### STUDY SESSION AGENDA
TUESDAY
November 10, 2020

**ALL TIMES LISTED ON THIS AGENDA ARE SUBJECT TO CHANGE**

<table>
<thead>
<tr>
<th>Time</th>
<th>Attendee(s)</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:10 A.M.</td>
<td>Nancy Duncan</td>
<td>Review of 2021 Proposed Budget</td>
</tr>
<tr>
<td>11:50 A.M.</td>
<td>Alisha Reis / Sheriff Rick Reigenborn / Matt Rivera Sheriff’s Office Staffing Report</td>
<td></td>
</tr>
<tr>
<td>1:00 P.M.</td>
<td>Adam Burg / Eliza Schultz / Elisabeth Rosen / Alan Morse</td>
<td>State Lobbyist Update</td>
</tr>
<tr>
<td>1:55 P.M.</td>
<td>Jill Jennings Golich / Ryan Nalty / Jen Rutter / Greg Barnes / Katie Keefe</td>
<td>Development Regulation &amp; Standards Discussion re: Gas Stations</td>
</tr>
<tr>
<td>2:35 P.M.</td>
<td>Raymond Gonzales</td>
<td>Administrative Item Review / Commissioners Communication</td>
</tr>
<tr>
<td>3:15 P.M.</td>
<td>Heidi Miller</td>
<td>Executive Session Pursuant to C.R.S. 24-6-402(4)(b) and (e) for the Purpose of Receiving Legal Advice and Instructing Negotiators Regarding DIA Litigation</td>
</tr>
</tbody>
</table>

**TO WATCH THE MEETING:**
- Watch the virtual Zoom Study Session through our [YouTube Channel](#)
**DATE OF STUDY SESSION:** November 10, 2020

**SUBJECT:** County Manager’s 2021 Recommended Adams County Budget

**OFFICE/DEPARTMENT:** Budget & Finance Department

**CONTACT:** Nancy Duncan, Budget & Finance Director; Marc Osborne, Deputy Budget Director

**FINANCIAL IMPACT:** Informational Only

**SUPPORT/RESOURCES REQUEST:** N/A

**DIRECTION NEEDED:** N/A

**RECOMMENDED ACTION:** No action required at the time. This is informational only to give the Board of County Commissioners an opportunity to review the County Manager’s 2021 Recommended Adams County Budget.

**DISCUSSION POINTS:**

- This presentation will allow the Board of County Commissioners to review, analyze, and ask questions regarding the County Manager’s 2021 Recommended Adams County Budget.
STUDY SESSION ITEM SUMMARY

DATE OF STUDY SESSION: Nov. 10, 2020

SUBJECT: Sheriff’s Office Staffing Review & Action Plans

OFFICE/DEPARTMENT: Sheriff’s Office, County Manager’s Office, County Attorney’s Office, People & Culture, Community Safety & Wellbeing

CONTACT: Alisha Reis, Deputy County Manager

FINACIAL IMPACT: None at this time

SUPPORT/RESOURCES REQUEST: None at this time

DIRECTION NEEDED: Support for the Sheriff’s Office strategy and check-in periods quarterly, with requests for resources as programs develop

RECOMMENDED ACTION: To review the report and presentation and discuss the strategy with the Sheriff, his team and the project team, to provide guidance on implementation going forward.

DISCUSSION POINTS:

- A multidisciplinary team from the County reviewed staffing levels and efficiencies at the request of and in concert with the Adams County Sheriff’s Office. A report on this effort is attached and will be presented in overview in Study Session on Nov. 10, 2020.

- The team reviewed two previous studies conducted by outside consultants in 2015 and 2017. This effort validated data and methodologies through that comparison, additional data analysis and in conversation with the Sheriff’s Office team.

- The purpose of this project is to assist the Sheriff’s Office to determine staffing needs both at a minimum operational level, as well as for performance-based objectives. This work creates the foundation for strategic development going forward. Five action plans resulted and are included in the attached report.
Sheriff’s Office Staffing Review
and Action Plans

Study Session
November 10, 2020
Overview

• Multi-disciplinary team reviewed staffing levels and efficiencies at the request and in concert with the Sheriff’s Office
• Built upon data from two previous studies (2015 and 2017)
• Purpose: To determine staffing needs at both a minimum operational level and the level to meet performance-based objectives for the strategic alignment of resources for the Office
• 18- to 24-month time horizon
• Summary of project
  – Data analysis/methodology
  – Strategic Planning Workshop & Goal Setting/Action Plans
• Continuous improvement alignment with Baldrige model
Data Analysis

- Methodology overview
- Began with Patrol, Detention divisions
- Assumptions – minimum staffing, aspirational staffing (closer to that necessary for goal attainment)
- Current conditions – authorized force, vacancies
- Findings
Goals & Action Plans

- Half day workshop to develop key focus areas for the Sheriff’s Office in the 24-month horizon
- Based upon data analysis and Sheriff’s Office observations, 5 key goals emerged
- Team developed Action Plans to define the goals with timelines, champions and next steps for implementation
- Strategic planning and continuous improvement effort integrates into the County’s focus, adoption of the Baldrige model – *first elected office to do so*
Goal: Reduce crime caseload per detective and increase clearance rates

Success:
• Number of case clearances increased
• Reduction in violent and property crimes
• Retention of experienced detectives
• Increase in community confidence
• Decrease in work hours per violent and property crimes (per detective)
• Decrease in number of cases per detective
Goal: Reduce time to respond to 911 calls (from dispatch to deputy on scene)

Success:

• 5-minute response time by geographic area
Goal: Increase cadet recruitment numbers and retention rates

Success:

• Increased employee satisfaction
• Increased cadet retention (70% through 3 years)
• Increased recruitment numbers
• Decreased turnover rates
• Increased number of overhires
Goal: Implement the mandates of Senate Bill 20-217

Success:

• Measurable progress toward completing tasks
• SB 20-2017 mandates are in place and operational
• Full compliance with SB 20-2017
• 100% of staff trained before January 2023
Goal: Increase safety, performance and staffing within the jail

Success:
- Number of staff vs. other similarly sized jails (determine)
- Increased retention rates of jail staff
- Improved inmate-to-staff ratios
- Improved supervisor-to-staff ratios
- Meeting statutory (bond release) timeframe
Timeline/Phasing

