

**DAVIS COUNTY**  
ENVIRONMENTAL HEALTH SERVICES DIVISION

**2018**  
**ANNUAL REPORT**

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The environment is everything that isn't me

- Albert Einstein

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This year marked a turning point in the Environmental Health Services Division. We made some changes in staffing and many programs were adjusted to better meet the needs of the County. Regulations were revised and the Department introduced a new Strategic Plan with many priorities, goals, and strategies that caused us to redirect resources to meet these new expectations. I'm very proud of what our Division accomplished throughout the year. The Division consists of 20 staff members that work across four bureaus: Air Quality, Water Resources, Food & Facilities, and Waste Management & Environmental Response. Division staff members worked hard together to meet many goals across their respective programs. We were excited to welcome a few temporary and new staff members this year that injected enthusiasm and renewed determination that have moved our programs in new and exciting directions.

In early 2018, the Department unveiled a new Strategic Plan. This plan was developed using current data, staff input, and Division Directors' collaboration. Through this process, four (4) priorities were identified:

1. Healthy Communities
2. Community and Partner Engagement
3. Supporting and Developing Employees
4. Sustainability and Funding

Throughout the year, the Department continued to develop structure and assign resources in support of this plan with an eye on implementation in 2019. However, while the Department continued to plan, the Division moved forward immediately to align with the plan priorities in 2018. The details around these accomplishments will be presented in the different bureau sections contained within this annual report.

I hope you enjoy our 2018 Annual Report. A great deal of work went into all the services provided, and certainly has lasting impacts on the overall health and well-being of Davis County residents.

Sincerely,  
Dennis Keith, Director



# MISSION

To promote food safety through education, inspection, and enforcement of all food service establishments and to promote the safety of children and adults in the physical environment of institutional facilities.

## YEAR IN REVIEW

In 2018, the Food & Facilities Bureau faced the challenge of implementing new regulatory requirements and improving Division resources, while trying to maintain past progress and meet the demands of a growing retail food industry in Davis County. R392-102 Food Truck Sanitation was added to the Utah Administrative Code and formally adopted as part of the revised Davis County Board of Health - Food Service Sanitation Regulation, and went into effect this year standardizing food truck requirements statewide. This new rule and revised regulation propelled the Division to establish new procedures and guidance documents, train staff, and work with industry to implement changes. This past year has not only been demanding due to implementing the regulatory changes, but also due to the commitment of maintaining a competent and knowledgeable workforce. As part of this process, the Food & Facilities Bureau has been working towards achieving further compliance with the Voluntary National Retail Food Regulatory Program (VNRFRP) Standards. This requires ongoing resources committed to maintaining compliance with standards previously met as well as allocating resources to meet the objectives of additional standards. This past year, the Division issued a total of 1,342 food establishment permits, with an additional 20 establishments in the plan review process, and an annual 8% increase in food establishment permits issued compared to 2017. Division staff also conducted 144 complaint investigations in 2018, which is 47% higher than the previous year. As the food industry grew in 2018, Division staff worked hard to meet the regulatory demand by conducting 12% more inspections this year than last year.

<b>10,888</b>	<b>FOOD HANDLER PERMITS ISSUED</b>
<b>1,790</b>	<b>TOTAL FOOD INSPECTIONS</b>
<b>1,342</b>	<b>FOOD ESTABLISHMENT PERMITS</b>
<b>144</b>	<b>COMPLAINT INVESTIGATIONS</b>
<b>63</b>	<b>PLAN/SITE REVIEWS</b>
<b>6</b>	<b>PERMIT SUSPENSIONS</b>

## ACCOMPLISHMENTS

### Rule R392-102 Food Truck Sanitation

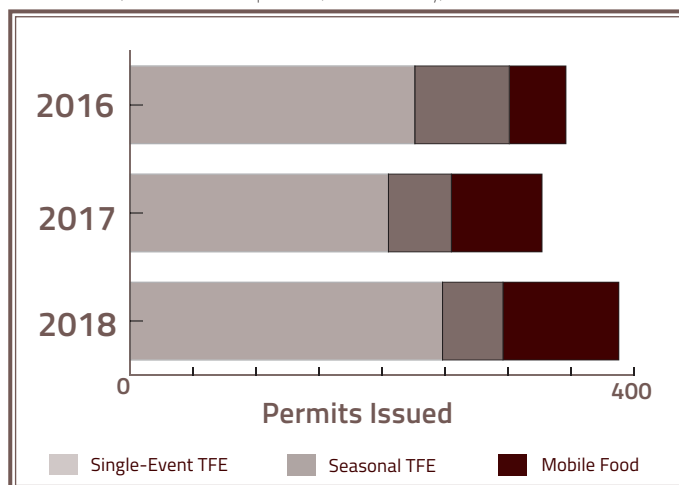
The new Rule R392-102 Food Truck Sanitation went into effect on September 1<sup>st</sup>, 2018. This required significant effort by staff as they worked with owners and operators of mobile food establishments to ensure existing trucks reached compliance with established standards and followed the correct permitting process. However, many food establishments operating as mobile food establishments were constructed in a way that failed to meet the definition of a food truck, and subsequently failed to meet permit criteria. In an effort to allow these food establishments to continue to operate, the Division created the Limited-Use permit category, which was put into effect in the revised Food Service Sanitation Regulation.

### Revision of the Davis County Board of Health – Food Service Sanitation Regulation

On November 13<sup>th</sup>, 2018 the Davis County Board of Health approved a revised Food Service Sanitation Regulation. The primary objectives of this revision were to adopt R392-102 Food Truck Sanitation, as well as create greater efficiencies for the Division and those we regulate. The following revisions were made:

- Adopted Rule R392-102 Food Truck Sanitation;
- Incorporated the Certified Food Safety Manager fee in the permit fee;
- Standardized a flat fee for plan reviews, rather than a risk-based fee;
- Established a Change-of-Ownership or Limited Plan Review fee;
- Expanded a risk-based permit system to all food establishments;
- Created Limited-Use and Seasonal Food Establishment permit categories;
- Instituted a Commissary Registration fee;
- Eliminated reinstatement fees and Sampler permits;
- Simplified the Temporary Food Establishment permit options;
- Altered the Purpose, Scope, Definitions, and Permit Validity sections to better align with state rules and statutes;
- Added section to easily reference permits not being transferable;
- Replaced the Mobile Food section in the regulation with Limited-Use Food Establishments;
- Simplified the Flavored Ice and Temporary Food Establishment sections of the regulation; and
- Re-worked the Enforcement section to show progressive stages of the enforcement process

Figure 1. Annual comparison of Mobile Food and Temporary Food (Single-Event and Seasonal) Establishment permits, Davis County, 2016-2018



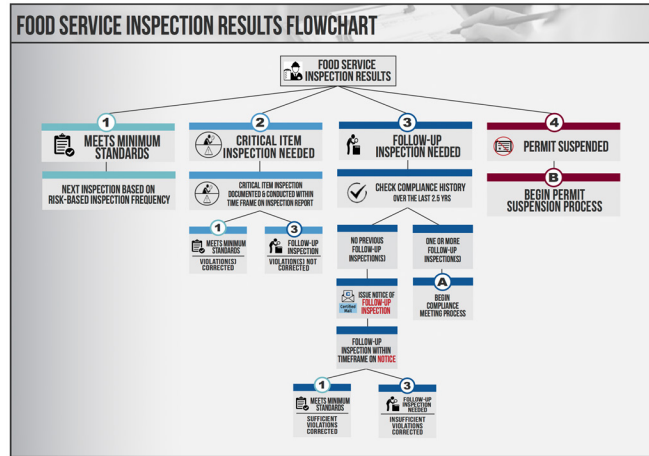
## Voluntary National Retail Food Regulatory Program (VNRFRP) Standards

