



Tactical Response Plan

BROOMFIELD DEVELOPMENT



Notice: Any printed copy of this Tactical Response Plan is considered an unofficial version at the time of printing. The official version of this document may be found on the Extraction Oil & Gas internal website.

For information on how to obtain an official copy, please contact the appropriate Extraction Oil & Gas official.

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Plan Approved By

Organization	Name	Signature	Date

Revision Log

Organization	File Name	Signature	Date
Extraction Oil & Gas	Extraction-trp-broomfield-Rev2-6-25-19_final		6/25/19
Extraction Oil & Gas	Extraction-trp-broomfield-Rev1-1-22-20_final		1/22/20

Action Items

Action Item	Name	Signature	Date Completed
Complete annual review of the EAP per Section 1.0			1/21/2020
Notify NMFRD and CCOB when phase changes occur per Section 1.1.			Open and on-going, compliant
Provide aerial photograph when phase changes occur and provide updated cards to NMFRD and CCOB OEM per Section 1.1			Open and on-going, compliant
Provide lease operators, company man, and/or guard shack with updated copies of TRP cards per Section 1.1			1/21/2020
Provide NMFRD with site tours at their discretion per Section 4.0			Open and on-going, compliant
H2S was not encountered in 2019, therefore no notifications were required per Section 5.3			1/21/2020
Provide list of known, available private industry firefighting foam located within the basin per Section 5.4			1/22/2020

Emergency Response Protocol



What to do when an incident occurs?

1. Initial Incident Response

- If appropriate, perform initial response by mitigating spills, performing first aid, or extinguishing a controllable fire.
- Evacuate the area if necessary and call 911 when appropriate.

2. Initial Notification

- Make contact with your supervisor or EHSR using the numbers listed here or on your response card.
- Operations supervisor, Manager, and EHSR communicate and initiate follow up response.

3. Internal Incident Response

- **Operations:**
 - Supervisor/Manager to scene to establish incident command.
 - Dispatch additional resources/ equipment needed (eg. Vac. Truck, skid steer).
 - Work with EHSR on unified command.
- **EHSR:**
 - Dispatch Field Support staff and other support resources necessary.
 - Initiate initial notification procedure:
 - If necessary, notify: Public Relations, Vice President, Agencies.
 - Establish ongoing Emergency Response Team communication plan.
 - Work with operations on unified command.

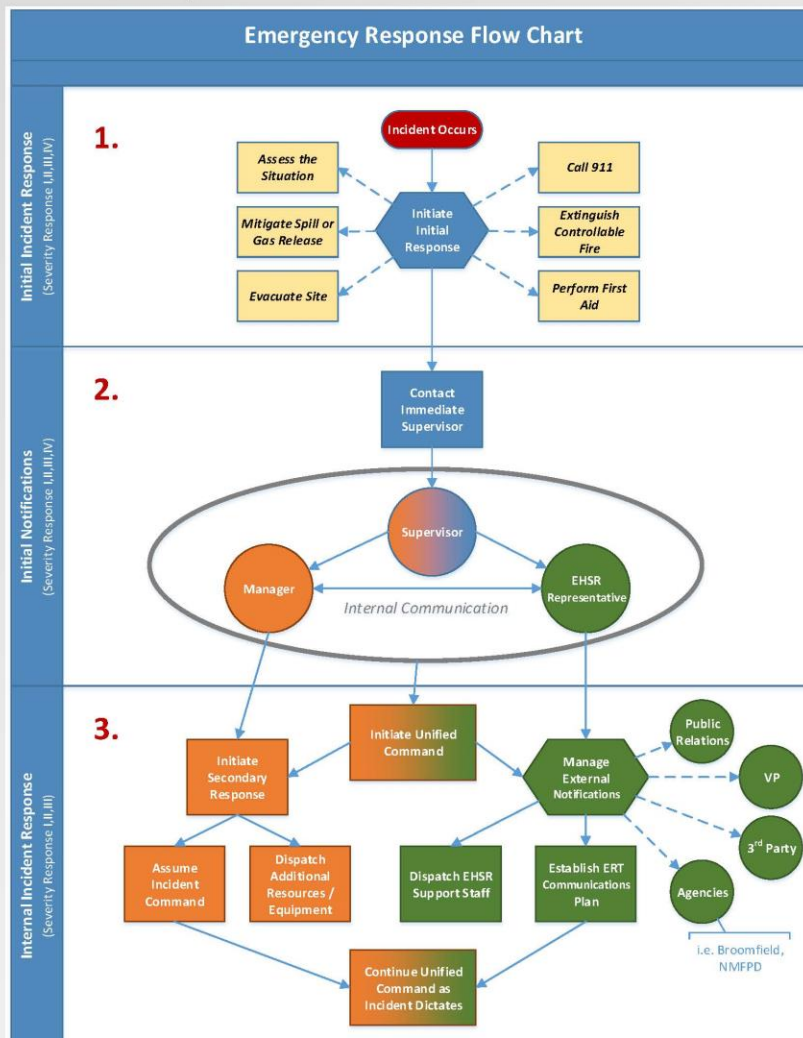
Job Name: _____

Job Supervisor: _____

Supervisor #: _____

Nearest Hospital: _____

Hospital Address: _____

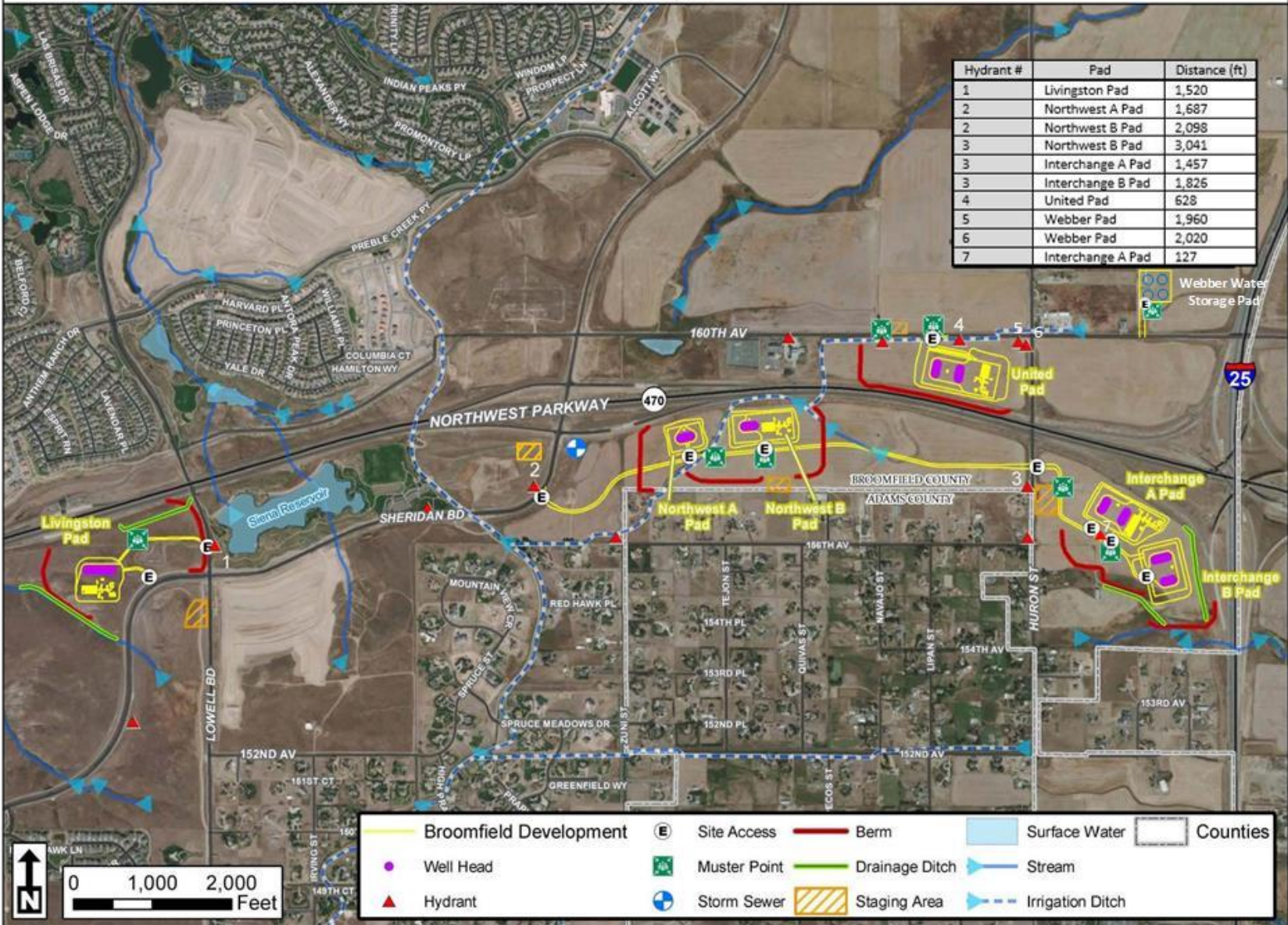


“Protecting our people, contractors, and communities.”



Broomfield Development / Tactical Map

Broomfield, CO



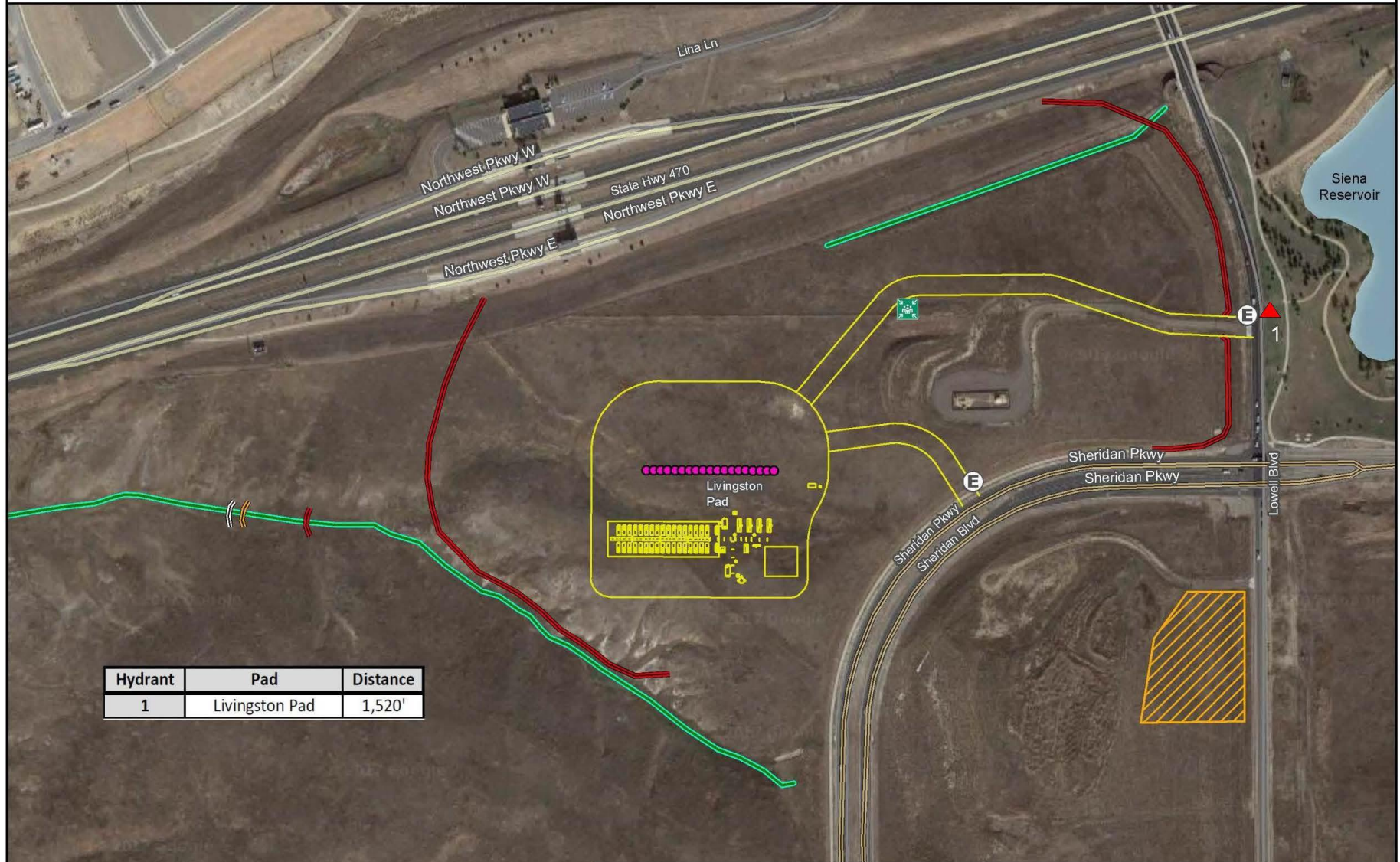
Hydrant #	Pad	Distance (ft)
1	Livingston Pad	1,520
2	Northwest A Pad	1,687
2	Northwest B Pad	2,098
3	Northwest B Pad	3,041
3	Interchange A Pad	1,457
3	Interchange B Pad	1,826
4	United Pad	628
5	Webber Pad	1,960
6	Webber Pad	2,020
7	Interchange A Pad	127



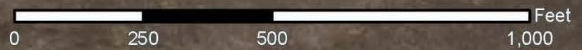
- Broomfield Development
- Ⓜ Site Access
- Berm
- ☑ Surface Water
- ☐ Counties
- Well Head
- Ⓜ Muster Point
- Drainage Ditch
- Stream
- ▲ Hydrant
- Ⓜ Storm Sewer
- ▨ Staging Area
- Irrigation Ditch



LIVINGSTON PAD/Tactical Map Broomfield, CO



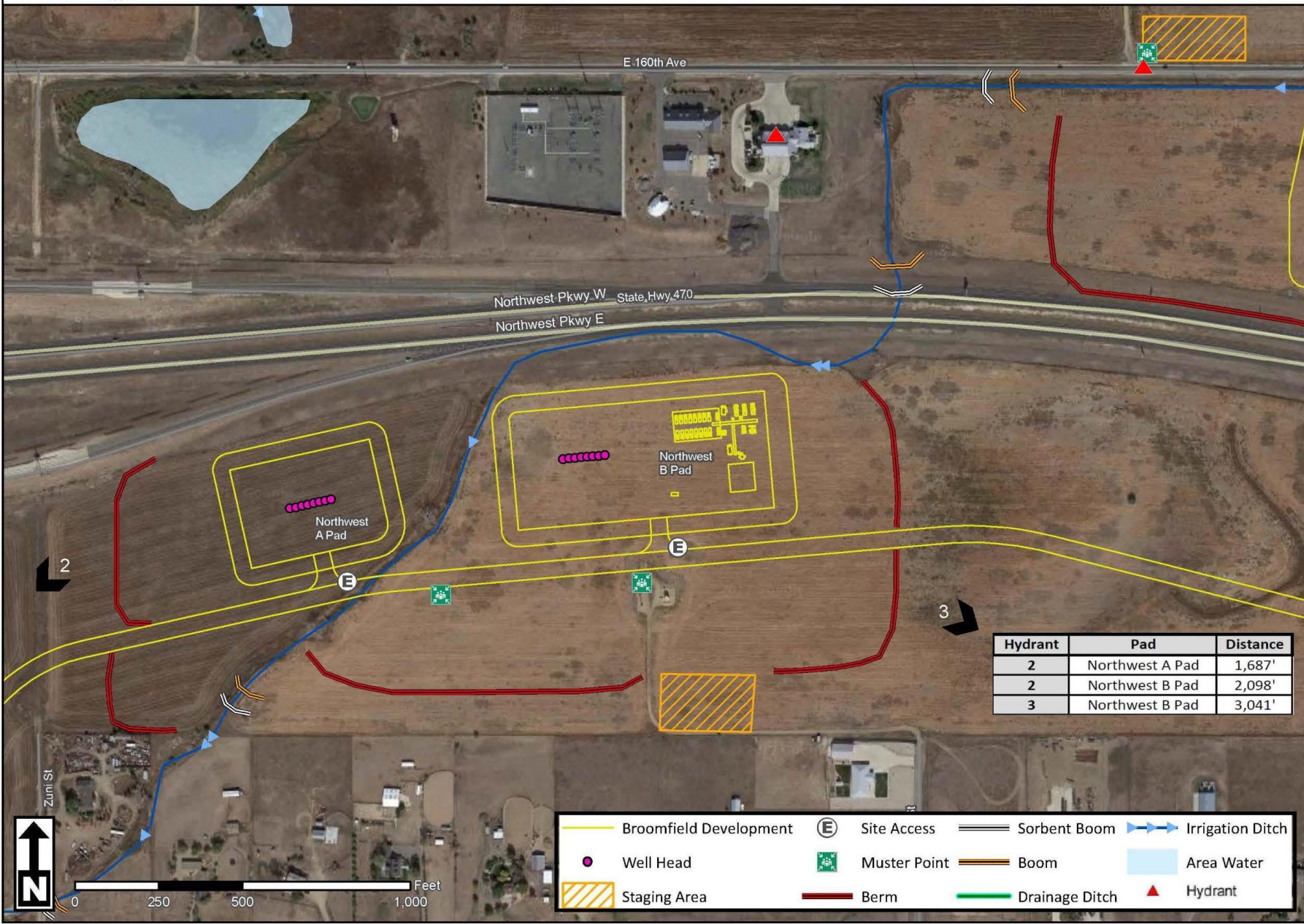
Hydrant	Pad	Distance
1	Livingston Pad	1,520'



Broomfield Development	Muster Point	Sorbent Boom	Irrigation Ditch
Well Head	Boom	Area Water	Hydrant
Staging Area	Berm	Drainage Ditch	