• 18- to 24-month timeline
• Dashboard to monitor progress and report quarterly to the Board of County Commissioners
• Tipping points to implement next phase of plan
• Project team regular check-ins to assess progress and assist Sheriff’s Office team in developing next steps, considering methods of breaking through logjams
Next Steps

• Dashboard launch by January 2021
• No FTE requests in proposed 2021 Budget
• Plan to make budget amendment requests as programs/goals are well-developed
• Report to inform 2022 Budget requests
Date: October 27, 2020

To: Sheriff Rick Reigenborn and Sheriff’s Office Leadership Team

From: Project Team: Alisha Reis, Jamal Ward, Matt Rivera, Max Cercone, Heidi Miller, Chris Kline

RE: Sheriff’s Office Staffing Review and Action Plans

PROJECT PURPOSE AND BACKGROUND

A multidisciplinary team from the County reviewed staffing levels and efficiencies at the request of and in concert with the Adams County Sheriff’s Office. The team reviewed two previous studies conducted by outside consultants in 2015 and 2017. This effort validated data and methodologies through that comparison, additional data analysis and in conversation with the Sheriff’s Office team.

The purpose of this project is to assist the Sheriff’s Office to determine staffing needs both at a minimum operational level, as well as for performance-based objectives. On October 15, 2020, the project team worked with the Sheriff’s Office leadership, management and support personnel at a half-day workshop to develop several goals and action plans to guide the initial visionary work of the office. This work creates the foundation for strategic development going forward. Five action plans resulted and are included here as exhibits.

They include the goals to:

1) Reduce crime caseload per detective and increase clearance rates,
2) Reduce time to respond to 911 calls (from dispatch to deputy on scene),
3) Increase cadet recruitment numbers/retention rates,
4) Implement the mandates of Senate Bill 20-217, and
5) Increase safety, performance and staffing within the jail.

The attached action plans include champions, timeframes and resources needed to reach these goals, which are intended to cover the next 18 to 24 months. These efforts will kick off strategies to appropriately deploy resources within the Sheriff’s Office to meet the needs of service to the Adams County community.

These goals were developed based upon the findings of the data analysis conducted by the project team, as well as additional data and conditions observed by Sheriff’s Office leadership. Several of the goals include needs for additional data to develop specific improvements that may be monitored for progress (e.g. determining average work hours per case to determine weight and distribution of
caseloads in the Detectives Division). These specific performance indicators then will be loaded into a dashboard that allow for dynamic, constant monitoring of the office’s operations.

This effort of strategic planning and continuous improvement integrates into the County’s focus and adoption of the Baldrige Model of continuous improvement, which was also discussed at the planning workshop. The Sheriff’s Office would represent the first elected office to join with this countywide effort toward formalized data-driven decision-making processes and resource deployment based on strategic outcomes.

The goals, strategies and phasing plan for resource requests will be discussed with the Board of County Commissioners during the Board’s 2021 Budget study sessions, on Nov. 10, 2020.

**DATA ANALYSIS**

The project team began its work in analysis of current staffing (authorized force and filled positions), the required posts to operate the patrol and detention divisions, the number of staff required to adequately staff those posts (“minimum staffing”) and desired force strength divined in conversations with the Sheriff’s Office staff.

The base staffing levels and aspirational staffing levels are both shown here. Given the desired move toward performance-based staffing, based on strategic goals, staffing levels may be adjusted as programs progress. Both of these levels are provided in order to present an order of magnitude need in staffing the office. This analysis determined the Detention Division is staffed at 7.5 FTEs below the minimum needed to staff all posts and to provide adequate shift relief (providing for time out of work, e.g. vacation, military service, etc.) and 19.4 FTEs below the aspirational level identified by the Sheriff’s Office. It was also determined the Patrol Division is staffed at 13.9 FTEs below the identified minimum and 65.02 FTEs below the Sheriff’s Office aspirational level.

Staffing for the Detectives Division will be best calculated based upon performance indicators, such as case load and desired outcomes, identified as one of the five goals the Sheriff’s Office will be pursuing in the next 24 months. One point of interest, in reviewing the shift-relief factors for the division, it was determined that detectives throughout the patrol division utilize 356 hours of annual leave compared with 279 hours of remaining deputies in the patrol division. This may indicate a “burnout” condition among some detectives, an issue identified by the Sheriff’s Office for study as part of the goal to reduce caseload per detective.

This analysis anticipates current vacancies of about 20 FTEs among certified and non-certified staff, which are in recruitment.

**Methodology**

Through a reproduction and refinement of the 2015 staffing study, we developed multiple methods for calculating shift-relief factors (how many FTEs to fully staff one post) for both the detention center and the patrol division. In order to appropriately calculate shift-relief factors (SRF), we first calculated the
net annual work hours for deputies and detention specialists at the detention center, and deputies in the patrol division. Net annual work hours are the actual number of hours that an FTE is available to work during the year. SRFs were then calculated through a comparison of net annual work hours and the total hours needed to cover posts.

The tables and findings below highlight our initial findings (Tables 1 and 3) and updated findings (Tables 2 and 3) after meetings held with members of the detention center and patrol command staffs.

**Detention Center Findings**

In our analysis of the Detention Center’s staffing, we categorized mandatory posts into five categories:

- 24/7 deputy only
- 24/7 detention specialist/deputy
- Non-24/7 deputy only
- 5:8 deputy only
- 5:8 detention specialist/deputy

We categorized posts in this fashion to ensure the accuracy of our estimation. Accuracy is improved because we know that:

- Detention specialists cannot be backfilled into certain posts; therefore, they must be analyzed separately.
- Required coverage is affected by shift schedules. 24/7 posts require far more FTE coverage than 5:8 posts and must be analyzed separately.

Our categorization corrects for the differences in coverage resulting from different shift lengths and ensures that only qualified staff can be backfilled in our analysis.

**Table 1: Jail calculations per category (initial findings)**

*Note: These figures were a result of collecting “minimum” staffing requirements for the jail.*

<table>
<thead>
<tr>
<th></th>
<th># of Posts</th>
<th>Shift Relief Factor</th>
<th>Total Staff Required</th>
<th>Current FTEs</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-24/7 Deputy</td>
<td>7</td>
<td>1.28</td>
<td>8.9</td>
<td>10</td>
<td>-1</td>
</tr>
<tr>
<td>24/7 Deputy</td>
<td>25</td>
<td>4.79</td>
<td>119.9</td>
<td>136</td>
<td>-16</td>
</tr>
<tr>
<td>24/7 DS/Deputy</td>
<td>9</td>
<td>4.82</td>
<td>43.42</td>
<td>29</td>
<td>14.4</td>
</tr>
<tr>
<td>5:8 Deputy</td>
<td>34</td>
<td>1.12</td>
<td>38.16</td>
<td>31</td>
<td>10.16</td>
</tr>
</tbody>
</table>
According to our calculations and analysis, as currently structured, the Detention Center is **7.5 FTEs understaffed**.