In 2018, we continued our commitment to improving our capabilities as food safety regulators by working towards compliance with another VNRFRP standard. This year, the Division focused on improving our capabilities and preparedness in response to foodborne illness outbreaks and outbreak investigations. As part of this standard, we established a foodborne illness team consisting of environmental health, epidemiology, and enteric disease staff. This team established standard procedures for the surveillance and investigation of foodborne illnesses, as well as the creation of foodborne illness investigation forms. The team also established times throughout the year to review different incidents and to refresh on our procedures. The Davis County Health Department is now compliant with four (4) of the nine (9) VNRFRP Standards:

- Standard 1:** Regulatory Foundation (2016);
- Standard 2:** Trained Regulatory Staff (2017);
- Standard 5:** Foodborne Illness and Food Defense Preparedness & Response (2018); and
- Standard 7:** Industry and Community Relations (2017)

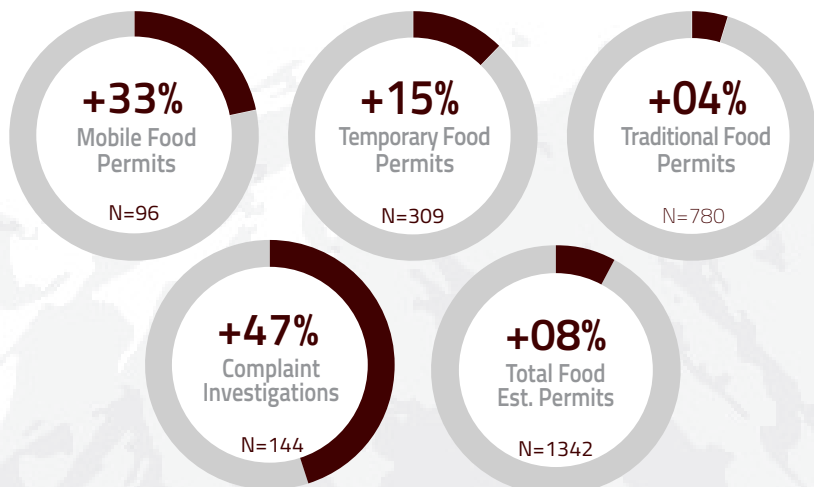
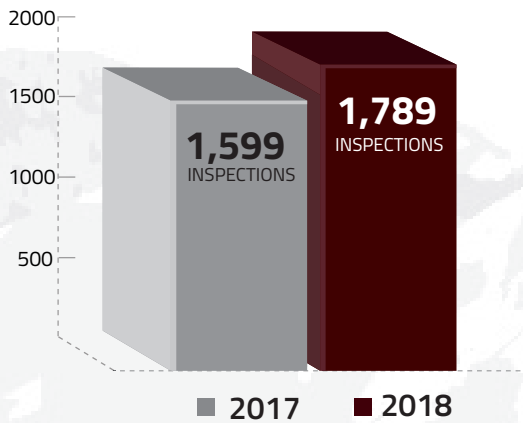
## Additional Accomplishments

- Revised the risk assessment and plan review process.
- Collaborated with a Davis School District official regarding school inspections and trained Davis School District food service personnel.
- Hired a seasonal employee to inspect the majority of our Temporary Food Establishments to allow full-time staff to focus on other demands of their jobs.
- Established a formalized enforcement process that outlines when follow-up inspections are conducted when particular Notices are issued, when compliance meetings are held, and when permits are suspended or risk categories are impacted (see flowchart below).



# by the Numbers

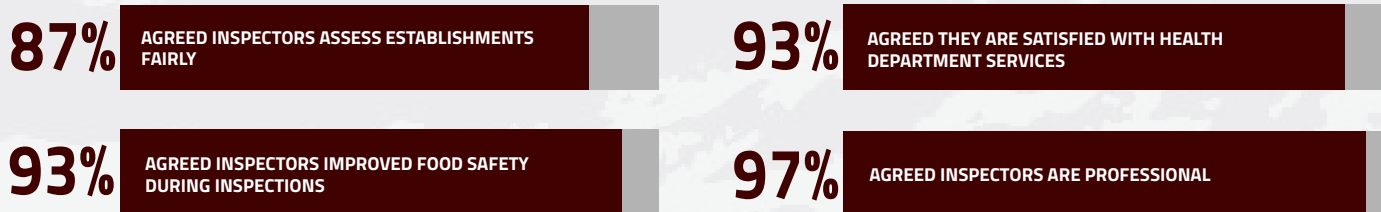
## FOOD SERVICE INSPECTIONS



Annual Percent Increase in Food Related Programs (2017-2018)

\*N represents the total sample number of each category, respectively

## CUSTOMER SATISFACTION SURVEY





# MISSION

To improve public health and welfare through air quality compliance programs that reduce tailpipe emissions from motor vehicles, education to the public and businesses about the hazards of air pollution point sources, and addressing any other factors that contribute to the overall air quality in Davis County.

## YEAR IN REVIEW AIR QUALITY PROGRAMS

### Cut Pollution - Mow Electric Program - UCAIR Grant

The Davis County Health Department in conjunction with the Weber-Morgan Health Department and Weber State University, was awarded a UCAIR Partnership Grant. This grant along with additional funds from the Utah Department of Environmental Quality (DEQ), allowed for the implementation of the "Cut Pollution – Mow Electric Program." This program allowed for an exchange event on April 21<sup>st</sup> where 837 gas-powered lawn mowers were exchanged with a \$100 fee for zero-emissions electric lawn mowers at two locations: the Weber State University-Davis Campus and the Weber State University-Ogden Campus. Over 1,600 applications were received and more than 1,000 employee and volunteer hours were used to ensure a successful exchange. Employee volunteers helped with logistics, planning, website creation, marketing, program workshops, lottery administration, and volunteer coordination. Additionally, 76 lawn mowers were allocated to a fee waiver program to ensure lower income families were able to participate. According to the Utah DEQ, each hour spent mowing with gas-powered lawn mowers produces emissions equivalent to 160 vehicle-miles traveled. Additionally, the average homeowner mows their lawn about 30 times per year and spends about an hour mowing each time. Therefore, in one year, the **837 mowers** distributed through this program will save emissions equivalent to **4,017,600 vehicle miles traveled**.

**251,564** TOTAL EMISSIONS TESTS

**652** CERTIFIED I/M TECHNICIANS

**256** SMOKING VEHICLE COMPLAINTS

**135** I/M STATION PERMITS

**125** COVERT AUDITS COMPLETED

**97** CHALLENGE TESTS

### Breathe Utah Partnership Spotlight

The Davis County Health Department partnered with Breathe Utah to provide air quality education to students and teachers within Davis County. Breathe Utah, through the Air Aware School Program, teaches students from pre-K to 12th grade what air pollution is, where it comes from, how it effects the human body, and what the public can do about it. In 2018, eight (8) presentations given by Breathe Utah staff provided education to 800+ students. Additionally, Breathe Utah, through funding from Andevor, hosted two (2) professional development courses on air quality for Davis County teachers. During these courses, teachers are provided materials and equipment to teach why we have inversions, what we put into the air, how it impacts us, and what we can do about it. Currently, 210 Utah teachers have received this training which has the potential to get air quality education to over 2,000 students statewide.