NORTHWEST PADS/Tactical Map Broomfield, CO



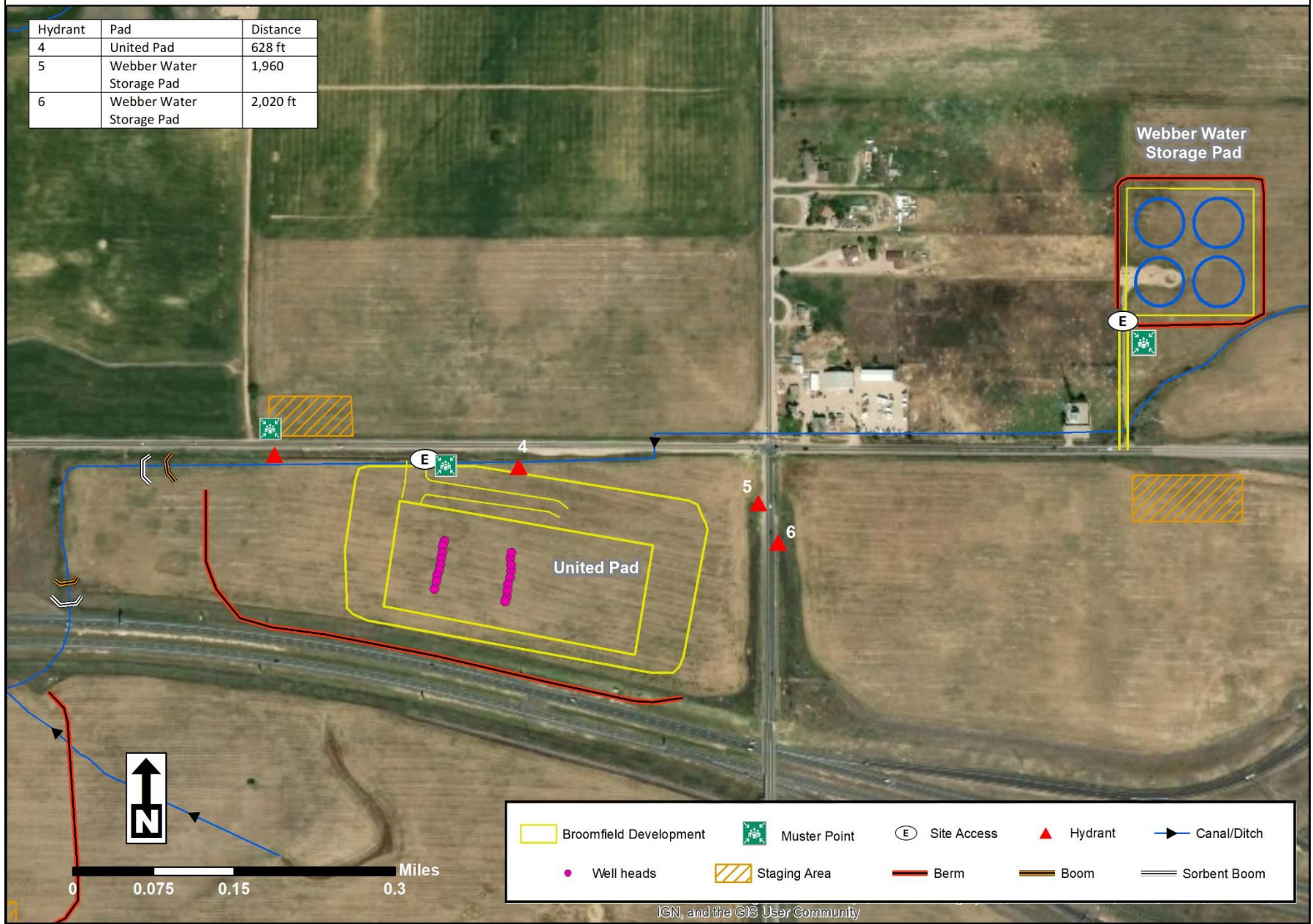
- Broomfield Development
- Well Head
- Staging Area
- E Site Access
- Muster Point
- Berm
- Boom
- Drainage Ditch
- Sorbent Boom
- Boom
- Irrigation Ditch
- Area Water
- ▲ Hydrant



UNITED PAD / Tactical Map

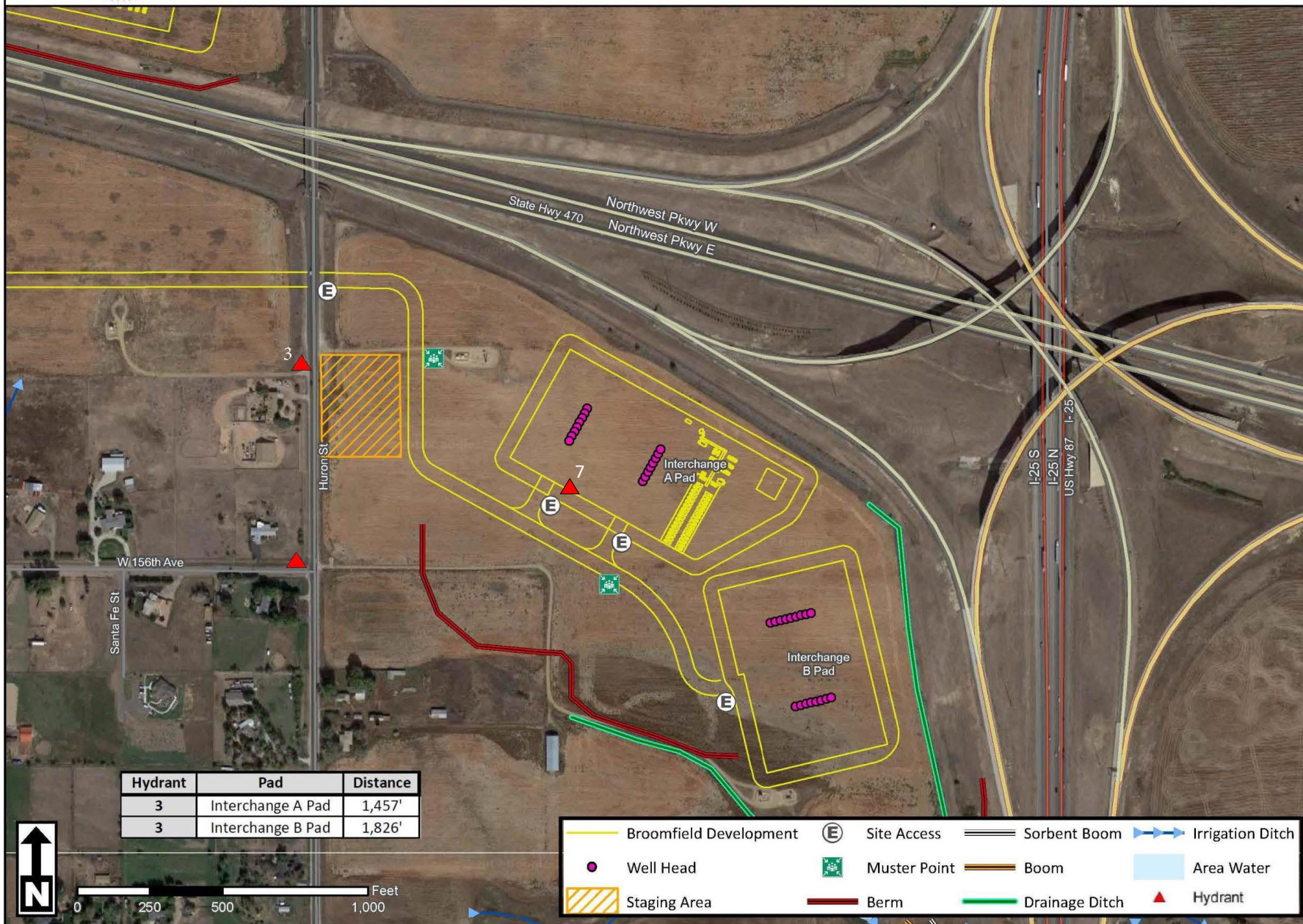
Broomfield, CO

Hydrant	Pad	Distance
4	United Pad	628 ft
5	Webber Water Storage Pad	1,960
6	Webber Water Storage Pad	2,020 ft





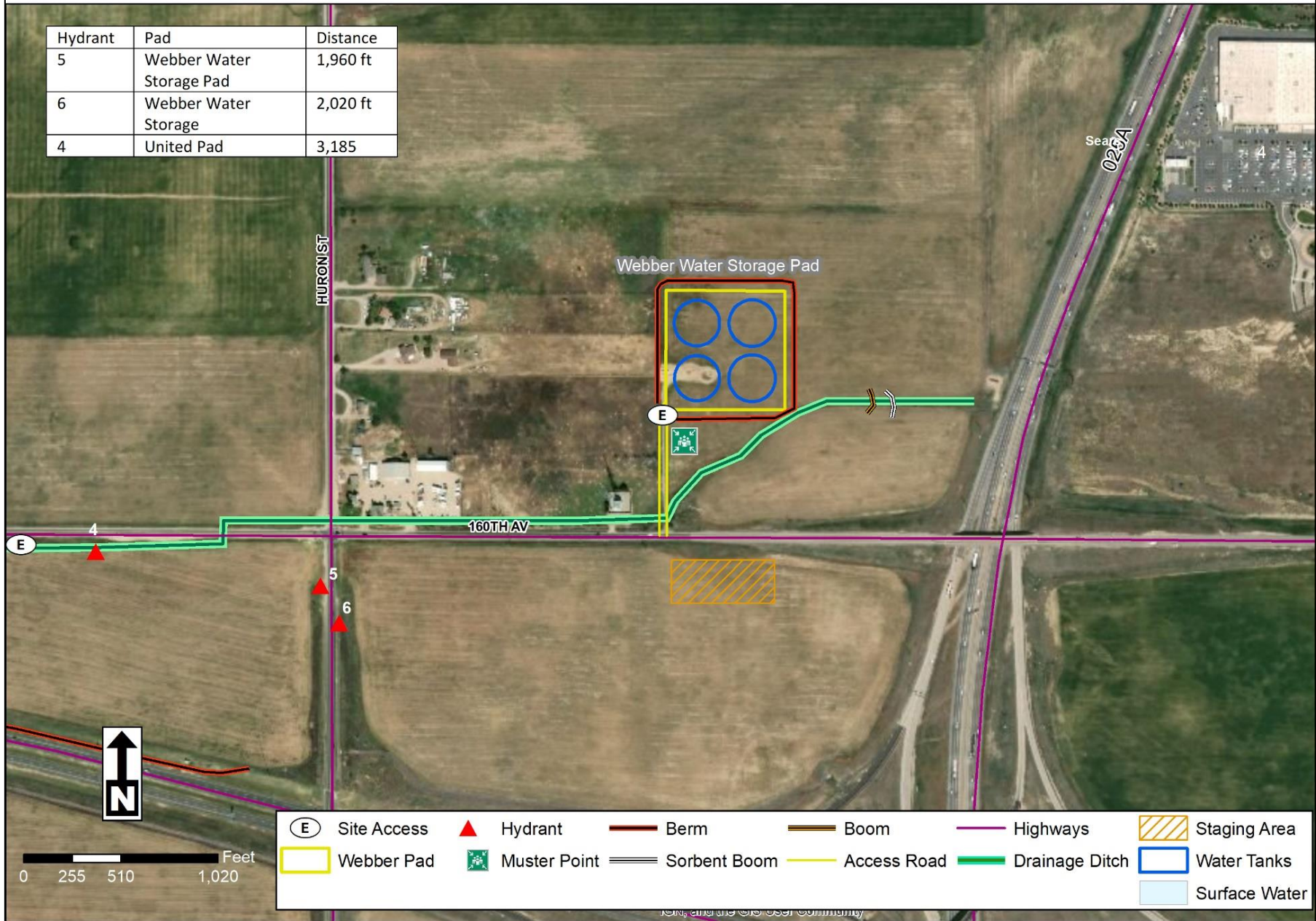
INTERCHANGE PADS/Tactical Map Broomfield, CO





WEBBER WATER STORAGE PAD / Tactical Broomfield, CO

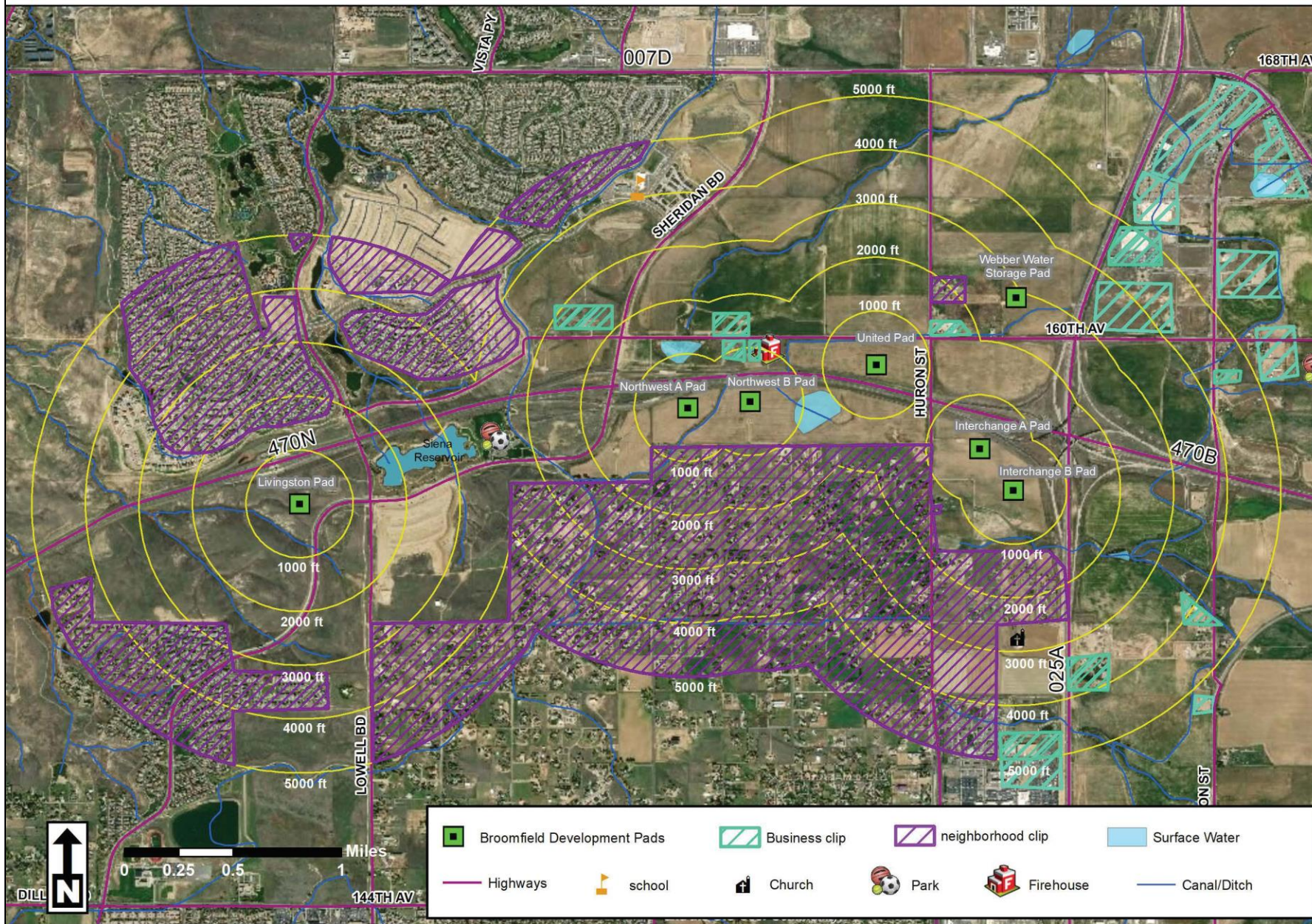
Hydrant	Pad	Distance
5	Webber Water Storage Pad	1,960 ft
6	Webber Water Storage	2,020 ft
4	United Pad	3,185





BROOMFIELD DEVELOPMENT/ Risk Receptors

Broomfield, CO



1.0 INTRODUCTION

Accidents and other emergency incidents during oil and gas operations may pose risks to the health and safety of site workers, responders, and neighboring populations. It cannot be overstated that the best way to address emergency situations is to prevent their occurrence in the first place. Extraction Oil & Gas (Extraction) has established strict and comprehensive policies and procedures aimed first at ensuring that operations at Extraction facilities conform to all applicable industry, health and safety standards. Second, are that effective, coordinated emergency procedures between Extraction, North Metro Fire Rescue District (NMFRD) and the City and County of Broomfield (CCOB) to mitigate potential accidents or other hazard events.

Emergency incidents can be unpredictable and may be impacted by a number of factors. The actions and procedures outlined in this Tactical Response Plan (TRP) should be viewed as general guidelines, not definitive algorithms, as situational differences often drive emergency scene decision making.

This TRP will serve as the basis for a coordinated, organized action plan for dealing with emergency events of all magnitude. While this document is meant to broadly identify agency responsibilities and actions during emergency incidents, other guiding documents are integral in establishing a comprehensive safety, response and mitigation plan. These documents include, but are not limited to:

- Colorado Oil and Gas Conservation Commission (COGCC) regulations
- Established Oil and Gas Industry best practices
- Extraction Oil and Gas MOU with CCOB
- CCOB Emergency Operations Plan and Annexes
- Extraction Oil and Gas Risk Assessment Plan
- Applicable NMFRD Field Operating Guidelines
- National Incident Management System (NIMS)

Extraction agrees and acknowledges that this Emergency Response Preparedness Plan is a living document, subject to change over time and in conjunction and collaboration with the City and County of Broomfield and the North Metro Fire Rescue District. As such, this TRP may require periodic modification based on regulatory, agency, process, technological and area development changes. An annual review of Plan efficacy shall be undertaken in coordination with the NMFRD and CCOB to ensure the Plan is kept up to date and continues to address relevant health and safety issues. Record of that review or any updates will be filed appropriately with Extraction, NMFRD and the CCOB.

1.1 EMERGENCY PREPAREDNESS PLAN (Tactical Response)

The TRP specific to the Broomfield Development locations will be provided to, and reviewed by, the Broomfield County Office of Emergency Management (OEM) and the NMFRD. The TRP includes response objectives that span all phases of the operation and Extraction will inform NMFRD and CCOB when operations change from drilling to completions to production. The TRP is kept at Extraction's office and a copy is provided to NMFRD and Broomfield OEM. Extraction lease operators carry a copy of the TRP summary

card with them and copies of the summary card are provided to the Broomfield County OEM and NMFRD to be kept in the responding fire apparatus.

2.0 OIL AND GAS GENERAL HAZARDS

Oil and gas site development and production involves the use of heavy equipment and chemicals in an environment of pressurized equipment and flammable liquids and gases. The number of staff onsite during development and production phases varies. Specific hazards staff may encounter depends on the stage of site operations, including; site preparation, drilling, hydraulic fracturing, sustained production and auxiliary operations. During early site development, multiple stages of operations (such as flowback and drill out) can occur simultaneously at the same location. When responding to incidents, responders should always consult with site supervisors to determine what operations are being conducted on the site. General oil and gas site hazards include:

- ❖ Confined spaces
- ❖ Elevated surfaces
- ❖ Electrical hazards
- ❖ Moving, automated equipment
- ❖ Vehicle traffic
- ❖ Flammable liquids and gases
- ❖ Chemicals, including corrosives and biocides
- ❖ Radioactive materials
- ❖ Explosive charges (used in hydraulic fracturing)

2.1 SITE PREPARATION

During the site preparation phase, earth moving equipment is used to construct a site that will be used for drilling, hydraulic fracturing and production. Once the site is constructed, a smaller rig may be brought in to drill the initial portions of the well in preparation for a larger drill rig. Sound walls will also be installed during this time. Potential site hazards that may be encountered during the site preparation phase and tactical response strategies that may be deployed in the event of an incident could include:

Potential Site Hazard/Incident	Tactical Response Strategy
Vehicle Traffic	Standard traffic accident response including, but not limited to, law enforcement, NMFRD engine and medic response
Moving Equipment	Heavy equipment accident response including, but not limited to, NMFRD engine, medic and Technical Rescue Team
Soil Stability	Entrapment requiring NMFRD Technical Rescue Team.
Uneven Surfaces	Slips, trips, and falls. NMFRD engine and medic response
Excavating and Trenching	Entrapment requiring NMFRD Technical Rescue Team.
Buried Utilities	Clear immediate area, contact utility, and NMFRD
Elevated Falls	Fall from elevation. NMFRD engine and medic response, NMFRD Technical Rescue Team.
Confined Spaces	IDLH atmosphere requiring NMFRD Technical Rescue Team.

