Environmental Health

Tri-County Health Department

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Environmental Health

The Tri-County Health Department (TCHD) Division of Environmental Health (EH) focuses on preventing communicable diseases and environmental conditions that could be harmful to individuals or public health. Programs and services range from food safety and restaurant inspections, to health, safety and prevention of disease in childcare centers and swimming pools, to land use, solid waste, and air and water quality.

Body Art Program

The Body Art program inspects facilities that perform tattooing, piercing, and scarification. TCHD developed and implemented its own Body Art regulation, BA-16 which went into effect on January 1, 2017. BA-16 requires Body Art establishments to obtain a Body Art Establishment license from TCHD.

Body Art facilities are inspected on an annual basis to ensure the facility is in compliance with the regulations and are taking proper precautions to prevent blood borne diseases. In 2017, TCHD staff conducted 120 total inspections at the 65 facilities, which include 62 shops, 2 temporary events and 1 mobile unit.

Childcare Program

The goal of the TCHD Childcare Program is to protect the health of children and staff in licensed childcare facilities through education and regulatory inspections. TCHD inspects childcare centers (excludes private home-based operations) on either an annual or biennial basis dependent upon risk. In 2017, the Childcare Program conducted 489 routine health inspections of 816 childcare centers. The TCHD Childcare Program has a dedicated team of members from the different TCHD offices and divisions composed of Environmental Health, Disease Control, Nutrition, and Nursing that meet regularly to discuss important items. This cross-divisional work has also improved the training process for new and existing TCHD EH staff and updated and improved the educational handouts provided to centers which can be found here: http://www.tchd.org/242/Childcare.

The number of licensed childcare facilities in Tri-County has steadily increased over the past 10 years as seen in the graph below.
Radon Testing

As part of the 2016 revised Colorado childcare health regulations, radon testing in existing facilities is a requirement. To assist with this new requirement, TCHD applied for and received a grant from the Colorado Department of Public Health and Environment (CPDHE) to purchase and provide free radon test kits to childcare facilities during routine inspections.

As part of this grant, 1,739 kits were provided to 248 childcare facilities with 205 facilities reporting radon data to the department. An additional 328 facilities completed radon testing on their own. Overall, 11% of facilities with known radon results were at or above the action limit of 4 PCi/L. Educational materials about radon including testing and mitigation were provided to facilities with higher radon levels.

Childcare Center Partnerships

The TCHD childcare program has also begun developing partnerships with external childcare agencies such as the Early Childhood Partnership of Adams County, Arapahoe County Early Childhood Council, Colorado Department of Human Services, and CDPHE to better understand and coordinate roles between agencies and improve messaging with childcare centers.

After-Hours Response

TCHD serves its citizens and partner agencies after hours between the hours of 5 p.m. to 8 a.m. weekdays and on weekends and holidays as needed. The Environmental Health After-Hours Emergency Response Team (EHRT) consists of eight Environmental Health Specialists that are trained to respond to restaurant fires, petroleum and sewage spills, vital records requests, rabies exposures, and other after-hours issues as they may occur. The EHRT provided assistance for 165 calls during 2017. Contact the team by calling 303-220-9200.
Household Chemical Roundup Program

The Household Chemical Roundup (HCR) Program serves the residents of Adams and Douglas Counties by providing an opportunity to dispose and recycle household chemicals from their homes in a safe, legal, and environmentally-sound manner. The HCR Program provides an appropriate outlet for wastes that might otherwise end up in our creeks, stormwater systems, sanitary sewers, and septic systems, or disposed of illegally on public or private property. Additionally, decreasing and removing household hazardous products from homes reduces the risk of fire hazards and the potential for accidental poisonings.

In 2017, the HCR Program operated five, one-day events to collect household hazardous wastes from the residents of Adams and Douglas Counties:

- **3,907** vehicles passed through the five HCR events
- **4,493** households participated
- **515,118** pounds of waste for recycling or proper disposal
- **235,994** pounds of paint for recycling

The chart depicts the participation and pounds of waste collected per year from 2009 to 2017.
Land Use and Built Environment Program

The Land Use and Built Environment Program works with local communities to bring health considerations into policies, programs and development projects that shape the way we build our communities. The environments in which we live, work, study, and play can have a profound impact on our health. The policies and systems that shape the design of these spaces are not often considered health-related. However, the health implications of our built environment are lasting.

Through collaborative efforts with community organizations, local governments and institutional partners, TCHD brings data, technical expertise, and capacity building activities to promote health considerations early in community discussions about transit access, street design, land use planning and housing development. In 2017, the Land Use and Built Environment team reviewed and provided guidance on 512 land development proposals, provided technical assistance to 10 community plans and built environment regulations updates, and assisted in four capacity building opportunities.
On-Site Wastewater Treatment Systems

Did you know that 25% of Colorado homes are served by On-Site Wastewater Treatment Systems (OWTS), also called septic systems? An improperly managed septic system can impact ground and surface water supplies as well as create a public health nuisance. TCHD’s Regulation 0-17 governs the design, installation, inspection, and use of septic systems within TCHD’s jurisdiction. In 2017, this regulation went through a stakeholder input and revision process to incorporate statewide changes and updates. The revised version was passed by the Board of Health and became effective October 1, 2017.