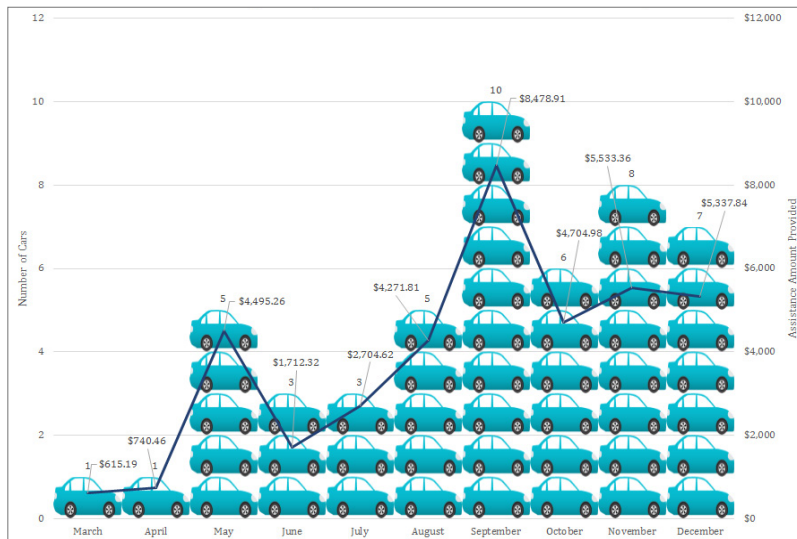
### I/M PROGRAMS

#### Davis County Vehicle Repair Assistance Program - UCAIR Grant

The Davis County Health Department was generously awarded a \$20,000 UCAIR Partnership Grant. The Health Department matched this funding in an effort to increase the overall impact to air quality. This program provided financial assistance to lower income vehicle owners to aid in the repair of excessively emitting vehicles, and reduce the number of emissions waivers being issued. The program received 63 applications for vehicles in need, with 49 of these vehicles repaired and successfully passed an emissions inspection. The program repaired 26 Tier I (model years 1994-2003) and 23 Tier 2 (model years 2004-2016) vehicles. This program also helped reduce the number of waivers issued by 50 %. The majority of the vehicles repaired by the VRAP failed their initial emissions test due to a faulty catalytic converter. Catalytic converters are essential, as they reduce up to

90 percent of combustion engine emissions. The total amount of emissions reduced annually, if each vehicle were driven **15,000 miles** per year, was calculated to be **460 pounds** with a lifetime emissions reduction of 2,460 pounds.

Figure 2. Number of vehicles repaired by month and assistance provided, Davis County, 2018



### Fraud Investigations

The Division investigated and took enforcement action in two (2) significant fraud cases in 2018. In one case it was discovered that a device was being used to "simulate an emission test" for excessively emitting vehicles. Using this method, more than 100 fraudulent tests were conducted. In the second case, properly functioning cars were being used in place of excessively emitting vehicles. Through the Division's adjudicative process, and with the support of Davis County's civil attorney the Department was able to effectively put an end to these activities by suspending I/M station and/or technician permits.

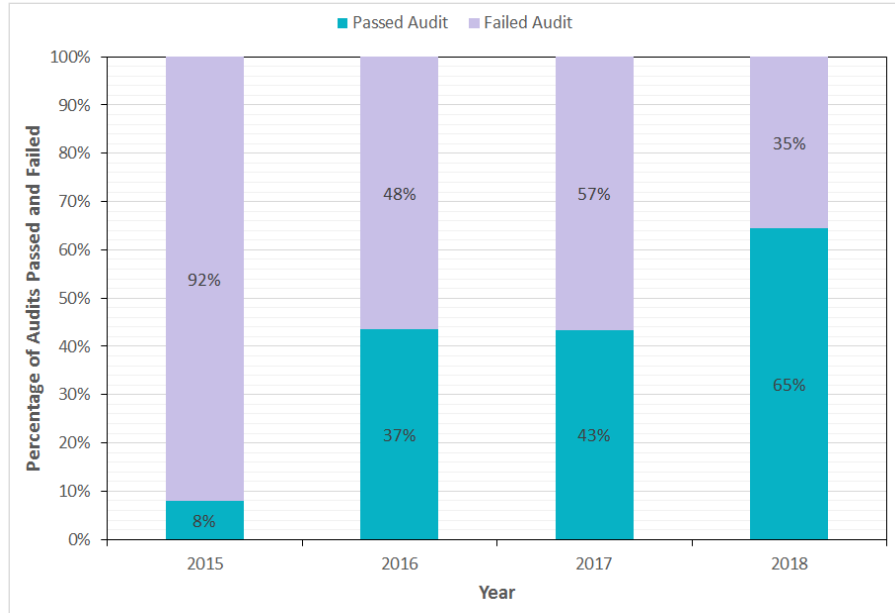
## Equipment Updates

The Davis County Health Department, in partnership with Worldwide Environmental Products, added new analyzer software at the end of 2018. First, the Data Acquisition Device (DAD) replaced the existing On-Board diagnostics paddles. This new equipment provides faster communication with vehicles, collects more data, and has an internal power supply. Second, the emulator is used to provide self-testing capabilities of the DAD. If the communication between the vehicle and the DAD does not occur, this device helps determine if the DAD is operating correctly. Over the next few months, the installation of all lane cameras will be completed to provide an overall view of the vehicle and the inspection lane. These equipment updates will allow Division staff to conduct covert technician audits while viewing the lane cameras and helping stations troubleshoot equipment malfunctions.

## Covert Audits

This year, 98% of all inspection and maintenance (I/M) stations received a covert audit. The vehicle used for the covert audits was missing its catalytic converter when tested and should fail its emissions test. Out of the 124 covert audits, 80 stations and inspectors successfully passed the audit by failing the covert vehicle. Unfortunately, 44 stations and inspectors failed the audit by passing the vehicle. The stations success rate increased by 22 percent (see Figure 3). This continual improvement is credited to the hard work of Davis County I/M station personnel and division staff. Additionally, based on station personnel's feedback, the Division implemented a new educational on-site training program. Through this new program, 33 stations and over 100 emission inspectors were able to be trained this year.

Figure 3. Percentage of passed/failed covert audits, Davis County, 2015-2018



# by the Numbers

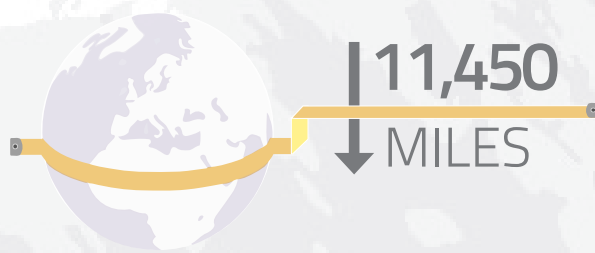
**+10**  
PURPLE AIR MONITORS



In partnership with the Davis County School District the Davis County Health Department purchased ten (10) Purple Air particulate matter (PM2.5) monitors to launch a pilot project that will provide real-time air quality data to all high schools within Davis County.

## CLEAN THE AIR CHALLENGE

20 employees collectively eliminated 11,450 miles, which equals nearly half the circumference of the globe.



## RESIDENTIAL WOOD BURNING

Solid-fuel burning is projected to make up about 15% of Wasatch Front air pollution this winter. Davis County conducted **five (5)** wood burning and/or solid fuel investigations in 2018. One (1) investigation resulted in submission for enforcement to the Utah Division of Air Quality (DAQ).