2.2 DRILLING

Once the site has been prepared, a larger drilling rig is moved onsite to drill a well bore that will contain an oil and gas production well. It can take approximately 8 to 10 days to drill a well bore and set the production well. During this process multiple layers of steel casing, steel piping and cement are driven into the ground. A drilling rig consists of four major systems that are utilized simultaneously to drill the well bore and set the production well: a mud system, power generation, materials handling, and well control system. Potential site hazards that may be encountered during the drilling phase and tactical response strategies that may be deployed in the event of an incident could include:

Potential Site Hazard/Incident	Tactical Response Strategy (Reference Sections 3.0 – 3.4)
Vehicle Traffic	Standard traffic accident response, including but not limited to, law enforcement, NMFRD engine and medic response
Moving/Rotating Equipment	Heavy equipment accident response including, but not limited to, NMFRD engine and medic response, NMFRD Technical Rescue
Fires	NMFRD O&G response.
Pressurized Fluids and Gases	SDS sheets maintained onsite, Isolate/depressurize source, confirm no ignition source present. NMFRD O&G response
Confined Spaces	NMFRD Technical Rescue Team.
Corrosive Materials	SDS sheets maintained onsite, NMFRD HazMat response
Electrical Equipment	Turn off power, confirm. NMFRD engine and medic response
Well Control/ Ignited Oil Droplets	Isolate pad site, confirm no ignition sources present, NMFRD O&G response and Well Control Specialist

2.3 HYDRAULIC FRACTURING

After the drill rig leaves, hydraulic fracturing activities begin and may take between 3 to 5 days per well. During this process a mixture of sand, water and a small proportion of other ingredients are pumped into the well to facilitate the release oil and natural gas. As a part of the overall hydraulic fracturing process wellbore cleanout, wireline, flowback and work over operations to bring the well online may occur. Potential site hazards that may be encountered during the drilling phase and tactical response strategies that may be deployed in the event of an incident could include:

Potential Site Hazard/Incident	Tactical Response Strategy (Reference Sections 3.0 – 3.4)
Vehicle Traffic	Standard traffic accident response, including but not limited to, law enforcement, NMFRD engine and medic response
Corrosive Fluids	NMFRD HazMat response dictated by ERG guidebook.
Radioactive Material	NMFRD HazMat response dictated by ERG guidebook.
Rotating Equipment	Heavy equipment accident response including, but not limited to, NMFRD engine and medic response
Confined Spaces	IDLH atmosphere requiring NMFRD Technical Rescue Team.
Toxic Vapors	Confine source, isolate pad site. NMFRD O&G response dictated by

	ERG guidebook.
Silica Dust	Isolate immediate area.
Elevated Falls	Fall from elevation. NMFRD engine and medic response, NMFRD Technical Rescue Team

2.4 SUSTAINED PRODUCTION

Once a well begins production, equipment utilized during hydraulic fracturing and flow back are removed. Only the wellheads, separators, and process vessels remain. Oil and natural gas produced by the well travels via pipeline to market. Any water produced from the well will also be hauled or piped offsite for disposal. During this phase, the wells are constantly monitored (24/7), 365-days through automated equipment where wells can be immediately and remotely shut-in. Potential site hazards that may be encountered during the sustained production phase and tactical response strategies that may be deployed in the event of an incident could include:

Potential Site Hazard/Incident	Tactical Response Strategy
Vehicle Traffic	Standard traffic accident response, including but not limited to, law enforcement, NMFRD engine and medic response
Confined Spaces	IDLH atmosphere requiring NMFRD Technical Rescue Team.
Buried Utilities	Clear immediate area, contact utility, and NMFRD engine response
Pressurized Equipment	Isolate/depressurize source, confirm no ignition source present. NMFRD Haz Mat response dictated by ERG guidebook.
Elevated Falls	Fall from elevation. NMFRD engine and medic response, NMFRD Technical Rescue Team
Electrical Shock	Turn off power, confirm. NMFRD engine and medic response

2.5 AUXILIARY OPERATIONS

To maintain well production, additional operations may occur throughout the life cycle of well. These operations may require a workover rig, a hot-oiler truck, temporary large volume fresh water storage or additional equipment such as a flare to be brought on site. Auxiliary operations are typically temporary. Potential site hazards that may be encountered during the auxiliary phase and tactical response strategies that may be deployed in the event of an incident could include:

Potential Site Hazard/Incident	Tactical Response Strategy
Confined Spaces	IDLH atmosphere requiring NMFRD Technical Rescue Team.
Fresh Water Tanks	Failure of tank. NMFRD engine and medic response, NMFRD Technical Rescue Team
Elevated Falls	Fall from elevation. NMFRD engine and medic response, NMFRD Technical Rescue Team
Moving Equipment	Heavy equipment accident response including, but not limited to, NMFRD engine and medic response, NMFRD Technical Rescue Team
Pressurized Fluids and Gases	Isolate/depressurize source. NMFRD O&G response, HazMat

	response dictated by ERG guidebook.
Well Control/ Ignited Oil Droplets	Isolate pad site and confirm no ignition sources present, NMFRD O&G response and Well Control Specialist
Fires	NMFRD O&G response, HazMat response.
Corrosive Materials	SDS sheets maintained onsite, NMFRD HazMat response dictated by ERG guidebook.

3.0 RESPONSE AND CONTROL OBJECTIVES

3.1 GENERAL REPOSE OBJECTIVES

This TRP is designed to provide Extraction employees at the Broomfield Development facilities in Broomfield, CO with the information necessary to prepare for and respond to incidents in a safe, rapid, effective, and efficient manner. For purposes of this TRP, incidents are defined as events that occur at or near the facility that create unacceptable impacts on people, the environment, or property, and require emergency response operations. The primary goal of this document is to help the company prevent from incurring, as far as practical, any injury or loss of life, damage to property, or damage to the environment. The health and safety of the public, first responders, Extraction employees, and contractors will always be the primary objective of this plan.

In the event of an incident, site managers will consider implementing emergency shutdown procedures depending on the scope of the incident and the capabilities of the on-site personnel. It is important to limit the scope of a release or a fire by shutting off the source and by isolating all potential ignition sources. The foreman/supervisor is responsible for ensuring the safe evacuation of all personnel and for performing an accountability check at one of the designated muster points and to initiate incident command. The incident command may decide to implement an initial air monitoring program depending on the type of incident; with the possibility of an evacuation or a shelter in place of nearby residences and businesses. It is important that incident details and actions are documented following company procedures as well as NIMS protocols. These, in addition to the appropriate forms, can be found in the Extraction Emergency Response Plan.

Changing conditions such as wind direction, road closures, and flooding may require deviations from this plan. It is the responsibility of emergency response personnel to be trained in tactical and emergency response procedures and to be able to adjust the plan as needed.

Depending on the scale and scope of the incident, consider a variety of Incident Command strategies and locations including, onsite-mobile command, Station 66, or the North Metro Fire Training Center.

3.2 GENERAL FIRE RESPONSE OBJECTIVES

Large fires and loss of well control events must only be approached by firefighters and designated well control personnel. The following is a list of general objectives the Fire Department should consider when responding to a fire at an Extraction site:

- ❖ Perform Incident Size up
 - Contact site supervisor and establish Unified Incident Command
 - Identify equipment/products involved

- ❖ Initiate air monitoring
- ❖ Consider shelter in place or evacuation of nearby residences and businesses
- ❖ Request additional resources, if appropriate
- ❖ Establish incident safety plan
- ❖ Control flow of product if possible
- ❖ Do not extinguish fire if product flow cannot be stopped
- ❖ Assemble adequate foam supplies and application plan
- ❖ Protect exposures. Firefighting efforts should be aimed at preventing escalating event
- ❖ Establish hot/warm/cold work zones (see *Establishing Hazard Zones* section 4.0)
- ❖ Consider run-off implications and establish containment plan

If deemed safe by Extraction, on-site personnel may attempt to extinguish small fires to prevent the spread of flames to chemical storage containers, assets, or well structures using appropriate fire-extinguishers or other dry-chemical fire suppression agents such as Purple K. Personnel not involved in extinguishment efforts shall call 911 to initiate NMFRD response. If the fire is extinguished prior to FD arrival, site personnel may call 911 and provide situation update.

3.3 GENERAL SPILL CONTROL OBJECTIVES

The following is a list of general objectives the Fire Department should consider when responding to a spill at an Extraction site:

- ❖ Perform Incident Size up
 - ❖ Contact site supervisor and establish Unified Incident Command
 - ❖ Identify equipment/products involved
 - ❖ Identify adequacy of containment basin(s)
- ❖ Initiate air monitoring
- ❖ Consider shelter in place or evacuation of nearby residences and businesses
- ❖ Request additional resources, if appropriate. Consider Jefferson/Adams County Hazardous Materials Team call out
- ❖ Establish incident safety plan
- ❖ Remove/eliminate ignition sources
- ❖ Control flow of product if possible
- ❖ If appropriate, assemble adequate foam supplies and application plan
- ❖ Identify potential for off-site impact of spill and establish containment plan
- ❖ Establish a decontamination plan for personnel and equipment

3.4 LOSS OF WELL CONTROL OBJECTIVES

Loss of well control occurs when there has been a loss of hydrostatic control in the wellbore, allowing the uncontrolled release of formation hydrocarbons and other materials to the surface. These events pose critical threats to the health and safety of site workers and responders and could present a serious potential for off-site injury and environmental impacts. They are complex events requiring the use of outside contractors with highly technical skills and specialized equipment. Well-control events often last days and will require extensive resources.

In the event of a loss of well control event the following objectives should be considered:

Perform Incident Size-up

- ❖ Contact site supervisor and establish unified command
- ❖ Determine affected areas and isolate
- ❖ Consider shelter in place or evacuation of nearby residences and businesses
- ❖ Rapid removal, treatment and transport of injured victims if safe to do so
- ❖ Dispatch specialized well control contractors
- ❖ Establishment of early four-point air monitoring and plume modeling
- ❖ Establish hot/warm/cold work zones (see *Establishing Hazard Zones* section 4.0)
- ❖ Consider run-off implications and establish containment plan

If deemed safe by Extraction, on-site personnel may attempt to extinguish small fires to prevent the spread of flames to chemical storage containers, assets, or well structures using appropriate fire-extinguishers or other dry-chemical fire suppression agents such as Purple K.

4.0 ESTABLISHING HAZARD ZONES

The establishment of hazard zones during emergency operations is required. Hazard zones shall be geographically described to all responding units and marked with tape or other marking devices. There are many factors to consider when establishing work zones, including physical and mechanical dangers, the presence of flammable liquids or gas, chemical or radiological exposures and radiant heat. Incident commanders must continually assess the adequacy of work zones and plan for their expansion or contraction as scene conditions change.

Hazard Zones are defined as:

4.1 HOT ZONE

The HOT ZONE is the area in which personnel are potentially in immediate danger from the hazardous condition. Access to this area will be RIGIDLY controlled and only personnel with the proper level of protective equipment will enter this area. Movements between the warm zone and hot zone must be approved by command either directly or by establishment of a hazard zone officer.

4.2 WARM ZONE

The WARM ZONE is the larger area surrounding the HOT ZONE in which a lesser degree of risk to personnel exists. All civilians and non-essential personnel shall be removed from this area. Appropriate protective equipment must be worn.

4.3 COLD ZONE

The COLD ZONE is the area beyond the outer perimeter of the WARM ZONE. Although the COLD ZONE is considered safe and the movement of persons is considered unrestricted, with many incidents it is prudent to

keep the area restricted to emergency services personnel only. This will allow emergency responders unencumbered movement to safely and efficiently stabilize the incident.

Regular meetings or site visits will occur which will with detail onsite progress, phase changes and updates to the site-specific appendices can be made at this time.

5.0 EMERGENCY PREPARDNESS

5.1 LOSS OF HIGHLINE POWER

Back-up generators will be in place to power all essential equipment, safety monitoring devices and site lighting in the event of a highline power outage. If back-up generators are not planned for a particular phase, safe shutdown procedures during loss of power will be established.

5.2 CYBER SECURITY

Extraction maintains high standards for protecting our assets which includes cyber security systems which protect the automation of the sites. If any of these systems are compromised, sites will be evaluated or programmed for emergency shut in procedures.

5.3 HAZARDOUS GASES

Extraction will aid in plume modeling hazardous gases and evacuation/shelter in place determination by providing real-time weather measurements from a station at NMFRD Station 66 or other regional data sources. Windssocks will also be utilized at Extraction's sites to indicate speed and wind direction.

There is no known presence of hydrogen sulfide gas in the formation accessed by site wells. Sites will be regularly monitored for the presence of hydrogen sulfide gas during drilling and completion operations. Water storage areas will be routinely monitored for hydrogen sulfide gas. Employees shall wear hydrogen sulfide detection monitors while working on site. If any hydrogen sulfide gas is identified, notification procedures will follow state requirements which includes COGCC and NMFRD.

5.4 FOAM CACHES

The operator will keep an up to date list of available area private firefighting foam caches (i.e. private industry owned supplies) with sufficient quantities to handle major spills from the wellbore, equipment and pipelines. An inventory of available firefighting foam, including location and contact numbers, will be submitted to NMFRD and Broomfield OEM. Such lists could include that of the Colorado Preparedness and Response Network (CPRN). Significant changes to private firefighting foam inventory (e.g. change of locations or reductions of over 20%) will be reported to NMFRD and Broomfield OEM within 48 hours.

6.0 SITE SPECIFIC APPENDICIES

Site specific appendices have been and will continuously be developed to supplement this TRP and include the following:

General items include:

- ❖ Site address and latitude/longitude location
- ❖ Site maps identifying
 - Access and egress locations, including sound wall “knock-outs”
 - Location of contact signage
- ❖ Detailed topographical maps of area surrounding site identifying:
 - Location of ditches, streams and bodies of water near pad site
 - Identified areas of likely spill travel with mitigation plan(s)
- ❖ Water supply plans for firefighting operations
 - Nearest fire hydrants and distances from hydrant(s) to the edge of the pad site
- ❖ Water shuttle plans, if needed
- ❖ Other unique site characteristics impacting emergency response

Drilling phase:

- ❖ Site maps identifying
 - Access and egress locations, including sound wall “knock-outs”
 - Proposed layouts including location of chemical storage areas
- ❖ Other unique site characteristics impacting emergency response

Completions phase:

- ❖ Site maps identifying
 - Access and egress locations, including sound wall “knock-outs”
 - Proposed layouts hydraulic fracturing including location of chemical storage areas
- ❖ Other unique site characteristics impacting emergency response

Production phase:

- ❖ Site maps identifying
 - Location of contact signage
 - Location of all Emergency Shut-Down(s) (ESD)
 - Final anticipated production layout including flow-line locations
 - Descriptions of containment basins and capacities
- ❖ Other unique site characteristics impacting emergency response

Regular meetings or site visits will occur which will with detail onsite progress, phase changes and updates to the site-specific appendices can be made at this time.

6.1 EVACUATION ROUTES

Evacuation routs will be pre-planned in conjunction with NMFPD and Broomfield OEM and will be implemented on a situational basis, if necessary. These will include:

- ❖ Code Red notification templates at 1/2 mile and 1-mile radii
- ❖ Area roadways that may be impacted with identified Traffic Control Points (TCPs)

7.0 REPORTING RESPONSIBILITIES

Extraction maintains the responsibility for all necessary reports to Local, State or Federal Agencies. The reporting follows the plan described above and the numbers are listed below and located on the TRP card.

AGENCY

Name	24-Hour Phone
Broomfield County LGD	W:303-464-5153; M: 720-201-0490
Broomfield County LGB Back up	W: 720-887-2293; 303-552-4859
Colorado Dept of Natural Resources (COGCC)	719-343-0130
EPA Region 8	303-312-6312
Department of Transportation	855-368-4200
Colorado Dept. of Public Health and Environment	877-518-5608

EMERGENCY RESPONDERS

Name	24-Hour Phone
Broomfield County Communications	911
Broomfield County OEM	303-438-6400
Broomfield Police Dispatch	303-438-6400
North Metro Fire & Rescue	303-452-9910
National Response Center	800-424-8802
Colorado Dept. of Natural Resources	303-866-3311
EPA Region 8	303-312-6312
Department of Transportation	855-368-4200
Colorado Dept. of Public Health and Environment	877-518-5608

8.0 RESPONSE, RECOVERY AND CLEANUP

Extraction will be responsible for response, recovery and cleanup activities according to this plan, and other plans such as the SPCC for the site. All regulated activities will be coordinated and approved by the COGCC in coordination with Broomfield. Extraction will be responsible for paying for response activities, replacement of materials. Extraction will participate in any after action reviews that occur.

APPENDIX A



BROOMFIELD DEVELOPMENT LIVINGSTON PAD

**Broomfield County
Broomfield, CO**

N 39.978202, W -105.039624

NOTIFICATIONS

1. National Response Center:
800-424-8802
2. Extraction 24-Hour Hotline
720-370-5540
3. Colorado Department of Natural Resources
303-866-3311
4. EPA Region VIII
303-312-6312
5. Broomfield County Communications
911
6. Broomfield County OEM
911
7. Adams County OEM
720-523-6600

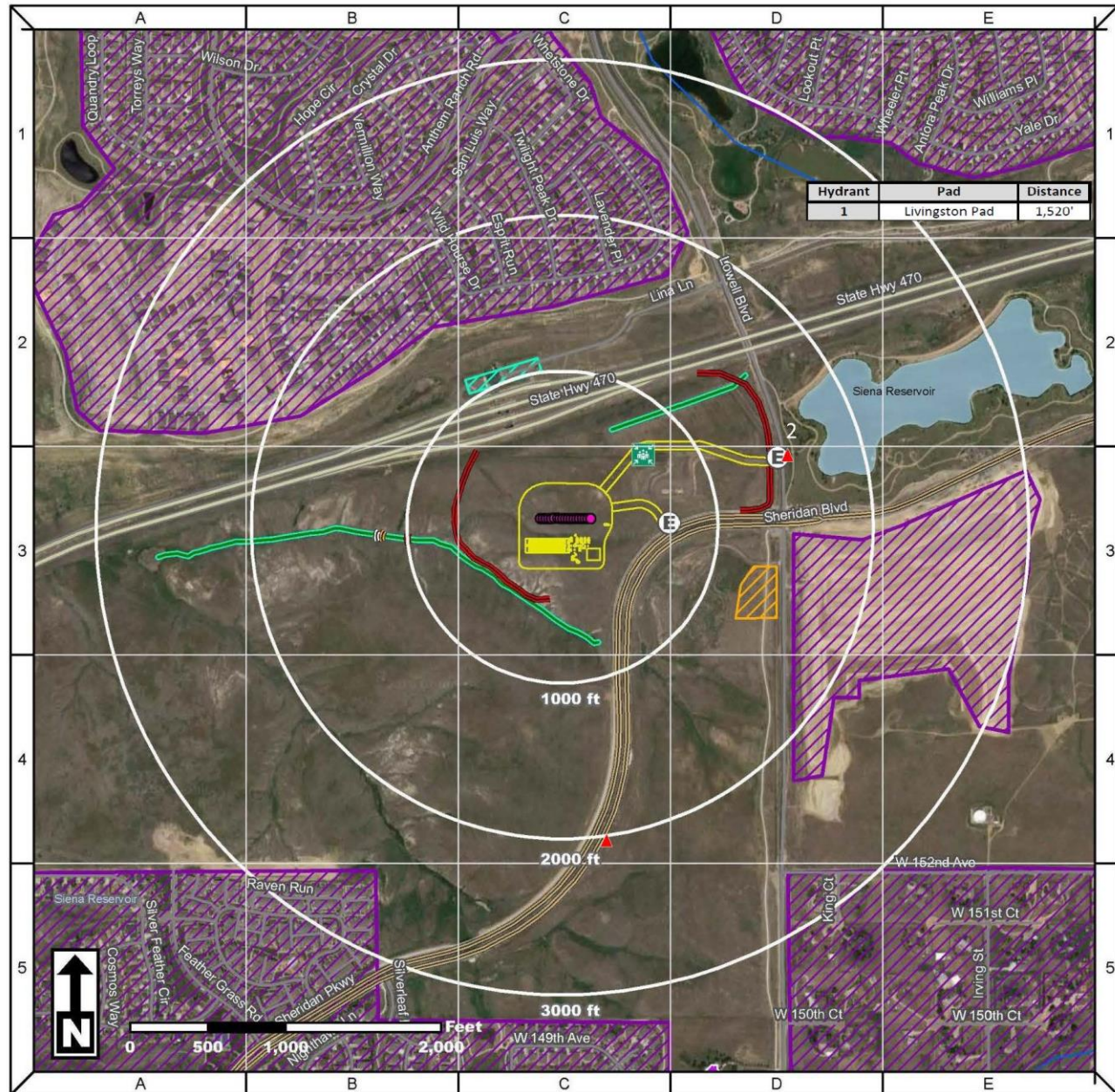
RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible.