**Table 2: Jail calculations per category (updated findings)**

*Note: These figures were modified following a meeting with the Sheriff’s Office leadership team, in which they clarified minimum, desired, and/or intended post assignments.*

<table>
<thead>
<tr>
<th></th>
<th># of Posts</th>
<th>Shift Relief Factor</th>
<th>Total Staff Required</th>
<th>Current FTEs</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-24/7 Deputy</td>
<td>8</td>
<td>1.28</td>
<td>10.28</td>
<td>10</td>
<td>0.28</td>
</tr>
<tr>
<td>24/7 Deputy</td>
<td>29</td>
<td>4.79</td>
<td>139.16</td>
<td>135</td>
<td>4.16</td>
</tr>
<tr>
<td>24/7 DS/Deputy</td>
<td>9</td>
<td>4.82</td>
<td>43.42</td>
<td>41</td>
<td>2.4</td>
</tr>
<tr>
<td>5:8 Deputy</td>
<td>36</td>
<td>1.12</td>
<td>40.4</td>
<td>28</td>
<td>12.4</td>
</tr>
<tr>
<td>5:8 DS/Deputy</td>
<td>1</td>
<td>1.12</td>
<td>1.12</td>
<td>1</td>
<td>0.13</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td></td>
<td>234.4</td>
<td>215</td>
<td>19.4</td>
</tr>
</tbody>
</table>

According to our updated calculations and analysis, the Detention Center is **19.4 FTEs understaffed**.

**Patrol Division Findings**

In our analysis of the patrol division’s staffing, we categorized mandatory posts into eight categories:

- Days
- Swings
- Graves
- Traffic
- JSU
- JSU (District 5)
- Special Enforcement
- Patrol East
Table 3: Patrol calculations per category (initial findings)

These figures were a result of collecting “minimum” staffing assignments for the patrol division.

<table>
<thead>
<tr>
<th></th>
<th># of Posts</th>
<th>Shift Relief Factor</th>
<th>Total Staff Required</th>
<th>Current FTEs</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days</td>
<td>8</td>
<td>2.36</td>
<td>18.9</td>
<td>21</td>
<td>-2.05</td>
</tr>
<tr>
<td>Swings</td>
<td>8</td>
<td>2.36</td>
<td>18.9</td>
<td>22</td>
<td>-3.05</td>
</tr>
<tr>
<td>Graves</td>
<td>7</td>
<td>2.36</td>
<td>16.5</td>
<td>20</td>
<td>-3.42</td>
</tr>
<tr>
<td>Traffic</td>
<td>10</td>
<td>2.36</td>
<td>23.68</td>
<td>5</td>
<td>18.68</td>
</tr>
<tr>
<td>JSU</td>
<td>6</td>
<td>1.35</td>
<td>8.12</td>
<td>6</td>
<td>2.12</td>
</tr>
<tr>
<td>JSU (District 5)</td>
<td>2</td>
<td>1.35</td>
<td>2.7</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Special Enforcement</td>
<td>8</td>
<td>1.35</td>
<td>10.8</td>
<td>8</td>
<td>2.8</td>
</tr>
<tr>
<td>Patrol East</td>
<td>3</td>
<td>2.36</td>
<td>7.1</td>
<td>9</td>
<td>-1.89</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td></td>
<td>106.9</td>
<td>93</td>
<td>13.9</td>
</tr>
</tbody>
</table>

According to our initial results, the patrol division is **13.9 FTEs understaffed**.

Table 4: Patrol calculations per category (updated findings)

Note: These figures were also modified following a separate meeting with the Sheriff’s Office leadership team, in which they clarified minimum, desired, and/or intended patrol assignments.

<table>
<thead>
<tr>
<th></th>
<th># of Posts</th>
<th>Shift Relief Factor</th>
<th>Total Staff Required</th>
<th>Current FTEs</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days</td>
<td>14</td>
<td>2.36</td>
<td>33.15</td>
<td>23</td>
<td>10.15</td>
</tr>
<tr>
<td>Swings</td>
<td>14</td>
<td>2.36</td>
<td>33.15</td>
<td>21</td>
<td>12.15</td>
</tr>
<tr>
<td>Graves</td>
<td>14</td>
<td>2.36</td>
<td>33.15</td>
<td>22</td>
<td>11.15</td>
</tr>
<tr>
<td>Traffic</td>
<td>10</td>
<td>2.36</td>
<td>23.68</td>
<td>5</td>
<td>18.68</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>1.35</td>
<td>8.12</td>
<td>6</td>
<td>2.12</td>
</tr>
<tr>
<td>----------------</td>
<td>-----</td>
<td>------</td>
<td>------</td>
<td>-----</td>
<td>------</td>
</tr>
<tr>
<td>JSU (District 5)</td>
<td>2</td>
<td>1.35</td>
<td>2.7</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Special Enforcement</td>
<td>8</td>
<td>1.35</td>
<td>10.8</td>
<td>8</td>
<td>2.8</td>
</tr>
<tr>
<td>Patrol East</td>
<td>6</td>
<td>2.36</td>
<td>14.2</td>
<td>7</td>
<td>7.12</td>
</tr>
<tr>
<td>Total</td>
<td>74</td>
<td></td>
<td>159.02</td>
<td>94</td>
<td>65.02</td>
</tr>
</tbody>
</table>

Our updated calculations suggest that the patrol division is **65.02 FTEs understaffed**.