WASATCH FRONT AIR QUALITY

**15%**

**+03%**

Initial Gasoline Tests

N=213,780

**+06%**

Initial Diesel Tests

N=10,183

Annual Percent Increase in Air Quality Related Programs (2017-2018)

\*N represents the total sample number of each category, respectively

## MISSION

To protect the citizens of Davis County and the environment through environmental response; promote reduction, reuse, and recycling; and prevent waste discharge or pollution.

## YEAR IN REVIEW

### Radon Program

The radon program provides radon testing and informational services to the residents of Davis County. During 2018, the Division provided in-home radon monitoring services to approximately 60 citizens using RadStar300 continuous radon monitoring units. The Division also purchased 200 short-term radon test kits and 50 long-term radon test kits which are provided to citizens upon request, at no cost, in order to test their homes for



radon. The results of the radon monitoring / testing services will be continually plotted using a Geographic Information System (GIS) in order to identify potential "hot spots" of elevated radon concentrations in local communities. In an effort to promote radon awareness, the Division posted several informational links to the Department's social media pages in January, which was designated nationally as Radon Awareness Month (Reach #706). During the year, the radon program also contracted with the Utah Geological Survey (UGS) to create a Geologic Radon Hazard Susceptibility Map of Davis County. This map

may be used to demonstrate to citizens, developers, and government officials where conditions exist for potential elevated radon concentrations. During the creation of this map, the UGS revised their mapping methodology based on sampling data provided by the Division. The methodology developed during this mapping project will serve as the standard for the UGS to produce Geologic Radon Hazard Susceptibility Maps for the entire State. The map can be found at the following web site: [https://ugspub.nr.utah.gov/publications/open\\_file\\_reports/ofr-655.pdf](https://ugspub.nr.utah.gov/publications/open_file_reports/ofr-655.pdf)

### Powdery Panic Exercise

This year, members of the Division's Environmental Response Team participated in a training exercise with other agencies, including: the Davis County Sheriff's Office, the South Davis Metro Fire Department, the Utah Public Health Laboratory, and the Civil Support Team. The training exercise was centered on the discovery of an unknown white powder at a local business. The exercise was designed in part, to evaluate the Davis County Health Department's Environmental Response Team's ability to:

- notify and assemble Environmental Response Team members;
- select proper testing and sampling equipment;
- select and utilize the appropriate personal protective equipment (PPE) once on scene;
- coordinate sampling activities with local fire departments and Civil Support Team partners;
- package the sample; and
- establish a forensic chain-of-custody for delivery of the sample to the Utah Public Health Laboratory.

Coordination between each of the agencies was also evaluated. Environmental Response Team members were able to effectively coordinate information sharing and response with partners. Areas of improvement for the Environmental Response Team members were identified and have been the focus of training throughout the year.

**116** HOUSING COMPLAINTS

**86** USED OIL INSPECTIONS

**57** RADON TESTS CONDUCTED

**48** BODY ART INSPECTIONS

**35** ENVIRONMENTAL RESPONSES

**23** TANNING INSPECTIONS





### Environmental Response Team Certifications and trainings

Three (3) staff members completed and were certified in HazMat Awareness training through the Utah Fire & Rescue Academy, which allows them to respond to a hazardous materials incident and report to the appropriate authorities. Two (2) members completed and were certified in HazMat Operations training which allows them to engage in defensive actions during a hazardous materials response. Three (3) team members continued to maintain their HazMat Technician certifications which allows them to engage in offensive actions during a hazardous materials response.

### Contaminated Properties/Illicit Drug

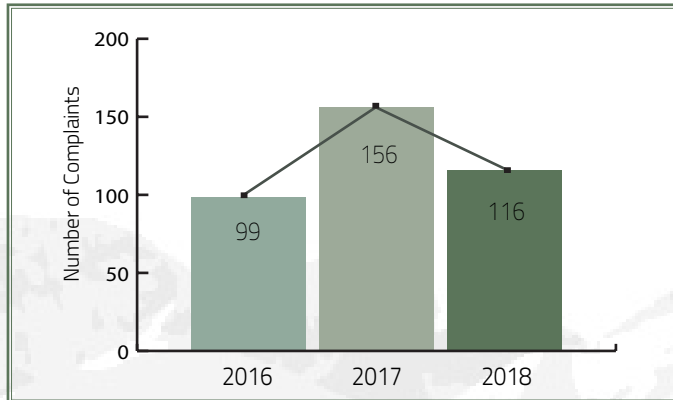
Two (2) Environmental Health Scientists (EHS) successfully completed a Utah Department of Environmental Quality Decontamination Specialist course. This certification allows these staff members to actively participate in preliminary assessment, work plan review and decontamination activities of properties contaminated by illegal drug operations. As part of this process, this will allow better oversight of our newly anticipated Board of Health Regulation to address these contaminated properties.

### Body Art Program

In 2018, the Division received applications for, and approved 14 new body art facilities. At the end of the year, there were 44 active body art facilities, with the vast majority exclusively offering permanent cosmetics. The Division participated in the state Body Art Rule Committee in 2018. The purpose of the committee is drafting a statewide body art rule for adoption by the Utah Department of Health. Division staff created and distributed a survey to all the body art operators in Utah, requesting input and guidance on the details of the proposed rule. The information gathered from the nearly 200 responses was used to draft the new rule. The draft is currently under review and may result in a completed rule in 2019.

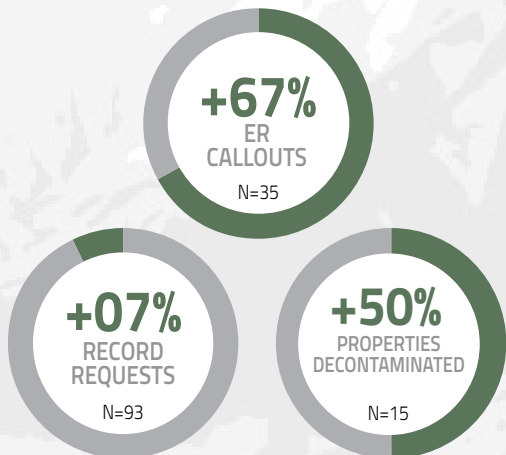
# by the Numbers

Figure 4. Annual comparison of housing complaints, Davis County, 2016-2018.



### RADON IN DAVIS COUNTY

A total of 57 homes were tested, 18 of which were greater than or equal to 4.0 picocurie/liter. Approximately 31.5% of homes with detectable radon concentrations are above the EPA recommended action level, which closely aligns with Utah's estimate that 1 out of 3 homes have elevated radon levels.



Annual Percent Increase in Waste Management & Environmental Response Programs (2017-2018)

\*N represents the total sample number of each category, respectively.

### 5 µg/dL BLOOD LEAD LEVELS

This year, the Utah State Rule, R386-703 Injury Reporting Rule, changed the action level of elevated blood lead levels from the previous 10 micrograms per deciliter to 5 micrograms per deciliter in children.



# MISSION

To promote and protect safe and healthy drinking water, recreational waters, and waters of the State through education, assessment, and oversight.