CRITICAL RECEPTORS

1. Surrounding Residential and Commercial Properties
2. Siena Reservoir (East of Facility)
3. State Hwy 470

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.



TACTICAL RESPONSE

After assessing the incident level and contacting the appropriate parties, the following steps will need to be taken for the tactical response:

1. Implement National Incident Management System (NIMS) Incident Command System (ICS)
2. Assess hazards to site, workers, and public
3. Safety Officer should complete form ICS 208 – Safety Message/Plan
4. Conduct Job Safety Briefing
5. Assess property and environmental impacts
6. Develop ICS 201 Incident Briefing and ICS 202 – Incident Objectives
7. Implement response actions:
 - a) Confine spills to tanks/vessels
 - b) Locate leading edge of spilled material
 - c) Contain spills on ground and any surrounding drainage ways
 - d) Recover spilled materials
 - e) Dispose of recovered materials properly
8. Document site conditions and activities
9. Document impacts to natural, economic, and cultural resources
10. Document site restoration/remediation activities

See the Extraction Emergency Response Plan for the full list of NIMS ICS Forms.

PAD STATS

FLOW STATS – 30 DAY AVERAGE IP

Gas (MCF/D)	Oil (BBL/D)	Water (BBL/D)

WELL PAD LIQUID STORAGE

Oil (BBL)	Water (BBL)

Developed by CTEH, LLC

Version: 0.2 3/28/2018

RESPONSE RESOURCE CONTACT INFORMATION

EXTRACTION OIL & GAS CONTACT INFORMATION

Name	Main Phone
24-Hour Hotline	720-370-5540

NEAREST HOSPITALS WITH EMERGENCY ROOMS

Name	Address	24-Hour Phone
St. Anthony North Health Campus	4300 Orchard Parkway Westminster, Colorado 80023	720-627-0000
Good Samaritan Medical Center	200 Exempla Cir Lafayette, CO 80026	303-689-4000

STATE, FEDERAL, MUNICIPAL EMERGENCY RESPONDERS

Name	24-Hour Phone
Broomfield County Communications	911
Broomfield County OEM	720-887-2078
Broomfield Police Dispatch	303-438-6400
North Metro Fire & Rescue Station 66	303-452-5777
National Response Center	800-424-8802
Colorado Dept. of Natural Resources	303-866-3311
EPA Region 8	303-312-6312
Department of Transportation	855-368-4200
Broomfield County LGD	303-464-5153; 720-201-0490
Broomfield County LGD Backup	720-887-2293; 303-552-4859

RESPONSE CONTRACTORS

Contractor Type	Name	24-Hour	Phone
OSRO	Belfor Environmental	800-930-0011	303-425-7526
OSRO	Custom Environmental	800-310-7445	303-423-9949
Well Control	Boots & Coots	281-931-8884	800-BLOWOUT
Well Control	Wild Well	281-784-4700	281-784-4700
Environmental	CTEH, LLC	866-869-2834	866-869-2834
Environmental	APEX Companies, LLC	970-260-5457	307-399-2870
Response Management	CTEH, LLC	866-869-2834	866-869-2834

RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible. The following response objective checklist shall be followed:

SAFETY – PROTECT LIFE

- ❖ Evaluate and account for all personnel
- ❖ Isolate all potential ignition sources
- ❖ Initiate emergency services immediately, as needed (911, Fire, LEPC)
- ❖ Identify hazard(s) of emitted material (obtain SDS)
- ❖ Establish site control (safe perimeter and evacuation routes)
- ❖ Monitor air in impacted areas
- ❖ Develop Site Safety Plan (ICS 208) and Medical Plan
- ❖ Continually assess site hazards and risks

RESPONSE – INCIDENT STABILIZATION

- ❖ Conduct notifications to external agencies and internal personnel
- ❖ Identify and implement staging areas to support response operations
- ❖ Activate response company for equipment and manpower as needed
- ❖ Activate response tactics to contain and recover product/material
- ❖ Establish command post and field communications
- ❖ Establish flight traffic restriction if required
- ❖ Implement waste handling and disposal procedures as required
- ❖ Initiate decontamination and demobilization procedures when appropriate

ENVIRONMENTAL – PROTECT THE ENVIRONMENT

- ❖ Identify, prioritize, and protect environmentally sensitive areas
- ❖ Establish wildlife rescue rehabilitation operations if required
- ❖ Verify release if waters are impacted
- ❖ Conduct visual assessments (spill tracking and surveillance)

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.



BROOMFIELD DEVELOPMENT LIVINGSTON PAD

**Broomfield County
Broomfield, CO**

Well heads: N 39.978202, W 105. 039624
Lease Entrance: N 39.979320, W105.034629
Address: 15545 Sheridan Blvd, Broomfield, CO 80023

NOTIFICATIONS

1. National Response Center
800-424-8802
2. Extraction 24-Hour Hotline
720-370-5540
3. COGCC Field Supervisors
719-343-0130, 970-575-1277
4. EPA Region VIII
308-312-6312
5. Broomfield County Communications
911
6. Broomfield County DEM
720-887-2078
7. Colorado Oil and Gas Conservation Commission
303-894-2100
8. Colorado Dept of Public Health and Environment
877-518-5608

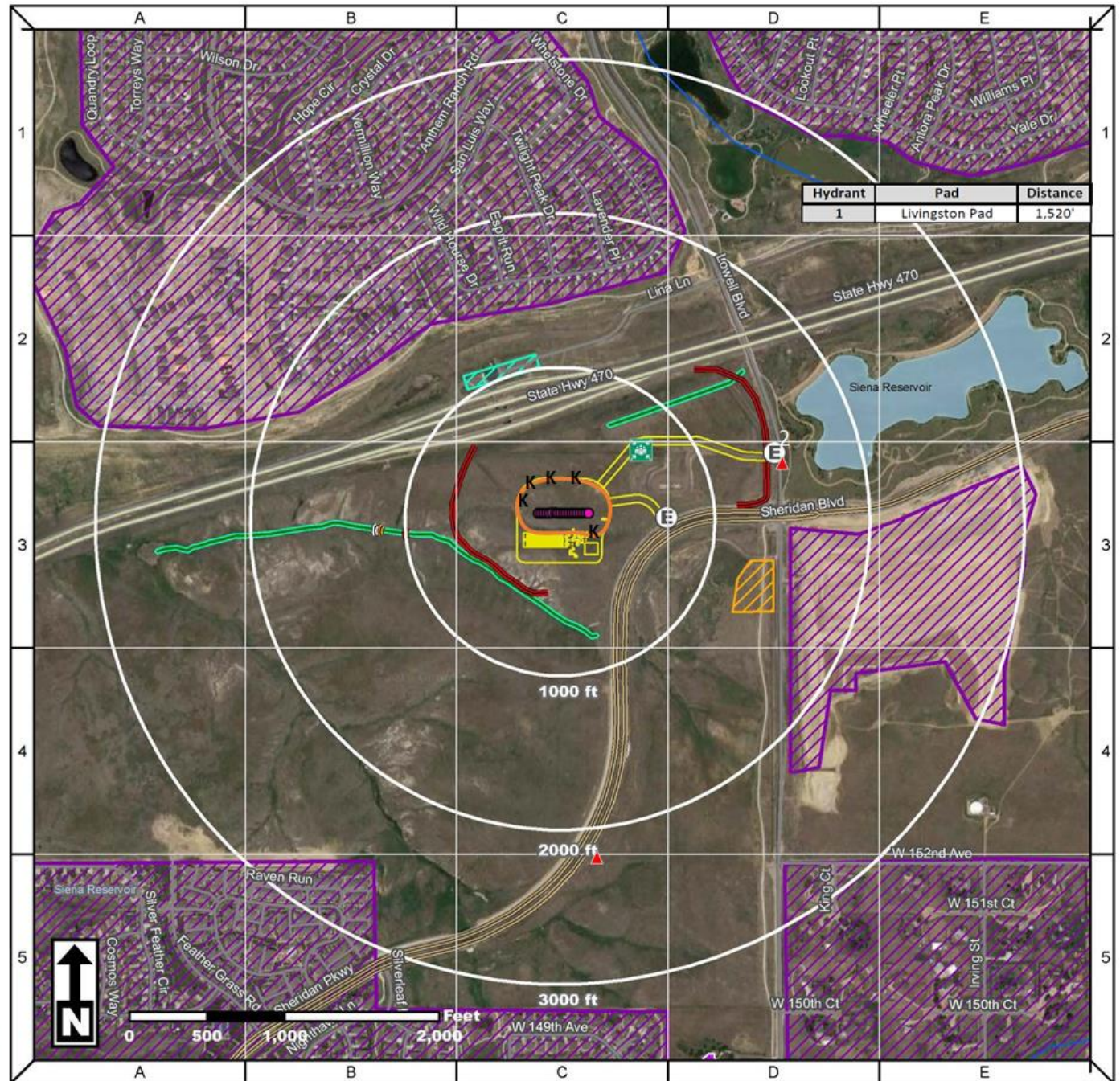
RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible.

CRITICAL RECEPTORS

1. Surrounding Residential and Commercial Properties
2. Nearby Canals and Ditches
3. State Hwy 470 and US Hwy 87/I-25

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.



Hydrant	Pad	Distance
1	Livingston Pad	1,520'



TACTICAL RESPONSE

After assessing the incident level and contacting the appropriate parties, the following steps will need to be taken for the tactical response:

1. Implement National Incident Management System (NIMS) Incident Command System (ICS)
2. Assess hazards to site, workers, and public
3. Safety Officer should complete form ICS 208 – Safety Message/Plan
4. Conduct Job Safety Briefing
5. Assess property and environmental impacts
6. Develop ICS 201 Incident Briefing and ICS 202 – Incident Objectives
7. Implement response actions:
 - a) Confine spills to tanks/vessels
 - b) Locate leading edge of spilled material
 - c) Contain spills on ground and any surrounding drainage ways
 - d) Recover spilled materials
 - e) Dispose of recovered materials properly
8. Document site conditions and activities
9. Document impacts to natural, economic, and cultural resources
10. Document site restoration/remediation activities

See the Extraction Emergency Response Plan for the full list of NIMS ICS Forms.

PAD STATS

FLOW STATS – 30 DAY AVERAGE IP

Gas (MCF/D)	Oil (BBL/D)	Water (BBL/D)

WELL PAD LIQUID STORAGE

Oil (BBL)	Water (BBL)

Developed by CTEH, LLC

Version: 0.2 3/28/2018

RESPONSE RESOURCE CONTACT INFORMATION

EXTRACTION OIL & GAS CONTACT INFORMATION

Name	Main Phone
24-Hour Hotline	720-370-5540

NEAREST HOSPITALS WITH EMERGENCY ROOMS

Name	Address	24-Hour Phone
St. Anthony North Health Campus	4300 Orchard Parkway Westminster, Colorado 80023	720-627-0000
Good Samaritan Medical Center	200 Exempla Cir Lafayette, CO 80026	303-689-4000

STATE, FEDERAL, MUNICIPAL EMERGENCY RESPONDERS

Name	24-Hour Phone
Broomfield County Communications	911
Broomfield County OEM	720-887-2078
Broomfield Police Dispatch	303-438-6400
North Metro Fire & Rescue Station 66	303-452-5777
National Response Center	800-424-8802
Colorado Dept. of Natural Resources	303-866-3311
EPA Region 8	303-312-6312
Department of Transportation	855-368-4200
Broomfield County LGD	303-464-5153; 720-201-0490
Broomfield County LGD Backup	720-887-2293; 303-552-4859

RESPONSE CONTRACTORS

Contractor Type	Name	24-Hour	Phone
OSRO	Belfor Environmental	800-930-0011	303-425-7526
OSRO	Custom Environmental	800-310-7445	303-423-9949
Well Control	Boots & Coots	281-931-8884	800-BLOWOUT
Well Control	Wild Well	281-784-4700	281-784-4700
Environmental	CTEH, LLC	866-869-2834	866-869-2834
Environmental	APEX Companies, LLC	970-260-5457	307-399-2870
Response Management	CTEH, LLC	866-869-2834	866-869-2834

RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible. The following response objective checklist shall be followed:

SAFETY – PROTECT LIFE

- ❖ Evaluate and account for all personnel
- ❖ Isolate all potential ignition sources
- ❖ Initiate emergency services immediately, as needed (911, Fire, LEPC)
- ❖ Identify hazard(s) of emitted material (obtain SDS)
- ❖ Establish site control (safe perimeter and evacuation routes)
- ❖ Monitor air in impacted areas
- ❖ Develop Site Safety Plan (ICS 208) and Medical Plan
- ❖ Continually assess site hazards and risks

RESPONSE – INCIDENT STABILIZATION

- ❖ Conduct notifications to external agencies and internal personnel
- ❖ Identify and implement staging areas to support response operations
- ❖ Activate response company for equipment and manpower as needed
- ❖ Activate response tactics to contain and recover product/material
- ❖ Establish command post and field communications
- ❖ Establish flight traffic restriction if required
- ❖ Implement waste handling and disposal procedures as required
- ❖ Initiate decontamination and demobilization procedures when appropriate

ENVIRONMENTAL – PROTECT THE ENVIRONMENT

- ❖ Identify, prioritize, and protect environmentally sensitive areas
- ❖ Establish wildlife rescue rehabilitation operations if required
- ❖ Verify release if waters are impacted
- ❖ Conduct visual assessments (spill tracking and surveillance)

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.

APPENDIX B



**BROOMFIELD DEVELOPMENT
NORTHWEST A PAD
NORTHWEST B PAD
Broomfield County
Broomfield, CO**

A PAD: N 39.983082, W -105.012892
B PAD: N 39.9834984, W -105.009289

NOTIFICATIONS

1. National Response Center
800-424-8802
2. Extraction 24-Hour Hotline
720-370-5540
3. Colorado Department of Natural Resources
303-866-3311
4. EPA Region VIII
303-312-6312
5. Broomfield County Communications
911
6. Broomfield County OEM
911
7. Adams County OEM
720-523-8600

RESPONSE OBJECTIVES

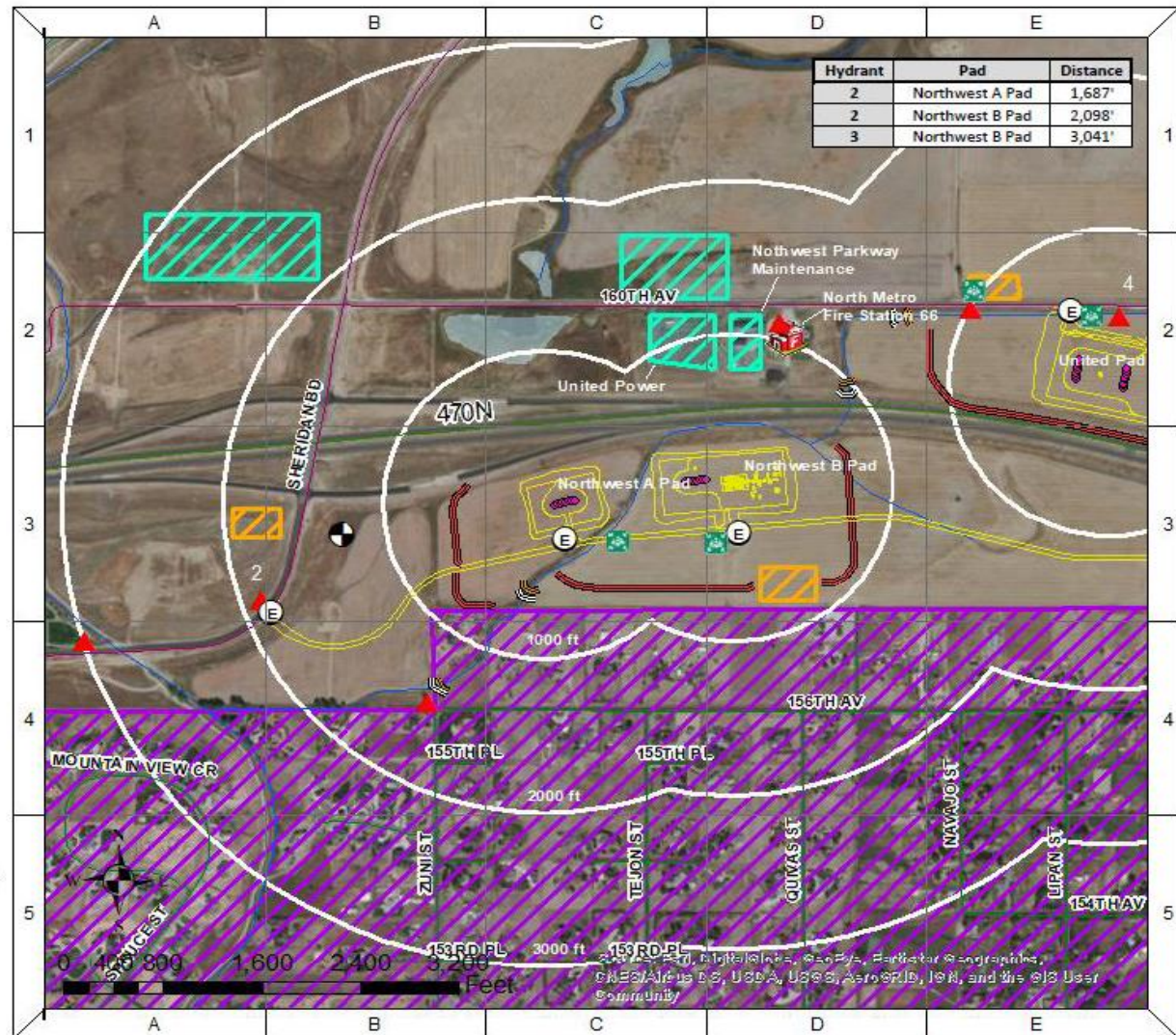
Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released products to the extent possible.

CRITICAL RECEPTORS

1. Surrounding Residential and Commercial Properties
2. Nearby Canals and Ditches
3. State Hwy 470

Note: This tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.

Developed by Quandary Consultants
4/17/2018



TACTICAL RESPONSE

After assessing the incident level and contacting the appropriate parties, the following steps will need to be taken for the tactical response:

1. Implement National Incident Management System (NIMS) Incident Command System (ICS)
2. Assess hazards to site, workers, and public
3. Safety Officer should complete form ICS 208 – Safety Message/Plan
4. Conduct Job Safety Briefing
5. Assess property and environmental impacts
6. Develop ICS 201 Incident Briefing and ICS 202 – Incident Objectives
7. Implement response actions:
 - a) Confine spills to tanks/vessels
 - b) Locate leading edge of spilled material
 - c) Contain spills on ground and any surrounding drainage ways
 - d) Recover spilled materials
 - e) Dispose of recovered materials properly
8. Document site conditions and activities
9. Document impacts to natural, economic, and cultural resources
10. Document site restoration/remediation activities

See the Extraction Emergency Response Plan for the full list of NIMS ICS Forms.