TCHD is continuing its efforts to educate homeowners on proper management of their OWTS. Outreach activities include development of a new two-year postcard campaign to remind homeowners to have their OWTS inspected and pumped as needed. In 2018, over 10,000 postcards were mailed to all Douglas County residents served by an OWTS. In 2019, postcards will be mailed to all Arapahoe and Adams County residents served by an OWTS.

New Permits are issued for the construction of a new OWTS. Repair Permits are issued when either the septic tank or soil absorption area are replaced. Repair Permits are further divided into major and minor repairs. Use Permits are issued under certain circumstances outlined in Regulation O-17. The majority of Use Permits are issued when a property changes ownership.

In 2017, there were 1,465 OWTS permit applications received that included; 903 Use Permits, 357 New Permits, 160 Minor Repairs, 37 Major Repairs, and 8 “other” permits. The 1,465 permit applications resulted in 1,150 inspections by staff.
Retail Food Program

TCHD’s Retail Food Program is the largest in the state and serves 4,935 Retail Food Establishments (RFEs) in Adams, Arapahoe, and Douglas counties.

The program focuses on regulatory inspections of restaurants and other food service facilities and education of food service employees. It is also responsible for the oversight of proper design of restaurants and mobile food units through the review of design and operational plans. Enforcement activities account for only a small part of the program due to the emphasis placed on training and educational activities designed to promote a holistic view of food safety in each establishment with each food safety professional.

Number of Licensed Retail Food Facilities by County, 2017

![Pie chart showing the distribution of licensed retail food facilities by county: Adams 1,621, Arapahoe 2,359, Douglas 955.]

### 2017 Retail Food Activities by County

<table>
<thead>
<tr>
<th>2017 Retail Food Activities by County</th>
<th>Adams</th>
<th>Arapahoe</th>
<th>Douglas</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td># of inspections (all types)</td>
<td>3,099</td>
<td>4,182</td>
<td>1,978</td>
<td>9,259</td>
</tr>
<tr>
<td># of plan reviews</td>
<td>97</td>
<td>269</td>
<td>70</td>
<td>436</td>
</tr>
<tr>
<td># of facilities in the enforcement process</td>
<td>15</td>
<td>10</td>
<td>8</td>
<td>33</td>
</tr>
<tr>
<td># of civil penalty assessments (non-compliance)</td>
<td>10</td>
<td>13</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td># of mobile retail food units</td>
<td>158</td>
<td>180</td>
<td>51</td>
<td>389</td>
</tr>
</tbody>
</table>

Efforts to improve efficiency and effectiveness of our RFE inspection program were awarded a Promising Practice by the National Association of City and County Health Officials in 2017.
Solid and Hazardous Waste Program

The Solid and Hazardous Waste program is made up of several programs that assist in serving and protecting the citizens and environments of Adams, Arapahoe and Douglas Counties.

Landfills

Where does your trash go? It goes to several landfills within Adams, Arapahoe and Douglas Counties. Some landfills in the TCHD jurisdiction are inspected monthly, others are inspected annually to ensure regulatory compliance. Construction oversight activities are also conducted when new waste disposal cells are designed, constructed, or covered for closure. In 2017, TCHD conducted 64 landfill operational oversight and construction inspections.

Biosolids

Application of Biosolids is a regulated beneficial use program that provides low-cost fertilizer to farmers. Biosolids are generated and treated at wastewater treatment plants and provide a natural source of nitrogen to a variety of crops such as wheat, corn, and millet used for animal feed. The program also reduces the application of commercial fertilizers, aids in soil amendment properties, and is proven to increase crop yields. TCHD provided oversight inspections at 18 land application sites during 2017.

Methamphetamine

Methamphetamine is a dangerous and detrimental drug that is readily manufactured and consumed illegally. The byproducts generated from the manufacturing and smoking of methamphetamine can affect the health and wellbeing of the inhabitants of a methamphetamine-affected property. TCHD provides regulatory oversight to property owners and their consultants from the point at which a property has been identified as contaminated, throughout the clean-up process, and ensures the property has been properly remediated and is deemed fit for use and may be re-inhabited. During 2017, TCHD was notified of 13 contaminated properties and cleared 12 properties for re-occupancy.
**Waste Tires**

Almost everyone purchases tires at one time or another during their lifetime. What happens to the tires that are no longer safe for travel? Tire stores are required to properly dispose and recycle tires. TCHD provides regulatory oversight inspections at tire shops to ensure that waste tires are being properly disposed of or recycled as appropriate. TCHD conducted 107 waste tire related inspections in 2017.