## YEAR IN REVIEW

### Drinking Water Program Highlights

There are 30 public drinking water systems in our county, ranging from small non-community systems that operate seasonally by US Forest Service personnel to large wholesale water systems that provide drinking water to municipal city drinking water systems. The Division is contracted by the Utah Division of Drinking Water (DDW) to conduct sanitary surveys of public drinking water systems. The purpose of the survey is to review the water systems physical facilities, record keeping, source protection, sampling requirements, emergency response plan, and water system capacity requirements. This year, Division staff completed five (5) sanitary surveys and assisted DDW staff with two (2) additional sanitary surveys. In the past, these surveys were entered into a tedious and time consuming database. DDW piloted a new database that streamlined the way that sanitary surveys are recorded. Division staff were able to use the new database, provide feedback to DDW, and work towards making the database a user-friendly tool to store and retrieve data. Division staff provide technical assistance to water system operators on various reports, assist in water sample emergency responses, communicate with the public on drinking water concerns, provide fluoride continuing education training for water operators, take investigative samples from each water system monthly, and support backflow programs. Three (3) staff members passed Level 4 Certified Water Operator Exam, for a total of six (6) Certified Water Operators within the Division.

- 8,575** TOTAL LABORATORY SAMPLES
- 4,458** DRINKING WATER SAMPLES
- 275** TOTAL POOL INSPECTIONS
- 18** OWS PLAN REVIEWS
- 12** ILLICIT DISCHARGE NOTICES
- 5** SANITARY SURVEYS

### Water Laboratory

The Davis County Environmental Health Water Laboratory supports the drinking water, recreational water quality, and swimming pool programs. It allows Division staff to serve the water systems with timely and accurate sample results. These results allow water operators to identify and address potential problems before they become public health issues. On average, the water laboratory tests over 7,500 samples per year, and this number has increased over the last few years (see Figure 5). The laboratory is certified by The National Environmental Laboratory Accreditation Program & Institute (TNI) and has maintained certification for over 15 years. To retain certification, the laboratory is audited every two (2) years; this year, the laboratory was audited and again met all requirements. As part of the certification, the laboratory is required to complete a customer satisfaction survey. The results of this survey showed that we had an overall satisfaction rating of 87%. The Division implemented a new single page laboratory submission form as a result of feedback from this survey. A Laboratory Open House was held this spring to strengthen Division partnership with water system personnel. As part of the open house, Division staff provided water operators updates on changes to the laboratory submission form, training on sampling, guidance on emergencies, and a review of the fluoride program. Water system personnel also had the opportunity to tour the laboratory and get a better understanding of laboratory procedures.

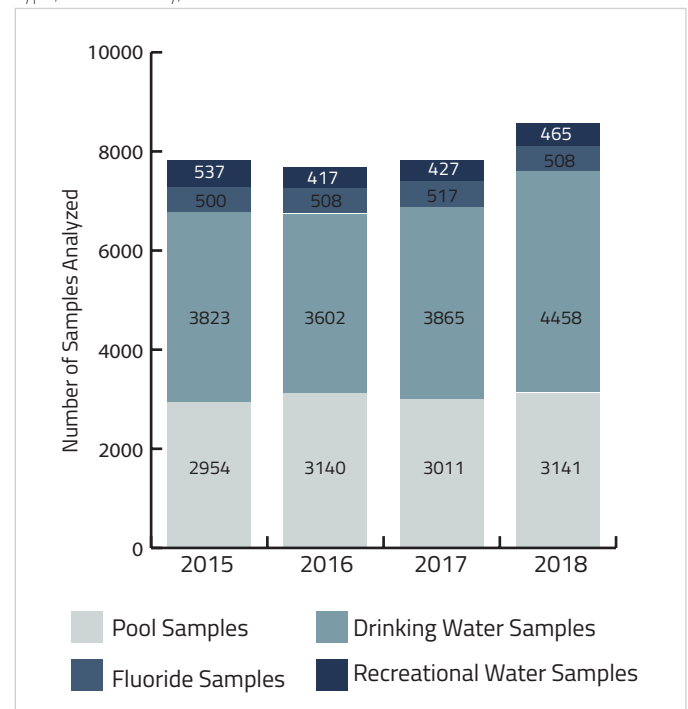
### Storm Water Program

The Division partners with the Davis County Storm Water Coalition to ensure that storm water discharged to local ponds and streams is free of contaminants that may be harmful to aquatic ecosystems. The Division participates in monthly Storm Water Coalition meetings and reports on illicit discharge incidents. When an illicit discharge is reported, the Division coordinates with local Storm Water Coalition members to ensure the discharge is investigated, remediated, and the responsible party is held accountable. The Division issues Notices an Notices of Violation (NOVs) that enforce illicit discharge clean-up activities when discharges are found to be in violation of the Davis County Board of Health Illicit Discharge Regulation.

### Storm Water Program Cont'd

This year, 53 illicit discharges were reported to the Storm Water Coalition, resulting in 12 Notices and five (5) NOVs being issued. The NOVs required the presence of the responsible party to go through our adjudicative process where corrective actions were discussed and fines were assessed. The Division also partners with the Storm Water Coalition to educate the public on the importance of protecting storm water. In April of 2018, several Division employees participated in the annual Water Fair that is hosted by the Storm Water Coalition. At the Water Fair, 4<sup>th</sup> grade students from across Davis County are educated on storm water, the water cycle, pollution and many other important environmental topics.

**Figure 5.** Comparison of laboratory samples analyzed by year and sample type, Davis County, 2015-2018



## Public Pools Program

In 2018, there were 223 permitted public pools in Davis County. A total of 275 inspections were completed during the year, as well as nine (9) public pool complaints. During inspections and complaint investigations, staff work closely with the Certified Pool Operator (CPO) staff to mitigate any health concerns with the public pool facilities. The Division offered two (2) annual Certified Pool Operator (CPO) training courses to 29 individuals in the spring of this year. The Division is committed to being a resource for pool operators, and had another staff member complete the National Swimming Pool Foundation's Instructor course and become certified as a new instructor. This certification allows the Division to directly train CPO's on how to maintain safe & healthy pools for public use.

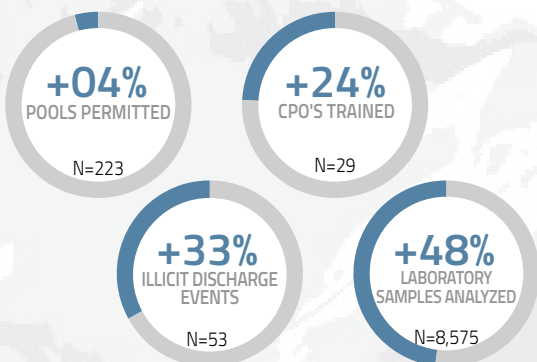
## Recreational Water Program

The Division works closely with the Division of Water Quality (DWQ) to monitor streams and ponds throughout Davis County. Streams are sampled on a monthly schedule for total coliform, *E. coli*, total chemistry, filtered and non-filtered nutrients, and total and filtered metals. Davis County is one of the few local health departments that have a stream sampling program to determine waterway impairments. The stream sampling list for Davis County was updated this year, and this, as part of a three (3) year sampling rotation will include all continuously flowing streams within the county. This new sampling list enables staff to monitor changes in the pollution levels of local streams. Division staff regularly monitor the quality of recreational pond water throughout the county. There were 354 pond samples collected throughout 2018—an 8.6% increase from 2017. Occasionally, high levels of *E. coli* are found in ponds, which require the Division to post advisories in order to educate the public. This year, four (4) ponds were posted with an advisory for high levels of *E. coli*. Division staff continue to monitor these ponds and will remove advisories when levels of *E. coli* drop. Staff also sample the Great Salt Lake in collaboration with United States Geological Survey and DWQ. Heavy metal and mercury samples were collected in June and October to aid in the Great Salt Lake Baseline Study.