PAD STATS

FLOW STATS – 30 DAY AVERAGE IP

Gas (MCF/D)	Oil (BBL/D)	Water (BBL/D)

WELL PAD LIQUID STORAGE

Oil (BBL)	Water (BBL)

Developed by CTEH, LLC

Version: 0.2 3/28/2018

RESPONSE RESOURCE CONTACT INFORMATION

EXTRACTION OIL & GAS CONTACT INFORMATION

Name	Main Phone
24-Hour Hotline	720-370-5540

NEAREST HOSPITALS WITH EMERGENCY ROOMS

Name	Address	24-Hour Phone
St. Anthony North Health Campus	4300 Orchard Parkway Westminster, Colorado 80023	720-627-0000
Good Samaritan Medical Center	200 Ekempla Cir Lafayette, CO 80026	303-689-4000

STATE, FEDERAL, MUNICIPAL EMERGENCY RESPONDERS

Name	24-Hour Phone
Broomfield County Communications	911
Broomfield County OEM	720-887-2078
Broomfield Police Dispatch	303-438-6400
North Metro Fire & Rescue Station 66	303-452-5777
National Response Center	800-424-8802
Colorado Dept. of Natural Resources	303-866-3311
EPA Region 8	303-312-6312
Department of Transportation	855-368-4200
Broomfield County LGD	303-464-5153; 720-201-0490
Broomfield County LGD Backup	720-887-2293; 303-552-4859

RESPONSE CONTRACTORS

Contractor Type	Name	24-Hour	Phone
OSRO	Belfor Environmental	800-930-0011	303-425-7526
OSRO	Custom Environmental	800-310-7445	303-423-9949
Well Control	Boots & Coots	281-931-8884	800-BLOWOUT
Well Control	Wild Well	281-784-4700	281-784-4700
Environmental	CTEH, LLC	866-869-2834	866-869-2834
Environmental	APEX Companies, LLC	970-260-5457	307-399-2870
Response Management	CTEH, LLC	866-869-2834	866-869-2834

RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible. The following response objective checklist shall be followed:

SAFETY – PROTECT LIFE

- ❖ Evaluate and account for all personnel
- ❖ Isolate all potential ignition sources
- ❖ Initiate emergency services immediately, as needed (911, Fire, LEPC)
- ❖ Identify hazard(s) of emitted material (obtain SDS)
- ❖ Establish site control (safe perimeter and evacuation routes)
- ❖ Monitor air in impacted areas
- ❖ Develop Site Safety Plan (ICS 208) and Medical Plan
- ❖ Continually assess site hazards and risks

RESPONSE – INCIDENT STABILIZATION

- ❖ Conduct notifications to external agencies and internal personnel
- ❖ Identify and implement staging areas to support response operations
- ❖ Activate response company for equipment and manpower as needed
- ❖ Activate response tactics to contain and recover product/material
- ❖ Establish command post and field communications
- ❖ Establish flight traffic restriction if required
- ❖ Implement waste handling and disposal procedures as required
- ❖ Initiate decontamination and demobilization procedures when appropriate

ENVIRONMENTAL – PROTECT THE ENVIRONMENT

- ❖ Identify, prioritize, and protect environmentally sensitive areas
- ❖ Establish wildlife rescue rehabilitation operations if required
- ❖ Verify release if waters are impacted
- ❖ Conduct visual assessments (spill tracking and surveillance)

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.

APPENDIX C



BROOMFIELD DEVELOPMENT UNITED PAD

**Broomfield County
Broomfield, CO**

N 39.985318, W -105.000455

NOTIFICATIONS

1. National Response Center:
800-424-8802
2. Extraction 24-Hour Hotline
720-370-5540
3. Colorado Department of Natural Resources
303-866-3311
4. EPA Region VIII
303-312-6312
5. Broomfield County Communications
911
6. Broomfield County OEM
911
7. Adams County OEM
720-523-6600

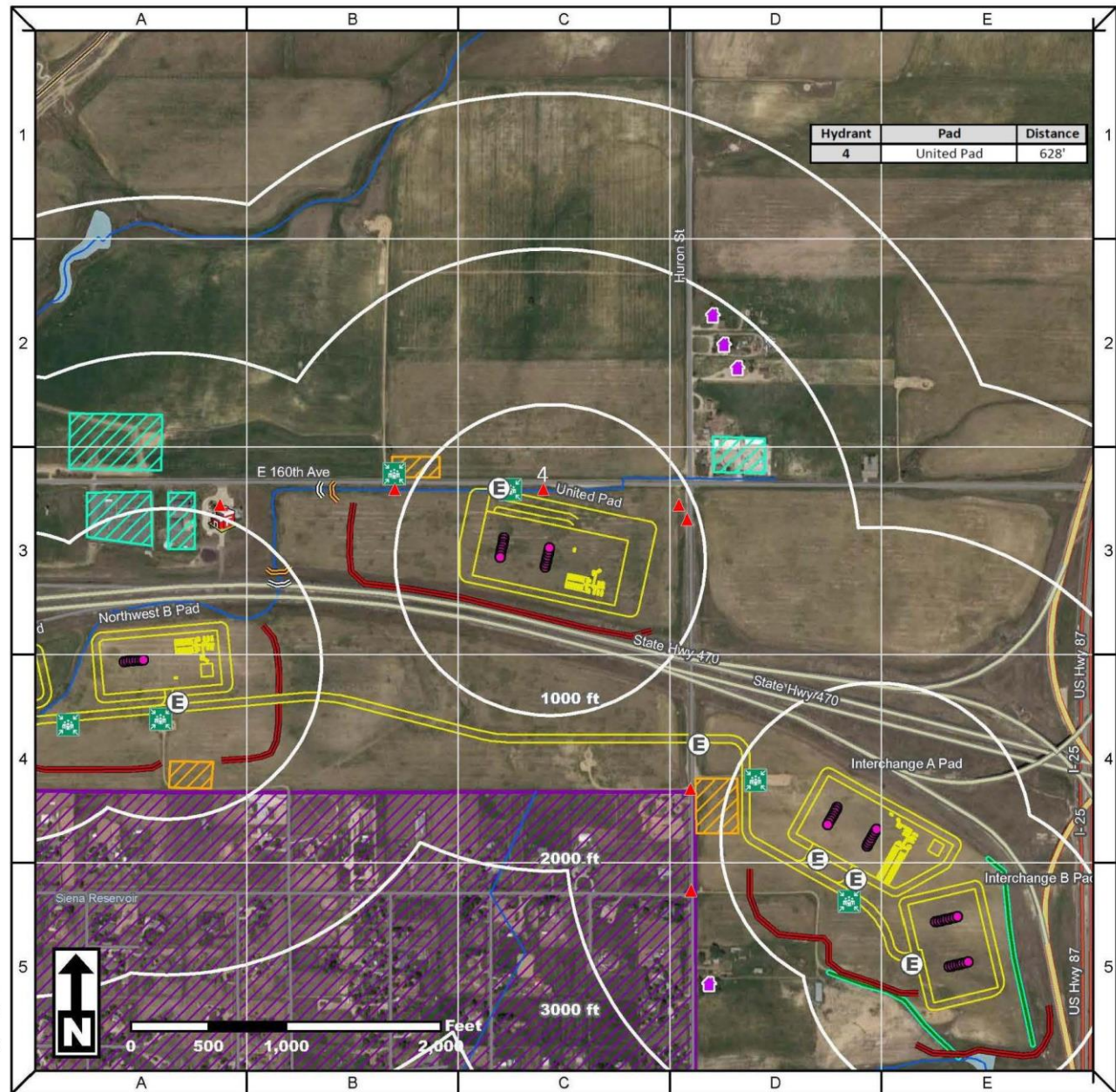
RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible.

CRITICAL RECEPTORS

1. Surrounding Residential and Commercial Properties
2. Nearby Canals and Ditches
3. State Hwy 470

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.



Hydrant	Pad	Distance
4	United Pad	628'



TACTICAL RESPONSE

After assessing the incident level and contacting the appropriate parties, the following steps will need to be taken for the tactical response:

1. Implement National Incident Management System (NIMS) Incident Command System (ICS)
2. Assess hazards to site, workers, and public
3. Safety Officer should complete form ICS 208 – Safety Message/Plan
4. Conduct Job Safety Briefing
5. Assess property and environmental impacts
6. Develop ICS 201 Incident Briefing and ICS 202 – Incident Objectives
7. Implement response actions:
 - a) Confine spills to tanks/vessels
 - b) Locate leading edge of spilled material
 - c) Contain spills on ground and any surrounding drainage ways
 - d) Recover spilled materials
 - e) Dispose of recovered materials properly
8. Document site conditions and activities
9. Document impacts to natural, economic, and cultural resources
10. Document site restoration/remediation activities

See the Extraction Emergency Response Plan for the full list of NIMS ICS Forms.

PAD STATS

FLOW STATS – 30 DAY AVERAGE IP

Gas (MCF/D)	Oil (BBL/D)	Water (BBL/D)

WELL PAD LIQUID STORAGE

Oil (BBL)	Water (BBL)

Developed by CTEH, LLC

Version: 0.2 3/28/2018

RESPONSE RESOURCE CONTACT INFORMATION

EXTRACTION OIL & GAS CONTACT INFORMATION

Name	Main Phone
24-Hour Hotline	720-370-5540

NEAREST HOSPITALS WITH EMERGENCY ROOMS

Name	Address	24-Hour Phone
St. Anthony North Health Campus	4300 Orchard Parkway Westminster, Colorado 80023	720-627-0000
Good Samaritan Medical Center	200 Ekempla Cir Lafayette, CO 80026	303-689-4000

STATE, FEDERAL, MUNICIPAL EMERGENCY RESPONDERS

Name	24-Hour Phone
Broomfield County Communications	911
Broomfield County OEM	720-887-2078
Broomfield Police Dispatch	303-438-6400
North Metro Fire & Rescue Station 66	303-452-5777
National Response Center	800-424-8802
Colorado Dept. of Natural Resources	303-866-3311
EPA Region 8	303-312-6312
Department of Transportation	855-368-4200
Broomfield County LGD	303-464-5153; 720-201-0490
Broomfield County LGD Backup	720-887-2293; 303-552-4859

RESPONSE CONTRACTORS

Contractor Type	Name	24-Hour	Phone
OSRO	Belfor Environmental	800-930-0011	303-425-7526
OSRO	Custom Environmental	800-310-7445	303-423-9949
Well Control	Boots & Coots	281-931-8884	800-BLOWOUT
Well Control	Wild Well	281-784-4700	281-784-4700
Environmental	CTEH, LLC	866-869-2834	866-869-2834
Environmental	APEX Companies, LLC	970-260-5457	307-399-2870
Response Management	CTEH, LLC	866-869-2834	866-869-2834

RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible. The following response objective checklist shall be followed:

SAFETY – PROTECT LIFE

- ❖ Evaluate and account for all personnel
- ❖ Isolate all potential ignition sources
- ❖ Initiate emergency services immediately, as needed (911, Fire, LEPC)
- ❖ Identify hazard(s) of emitted material (obtain SDS)
- ❖ Establish site control (safe perimeter and evacuation routes)
- ❖ Monitor air in impacted areas
- ❖ Develop Site Safety Plan (ICS 208) and Medical Plan
- ❖ Continually assess site hazards and risks

RESPONSE – INCIDENT STABILIZATION

- ❖ Conduct notifications to external agencies and internal personnel
- ❖ Identify and implement staging areas to support response operations
- ❖ Activate response company for equipment and manpower as needed
- ❖ Activate response tactics to contain and recover product/material
- ❖ Establish command post and field communications
- ❖ Establish flight traffic restriction if required
- ❖ Implement waste handling and disposal procedures as required
- ❖ Initiate decontamination and demobilization procedures when appropriate

ENVIRONMENTAL – PROTECT THE ENVIRONMENT

- ❖ Identify, prioritize, and protect environmentally sensitive areas
- ❖ Establish wildlife rescue rehabilitation operations if required
- ❖ Verify release if waters are impacted
- ❖ Conduct visual assessments (spill tracking and surveillance)

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.

APPENDIX D



**BROOMFIELD DEVELOPMENT
INTERCHANGE A PAD
INTERCHANGE B PAD**

**Broomfield County
Broomfield, CO**

A PAD: N 39.9804, W -104.992958
B PAD: N 39.978388, W -104.991099
Interchange A - 15652 Huron St.
Interchange B - 15554 Huron St.

NOTIFICATIONS

1. National Response Center:
800-424-8802
2. Extraction 24-Hour Hotline
720-370-5540
3. Colorado Department of Natural Resources
303-866-3311
4. EPA Region VIII
303-312-6312
5. Broomfield County Communications
911
6. Broomfield County OEM
720-887-2078
7. Adams County OEM
720-523-6600

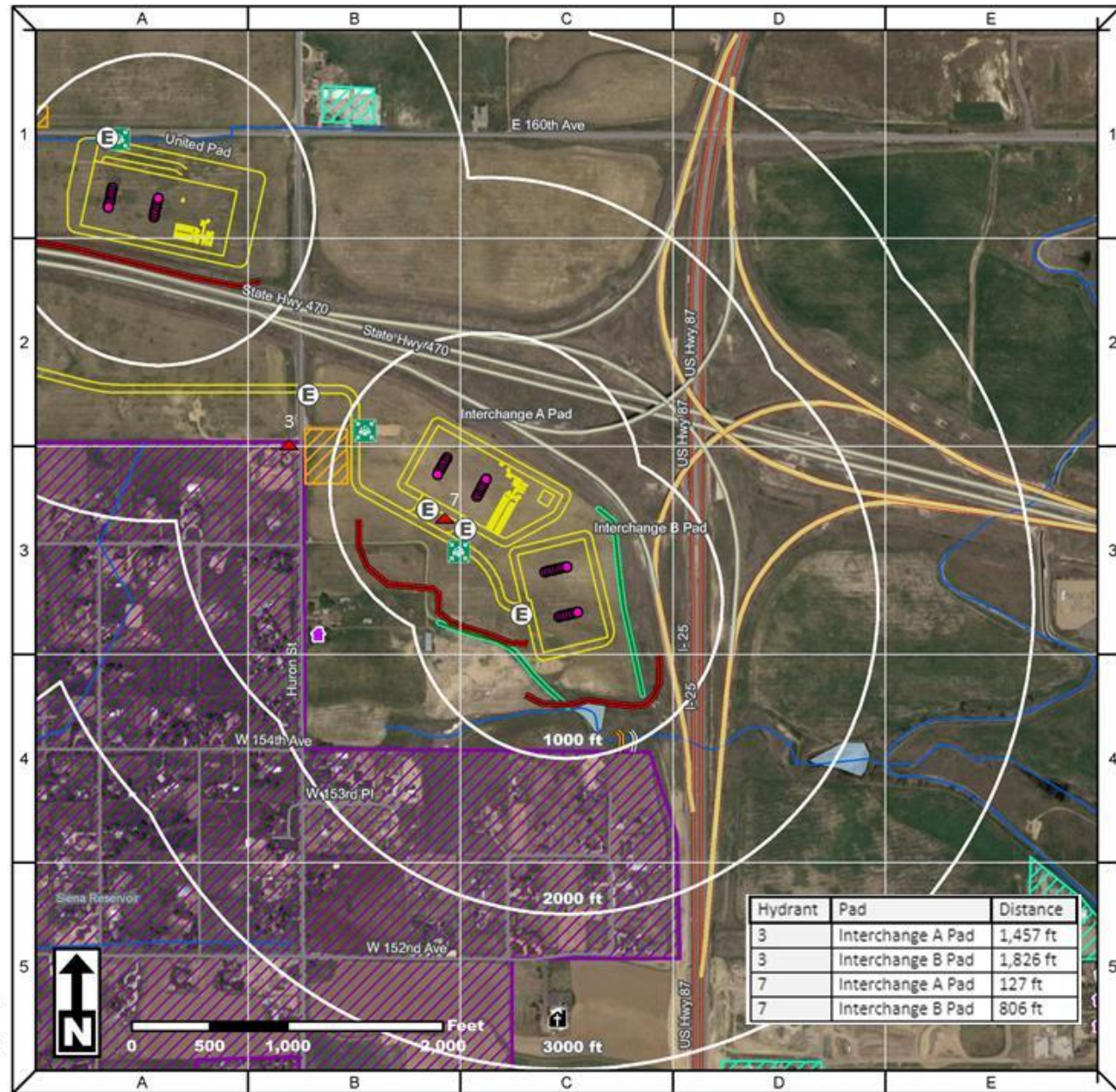
RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible.

CRITICAL RECEPTORS

1. Surrounding Residential and Commercial Properties
2. Nearby Canals and Ditches
3. State Hwy 470 and US Hwy 87/I-25

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.



TACTICAL RESPONSE

After assessing the incident level and contacting the appropriate parties, the following steps will need to be taken for the tactical response:

1. Implement National Incident Management System (NIMS) Incident Command System (ICS)
2. Assess hazards to site, workers, and public
3. Safety Officer should complete form ICS 208 – Safety Message/Plan
4. Conduct Job Safety Briefing
5. Assess property and environmental impacts
6. Develop ICS 201 Incident Briefing and ICS 202 – Incident Objectives
7. Implement response actions:
 - a) Confine spills to tanks/vessels
 - b) Locate leading edge of spilled material
 - c) Contain spills on ground and any surrounding drainage ways
 - d) Recover spilled materials
 - e) Dispose of recovered materials properly
8. Document site conditions and activities
9. Document impacts to natural, economic, and cultural resources
10. Document site restoration/remediation activities

See the Extraction Emergency Response Plan for the full list of NIMS ICS Forms.