**Rocky Mountain Arsenal**

TCHD has been involved with the oversight of the cleanup at Rocky Mountain Arsenal (RMA) since the mid-1980’s when we played a large role in surveying potentially contaminated private wells located northwest of the RMA. From the original survey of properties with drinking water wells to the present, we have continued to sample private wells for Diisoproplmethylphosponate (DIMP) which is a chemical unique to the Army’s manufacture of nerve gas in the 1950’s. In 2017, 14 private wells and 2 surface water locations were sampled for DIMP. Of the wells sampled, only one contained DIMP at levels above the state standard of 8.0 ppb. TCHD arranged for the residents of this property to receive bottled drinking water to prevent the ingestion of DIMP contaminated water.

Two hazardous waste landfills are located at the RMA. These landfills have been filled, capped and closed and are currently in the operations and maintenance (O&M) phase. TCHD participates in monthly landfill inspections as part of the O&M oversight.

Today, much of the RMA has been transformed from a Superfund site to a National Wildlife Refuge that has become a significant asset to Commerce City, Adams County and the entire Denver Metro area. TCHD has played a role over the years in this phenomenal transformation which can be read about in a recently published Environmental Protection Agency (EPA) Case Study: https://semspub.epa.gov/work/HQ/100001199.pdf.

**Vector Surveillance**

As outlined in a recent report from Centers for Disease Control on the increase in vector-borne diseases, TCHD’s vector surveillance program plays an important role in monitoring and collaborating on communication and responses to outbreaks of vector-borne diseases. TCHD trapped 29,413 mosquitoes for West Nile virus (WNV) surveillance, tested three animal specimens for plague and two for tularemia. There were 9 human cases of WNV and no positive plague or tularemia cases in animals or humans in 2017.
Quality Improvement

In 2017, Environmental Health engaged in two Quality Improvement projects (Rocky Mountain Arsenal Water Sampling and Meth Labs). These projects included the creation of Process Maps and Action Plans that have yielded innovative ideas (14 for Water Sampling and 12 for Meth Labs) that are currently being implemented.

Strategic Plan Related Efforts

In support of the TCHD Strategic Plan, the Environmental Health Division was active in the participation of Goal 8: Improve and Expand Efforts to Promote Healthy Human Environments and worked closely with other Goal areas to improve population health. Specific examples include:

- Development of seven fact sheets on water related issues such as bacteria in well water, lead, hardness, rainwater harvesting, lead in schools, well testing, and graywater.
- Presentations regarding well-water quality and well testing and permitting were delivered to two realtor groups and one homeowner association. Expected to increase this effort in 2018.
- Outreach to various stakeholder groups including Realtors, building officials, home builders and new homebuyers and sellers as part of TCHD’s Regional Radon Grant designed to reduce exposure to radon.
- Establishment of a Douglas County Household Chemical Roundup (HCR) Steering Committee in Douglas County regarding a permanent facility.
- Completion of FDA RFE Inspection Voluntary Program Standards 4 and 5 regarding a Uniform Inspection Program and Foodborne Illness and Food Defense Preparedness and Response.
- Collaboration with the Metro Denver Partnership for Health in creating a regional Environmental Health/Climate Change workgroup.

Cross Divisional Workgroups

- The Childcare Team met four times in 2017 with cross divisional updates from Environmental Health (EH), Disease Control, Nursing, Nutrition, and Maternal and Child Health. The EH staff met after the cross divisional updates to discuss program policy updates, database entry and clean-up, regulation interpretation, staff training, future objectives for the program, childcare operator training, radon testing grant, newsletter ideas, plan review packet revisions, and developing better external partnerships.
- The Local Government Workgroup completed the focus group and key informant interview project initiated in late 2016 with local government staff and elected officials. Following the completion of the report—Formative Research for TCHD: Qualitative Findings from Local Government Agency Representative Focus Groups and Interviews— the workgroup conducted several meetings with TCHD staff to review the project report and draft potential next steps for implementation in 2018. Recommended actions involve partnership enhancement /relationship management, TCHD approaches to local policy, and internal capacity building /training.
- The Green Team worked together to develop a new campaign to be launched in 2018, 12 Months of Sustainability, to educate and remind TCHD staff about simple steps to take in the office and at home to be a living example of environmental sustainability. Green Team members are posing challenges to engage all staff in actions such as decreasing TCHD’s office paper use.
### Division Revenue

**Total:** $6,978,038

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<thead>
<tr>
<th>Source</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>General Funds</td>
<td>$3,763,671</td>
<td>53.9%</td>
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<tr>
<td>Fees</td>
<td>$2,677,410</td>
<td>38.4%</td>
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<tr>
<td>Grants</td>
<td>$285,886</td>
<td>4.1%</td>
</tr>
<tr>
<td>Federal Funds / Federal Pass Through Funds</td>
<td>$230,497</td>
<td>3.3%</td>
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<tr>
<td>State Funds</td>
<td>$20,574</td>
<td>0.3%</td>
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### Division Expenses

**Total:** $6,978,038

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary &amp; Benefits</td>
<td>$4,940,125</td>
<td>70.9%</td>
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<tr>
<td>Indirect</td>
<td>$1,279,647</td>
<td>18.3%</td>
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<tr>
<td>Operating Expenses</td>
<td>$406,365</td>
<td>5.8%</td>
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<tr>
<td>Contract Services</td>
<td>$351,901</td>
<td>5.0%</td>
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