last year only it

involved a different active ingredient. Bees didn't find it attractive even under starvation conditions.

The second trial was conducted to see how effective the currently available ATSB is that we trialed on bees last year. This is for use on adult mosquitoes. We found that results were variable with different mosquito species, and product duration wasn't as long as claimed. However, we did find it to be a great short-duration tool with quick results in most cases especially effective as a buffer between migrating adult mosquitoes and the public. It is a welcome new tool to have available.

## **Peak Mosquito Activity**

In the event that adult mosquito control becomes needed, we have started doing work to determine peak activity times for key species. This is done by using a rotator trap that has several collection bags

that allows us to determine in what time period mosquitoes are caught. It took quite a while to get this set up and running properly this summer. While we have only data from a limited time frame it gives great insight into mosquito activity. In Figure 4 you can see our main WNV vector has to peak activity times during the night 9-11p.m. and again from 3-5a.m. Based on this adult mosquito spraying would be most effective at those times and least effective at 11p.m. to 1 a.m. when there was almost no adult activity.

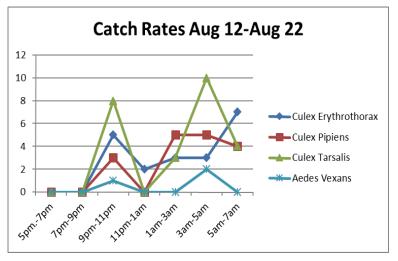


Figure 4. Adult catch rate by time period. Aug 12-22.

### 7. Certification

\*Professional Applicator Licenses were maintained by all of our applicators. In-house training was conducted on defensive driving, water safety, ATV, CPR and First Aid, equipment calibration and use, emergency procedures for spills and insect identification. The water safety portion of our training provides each employee practice in self rescues in a swift water environment. The following is a list of trainings and important meetings attended.

Jan 13, Local Government Emergency Planning meeting

Jan 13, Twin Falls Canal Company meeting

Jan 21, Idaho water users annual meeting (speaker)

Feb 19-20, Black Fly conference; Athens GA (speaker)

Feb 24,th 71 Cattle Association meeting, Jackpot, NV

March 23-26, International IPM conference Salt Lake City, UT

March 29 - April 2, American Mosquito Control Association Annual meeting (speaker) New Orleans

May 12, 2015 IMVCA Spring training workshop, Pocatello

May 27, CPR & First Aid training, Also completed in the past two weeks, ATV, Forklift, Defensive Driving and basic hazard safety training.

Various Local Government Emergency Planning meeting (LGIP) during the year.

#### 8. Public Education and awareness

\*The following is a list of educational events attended by TFCPAD:

May 20, COW days, Career on Wheels Day

May 18, KMVT Story http://www.kmvt.com/news/latest/304175601.html

May 21, Education day with Hollister Elementary

May 28, Filer Fish Pond Education Day

Jun, July & Aug, Public service announcements on local TV and Radio stations.

Sep 19, South Central Community Action Day in the Park

Nov 11, Met with Cub Scouts learning about biology and mosquitoes.

Nov 17,18 Guest speaker at 3 Biology classes at CSI.

### 8.1 Links to TFCPAD related news stories: (click on link in blue)

**Protecting honey bees while fighting off mosquitoes** *Posted: Thu 4:09 PM, Aug 27, 2015* The Twin Falls County Pest Abatement District is wrapping up a study involving a mosquito treatment product and how it affects honey bees.

**Fewer cases of West Nile cases expected this year** *Posted: Tue 5:05 PM, Aug 25, 2015* It's looking like we're going to see fewer cases of West Nile virus in the Magic Valley this summer.

Pest Abatement officials warn to be cautious of West Nile Virus *Posted: Thu 5:16 PM*, *Aug 20*, 2015 The Twin Falls County Pest Abatement District is warning everyone throughout the Magic Valley to be cautious of West Nile Virus.

West Nile Virus found in Twin Falls county *Posted: Wed 12:39 PM, Aug 19, 2015* The West Nile Virus has been discovered in Twin Falls County.

**Traps test positive for West Nile Virus** *Posted: Wed 8:34 PM, Aug 19, 2015* Mosquito traps in the county are testing positive for west Nile Virus.

**Fish from Dierkes helping to lower mosquito population** *Posted: Fri 4:52 PM, Jul 10, 2015* Lots of little helpers are joining forces with the Twin Falls County Pest Abatement District to help out with mosquito control.

Twin Falls County is fighting back against the West Nile Virus Posted: Tue 3:42 PM, Jul 07, 2015 Once a week the Twin Falls County Pest Abatement District sets mosquito traps to test for the West Nile Virus.

West Nile Virus found in Western Idaho *Posted: Mon 1:58 PM, Jul 06, 2015* Idaho is once again in the news regarding the West Nile Virus... This time, it's South Western Idaho in the cross-hairs.