PAD STATS

FLOW STATS – 30 DAY AVERAGE IP

Gas (MCF/D)	Oil (BBL/D)	Water (BBL/D)

WELL PAD LIQUID STORAGE

Oil (BBL)	Water (BBL)

Developed by CTEH, LLC
Version: 0.2 3/28/2018

RESPONSE RESOURCE CONTACT INFORMATION

EXTRACTION OIL & GAS CONTACT INFORMATION

Name	Main Phone
24-Hour Hotline	720-370-5540

NEAREST HOSPITALS WITH EMERGENCY ROOMS

Name	Address	24-Hour Phone
St. Anthony North Health Campus	4300 Orchard Parkway Westminster, Colorado 80023	720-627-0000
Good Samaritan Medical Center	200 Ekempla Cir Lafayette, CO 80026	303-689-4000

STATE, FEDERAL, MUNICIPAL EMERGENCY RESPONDERS

Name	24-Hour Phone
Broomfield County Communications	911
Broomfield County OEM	720-887-2078
Broomfield Police Dispatch	303-438-6400
North Metro Fire & Rescue Station 66	303-452-5777
National Response Center	800-424-8802
Colorado Dept. of Natural Resources	303-866-3311
EPA Region 8	303-312-6312
Department of Transportation	855-368-4200
Broomfield County LGD	303-464-5153; 720-201-0490
Broomfield County LGD Backup	720-887-2293; 303-552-4859

RESPONSE CONTRACTORS

Contractor Type	Name	24-Hour	Phone
OSRO	Belfor Environmental	800-930-0011	303-425-7526
OSRO	Custom Environmental	800-310-7445	303-423-9949
Well Control	Boots & Coots	281-931-8884	800-BLOWOUT
Well Control	Wild Well	281-784-4700	281-784-4700
Environmental	CTEH, LLC	866-869-2834	866-869-2834
Environmental	APEX Companies, LLC	970-260-5457	307-399-2870
Response Management	CTEH, LLC	866-869-2834	866-869-2834

RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible. The following response objective checklist shall be followed:

SAFETY – PROTECT LIFE

- ❖ Evaluate and account for all personnel
- ❖ Isolate all potential ignition sources
- ❖ Initiate emergency services immediately, as needed (911, Fire, LEPC)
- ❖ Identify hazard(s) of emitted material (obtain SDS)
- ❖ Establish site control (safe perimeter and evacuation routes)
- ❖ Monitor air in impacted areas
- ❖ Develop Site Safety Plan (ICS 208) and Medical Plan
- ❖ Continually assess site hazards and risks

RESPONSE – INCIDENT STABILIZATION

- ❖ Conduct notifications to external agencies and internal personnel
- ❖ Identify and implement staging areas to support response operations
- ❖ Activate response company for equipment and manpower as needed
- ❖ Activate response tactics to contain and recover product/material
- ❖ Establish command post and field communications
- ❖ Establish flight traffic restriction if required
- ❖ Implement waste handling and disposal procedures as required
- ❖ Initiate decontamination and demobilization procedures when appropriate

ENVIRONMENTAL – PROTECT THE ENVIRONMENT

- ❖ Identify, prioritize, and protect environmentally sensitive areas
- ❖ Establish wildlife rescue rehabilitation operations if required
- ❖ Verify release if waters are impacted
- ❖ Conduct visual assessments (spill tracking and surveillance)

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.



**BROOMFIELD DEVELOPMENT
INTERCHANGE A PAD
INTERCHANGE B PAD**
Broomfield County
Broomfield, CO

A PAD: N 39.9804, W -104.992958
B PAD: N 39.978388, W -104.991099
Interchange A - 15652 Huron St.
Interchange B - 15554 Huron St.

NOTIFICATIONS

1. National Response Center:
800-424-8802
2. Extraction 24-Hour Hotline
720-370-5540
3. Colorado Department of Natural Resources
303-866-3311
4. EPA Region VIII
303-312-6312
5. Broomfield County Communications
911
6. Broomfield County OEM
720-887-2078
7. Adams County OEM
720-523-6600

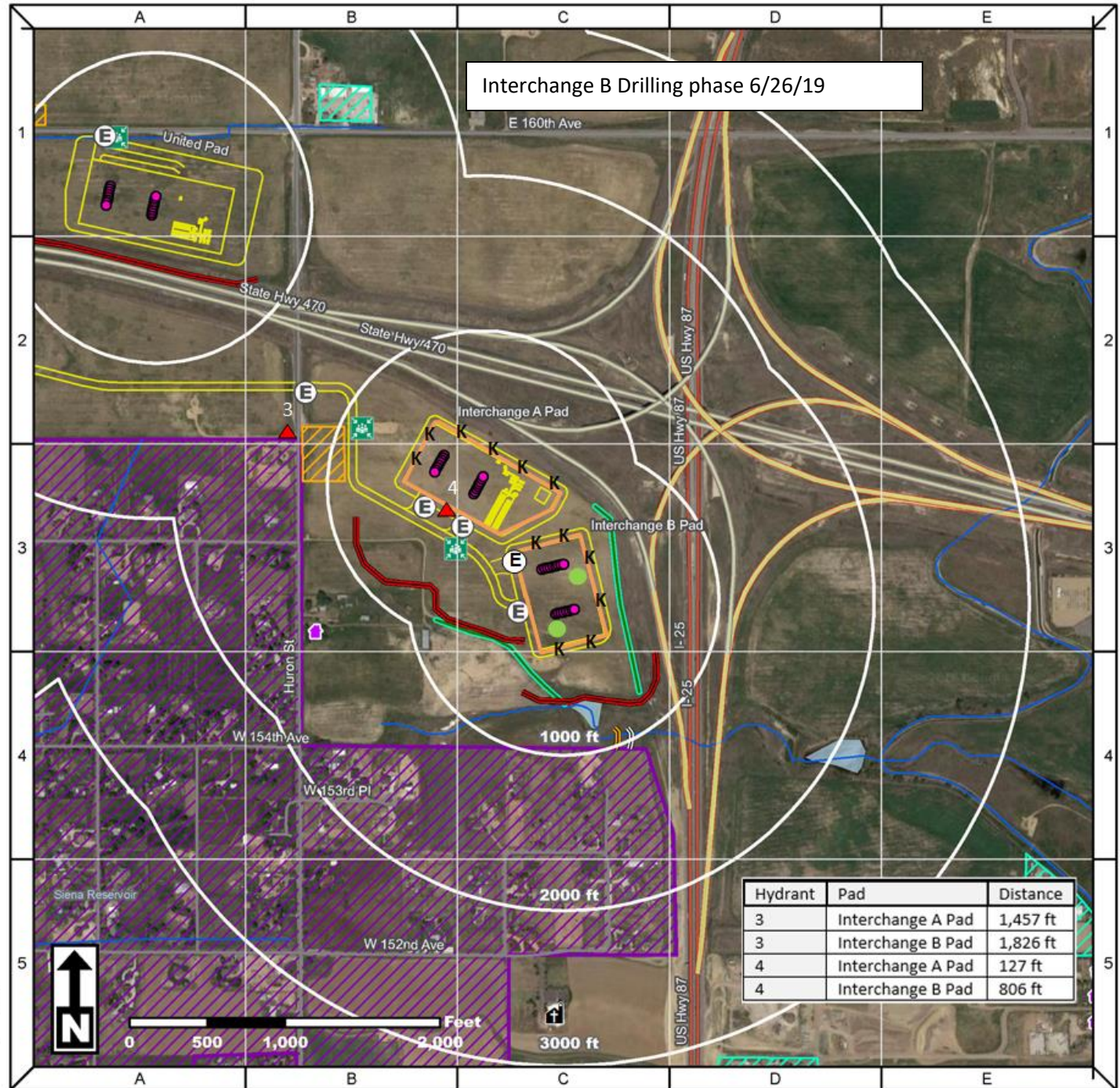
RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible.

CRITICAL RECEPTORS

1. Surrounding Residential and Commercial Properties
2. Nearby Canals and Ditches
3. State Hwy 470 and US Hwy 87/I-25

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.



TACTICAL RESPONSE

After assessing the incident level and contacting the appropriate parties, the following steps will need to be taken for the tactical response:

1. Implement National Incident Management System (NIMS) Incident Command System (ICS)
2. Assess hazards to site, workers, and public
3. Safety Officer should complete form ICS 208 – Safety Message/Plan
4. Conduct Job Safety Briefing
5. Assess property and environmental impacts
6. Develop ICS 201 Incident Briefing and ICS 202 – Incident Objectives
7. Implement response actions:
 - a) Confine spills to tanks/vessels
 - b) Locate leading edge of spilled material
 - c) Contain spills on ground and any surrounding drainage ways
 - d) Recover spilled materials
 - e) Dispose of recovered materials properly
8. Document site conditions and activities
9. Document impacts to natural, economic, and cultural resources
10. Document site restoration/remediation activities

See the Extraction Emergency Response Plan for the full list of NIMS ICS Forms.

PAD STATS

FLOW STATS – 30 DAY AVERAGE IP

Gas (MCF/D)	Oil (BBL/D)	Water (BBL/D)

WELL PAD LIQUID STORAGE

Oil (BBL)	Water (BBL)

Developed by CTEH, LLC
Version: 0.2 3/28/2018

RESPONSE RESOURCE CONTACT INFORMATION

EXTRACTION OIL & GAS CONTACT INFORMATION

Name	Main Phone
24-Hour Hotline	720-370-5540

NEAREST HOSPITALS WITH EMERGENCY ROOMS

Name	Address	24-Hour Phone
St. Anthony North Health Campus	4300 Orchard Parkway Westminster, Colorado 80023	720-627-0000
Good Samaritan Medical Center	200 Exempla Cir Lafayette, CO 80026	303-689-4000

STATE, FEDERAL, MUNICIPAL EMERGENCY RESPONDERS

Name	24-Hour Phone
Broomfield County Communications	911
Broomfield County OEM	720-887-2078
Broomfield Police Dispatch	303-438-6400
North Metro Fire & Rescue Station 66	303-452-5777
National Response Center	800-424-8802
Colorado Dept. of Natural Resources	303-866-3311
EPA Region 8	303-312-6312
Department of Transportation	855-368-4200
Broomfield County LGD	303-464-5153; 720-201-0490
Broomfield County LGD Backup	720-887-2293; 303-552-4859

RESPONSE CONTRACTORS

Contractor Type	Name	24-Hour	Phone
OSRO	Belfor Environmental	800-930-0011	303-425-7526
OSRO	Custom Environmental	800-310-7445	303-423-9949
Well Control	Boots & Coots	281-931-8884	800-BLOWOUT
Well Control	Wild Well	281-784-4700	281-784-4700
Environmental	CTEH, LLC	866-869-2834	866-869-2834
Environmental	APEX Companies, LLC	970-260-5457	307-399-2870
Response Management	CTEH, LLC	866-869-2834	866-869-2834

RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible. The following response objective checklist shall be followed:

SAFETY – PROTECT LIFE

- ❖ Evaluate and account for all personnel
- ❖ Isolate all potential ignition sources
- ❖ Initiate emergency services immediately, as needed (911, Fire, LEPC)
- ❖ Identify hazard(s) of emitted material (obtain SDS)
- ❖ Establish site control (safe perimeter and evacuation routes)
- ❖ Monitor air in impacted areas
- ❖ Develop Site Safety Plan (ICS 208) and Medical Plan
- ❖ Continually assess site hazards and risks

RESPONSE – INCIDENT STABILIZATION

- ❖ Conduct notifications to external agencies and internal personnel
- ❖ Identify and implement staging areas to support response operations
- ❖ Activate response company for equipment and manpower as needed
- ❖ Activate response tactics to contain and recover product/material
- ❖ Establish command post and field communications
- ❖ Establish flight traffic restriction if required
- ❖ Implement waste handling and disposal procedures as required
- ❖ Initiate decontamination and demobilization procedures when appropriate

ENVIRONMENTAL – PROTECT THE ENVIRONMENT

- ❖ Identify, prioritize, and protect environmentally sensitive areas
- ❖ Establish wildlife rescue rehabilitation operations if required
- ❖ Verify release if waters are impacted
- ❖ Conduct visual assessments (spill tracking and surveillance)

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.

Appendix E



BROOMFIELD DEVELOPMENT

Webber Pad

Broomfield County
Broomfield, CO

Tanks: N 39.988747, W 104.991537

Location: 1000ft northwest of W. 160th Ave and E-470

Lease Entrance: N 39.986742, W 105.992431

NOTIFICATIONS

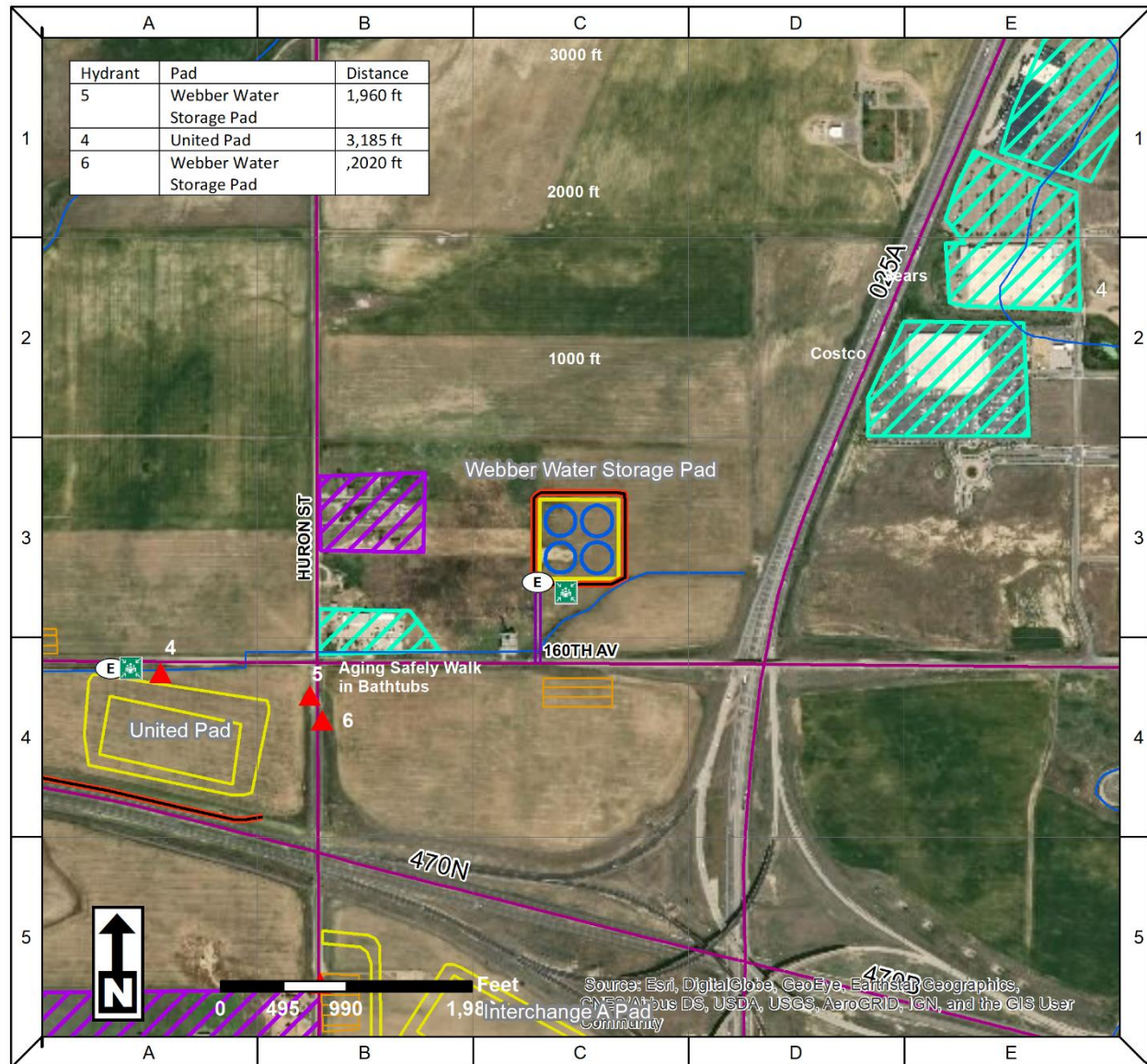
1. National Reponse Center
800-424-8802
2. Extraction 24-Hour Hotline
720-370-5540
3. COGCC Field Supervisors
719-343-0130, 970-575-1277
4. EPA Region VIII
303-312-6312
5. Broomfield County Communications
911
6. Broomfield County OEM
720-887-2078
7. Colorado Oil and Gas Conservation Commission
303-894-2100
8. Colorado Dept of Public Health and Environment
877-518-5608

RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Minimize the impact to the environment and local community. Contain and recover released products to the extent possible

CRITICAL RECEPTORS

1. Surrounding Residential and Commercial Properties
2. Nearby Canals and Ditches
3. 470 and 160th Ave



Note: This Emergency Action Card is a reference tool and is intended to provide guidance during an actual event or exercise only during the drilling through completion phases, once pad turned over to production refer to Extraction's Master Emergency Response Plan. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed

TACTICAL RESPONSE

After assessing the incident level and contacting the appropriate parties, the following steps will need to be taken for the tactical response:

1. Implement National Incident Management System (NIMS) Incident Command System (ICS)
2. Assess hazards to site, workers, and public
3. Safety Officer should complete form ICS 208 – Safety Message/Plan
4. Conduct Job Safety Briefing
5. Assess property and environmental impacts
6. Develop ICS 201 Incident Briefing and ICS 202 – Incident Objectives
7. Implement response actions:
 - a) Confine spills to tanks/vessels
 - b) Locate leading edge of spilled material
 - c) Contain spills on ground and any surrounding drainage ways
 - d) Recover spilled materials
 - e) Dispose of recovered materials properly
8. Document site conditions and activities
9. Document impacts to natural, economic, and cultural resources
10. Document site restoration/remediation activities

See the Extraction Emergency Response Plan for the full list of NIMS ICS Forms.

PAD STATS

FLOW STATS – 30 DAY AVERAGE IP

Gas (MCF/D)	Oil (BBL/D)	Water (BBL/D)
n/a	n/a	n/a

WELL PAD LIQUID STORAGE

Oil (BBL)	Water (BBL)
n/a	168,000

Developed by Quandary Consultants

Version: 0.2 5/9/2019

RESPONSE RESOURCE CONTACT INFORMATION

EXTRACTION OIL & GAS CONTACT INFORMATION

Name	Main Phone
24-Hour Hotline	720-370-5540

NEAREST HOSPITALS WITH EMERGENCY ROOMS

Name	Address	24-Hour Phone
St. Anthony North Health Campus	4300 Orchard Parkway Westminster, Colorado 80023	720-627-0000
Good Samaritan Medical Center	200 Ekempla Cir Lafayette, CO 80026	303-689-4000

STATE, FEDERAL, MUNICIPAL EMERGENCY RESPONDERS

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EPA Region 8	303-312-6312
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RESPONSE CONTRACTORS

Contractor Type	Name	24-Hour	Phone
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Environmental	CTEH, LLC	866-869-2834	866-869-2834
Environmental	APEX Companies, LLC	970-260-5457	307-399-2870
Response Management	CTEH, LLC	866-869-2834	866-869-2834

RESPONSE OBJECTIVES

Ensure safety of the public, first responders, Extraction employees, and contractors. Freshwater storage at location. Berms in place for storage. Minimize the impact to the environment and local community. Contain and recover released product to the extent possible. The following response objective checklist shall be followed:

SAFETY – PROTECT LIFE

- ❖ Evaluate and account for all personnel
- ❖ Isolate all potential ignition sources
- ❖ Initiate emergency services immediately, as needed (911, Fire, LEPC)
- ❖ Identify hazard(s) of emitted material (obtain SDS)
- ❖ Establish site control (safe perimeter and evacuation routes)
- ❖ Monitor air in impacted areas
- ❖ Develop Site Safety Plan (ICS 208) and Medical Plan Continually assess site hazards and risk