## Wastewater Program

As a result of the expanding housing market, there has been an increase in general Onsite Wastewater (OWS) questions including feasibility studies, development possibilities, and permitting processes. There was a 15% increase across all activities (e.g., soil evaluations, ground water monitoring, inspections) (see Figure 6). There was a 100% increase in construction inspections, i.e., the number of construction inspections in 2018 doubled compared to 2017. There has been an increased interest in the development of unincorporated county areas, as well as the city of Hooper, which necessitated coordination of permit review and permitting processes with the Davis County Economic Development (DCED) office. The Division and the Economic Development office collaborated to develop a subdivision review process and update the permitting process. As a result, a construction permit from the Division is now required before the DCED will issue a building permit, ensuring that OWS provide adequate treatment for the size of the home built on each lot, protecting other waters from potential contamination. The past year was also marked by advancement of two (2) staff members to Level III Wastewater Certification, which allows for the review of alternative systems. Coincidentally, the Division received its first packed-bed media design for a property in Hooper, which is included as one (1) of the alternative systems allowed in the Davis County Board of Health Wastewater Regulation.

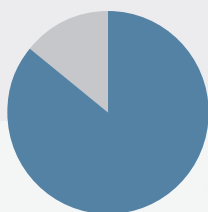
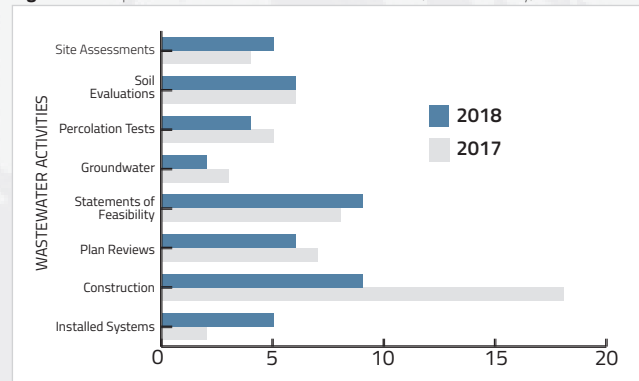
# by the Numbers



Annual Percent Increase in Water Related Programs (2017-2018)

\*N represents the total sample number of each category, respectively.

Figure 6. Comparison of annual wastewater activities, Davis County, 2017-2018



## Satisfaction Survey

87%

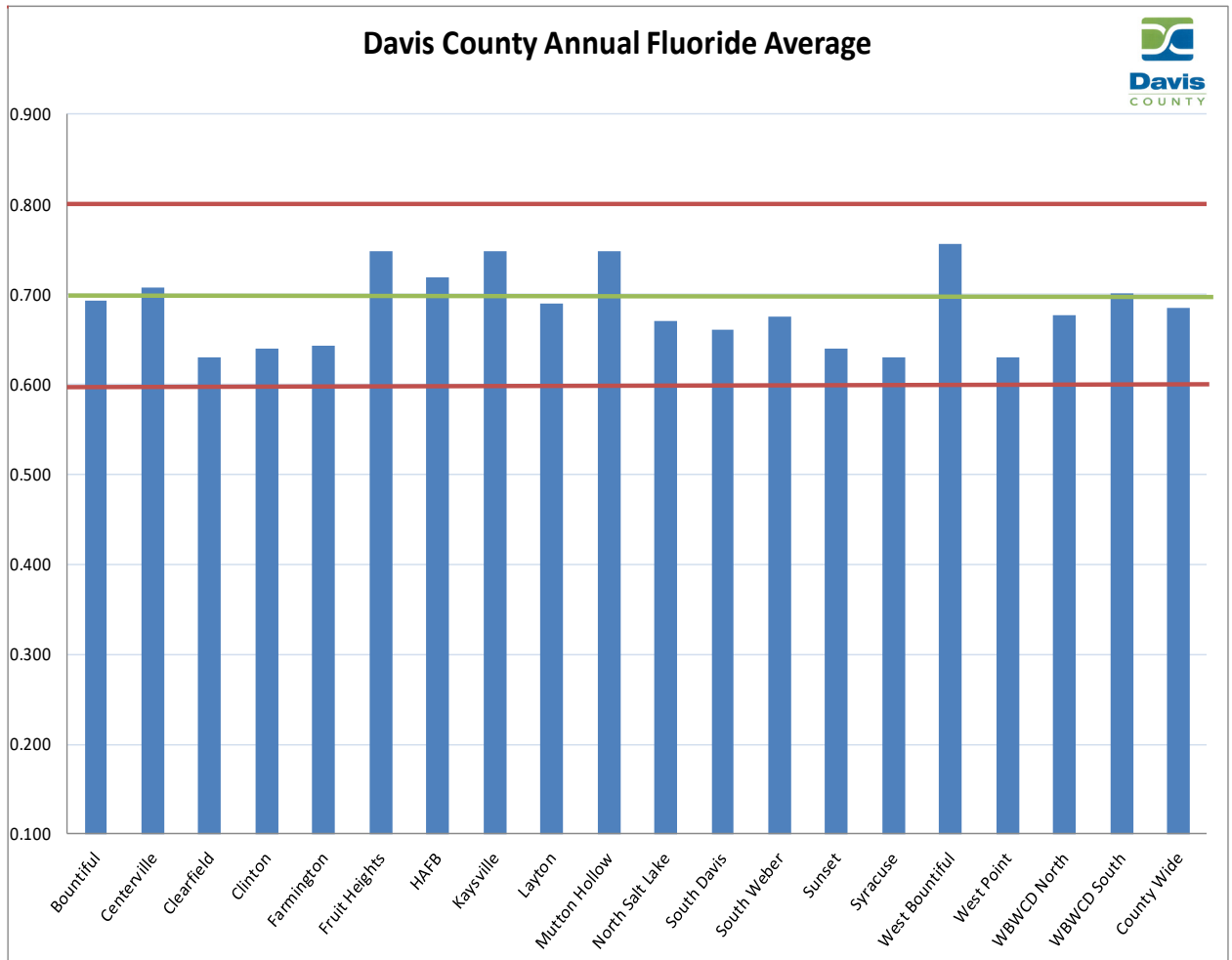
of water operators, on average, strongly agree that laboratory staff demonstrate knowledge & expertise, assist in maintaining compliance, and meet customer needs.

### Drinking Water Fluoridation Program

The Division oversees the Davis County Drinking Water Fluoridation program. The primary activities of this program include providing analysis of fluoride samples, technical support, collecting field samples, and ensuring training opportunities are available for water system operators. Monthly investigative samples are collected from 17 systems that have fluoridated water. The Division requires systems that fluoridate to submit monthly fluoride reports and a comparative split sample.

This year, the Division joined the Salt Lake County Health Department to host a free six (6) hour fluoride safety training, which over 80 water operators attended. The annual water operator training includes regulatory updates, safety, maintenance and operation of fluoride facilities. The Davis County Board of Health Drinking Water Fluoridation Regulation requires an annual review of optimal fluoride levels and control ranges by the Utah Oral Health Program Administration and Division staff. In response to recommendations from the scientific and medical communities, the regulation has been revised several times to adjust these levels and improve safety and training requirements. The last adjustment to the optimal fluoride was in 2010 when the control range was lowered to 0.6-0.8 mg/L, with a required annual average mean of 0.7 mg/L of fluoride. Changes were not recommended in 2018. All PWS withing Davis County maintained compliance with annual control ranges.

The Division also continues to comply with the Safe Drinking Water Disclosure Act which was passed in 2013 requiring local health departments to obtain and maintain NSF/ANSI Standard 60 certification documents related to the fluoride products being added to the water. Two (2) public water systems were checked for compliance during a regularly scheduled sanitary survey. Water systems receive a sanitary survey every three years. The chart below shows the annual average fluoride levels for each water system in Davis County. Overall, the averages throughout the county met the requirements of the Fluoride Regulation to provide fluoride levels recommended by the Center for Disease Control or other recognized health authorities for the prevention of dental decay.