**EXHIBITS**

1) Staffing Action Plan Workshop Agenda and Participants
2) Action Plans #1 through #5
Staff Review Action Planning Session

Thursday, October 15, 2020
1 to 4 p.m.
Riverdale Regional Park, Waymire Dome Rendezvous Rooms

1. Welcome/Introductions
   a. Project overview and expectations for this session – Alisha Reis

2. Overview of Base Staffing Findings
   a. Review of staffing study and impact of staffing needs – Matt Rivera/Max Cercone

3. Goalsetting
   – Jamal Ward, Alisha Reis, Matt Rivera
   a. Discussion: Based on the information from the staffing review, what would you say are your top 4-5 priorities and why?
   b. Create action plan to address priorities

4. Brief overview of Baldrige and how the Sheriff’s Office fits in – Jamal Ward

5. Wrap Up/Next Steps – Alisha Reis

Participants:
Sheriff Rick Reigenborn
Undersheriff Tommie McLallen
Jail Division Chief Chris Laws
Training Div. Chief Mickey Bethel
Professional Standards Div. Chief Bill Dunning
Detectives Div. Chief Dirk Budd
Operations Supervisor/Finance Stephanie Brandt
P&C Business Partner Shannon Dennington
Patrol Commander J.D. Cordova

Project Coordinator Brian Perkins
County Attorney Heidi Miller*
Deputy County Manager Alisha Reis*
Deputy County Manager Chris Kline*
Performance Excellence Administrator Jamal Ward*
Director, Community Safety & Wellbeing Matt Rivera*
CSWB Evaluator Max Cercone*
*Project Team
# Adams County Sheriff’s Office ACTION PLAN 2020

## GOAL: Detective Division Staffing

### Goal Statement
Reduce Crime Caseload Per Detective and Increase Clearance Rates.

### BENCHMARKS FOR SUCCESS
- # of clearances increased
- Decrease in # of man hours for violent and property crimes
- Decrease in # of cases per detective
- Reduction in violent and property crimes
- Retention of experienced detectives
- Increase in community confidence

## EVALUATION PLAN
Monthly check-ins with action plan owners to determine progress

<table>
<thead>
<tr>
<th>STRATEGIC ACTION DESCRIPTIONS</th>
<th>PARTY / DEPT RESPONSIBLE</th>
<th>DATE TO BEGIN</th>
<th>DATE DUE</th>
<th>RESOURCES REQUIRED</th>
<th>POTENTIAL BARRIERS</th>
<th>DESIRED OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain Adco Crime Stats from Sheriff’s crime analyst</td>
<td>Chief of Detectives - Dirk Budd, Stephanie Brandt, Under Sheriff Tommie McLallen, Crime Analyst Kassie Borth</td>
<td>November 1, 2020</td>
<td>November 1, 2020</td>
<td>Access to database info- ITi collaboration</td>
<td>Delay in obtaining data. Precipitous increase in caseload or high-profile cases.</td>
<td>Data analysis to determine the scope of issue. Determine avg. man hours for violent crimes and property crimes. Determine current and desired clearance rates</td>
</tr>
<tr>
<td>Compensation Analysis</td>
<td>Chief of Detectives - Dirk Budd, Stephanie Brandt, Under Sheriff, Tommie McLallen</td>
<td>November 1, 2020</td>
<td>November 1, 2020</td>
<td>Collaboration with Shannon Dennington, Compensation/Analysis Team</td>
<td>Delay in obtaining information.</td>
<td>Compensation analysis to determine equitable pay for detectives.</td>
</tr>
<tr>
<td>Increase the number of FTE’s within Detective Division</td>
<td>Chief of Detectives - Dirk Budd, Stephanie Brandt, Under Sheriff, Tommie McLallen</td>
<td>January 1, 2021</td>
<td>December 31, 2021</td>
<td>Collaboration with Shannon Dennington and Nancy Duncan, funding</td>
<td>Lack of funding and lack of institutional knowledge of S.O. needs.</td>
<td>By December 31, 2021, the Detective Division will recruit, hire and train # of new FTE’s. <strong>Determine number with work on caseload analysis and performance desires.</strong></td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>-------------------------------------------------------------</td>
<td>-------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Assess process and scheduling improvement efficiencies with current detectives</td>
<td>Chief of Detectives - Dirk Budd, Stephanie Brandt, Under Sheriff, Tommie Tommy McLallen</td>
<td>December 1, 2020</td>
<td>March 1, 2020</td>
<td>Collaboration with Kirti Padsala, Eric Bettinger, Max Cercone, and current detectives</td>
<td>Delay in launching initiative and/or obtaining information from assessment</td>
<td>Identify and create efficiencies that address the feeling of “burnout” experiences by current detectives.</td>
</tr>
</tbody>
</table>
Adams County Sheriff’s Office ACTION PLAN 2020

GOAL-Response Times

**Goal Statement:** Reduce time to respond to 911 calls (from dispatch to deputy on scene).

**BENCHMARKS FOR SUCCESS**

5-minute response times by geographic area

**EVALUATION PLAN**

Monthly check-ins with action plan owners to determine progress

Monitor quarterly call response data analysis and actual response times

<table>
<thead>
<tr>
<th>STRATEGIC ACTION DESCRIPTIONS</th>
<th>PARTY / DEPT RESPONSIBLE</th>
<th>DATE TO BEGIN</th>
<th>DATE DUE</th>
<th>RESOURCES REQUIRED</th>
<th>POTENTIAL BARRIERS</th>
<th>DESIRED OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrieve data on current call response times</td>
<td>J.D. Cordova, Sheriff Rick Reigenborn</td>
<td>November 1, 2020</td>
<td>November 1, 2020</td>
<td>Access to database info-ITi/Records Division collaboration</td>
<td>Delay in obtaining data.</td>
<td>Data analysis to determine the scope of issue.</td>
</tr>
<tr>
<td>Assessment and potential reallocation of admin duties for 5 commanders on patrol</td>
<td>J.D. Cordova, Sheriff Rick Reigenborn</td>
<td>November 1, 2020</td>
<td>November 1, 2020</td>
<td>Job descriptions</td>
<td>Inability to reassign admin responsibilities</td>
<td>Relief from admin duties to provide better oversight and create efficiencies.</td>
</tr>
<tr>
<td>Collaborate with People and Culture to include response times in county dashboard</td>
<td>J.D. Cordova, Sheriff Rick Reigenborn, Shannon Dennington</td>
<td>January 1, 2021</td>
<td>December 31, 2021</td>
<td>ClearPoint user access</td>
<td>Delay in obtaining data. Collecting verifiable data</td>
<td>Transparency with the public.</td>
</tr>
<tr>
<td>Develop measure (including kpi) to track progress toward benchmark. Note: This is developed once data is reviewed/verified</td>
<td>J.D. Cordova, Sheriff Rick Reigenborn, Shannon Dennington</td>
<td>November 1, 2020</td>
<td>November 1, 2020</td>
<td>Access to data and verification of reliability</td>
<td>Delay in obtaining data. Collecting verifiable data</td>
<td>Develop realistic measures and benchmarks.</td>
</tr>
<tr>
<td>ADDITIONAL NOTES</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Recommendations: Translate data and information into language that is easily understandable by the BoCC. Consider marketing strategy around the non-emergency number to reduce actual 911 calls. The strategy team can assist with developing measures, benchmarks, and kpi’s once data is retrieved.</td>
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</tbody>
</table>
## Adams County Sheriff’s Office ACTION PLAN 2020