<u>1st Human Case of West Nile of Year Confirmed in South-central Idaho</u> A woman in Lincoln County has been diagnosed with West Nile disease, the first human case confirmed this year in southern Idaho. September 06, 2015 3:00 pm

<u>1st Human Case of West Nile of Year Confirmed in South-central Idaho</u> A woman in Lincoln County has been diagnosed with West Nile disease, the first human case confirmed this year in southern Idaho. September 03, 2015 3:00 pm

<u>Saving Bees in the Battle Against Mosquitos</u> Pest control is a constant balancing act. August 31, 2015 2:30 am

West Nile Virus Confirmed in Twin Falls County West Nile virus has been confirmed in Twin Falls County, health officials announced Wednesday. August 20, 2015 2:00 am

<u>Vesicular Stomatitis Virus Getting Closer to Idaho</u> Livestock producers are watching the development and movement of a disease that is moving northward faster than usual.

# 9. Other Business

# 9.1 Board meeting Dates

All Board meetings were announced and open to the public. The following is a list of Meeting date

1/14/2015	5/28/2015	10/8/2015
1/26/2015	7/7/2015	11/20/2015
2/24/2015	8/19/2015	
4/6/2015	9/10/2015	

## 9.2 BUDGET FOR TWIN FALLS COUNTY PEST ABATEMENT DISTRICT

\*Twin Falls County Pest Abatement District YTD Revenues & Expenses to 2015 Budget vs. Actual & 2016. Budget was approved at a public hearing Wednesday, August 19, 2015, at 7:00 PM at the TFCPAD Office.

Budget Summary: Repayment to the County of Twin Falls for expenses incurred by the interim pest abatement district prior to the formation of the permanent district was completed in 2013. Additionally, the target of approximately one year's tax collection was reached in 2014. With these two long term financial obligations completed, the board approved a second full time employee for the district. (started spring of this year) While this is a long term financial commitment that may impact expenditures in other areas, the decision was taken to secure operational sustainability. 2016 will see increased health care costs associated with the affordable health care act.

Budget Items		2015 Actual	2015 Budget	2016 Total Budge
1-01 Taxes		588,924	552,293	552,293
1-02 Grants		-	-	-
1-03 Foregone		-	17,601	17,601
1-04 Carryover Money Other		671,074	573,773	573,773
		10,550	3,250	3,250
		1,270,548	1,146,917	1,146,917
		84,184	123,303	123,303
		33,201	43,007	43,007
		22,863	25,130	25,130
		2,055	3,200	3,200
		23,269	37,900	37,900
		846	5,650	5,650
		1,412	2,520	2,520
		4,458	6,480	6,480
10-01 Emergency Abatement Fund		-		-
10-02 Previous Year Carry Over		671,074	573,773	573,773
		4,357	10,850	10,850
		299,945	303,654	303,654
		4,776	11,450	11,450
		1,068,256	1,023,614	1,023,614
		1,152,440	1,146,917	1,146,917
		\$ 118,108	\$ -	\$ -
	1-02 Grants 1-03 Foregone 1-04 Carryove 1-03 & 1-05 O	1-02 Grants 1-03 Foregone 1-04 Carryover Money Other 1-03 & 1-05 Other Income	1-02 Grants 1-03 Foregone 1-04 Carryover Money Other 1-03 & 1-05 Other Income 10,550 1,270,548  84,184  84,184  33,201 22,863 2,055 23,269 846 1,412 4,458 10-01 Emergency Abatement Fund 10-02 Previous Year Carry Over 4,357 299,945 4,776 1,068,256	1-02 Grants       -       -       -       -       -       -       17,601       17,601       17,601       1-04 Carryover Money Other       671,074       573,773       1-03 & 1-05 Other Income       10,550       3,250       1,146,917 <td< td=""></td<>

### 9.3 Emergency Abatement Fund Policy

Twin Falls County Pest Abatement District Emergency Abatement Fund Policy Position January 7, 2016

The Twin Falls County Pest Abatement District is charged with protecting the health and welfare of the citizens of the county from pests and vectors which carry disease or which might have a negative impact on social and economic well-being of the citizens. The primary focus of the district's activity is to proactively abate mosquitoes and black flies in the county before they reach numbers which could cause harm.

The district must, however, also be prepared to react to threats which are currently not an issue. To those ends, the district has worked to accumulate monies into an Emergency Abatement Fund. When the District was formed, there were no monies allocated to fund emergency abatement. The financial target for the Emergency Fund is approximately one fiscal year worth of tax collections. This amount should allow a reasonable and non-excessive response to an emergency. At the time of the district's formation it was decided that money should be set aside each year from a line item on the budget and that any unspent operating money should also be added to the fund, until such time that the budget target was reached.

Due to State of Idaho statutes for taxing districts, in order to make the Emergency Fund money available for use, the money in the Emergency Fund must be shown on the annual budget. The result of this is that the annual budget for the Abatement District rose steadily and significantly each year through 2015. It was anticipated that when the fund target was reached the district budget will be approximately two (2) times the annual tax revenue collection.

Through organized budgeting and spending discipline the Emergency Fund target was reached and for fiscal 2015 it was decided by the board to use the money that had been going into the fund for a second full time district employee. This decision will reduce the risk of institutional knowledge loss and provide better continuity of activities from one season to the next. Fiscally the goal now will be to efficiently abate and educate within the district to the extent possible with the tax monies annually collected and to essentially stop any underspend compared with current and future budgets.