RESPONSE – INCIDENT STABILIZATION

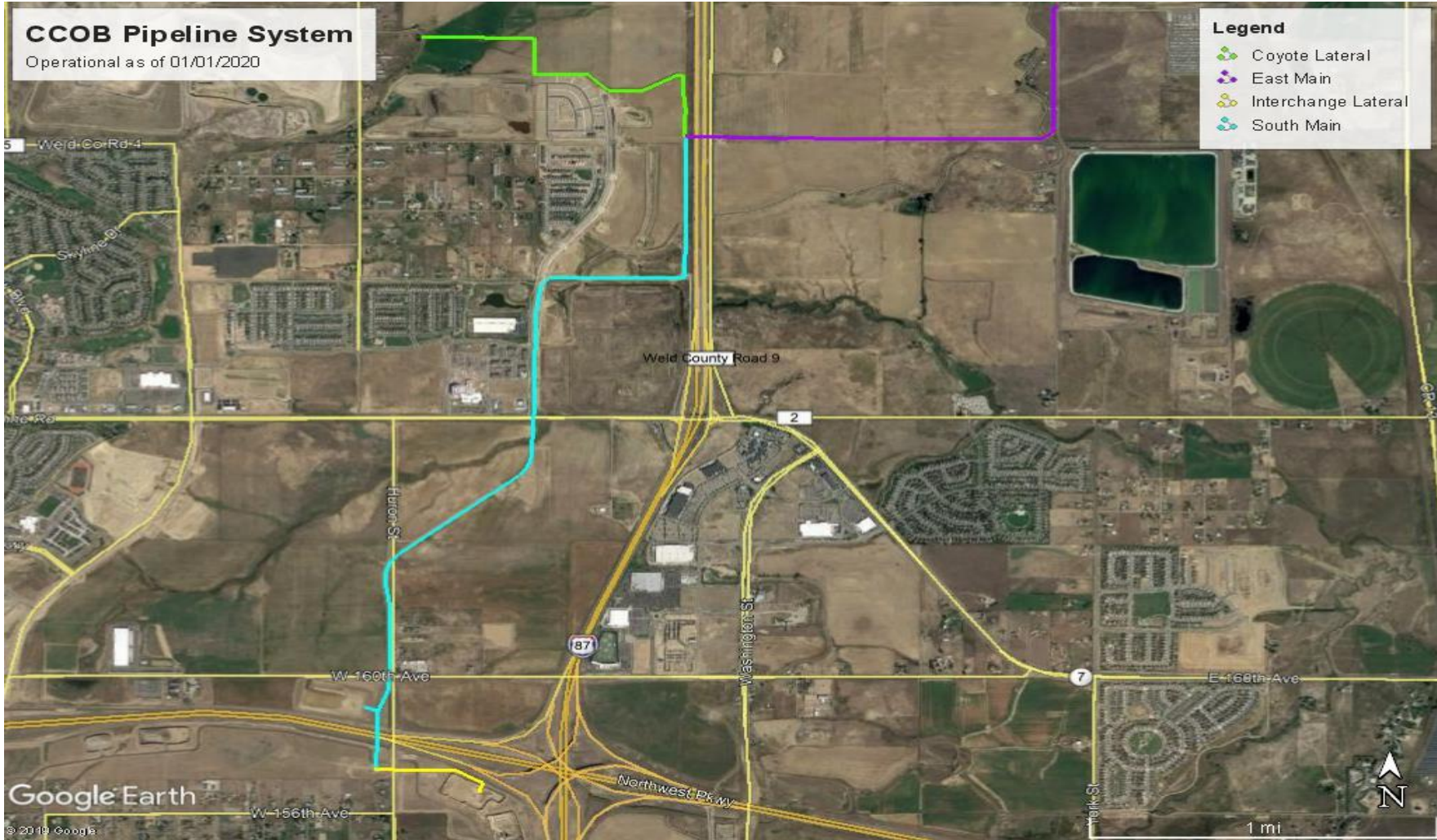
- ❖ Conduct notifications to external agencies and internal personnel
- ❖ Identify and implement staging areas to support response operations
- ❖ Activate response company for equipment and manpower as needed
- ❖ Get uphill, in release scenario
- ❖ Activate response tactics to contain and recover product/material
- ❖ Establish command post and field communications
- ❖ Establish flight traffic restriction if required
- ❖ Implement waste handling and disposal procedures as required
- ❖ Initiate decontamination and demobilization procedures when appropriate

ENVIRONMENTAL – PROTECT THE ENVIRONMENT

- ❖ Lines checked for leaks daily
- ❖ Identify, prioritize, and protect environmentally sensitive areas
- ❖ Establish wildlife rescue rehabilitation operations if required
- ❖ Verify release if waters are impacted
- ❖ Conduct visual assessments (spill tracking and surveillance)

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.

Appendix F



CCOB Pipeline System				
Segment	Segment Length	Gas Pipeline (diameter)	Oil Pipeline (diameter)	Water Pipeline (diameter)
Coyote Lateral	+/- 9,918 feet	24-inches	12-inches	8-inches
East Main	+/- 17,291 feet	24-inches	12-inches	8-inches (x 2 lines)
Interchange Lateral	+/- 2,228 feet	16-inches	8-inches	8-inches
South Main	+/- 15,375 feet	24-inches	12-inches	8-inches

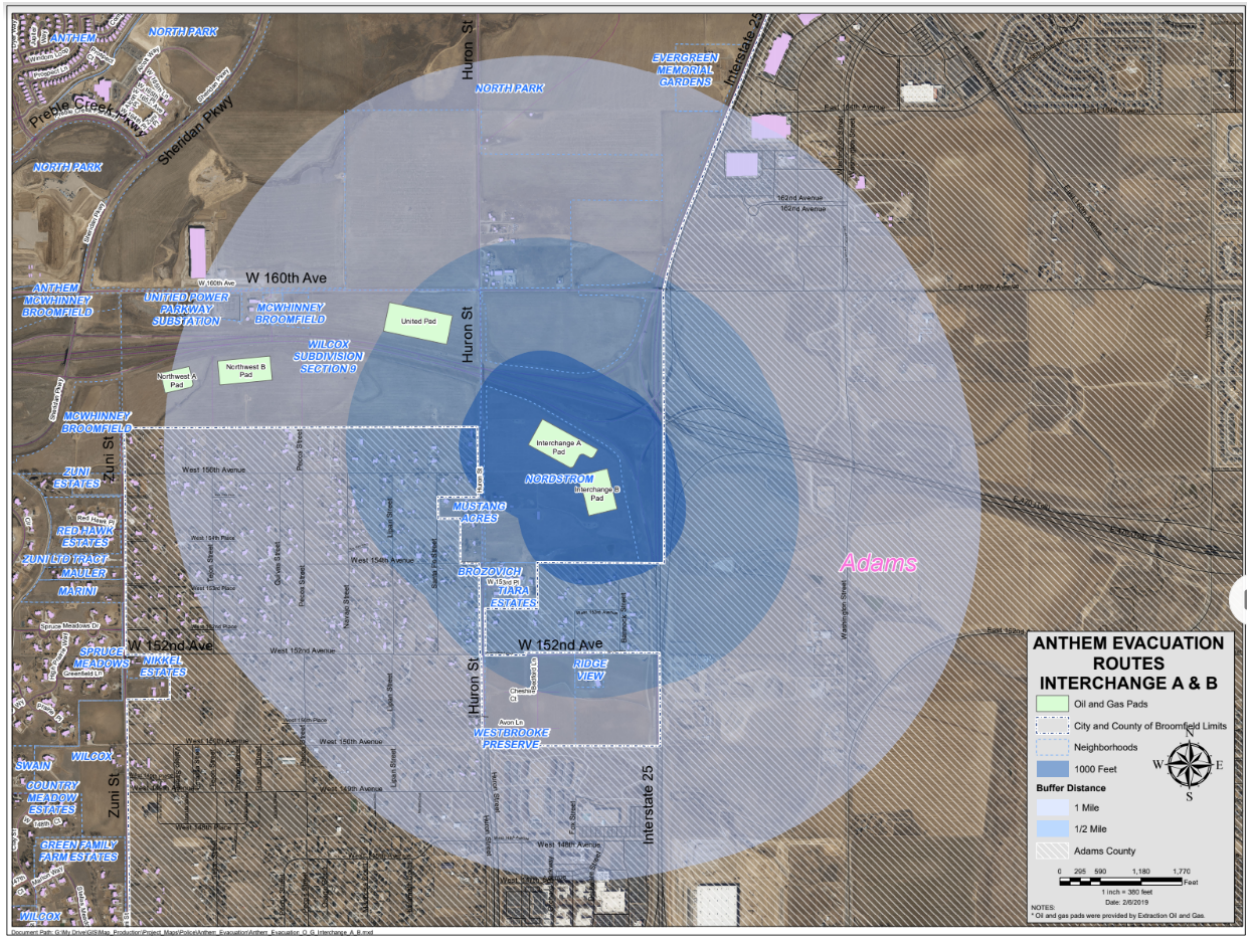
Interchange A&B Evacuation Checklist

Interchange A - 15652 - Huron St. Interchange B - 15554 Huron St

General Information	<p>Most of the impacted population for this site are Adams County Residents. Coordination with ACSO, Adcom and Adams County EM is critical.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Size of evacuation area <input type="checkbox"/> Reason for evacuation <input type="checkbox"/> Restricted Areas (Hot, Warm, Cold Zones) 	
Alert and Warning	<ul style="list-style-type: none"> <input type="checkbox"/> *All Citizen Notification will be done via Code Red and possible Door to Door/Route. <input type="checkbox"/> Coordination with AdComm and Adams County Sheriff will be needed to evacuation impact Adams County neighborhoods <input type="checkbox"/> Evacuation Point - Paul Derda Rec Center is predetermined - <ul style="list-style-type: none"> <input type="checkbox"/> Contact Victim Advocates to do initial staffing <input type="checkbox"/> Coordinate with EOC or Emergency Manager ASAP 	
Special Considerations	<ul style="list-style-type: none"> <input type="checkbox"/> Assisted Living Facility- At Risk Population "The Next Step Group Home" informally called "Santa Fe House". 15536 Santa Fe Broomfield, The home has beds for 6 individuals, and serves people with intellectual and developmental disabilities. Some residents are in wheelchairs, some use a cane/walker, and others are ambulatory. Staff available to assist with evacuation <input type="checkbox"/> Major Highways/Roadways impacted I-25 and NW PKw are with the ½ mile <input type="checkbox"/> Schools - No Schools are within one mile but notification to Adams 12 Safety team is recommended <ul style="list-style-type: none"> <input type="checkbox"/> Contact SRO Supervisor / Emergency Manager <input type="checkbox"/> Hospital - None Children's North is outside of mile radius <input type="checkbox"/> High Density Populations Centers (Industry and/or Apartments) - 	
Traffic Plan	<ul style="list-style-type: none"> <input type="checkbox"/> See site specific plan <input type="checkbox"/> Traffic closures <ul style="list-style-type: none"> <input type="checkbox"/> Highway I-25 (notify CDOT) (consider signage) <input type="checkbox"/> Northwest Parkway (notify parkway authority) <input type="checkbox"/> Social Media Advisements – work through PIO <ul style="list-style-type: none"> <input type="checkbox"/> Notification Only <input type="checkbox"/> Shelter in place 	

	<ul style="list-style-type: none"> <input type="checkbox"/> Evacuation <input type="checkbox"/> Assistance from Streets Department <input type="checkbox"/> Ingress plan <ul style="list-style-type: none"> <input type="checkbox"/> Is there a route in for emergency personnel 	
Re-Entry	<ul style="list-style-type: none"> <input type="checkbox"/> Confer with IC on what type of Re-Entry will be allowed <ul style="list-style-type: none"> <input type="checkbox"/> Escorted - are enough resources available <input type="checkbox"/> Limited - who is allowed when and for how long <input type="checkbox"/> Full <input type="checkbox"/> Who is authorized to re-enter and what identification do the need? 	

[Map link Here](#)



Evacuation/Traffic Plan

Northwest A & B Pads

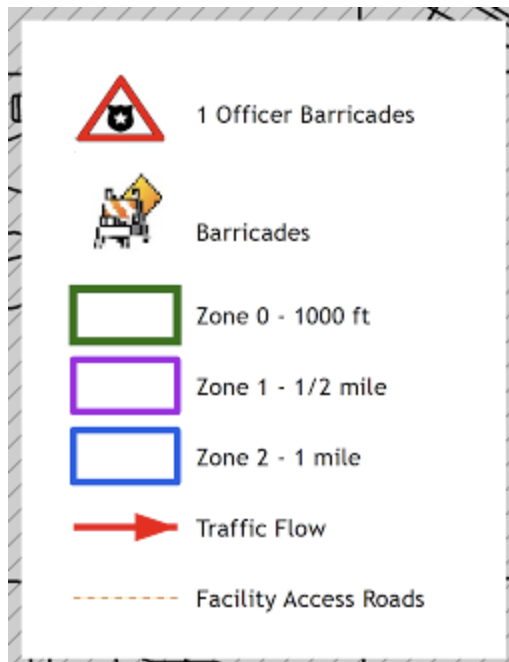
Drafted 12/07/2018, 7/2/19, 9/20/19

Overview

This plan is developed based on a significant event at the Northwest A & B Pads (ADDRESS - Broomfield CO) that the Incident Command of the incident determines that evacuation of community members from potentially impacted neighborhoods. This plan is developed to give Incident Command a starting point for how the evacuation might be implemented. The actual evacuation plan will develop at the time of the incident and will be based on the type and extent of the incident and unpredictable variables such as weather conditions.

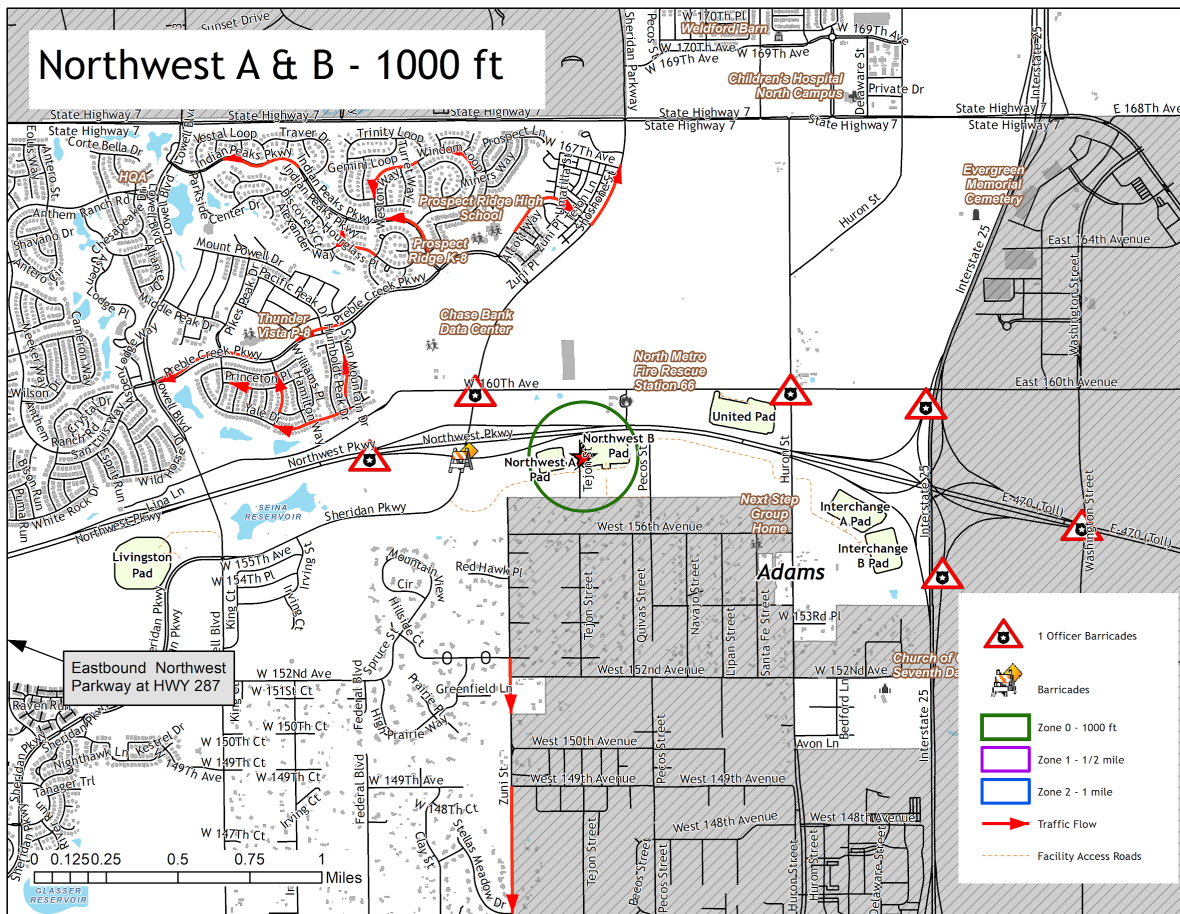
Map here

Legend:



1,000 Foot Evacuation Order

General note: Consider replacing any officers at roadblock locations with Streets personnel and / or barricades as is safe and appropriate.



Special consideration:

Residential:

- Adams County Homes on the northside of W. 156th Ave.

Industrial Evacuation:

- Northwest Parkway maintenance next to Station 66

Roadway Instruction::

LOCATION	DIRECTION	STAFF/RESOURCES
Westbound Northwest Parkway exit ramp to I-25	All W/B traffic diverted off of NW Pkwy onto I-25 ramps for N/B or S/B	1 Officer Barricades CSP assistance?
Eastbound Northwest Parkway @ Sheridan exit ramp	E/B Sheridan exit ramp - all traffic on Pkwy must exit onto N/B or S/B Sheridan Pkwy.	1 Officer Barricades
Sheridan Pkwy @ Northwest Parkway E/B on ramp	E/B on ramp from Sheridan - no entrance to Pkwy	Barricades Consider closing NWP E/B at 287
Northbound I-25 @ Northwest Parkway W/B exit ramp	Northbound I-25 @ Northwest Parkway W/B exit ramp	1 Officer Barricades CDOT, NW PKWY & E470 Notification (EOC) CDOT Information boards
Southbound I-25 @ Northwest Parkway W/B exit ramp	W/B on ramp to Northwest Parkway No entrance - all traffic diverted To S/B I-25 or E/B E470	1 Officer Barricades CDOT, NW PKWY & E470 Notification (EOC) CDOT Information boards
W. 160th Ave at Sheridan Pkwy	Closed to E/B traffic	1 Officer Barricades

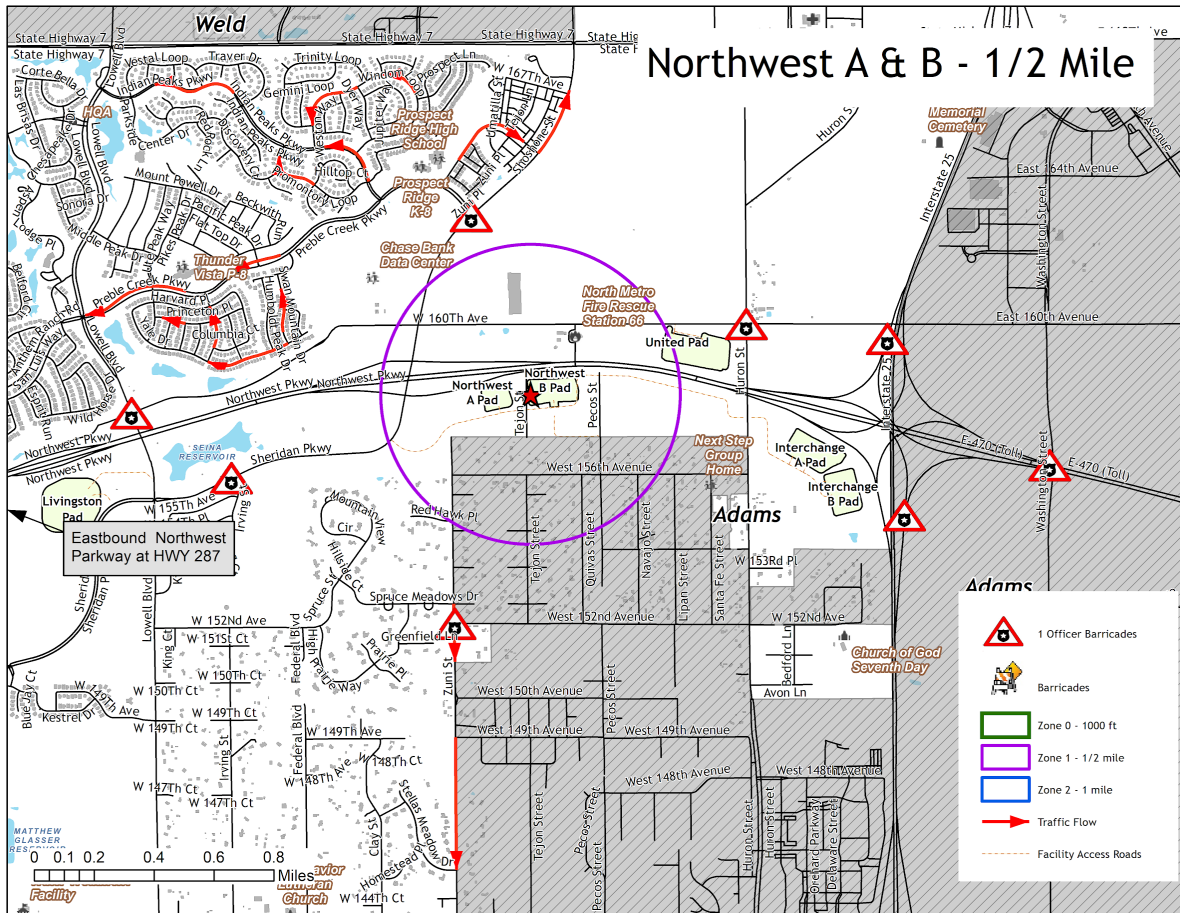
W. 160th Ave at Huron St

Closed to W/B traffic

**1 Officer
Barricades**

1/2 Mile Evacuation Order

General note: Consider replacing any officers at roadblock locations with Streets personnel and / or barricades as is safe and appropriate.