### GOAL- Develop Cadet Recruitment, Retention, and Support Plan

**Goal Statement:** Increase cadet recruitment numbers/retention rates.

### BENCHMARKS FOR SUCCESS

- Increased employee satisfaction
- Increased cadet retention
- Increased in recruitment numbers
- Decreased turnover rates
- Increased number of overhires

### EVALUATION PLAN

- Monthly check-ins with action plan owners to determine progress
- Employee pulse survey satisfaction
- Data analysis to support recruitment and retention

### STRATEGIC ACTION DESCRIPTIONS

<table>
<thead>
<tr>
<th>STRATEGIC ACTION DESCRIPTIONS</th>
<th>PARTY / DEPT RESPONSIBLE</th>
<th>DATE TO BEGIN</th>
<th>DATE DUE</th>
<th>RESOURCES REQUIRED</th>
<th>POTENTIAL BARRIERS</th>
<th>DESIRED OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop new recruitment strategy to incl. (military connections, job fairs, reevaluate testing process/esp. written portion (e.g. address test anxiety/failures).</td>
<td>Chief Mickey Bethel and Shannon Dennington</td>
<td>Dec. 1, 2020</td>
<td>February 1, 2021</td>
<td>Research other agencies, access to job fair info, access to military information/connections with local reserves and National Guard units, and collaboration with P&amp;C</td>
<td>COVID-19 environment, lack of quality candidates, negative media coverage of law enforcement</td>
<td>New plan to measurably recruit/retain cadets and eliminate barriers to onboarding. Plan should include goal/measurement to retain 70% of cadets through 3 years. (see note below)</td>
</tr>
<tr>
<td>Develop academy post graduate program to support new cadets and monitor needs.</td>
<td>Chief Mickey Bethel and Shannon Dennington</td>
<td>Dec. 1, 2020</td>
<td>March 1, 2021</td>
<td>Develop survey questions, 1:1 interviews with postgraduates, funding for special programming, recognition and reward</td>
<td>Losing cadets in training process, negative media coverage of law enforcement, COVID-19 environment</td>
<td>Intentional support and integration for cadets.</td>
</tr>
<tr>
<td>Evaluate testing process</td>
<td>Chief Mickey Bethel and Shannon Dennington</td>
<td>January 1, 2021</td>
<td>April 1, 2021</td>
<td>Collaborate with P&amp;C, research other agencies,</td>
<td>Policy/legal mandates</td>
<td>Create efficiencies to increase recruitment and eliminate barriers for cadets.</td>
</tr>
<tr>
<td>Explore the potential of a FTO mentorship program for new cadets</td>
<td>Chief Mickey Bethel and Shannon Dennington</td>
<td>January 1, 2021</td>
<td>March 1, 2021</td>
<td>Identifying and codifying capacity of mentors to participate, identify specific outcomes, research other agencies</td>
<td>Lack of participation and lack of funding</td>
<td>Retain new cadets and create support systems by focusing on relationships</td>
</tr>
</tbody>
</table>

**ADDITIONAL NOTES**

People and Culture can assist with developing a measure and KPI associated with desired outcome of strategic action to quantify the number of cadets retained within 3 years.
## Adams County Sheriff’s Office ACTION PLAN 2020

### GOAL-Senate Bill 20-217

**Goal Statement:** Implement the mandates of Senate Bill 20-217.

### Benchmarks for Success

- Measurable progress toward completing tasks
- SB20-217 Mandates are in place and operational
- Full compliance with SB20-217

### Evaluation Plan

- Monthly check-ins with action plan owners to determine progress
- Number of staff trained on body camera use

### Strategic Action Descriptions

<table>
<thead>
<tr>
<th>STRATEGIC ACTION DESCRIPTIONS</th>
<th>PARTY / DEPT RESPONSIBLE</th>
<th>DATE TO BEGIN</th>
<th>DATE DUE</th>
<th>RESOURCES REQUIRED</th>
<th>POTENTIAL BARRIERS</th>
<th>DESIRED OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research similarly sized law enforcement agencies to determine implementation successes and pitfalls</td>
<td>Project Coordinator Brian Perkins and Chief Bill Dunning</td>
<td>December 1, 2020</td>
<td>February 1, 2021</td>
<td>Connections to other law enforcement agencies</td>
<td>Workload does not allow enough time to adequately research issues.</td>
<td>Identify potential efficiencies and pitfalls to implementing SB20-217</td>
</tr>
<tr>
<td>Finalize decision on which camera manufacturer to chose</td>
<td>Project Coordinator Brian Perkins and Chief Bill Dunning</td>
<td>December 1, 2020</td>
<td>February 1, 2021</td>
<td>Consensus within team, financial latitude</td>
<td>Budget shortfall, competing priorities, political will to purchase materials well ahead of state deadline</td>
<td>Purchase the highest quality body cameras at the most cost-effective price point</td>
</tr>
<tr>
<td>Determine ITi infrastructure needs for building and vehicles</td>
<td>Project Coordinator Brian Perkins and Chief Bill Dunning</td>
<td>March 1, 2021</td>
<td>July 1, 2021</td>
<td>ITi assessment and review, potential collaboration with Fleet</td>
<td>Staff and ITi Capacity</td>
<td>Design and implementation of ITi infrastructure to support camera use and info transfer to server</td>
</tr>
<tr>
<td>Subcommittee (i.e. Policy, Finance, IT, Training) development and monitoring</td>
<td>Project Coordinator Brian Perkins and Chief Bill Dunning</td>
<td>Ongoing</td>
<td>Ongoing</td>
<td>Sufficient time</td>
<td>Staff capacity and workload demands</td>
<td>Subdivision of key tasks associated with SB20-217 and implementation/measurable progress toward completion</td>
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</tr>
<tr>
<td>Hire necessary staff to implement and administer the camera support program, including those needed to review open records requests and similar data requests.</td>
<td>Project Coordinator Brian Perkins, P&amp;C Business Partner Shannon Dennington, and Chief Bill Dunning</td>
<td>August 1, 2021</td>
<td>Connections to other law enforcement agencies, sufficient time, and availability of qualified labor.</td>
<td>Budget shortfall, competing priorities, lack of qualified labor, and political will to allot FTEs well ahead of state deadline</td>
<td>Staffing level to be determined in research discussions with other agencies and among the Sheriff’s Office project team. The initial need is estimated at 8 FTE.</td>
<td></td>
</tr>
</tbody>
</table>