# APPENDICES





## APPENDIX A: FOOD & FACILITIES BUREAU - YEAR END 2018

PERMITTED ESTABLISHMENTS	TOTAL
FOOD ESTABLISHMENTS	780
RISK I	214
RISK II	218
RISK III	242
RISK IV	86
NOT YET OPEN	20
MOBILE FOOD ESTABLISHMENTS	96
PRIMARY FOOD TRUCKS	40
SECONDARY FOOD TRUCKS	51
FOOD CARTS	5
SEASONAL FOOD ESTABLISHMENTS	51
AMUSEMENT PARKS	25
FLAVORED ICE	15
OTHER	11
TEMPORARY FOOD ESTABLISHMENTS	309
ANNUAL	7
SEASONAL	41
SINGLE EVENT	248
SAMPLER	13
SCHOOL FOOD ESTABLISHMENTS	106
PUBLIC SCHOOLS	91
ELEMENTARY	62
JUNIOR HIGH	17
HIGH	12
CHARTER / PRIVATE SCHOOLS	29
CHARTER	24
PRIVATE	5
TOTAL PERMITTED ESTABLISHMENTS	1,462
FOOD ESTABLISHMENT INSPECTIONS	TOTAL
FOOD ESTABLISHMENTS	1,189
ROUTINE	897
FOLLOW-UP	77
CRITICAL ITEM	60
PRE-OPENING & SITE REVIEW	155
MOBILE FOOD ESTABLISHMENTS	122
ROUTINE	99
FOLLOW-UP	9
PRE-OPENING & SITE REVIEW	14
SEASONAL FOOD ESTABLISHMENTS	26
ROUTINE	26
FOLLOW-UP	0
TEMPORARY FOOD ESTABLISHMENTS	244
ROUTINE	244
FOLLOW-UP	0
SCHOOL FOOD ESTABLISHMENTS	209
TOTAL NUMBER OF INSPECTIONS	1,790

FOOD SERVICE INVESTIGATIONS	TOTAL
COMPLAINTS INVESTIGATED	144
FOODBORNE ILLNESS INVESTIGATIONS	3
FOODBORNE ILLNESS SURVEILLANCE	82
ENFORCEMENT ACTIONS	TOTAL
NOTICES ISSUED	116
FOLLOW UP INSPECTION	57
INFORMAL MEETING	22
SUSPENSION OF PERMIT	2
CEASE & DESIST	1
MOBILE FOOD ESTABLISHMENTS	10
TEMPORARY FOOD ESTABLISHMENTS	24
FOOD ESTABLISHMENT CLOSURES	3
NO PERMIT	1
HEALTH HAZARD	2
MOBILE FOOD ESTABLISHMENT CLOSURES	4
NO PERMIT	0
HEALTH HAZARD	4
SEASONAL FOOD ESTABLISHMENT CLOSURES	0
NO PERMIT	0
HEALTH HAZARD	0
TEMPORARY FOOD ESTABLISHMENT CLOSURES	6
NO PERMIT	6
PERMITTED ON-SITE	18
HEALTH HAZARD	0
NEW FOOD ESTABLISHMENTS	TOTAL
PLAN REVIEWS	49
SITE REVIEWS	14
CHANGE OF OWNERSHIP	61
FOOD HANDLER TRAININGS	TOTAL
TOTAL IN-HOUSE ENGLISH CLASS PERMITS ISSUED	36
TOTAL IN-HOUSE SPANISH CLASS PERMITS ISSUED	299
TOTAL NUMBER OF PERMITS ISSUED	10,886
TOTAL NUMBER OF FOOD MANAGERS, REGISTERED	169
INSTITUTIONS	TOTAL
SCHOOL INSPECTIONS	39
SCHOOL COMPLAINTS INVESTIGATED	7
HOME DAY CARE INSPECTIONS	35
HOME DAY CARE COMPLAINTS INVESTIGATED	0
JOB CORP INSPECTIONS	8
CORRECTIONAL FACILITY INSPECTIONS	2
GROUP HOME / RES. SUPPORT ASSESSMENTS	17
MASS GATHERING	TOTAL
PERMITS ISSUED	18
INSPECTIONS	14
COMPLAINTS INVESTIGATED	0

## APPENDIX B: AIR QUALITY BUREAU - YEAR END 2018

<b>EMISSIONS TESTING I/M PROGRAM</b>	<b>TOTAL</b>
PERMITTED I/M STATIONS	135
BASIC TEST STATIONS	107
REPAIR STATIONS	28
PERMITTED I/M TECHNICIANS	691
CERTIFIED TECHNICIAN	652
CERTIFIED REPAIR TECHNICIAN	39
TECHNICIANS TRAINED	236
NEW TECHNICIAN COURSE	204
TECHNICIAN RE-TRAIN COURSE	32
CUSTOMER SATISFACTION SURVEYS COLLECTED	157
<b>EMISSIONS TESTING</b>	<b>TOTAL</b>
TOTAL EMISSION TESTS	251,564
TOTAL INITIAL EMISSION TESTS	230,856
TRAINING TESTS	888
INITIAL GASOLINE TESTS	213,780
GASOLINE PASSED	188,158
GASOLINE FAILED	17,837
GASOLINE ABORTED	7,785
GASOLINE FAIL RATE	7.785%
INITIAL DIESEL TESTS	10,183
DIESEL PASSED	8,719
DIESEL FAILED	1,008
DIESEL ABORTED	456
DIESEL FAIL RATE	10.36%
INITIAL TEST BY FUEL TYPE	1,475
GAS + ELECTRIC	1,075
PROPANE	15
GASAHOL	2
BI-FUELED	183
OTHER	200
INITIAL TESTS WITHOUT FUEL TYPE	6,693
INITIAL OBD TESTS	196,939
OBD TESTS PASS	180,697
OBD TESTS FAIL	15,954
OBD TESTS ABORTED	288
OBD GAS TOTAL (1996-NEWER)	191,546
OBD GAS PASS	176,040
OBD GAS FAIL	15,293
OBD GAS ABORTED	263
OBD DIESEL TOTAL	4,113
OBD DIESEL PASS	3,516
OBD DIESEL FAIL	596
OBD DIESEL ABORTED	1
OBD OTHER FUEL TYPES TOTAL	1,230