Special Consideration:

- Next Step Group Home 15536 Santa Fe St.
 - 6 beds for 6 individuals
 - Serves people with intellectual and developmental disabilities.
 - Some residents are in wheelchairs, use canes/walkers, and are ambulatory.
 - Staff is available to assist with evacuation.

Residential:

Spruce Meadows	East to Zuni then South on Zuni
----------------	---------------------------------

Industrial Evacuation:

- JP Morgan/ Chase Bank facility (currently under construction)
- CML Security - 1785 W. 160th Ave # 700

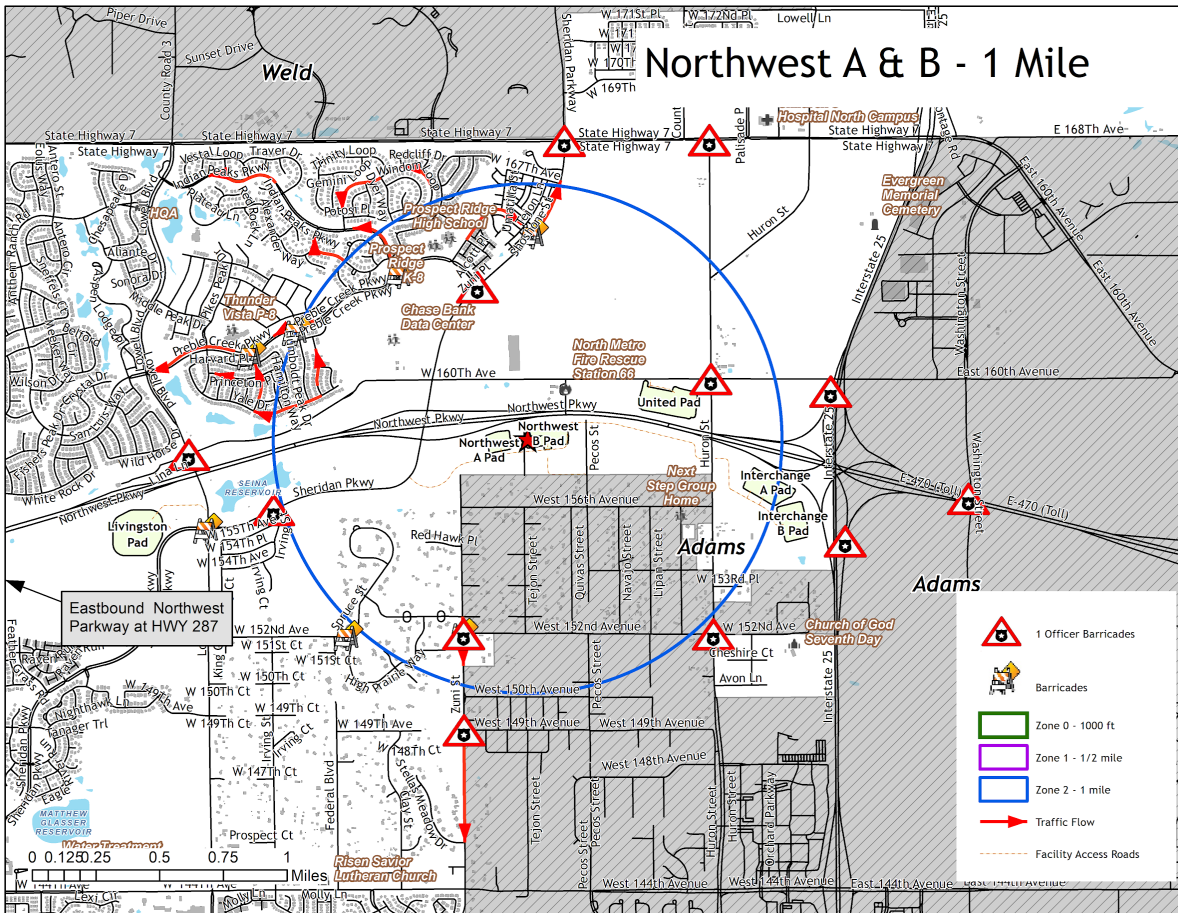
Roadway Instructions:

LOCATION	DIRECTION	STAFF/RESOURCES
Westbound Northwest Parkway exit ramp to I-25	All W/B traffic diverted off of NW Pkwy onto I-25 ramp	1 Officer Barricades CDOT, NW PKWY & E470 Notification (EOC) CDOT Information boards
I-25 northbound to westbound Northwest Parkway ramp	NW Pkwy closed to all W/B traffic	1 Officer Barricades
Eastbound Northwest Parkway at Hwy 287	Divert E/B traffic on to 287 N/B or S/B	2 Officers Barricades Close NWP E/B at 287
Northbound & southbound Hwy 287 to Eastbound Northwest Parkway ramp	NW Pkwy closed to all E/B traffic	1 officer Barricades and cones for S/B 287 left turn lanes

I-25 southbound to westbound Northwest Parkway ramp	NW Pkwy closed to all W/B traffic	1 officer barricades
W/B W. 160th Ave. @ Huron St.	Close W/B W. 160th Ave. All traffic diverted N/B or S/B on Huron St.	1 Officer Barricades
E/B W. 160th Ave. @ Lowell Blvd.	Close E/B W. 160th Ave @ Lowell Blvd All traffic diverted N/B or S/B on Lowell Blvd.	1 Officer Barricades
Sheridan Pkwy @ Preble Creek Pkwy	Closed to S/B traffic	1 officer barricades
Sheridan Pkwy @ Irving St.	Closed to N/B traffic	1 officer barricades
Zuni St. @ W. 152nd St.	Zuni closed to N/B	1 officer Barricades

1 Mile Evacuation Order

General note: Consider replacing any officers at roadblock locations with Streets personnel and / or barricades as is safe and appropriate.



Special Consideration:

- Next Step Group Home
- 6 beds for 6 individuals
- Serves people with intellectual and developmental disabilities.
- Some residents are in wheelchairs, use canes/walkers, and are ambulatory.
- Staff is available to assist with evacuation.

Residential:

- 4 Broomfield Residences between W. 160th Ave. and Hwy 7

Anthem Highlands & Anthem 24	North on Anthem Ranch Road to Lowell North on Lowell to Highway 7, Or Sheridan North to Highway 7 East on Preble Creek Parkway, North on Sheridan Parkway to Highway 7	1 Officer Barricades
Spruce Meadows	East to Zuni then South on Zuni	
Adams County	East to Zuni then South to 148th then East to Huron	
Huron north of W. 160th	North on Huron to Hwy 7	

Industrial Evacuation:

- Aging Safely Walk-in Tubs of Denver 16000 Huron St.

Roadway Instructions: No Southbound traffic allowed

LOCATION	DIRECTION	STAFF/RESOURCES
Westbound Northwest Parkway exit ramp to I-25	All W/B traffic diverted off of NW Pkwy onto I-25 ramp	1 Officer Barricades
I-25 southbound to westbound Northwest Parkway	All traffic closed from I-25 to NW Pkwy	1 Officer Barricades
I-25 northbound to westbound Northwest Parkway	All traffic closed from I-25 to NW Pkwy.	1 Officer Barricades

Eastbound Northwest Parkway at Hwy 287	Divert E/B traffic on to 287 N/B or S/B	2 Officers Barricades
Northbound & southbound Hwy 287 to Eastbound Northwest Parkway ramp	NW Pkwy closed to all E/B traffic	1 officer Barricades and cones for S/B 287 left turn lanes
E/B W. 160th Ave. @ Lowell Blvd.	Close E/B W. 160th Ave @ Lowell Blvd All traffic diverted N/B or S/B on Lowell Blvd.	1 officer barricades
Lowell Blvd. @ Sheridan Pkwy	Close Sheridan to N/B traffic	1 officer barricades

Sheridan Pkwy @ Irving St.	Close Sheridan to N/B traffic	barricades
Sheridan Pkwy @ Preble Creek Pkwy	Closed to S/B traffic	Barricades
Hwy 7 @ Sheridan Pkwy	Sheridan closed to S/B traffic	1 officer Barricades
Sheridan Pkwy @ Alcott Wy	Sheridan closed to S/B traffic (This post may not be necessary)	Barricades
Preble Creek Pkwy @ 5 intersections: Pikes Peak Dr., Antora Peak Dr., Pacific Peak Dr., Blue Mountain Dr. & Indian Peaks Pkwy	Close E/B traffic with barricades	Barricades
Spruce St. @ High Prairie Way	Close N/B traffic with barricades	Barricades
Zuni @ W. 149th Ave	Zuni closed to N/B traffic	1 officer Barricades
Zuni @ W. 152nd Ave	Zuni closed to N/B traffic	Barricades

Huron @ Hwy 7	Huron closed to S/B traffic	1 officer Barricades
W. 160th Ave @ Top Golf (east of I-25)	W. 160th closed to W/B traffic	1 officer Barricades Assistance from Adams or Thornton?
Huron St. @ W. 152nd Ave	Huron closed to N/B traffic	1 officer Barricades (may be able to move further south to City Limits)



Preparing and Responding to an Livingston Pad Incident

Presented by

Gary Creager- Chief of Police
Jeff Bybee- Deputy Chief NMFD





Incident Commander Priorities

Incident Priorities (Evacuation Decisions)

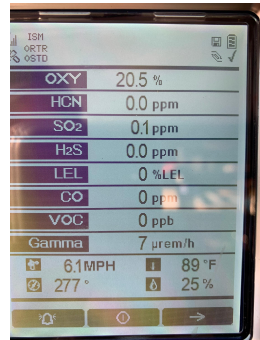
- Determine nature of problem
- Establish Unified Incident Command
- Evacuate pad site (if necessary) and determine potential for offsite impact
- Consider evacuation or shelter-in-place for surrounding areas
- Establish continuous four-point air monitoring
- Remove or eliminate sources of ignition
- Control flow of product



Establish continuous 4-point air monitoring

Air Monitoring helps Incident Commanders determine recommended shelter-in-place or evacuation orders and area affected

- Lower Explosive Limit (LEL)
- Volatile Organic Compounds
- Hydrogen Sulfide
- Oxygen



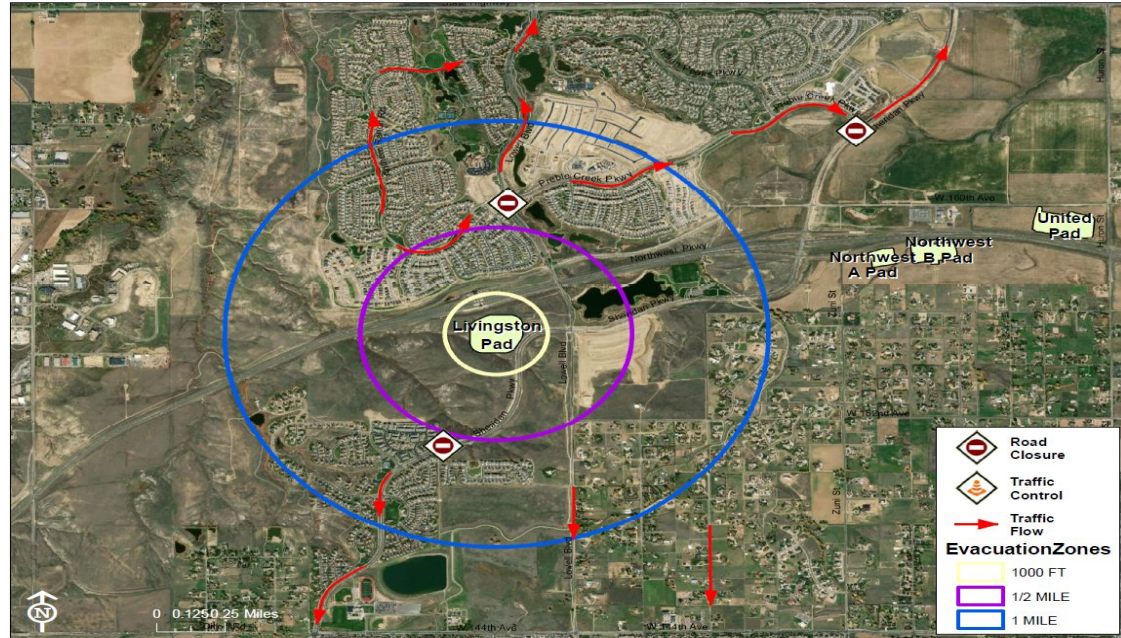


Determining need for Shelter-in-place or evacuation

- Spills that may travel offsite
- Risk of ignition/explosion
- Plume/Smoke travel
- Presence and concentration of VOCs



Establishing Evacuation Zones



- Department of Transportation Emergency Response Guide (ERG) recommended evacuation zone for Large Scale Methane releases is 1/2 mile
- Air monitoring and plume modeling will be used to expand or contract designated evacuation area



Prepare You and Your Family

1. Build Your 72-Hour Preparedness Kit
2. Develop Shelter in Place Plans
3. Know Evacuation Routes
4. Plan Where/How you Will Evacuate
5. Register Cell Phone with Code **RED**
6. Follow Instructions Contained in Alerts-
May change based upon conditions
7. Call 911 If you Cannot Evacuate



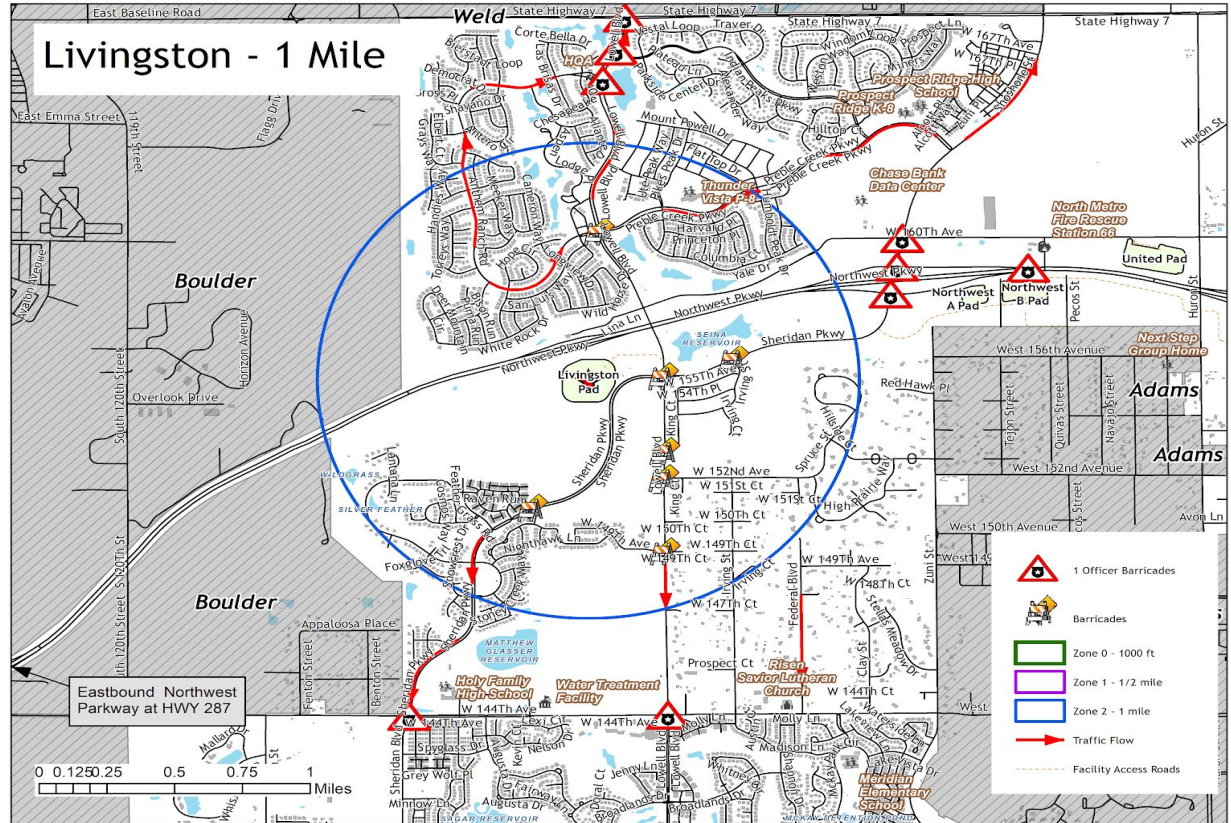
Shelter in Place Plan

- Stay inside
- Close your doors & windows
- Shut down your HVAC system





LIVINGSTON EVACUATION PLAN





Livingston Pad- Evacuation Checklist (Incident Commander)

1. Individual Well Pad Evacuation Zones
 - a. Electronic Map
 - b. Evacuation Checklist
 - c. Traffic Plan
2. Additional Information
 - a. General Info
 - b. Alerts/Warnings
 - c. Special Considerations
 - d. Traffic Control Points
 - e. Re-Entry



MONITORING THE SITUATION

- Follow the instructions that you receive.
- Monitor the situation on social media
 - Facebook
 - Broomfield Police Department @BroomfieldPD
 - North Metro Fire Rescue District @NorthMetroFire
 - City and County of Broomfield @broomfield
 - Twitter
 - Broomfield Police @BroomfieldPD
 - North Metro Fire @nmfirepio
 - Broomfield Gov't @broomfield
 - NextDoor
 - City website - broomfield.org



Help Us/Help Your family/Help Your Neighbors

- Have a Plan
- Do Not Self-Evacuate!!!
- Follow Direction Contained in Alerts
- Evacuate Quickly and Safely
- Go to Family and Friend's Home
- Paul Derda/1st Bank Center- only if needed (others if needed)
 - We'll assist in identifying resources
 - Stay in your vehicle if quarantined/isolated
 - Maintain social distance- staff will assist