**ADDITIONAL NOTES**

Note: Beginning July 1, 2023, the act requires the division of criminal justice in the department of public safety (division) to create an annual report of the information that is reported to the division, aggregated and broken down by state or local agency that employs peace officers, along with the underlying data. Each local agency and the Colorado state patrol that employs peace officers shall report to the division:

- All use of force by its peace officers that results in death or serious bodily injury;
- All instances when a peace officer resigned while under investigation for violating department policy;
- All data relating to contacts conducted by its peace officers; and
- All data related to the use of an unannounced entry by a peace officer.

The division of criminal justice shall maintain a statewide database with data collected in a searchable format and publish the database on its website. Any state or local law enforcement agency that fails to meet its reporting requirements is subject to suspension of its funding by its appropriating authority.

Note: It is anticipated that new legislation may emerge to launch citizen oversight in internal affairs processes. The Sheriff’s Office has about 36-45 major internal affairs cases per year. This added requirement will trigger reconsideration for staffing and other resources for implementation.
## Adams County Sheriff’s Office ACTION PLAN 2020

### GOAL-Jail Division Staffing

**Goal Statement:** Increase safety, performance, and staffing within the jail.

### BENCHMARKS FOR SUCCESS

- # of staff versus other similarly sized jails
- Improved supervisor to staff ratios
- Increased retention rates of jail staff
- Meeting statutory (bond release) timeframe
- Improved inmate to staff ratios

### EVALUATION PLAN

- Monthly check-ins with action plan owner
- FTE count
- Quantify progress toward completing action items

### STRATEGIC ACTION DESCRIPTIONS

<table>
<thead>
<tr>
<th>STRATEGIC ACTION DESCRIPITIONS</th>
<th>PARTY / DEPT RESPONSIBLE</th>
<th>DATE TO BEGIN</th>
<th>DATE DUE</th>
<th>RESOURCES REQUIRED</th>
<th>POTENTIAL BARRIERS</th>
<th>DESIRED OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiate competitive wage</td>
<td>Chief Chris Laws, Shannon Dennington</td>
<td>November 15, 2020</td>
<td>January 1, 2021</td>
<td>Access to and collaboration with P&amp;C compensation team</td>
<td>Funding and a lack of understanding of jail needs and currents resources</td>
<td>Obtain current information on compensation for certified and non-certified staff to assess gaps in pay and potentially raise pay levels commensurate with local and national benchmarks (including similar positions outside of jail field).</td>
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<tr>
<td>analysis for certified and</td>
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<tr>
<td>non-certified staff (focus on</td>
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<tr>
<td>records tech positions)</td>
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<tr>
<td>Explore process improvement</td>
<td>Chief Chris Laws, Shannon Dennington, Kirti</td>
<td>December 1, 2020</td>
<td>June 1, 2021</td>
<td>Collaboration with Kirti Padsala, Process improvement</td>
<td>Insufficient time</td>
<td>Identification and reduction of re-work and inefficiencies. Creating capacity in certain job categories.</td>
</tr>
<tr>
<td>tools/ methodologies as a</td>
<td>Padsala</td>
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<td></td>
<td>tools, identification of bottlenecks,</td>
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<td>means to eliminate re-work</td>
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<td>and inefficiencies (e.g.</td>
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<td>writing</td>
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<tr>
<td>Increase the number of FTE’s within Jail Division</td>
<td>Chief Chris Laws, Shannon Dennington</td>
<td>December 1, 2020</td>
<td>December 31, 2021</td>
<td>Collaboration with Shannon Dennington and Nancy Duncan (funding)</td>
<td>Lack of funding and lack of institutional knowledge of S.O. needs. Other divisions poaching employees from Jail</td>
<td>By December 31, 2021, the Jail Division will recruit, train and hire 19 new FTE’s</td>
</tr>
</tbody>
</table>

| Examine the use of non-certified staff assuming duties/responsibilities of certified staff | Chief Chris Laws, Shannon Dennington | November 1, 2020 | February 1, 2021 | Collaboration with Shannon Dennington, Terri Lekic, Nancy Duncan | Funding for new positions and inability to reassign duties. Institutional desire to keep processes and duties the same. Explore change in culture to increase respect/relationship between certified and non-certified staff and reduce “this is the way we’ve always done it” reliance. | Reassigning duties/responsibilities to create capacity for certified staff. |
**STUDY SESSION ITEM SUMMARY**

<table>
<thead>
<tr>
<th><strong>DATE OF STUDY SESSION:</strong></th>
<th>11/10/20</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUBJECT:</strong></td>
<td>State Lobbyist Update Re: Election 2020 &amp; Budget Impact Update</td>
</tr>
<tr>
<td><strong>OFFICE/DEPARTMENT:</strong></td>
<td>County Manager’s Office</td>
</tr>
<tr>
<td><strong>CONTACT:</strong></td>
<td>Adam Burg</td>
</tr>
<tr>
<td><strong>FINACIAL IMPACT:</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>SUPPORT/RESOURCES REQUEST:</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>DIRECTION NEEDED:</strong></td>
<td>Potential direction needed on 2021 legislative item regarding business registration.</td>
</tr>
<tr>
<td><strong>RECOMMENDED ACTION:</strong></td>
<td>N/A</td>
</tr>
</tbody>
</table>

**DISCUSSION POINTS:**

- Election 2020 Colorado Results.
- Budget impact of election 2020 items.
- Update on Adams County led business registration legislation.
**STUDY SESSION ITEM SUMMARY**