INITIAL TAILPIPE TESTS	20,304
TAILPIPE TESTS PASS	17,527
TAILPIPE TESTS FAIL	2,465
TAILPIPE TESTS ABORTED	312
TAILPIPE GAS TOTAL	14,589
TAILPIPE GAS PASS	12,118
TAILPIPE GAS FAIL	2,169
TAILPIPE GAS ABORTED	302
TAILPIPE DIESEL TOTAL (2007-OLDER)	5,475
TAILPIPE DIESEL PASS	5,203
TAILPIPE DIESEL FAIL	271
TAILPIPE DIESEL ABORTED	1
TAILPIPE TESTS WITHOUT FUEL TYPE	240
WORLDWIDE ENVIRONMENTAL TESTS	4,876
WAIVERS ISSUED	47
30 DAY WAIVER	0
60 DAY WAIVER	19
90 DAY WAIVER	1
1 YEAR WAIVER	27
REFEREE TESTS CONDUCTED	1
<b>SMOKING VEHICLE</b>	<b>TOTAL</b>
TOTAL SMOKING VEHICLE COMPLAINTS	256
LETTERS OF INFORMATION ISSUED	78
NOTICES ISSUED	27
CHALLENGE TESTS	16
<b>CHALLENGE TESTS</b>	<b>TOTAL</b>
TOTAL CHALLENGE TESTS CONDUCTED	97
NOTICES ISSUED	96
<b>DUPLICATE CERTIFICATES</b>	<b>TOTAL</b>
TOTAL NOTICES ISSUED	54
FIRST NOTICES ISSUED	54
SECOND NOTICES ISSUED	12
<b>COVERT AUDITS</b>	<b>TOTAL</b>
TOTAL ATTEMPTED AUDITS	125
TOTAL COMPLETED AUDITS	125
AUDITS PASSED	80
LETTERS OF COMPLIANCE ISSUED	160
AUDITS FAILED	44
NOTICES ISSUED	82
FAIL RATE	35%
CONSENT AGREEMENTS	14
<b>AIR QUALITY PROGRAM</b>	<b>TOTAL</b>
TOTAL SOLID FUEL COMPLAINTS	4
COMPLAINT INVESTIGATIONS	5
TOTAL AIR QUALITY SCHOOL PRESENTATIONS	8
TOTAL FACEBOOK POSTS REACH	1,930

**APPENDIX C: WASTE MANAGEMENT & ENVIRONMENTAL RESPONSE BUREAU - YEAR END 2018**

<b>WASTE HAULER</b>	<b>TOTAL</b>
WASTE HAULER VEHICLES	389
WASTE HAULER / INFECTIOUS WASTE VEHICLE PERMITS	386
WASTE TIRE HAULER VEHICLE PERMITS	3
<b>INFECTIOUS WASTE PROGRAM</b>	<b>TOTAL</b>
INFECTIOUS WASTE INCINERATOR PERMIT	1
ROUTINE INSPECTION	1
<b>HOUSING</b>	<b>TOTAL</b>
COMPLAINTS	116
NOTICES ISSUED	10
LETTER OF FINDINGS	13
CLOSURE NOTICES	6
<b>TANNING</b>	<b>TOTAL</b>
PERMITTED FACILITIES	23
ROUTINE INSPECTIONS	23
FOLLOW UP INSPECTIONS	0
NOTICES ISSUED	0
NEW FACILITIES	1
FACILITIES OUT OF BUSINESS	2
<b>BODY ART</b>	<b>TOTAL</b>
PERMITTED FACILITIES	44
PERMANENT COSMETICS/MICROBLADING	34
TATTOO AND PIERCING	5
TATTOO ONLY	5
ROUTINE INSPECTIONS	25
FOLLOW-UP INSPECTIONS	0
NOTICES ISSUED	0
NEW FACILITIES	11

<b>ENVIRONMENTAL RESPONSE</b>	<b>TOTAL</b>
CALL OUTS	35
<b>E-CIGARETTE MANUFACTURING</b>	<b>TOTAL</b>
PERMITTED FACILITIES	4
ROUTINE	4
COMPLAINTS	0
<b>RABIES</b>	<b>TOTAL</b>
SPECIMENS SUBMITTED	54
POSITIVE	0
NEGATIVE	51
NOT TESTED	3
<b>RADON</b>	<b>TOTAL</b>
TESTS CONDUCTED	57
<b>RECORDS REQUESTS/SITE ASSESSMENTS</b>	<b>TOTAL</b>
REQUESTS SUBMITTED	93
NUMBER OF PROPERTIES	119
<b>USED OIL COLLECTION CENTER</b>	<b>TOTAL</b>
ROUTINE INSPECTION	86
EDUCATION EVENTS	3
<b>ILLEGAL DRUG OPERATIONS</b>	<b>TOTAL</b>
PROPERTIES DECONTAMINATED	15
<b>ELEVATED BLOOD LEAD LEVEL REPORTS</b>	<b>TOTAL</b>
INVESTIGATIONS	9
<b>VECTOR CONTROL</b>	<b>TOTAL</b>
COMPLAINTS	32
<b>GENERAL SANITATION</b>	<b>TOTAL</b>
COMPLAINTS	5
<b>SOLID WASTE</b>	<b>TOTAL</b>
COMPLAINTS	5

## APPENDIX D: WATER RESOURCES BUREAU - YEAR END 2018

<b>PUBLIC POOL FACILITIES</b>	<b>TOTAL</b>	<b>PUBLIC POOL SAMPLES</b>	<b>3,141</b>
PUBLIC POOLS	223	ROUTINE	3028
SEASONAL PUBLIC POOLS	130	REPEAT	113
SEASONAL POOLS	96	<b>TOTAL NUMBER OF SAMPLES</b>	<b>8107</b>
SEASONAL SPAS	4	<b>RECREATIONAL WATER QUALITY SAMPLES</b>	<b>TOTAL</b>
SEASONAL SPLASH PADS	8	STREAMS	112
SEASONAL WATER SLIDES	2	GREAT SALT LAKE	2
SEASONAL WADING POOLS	12	POND SAMPLES	354
SEASONAL LEISURE POOL	8	<b>TOTAL NUMBER OF RECREATIONAL WATER QUALITY SAMPLES</b>	<b>468</b>
YEAR ROUND PUBLIC POOLS	93	<b>DRINKING WATER</b>	<b>TOTAL</b>
YEAR ROUND POOLS	24	COMPLAINTS INVESTIGATED	5
YEAR ROUND WAVE POOLS	1	COMPLAINTS	6
YEAR ROUND THERAPY POOLS	5	BOIL ORDERS	0
YEAR ROUND SPAS	60	TIER 1 ASSESSMENTS	0
YEAR ROUND LEISURE POOLS	3	TIER 2 ASSESSMENTS	0
PLAN REVIEWS	6	<b>ILLICIT DISCHARGES</b>	<b>TOTAL</b>
POOLS OPENED IN 2018	9	COMPLAINTS INVESTIGATED	53
<b>PUBLIC POOL INSPECTIONS</b>	<b>TOTAL</b>	NOTICES ISSUED	12
ANNUAL INSPECTIONS	115	LETTERS OF FINDING ISSUED	1
QUARTERLY INSPECTIONS	160	<b>WASTEWATER PROGRAM</b>	<b>TOTAL</b>
COMPLAINT INVESTIGATIONS	9	COMPLAINTS	6
FOLLOW UP INSPECTIONS	2	FEASIBILITY ASSESSMENT RECORDS (FAR)	4
TOTAL PUBLIC POOL INSPECTIONS	275	SITES ASSESSMENTS	6
CERTIFIED POOL OPERATORS TAUGHT IN DCHD ANNUAL CLASS	29	SOIL EVALUATIONS	5
<b>LABORATORY SAMPLES</b>	<b>TOTAL</b>	PERCOLATION TESTS	3
DRINKING WATER BACTERIOLOGICAL SAMPLES	4,458	GROUNDWATER MONITORING	8
ROUTINE	3322	ONSITE WASTEWATER SYSTEMS (OWS)	0
REPEAT	41	FAILED SYSTEMS	7
DAVIS COUNTY INVESTIGATIVES (PUBLIC HEALTH CHECK)	766	PLAN REVIEWS	18
INVESTIGATIVES (CITY & PRIVATE)	329	CONSTRUCTION INSPECTIONS	2
DRINKING WATER FLUORIDE SAMPLES	508	INSTALLED SYSTEMS	2
MONTHLY SPLIT SAMPLES	92		
DAVIS COUNTY INVESTIGATIVES	416		