<table>
<thead>
<tr>
<th>DATE OF STUDY SESSION: 11/10/2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT: Development regulation amendments regarding gas station setbacks</td>
</tr>
<tr>
<td>OFFICE/DEPARTMENT: Community &amp; Economic Development</td>
</tr>
<tr>
<td>CONTACT: Jill Jennings Golich</td>
</tr>
<tr>
<td>FINACIAL IMPACT: none</td>
</tr>
<tr>
<td>SUPPORT/RESOURCES REQUEST: Jen Rutter, Ryan Nalty, Katie Keefe and Greg Barnes</td>
</tr>
<tr>
<td>DIRECTION NEEDED: Determination on approach for gas station locations and setbacks from residentially zoned or used properties</td>
</tr>
<tr>
<td>RECOMMENDED ACTION: That the Board of County Commissioners support the direction provided by staff for inclusion in the Phase 2 development regulation changes to be presented to Planning Commission on 11/12/2020 and the BoCC on 12/8/2020</td>
</tr>
</tbody>
</table>

**DISCUSSION POINTS:**

- Based on feedback provided at the 10/20/2020 study session, staff has prepared information for proposed changes to gas stations and setbacks from residentially zoned or used properties.
- Attached is a memo prepared by Katie Keefe from earlier this year when we began looking into our regulations that reviews public health impacts and land use setbacks for gasoline dispensing stations.
Gas Stations in Unincorporated Adams County

November 10, 2020
Agenda

• Concerns expressed
• Review of potential impacts
• Current regulations
• Proposed regulations
• Options
• Map Analysis
Concerns Expressed

• 50 ft setback from residentially zoned or used properties is not enough – particularly when we require 1000 ft for oil and gas facilities (state proposing 2000 ft)

• Some convenience stores with fueling stations provide an option for those in a food desert – could there be a requirement for healthy food?

• Desire to analyze impact on a case by case basis – that isn’t a CUP

• Need for a good balance on what we allow in our corridors
Review of Potential Impacts

- Emissions of Volatile Organic Compounds (VOC)
  - Ozone precursor
  - Contributes to haze/smog
- Emissions of Hazardous Air Pollutants (HAP)
  - Human health effects – dose, duration, frequency & receptor traits
- Relative Risk to Sensitive Land Use Populations: CARB study

Comparison of Facility Emission Sources

<table>
<thead>
<tr>
<th>Fueling Station</th>
<th>Oil &amp; Gas Production Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground storage tanks</td>
<td>Aboveground storage tanks</td>
</tr>
<tr>
<td>Tank Truck</td>
<td>Enclosed combustors/flares</td>
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<tr>
<td>Pump nozzle</td>
<td>Production Wells</td>
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<td>Separators</td>
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<tr>
<td></td>
<td>Condensate tanks</td>
</tr>
<tr>
<td></td>
<td>Compressors</td>
</tr>
<tr>
<td></td>
<td>Process Heater</td>
</tr>
<tr>
<td></td>
<td>Glycolic dehydrators</td>
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</tbody>
</table>
Regulatory Controls

- Division of Oil and Public Safety Regulation 7 CCR 1101-14
- APCD Regulation 3: Emissions Calculations and Permits
  - Air Pollutant Emission Notice (APEN); Construction Permit
- APCD Regulation 7
  - UST Stage I Vapor Recovery System
  - Tank Truck Vapor Recovery System Certification
- National Emission Standards for Hazardous Air Pollutants
- CAA Title V Operating Permit: Synthetic Minor or Major Source

<table>
<thead>
<tr>
<th>APEN Calculated VOC Emissions for Facilities in Adams County</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-Eleven Store #26289</td>
</tr>
<tr>
<td>7-Eleven Store #39296</td>
</tr>
<tr>
<td>Circle K Stores</td>
</tr>
<tr>
<td>Costco fueling station (26,000,000 MG year)</td>
</tr>
<tr>
<td>Great Western Operating Co B-Farm LD PAD</td>
</tr>
</tbody>
</table>
Current Regulations

• Automobile Service Stations (includes car washes; convenience stores with gas pumps where vehicles are serviced with minor repairs, oil changes, etc.; and gas stations)
  - Located on a collector or arterial road or highway unless the sites are part of a shopping center
  - Pump islands may be located a minimum of 40 ft from all exterior property lines, and pump island canopies may project to within 20 ft of property lines.
Proposed Regulations

- Automobile Service Stations (includes car washes; convenience stores with gas pumps where vehicles are serviced with minor repairs, oil changes, etc.; and gas stations)
  - Located on a collector or arterial road or highway unless the sites are part of a shopping center
  - Pump islands shall be located a minimum of 50 ft from residentially zoned or used property lines and a minimum of 40 ft from other exterior property lines. Pump island canopies may project to within 30 ft of property lines.
  - Underground storage tank setbacks (UST) setbacks: UST vent pipes must be located a minimum of 50 ft from residentially zoned or used property lines and a minimum of 40 ft from other exterior property lines.
### Proposed Regulations

| Use Category | A-1 | A-2 | A-3 | AE | R-1-C | R-2 | R-3 | R-4 | MH | C-0 | C-1 | C-2 | C-3 | C-4 | C-5 | I-1 | I-2 | I-3 | CO | PL |
|--------------|-----|-----|-----|----|------|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| **Automobile Service Stations** | -   | -   | -   | -  | -    | -   | -   | -   | -  | P   | P   | P   | P   | P   | P   | P   | P   | P   | -  | -  |
| **Car washes** | -   | -   | -   | -  | -    | -   | -   | -   | -  | P   | P   | P   | P   | P   | P   | P   | P   | P   | -  | -  |
| **Convenience stores with fueling stations where vehicles are serviced with minor repairs, oil changes, etc.** | -   | -   | -   | -  | -    | -   | -   | -   | -  | P   | P   | P   | P   | P   | P   | P   | P   | P   | -  | -  |
| **Gas stations** | -   | -   | -   | -  | -    | -   | -   | -   | -  | P   | P   | P   | P   | P   | P   | P   | P   | P   | -  | -  |
| **Comparables:** |     |     |     |    |      |     |     |     |    |     |     |     |     |     |     |     |     |     |     |     |
| **Convenience retail store** | -   | -   | -   | -  | -    | -   | -   | -   | -  | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | -  | -  |
| **Automotive repair except top, body, upholstery repair, paint and tire retreading shops** | -   | -   | C   | -  | -    | -   | -   | -   | -  | C   | C   | P   | P   | P   | P   | P   | P   | P   | P   | -  | -  |
| **Automotive repair, including top, body, upholstery repair, paint and tire retreading shops** | -   | -   | C   | -  | -    | -   | -   | -   | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -  | -  |
| **Fuel, oil, gasoline and petroleum products (bulk storage and/or sale)** | -   | -   | -   | -  | -    | -   | -   | -   | -  | C   | C   | C   | C   | C   | -   | -   | -   | C   | P   | -  | -  |
Options

• Increase setback from residentially zoned or used properties

• Performance standards
  – Convenience store with fueling station and Gas stations will require a 300 ft setback from residentially zoned or used properties when they have an annual gasoline throughput of 3.6 million gallons or more per year
  – Only allow convenience store with fueling stations, not stand-alone gas stations within 300 ft of residentially zoned or used property
Map Analysis

Available gas station properties 50 feet from residential uses and zones.
Map Analysis

Available gas station properties 100 feet from residential uses and zones
Map Analysis

Available gas station properties 250 feet from residential uses and zones
Available gas station properties 1,000 feet from residential uses and zones
Recommendation

- Add additional performance standards to already proposed language
  - Convenience store with fueling station and Gas stations will require a 300 ft setback from residentially zoned or used property when they have an annual gasoline throughput of 3.6 million gallons or more per year
  - Only allow convenience store with fueling stations, not stand-alone gas stations within 300 ft of residentially zoned or used property
Background

Gasoline contains over 400 distinct organic compounds and its vapor contains numerous hazardous air pollutants (HAPs). HAPs found in gasoline vapor include, but are not limited to, benzene, hexane, toluene, 2,2,4-trimethyl pentane, and xylene. Acute exposure to high levels of these HAPs can cause headaches, dizziness, and difficulty with breathing. General public exposure to acute high-level concentrations of HAPs from gasoline dispensing station fugitive emissions is relatively unlikely given the air quality regulation requirements applicable to these sources. Chronic exposure to lower concentrations of these HAPs, typical of workplace exposures or general public lifetime exposure (70-year period), may impact liver function, the hematopoietic system, central nervous system, and can result in an increased risk of cancer and birth defects (ATSDR, 2007)(ATSDR, 1999). Section 112 of the federal Clean Air Act regulates HAP emissions from mobile and stationary sources, such as gasoline dispensing stations. Colorado has state implementation authority from the USEPA to promulgate and enforce its own air quality regulations that are at least as stringent as the respective federal regulations. In Colorado, emissions of HAPs and ozone precursors from gasoline dispensing stations (“gas stations”) are regulated through Air Quality Control Commission Regulation 3 (permitting and reporting requirements), Regulation 7 (control of ozone precursor and hydrocarbon emissions) and Regulation 8 (emission control and performance standard requirements).

Underground fuel storage tanks, pump nozzles, fuel spillage, pressure relief devices, and transport truck unloading operations are all potential sources of fugitive vapor emissions at gas stations. Gas Stations are mandated by the Air Pollution Control Division to calculate their expected uncontrolled HAP emission levels, submit an Air Pollutant Emission Notice, and obtain an Air Permit prescribing emission limits and controls for each source when HAP permitting thresholds are exceeded. All gas stations located within a non-attainment area, regardless of emission levels, are required to install, maintain, and operate a Stage I Vapor Recovery System (VRS) per Regulation 7, Section VI. The Air Pollution Control Division has focused on enforcement inspections of gas stations located within non-attainment areas to assess VRS performance during transport truck unloading operations. Both the transporter and gas station operator are subject to fines for violations of emission control requirements (CDPHE, 2015).

Gas Station Emissions and Land Use Impacts

In its Air Quality and Land Use Handbook: A Community Health Perspective, the California Air Resources Board (CARB) evaluated categories of air pollution sources and cancer health impacts to determine
relative risk to proximal sensitive population land uses (CARB, 2005). This risk determination was then used to recommend setback distances from these sources to sensitive land use populations. Gasoline Dispensing Facility (“gas station”) was one of eight sources evaluated for potential community-based health impacts associated with proximity to these air pollution sources. Although fugitive emissions from gas stations contribute to ambient HAP levels, numerous studies have found that motor vehicle tailpipe emissions are a primary source of health impacts to sensitive populations. As noted by CARB, motor vehicle emissions account for more than 90% of total benzene emissions in their state each year (CARB, 2005). Considering the stricter requirements for vehicle emission controls in California, it is reasonable to expect that vehicle emission contributions in Colorado are comparable. Evaluation of air emissions data and air modelling data found that typical gas stations, those with an annual gasoline throughput of less than 3.6 million gallons, account for a minor fraction of total benzene emissions within a localized area. Under urban air dispersion conditions, CARB determined that typical gas stations have a relative risk of less than 10 at 50 feet from source fence line.

For large gas stations, relative risk for proximal exposure to benzene emissions was found to be significant (CARB, 2005). Large gas stations are those with an annual gasoline throughput of 3.6 million gallons or more, e.g., stations with 5 or more fuel islands, that are often co-located with warehouse retail stores and wholesale outlets. Under both urban and rural air dispersion conditions, large gas stations pose a greater risk even at greater distances to proximal land uses.

**CARB recommended setback distances:**

- **Typical** gas station setback of 50-ft from sensitive population land uses.
- **Large** gas station setback of 300-ft from sensitive population land uses.

**Reference Zoning Requirements for Gas Stations**

An online search of development regulations and zoning requirements for gasoline dispensing facilities identified numerous jurisdictions with specific setback requirements. None had delineated gas stations by annual gasoline throughput or storage capacity. Within the Denver metro area, the following zoning regulations pertaining to gas stations and their setbacks were identified:

- 300-foot setback from residential land uses
- 100-foot setback from residential land uses unless located across the street
- 1,000-foot setback from another, distinct gas station
- Minimum lot size of one-half acre
- Maximum of two (2) fuel islands and four (4) fuel pumps per gas station

An extensive internet search also identified several jurisdictions in other states with the following setback requirements from specific land uses, all of which excluded residential:

---

1 CARB defined sensitive population land uses as residential, schools, daycares, hospitals, healthcare centers, and parks/open space.
2 Relative risk, for cancer health effects, is expressed as an estimate of the increased chances of getting cancer due to facility emissions over a 70-year lifetime expressed as chances in a million.
3 Municipalities or counties in Connecticut, Florida, Maryland, New Jersey
200-foot setback from schools, playgrounds, rec center, public library, or church
200-foot setback from another permitted gas station
300-foot setback from schools, playgrounds, churches, hospitals, libraries, long-term care facilities and public assembly buildings
500-foot setback from schools, park, playground, day care center, or any outdoor civic or institutional use for gas stations with annual throughput greater than 3.6 million gallons
1,500-foot setback from schools, hospitals, churches, theater, public assembly building, park or playground

References


