PLANNING AND ECONOMIC DEVELOPMENT MEETING
September 9, 2020
8:30 a.m.
Teleconference Meeting

Public Participation Dialing Instructions
Call in Number: (408) 418-9388
Access Code: 146 687 3855

Council Member Francoise Bergan, Chair
Council Member Crystal Murillo, Vice Chair
Council Member Allison Hiltz, Member

Be a great place to locate, expand and operate a business and provide for well-planned growth and development.

1. Approval of August 12, 2020 Draft Minutes - Council Member Bergan 8:30 a.m.

2. Introduction of Colonel Micah Fesler, Buckley Air Force Base 8:35 a.m.

3. Subarea C: Proposed Amendments to the UDO regarding Notice and Approvals 8:40 a.m.
   Karen Hancock

4. Presentation and Discussion regarding Lowry Landfill Superfund Site – 9:05 a.m.
   Mayor Pro Tem Johnston, Linda Kiefer, EPA

5. UDO Oil and Gas Amendments – Jeffrey Moore 9:35 a.m.

6. Miscellaneous Matters for Consideration - Council Member Bergan 9:50 a.m.
   - Aurora Economic Development Council
   - Havana Business Improvement District
   - Aurora Chamber of Commerce
   - Planning Commission
   - Oil and Gas Committee
   - Business Advisory Board
   - Retail
   - AER and Small Business

7. Confirm Next Meeting - Council Member Bergan 9:55 a.m.
   October 14, 2020

PLANNING AND ECONOMIC DEVELOPMENT (PED)
POLICY COMMITTEE
TELECONFERENCE MEETING
August 12, 2020

Members Present: Councilmember Francoise Bergan, Chair; Councilmember Crystal Murillo, Vice Chair; Councilmember Allison Hiltz

Others present: Mayor Pro Tem Nicole Johnston, Councilmember Marsha Berzins, Councilmember Dave Gruber, Andrea Amonick, Andrea Barnes, Becky Hogan, Bob Bengen, Brad Pierce, Chance Horiuchi, Daniel Money, Dennis Lyon, Elena Vasconez, Garrett Walls, Gayle Jetchick, George Adams, Hector Reynoso, Huiliang Liu, Ian Best, Jad Lanigan, Juliana Berry, Karen Hancock, Liz Fuselier, Mac Callison, Marcia McGilley, Margie Sobey, Mindy Parnes, Melvin Bush, Mike Dean, Mindy Parnes, Porter Ingram, Sarah Wile, Tod Kuntzelman, Victor Rachael Jr., Vinessa Irvin, Brandon Cammarata, Yuriy Gorlov, Tim Craft

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APPROVAL OF MINUTES
July 8, 2020 minutes were approved.

PROPOSED AMENDMENTS TO THE UNIFIED DEVELOPMENT ORDINANCE (UDO)
Summary of Issue and Discussion:
Karen Hancock and Mayor Pro Tem Nicole Johnston gave a summary of proposed amendments to the city's Unified Development Ordinance. The proposed UDO amendments were initiated by MPT Johnston. Karen Hancock provided an overview of the proposed changes to the UDO proposed by MPT Johnston. The Draft Ordinance proposes changes to notice and public hearings required in Subarea C (Eastern Aurora). As proposed, changes in the UDO would reflect that projects in Subarea C require the same process as Subareas A and B. Major Site Plans, Major Subdivisions and Master Plans would require a public hearing at Planning and Zoning Commission. The other component of the proposal is to increase the mail notice requirement for registered neighborhood groups in Subarea C from 1 mile to 3 miles.

CM Bergan expressed concern over the 3-mile radius for notification, stating that this process could delay development and increase postage expenses. Karen Hancock clarified that notices only go to registered neighborhood groups. George Adams provided input on the effect of neighborhood meetings and Planning Commission hearings on timelines for development.

Mayor Pro Tem Johnston provided information on the intent of the ordinance, stating there were concerns from residents that there is no formal process for neighborhood input outside of the

initial neighborhood meeting. She also said that she is open to discussion about the dimensions and that the proposed amendments are meant to generate discussion.

CM Hiltz stated her support for the proposed ordinance.

CM Gruber stated his opposition to the proposed ordinance, citing timelines as a major issue. CM Gruber stated that neighborhood groups are "clubs" and have no legal standing and should not increase development times and costs. The process of approving the original version of the UDO was inclusive and exhaustive.

Mayor Pro Tem Johnston provided a response to CM Gruber's comments indicating that members of neighborhood groups should be consulted when a project is proposed because community input is valuable.

CM Bergan asked if the groups in question can attend the initial neighborhood meeting and reiterated concern over the notice range. CM Bergan suggested modifying some of the criteria listed in the ordinance.

CM Johnston stated that there was a desire in the community for more detailed and involved forms of input and stated support for consistency across sub-areas.

CM Bergan asked for developer input. Tim Craft of Craft Companies LLC (representing the HBA) identified the need for public notice and its value to the development process. He expressed concerns regarding the changes in legal standing that may result from increased notification requirements and how this might impact potential litigation associated with development projects. Vinessa Irvin provided information about gathering development community feedback in a more formal way through the Joint Task Force. Karen Hancock stated that only adjacent property owners have standing for appeal and this requirement is already in the UDO.

CM Berzins stated that a range of one mile can already be problematic and the distance often results in residents from a different ward providing comment. A three-mile radius would be detrimental to the process. CM Berzins provided comment regarding the development process and cautioned against creating more red tape. CM Berzins stated that Aurora needs affordable homes and jobs that come with the development of projects.

CM Hiltz suggested bringing this item back to the committee, stating there was additional comment and discussion and that she did not have the opportunity to weigh in because of time constraints. Mayor Pro Tem Johnston supported this.

Mayor Pro Tem Johnston gave an overview of the Lowry Landfill Superfund site ordinance and explained there have been projects proposed in an area that may be subject to groundwater contamination from the Superfund site, potential liability issues for the city, and the EPA has not

determined the area's safety. Karen Hancock provided some details on the proposed buffers around the site.

CM Bergan asked the City Attorney's Office about the buffers and the possible impact on current and future development, asking if it could be considered a regulatory taking. Daniel Money stated that it could be considered a regulatory taking, as it prohibited development on private land, and provided a summary of direct and regulatory takings.

CM Bergan asked about the buffer and where it is measured. Karen Hancock stated that DADS landfill in Section 31 provides a little less than a mile of buffer from the Superfund site located directly south in Section 6. CM Bergan asked what measurement led to the specific buffer areas. Karen Hancock clarified that there are existing buffers in the UDO of ¼ mile on the east, west and south sides of the Superfund site but not to the north where the groundwater is flowing.

Mayor Pro Tem Johnston provided comment regarding regulatory takings and stated that this is the largest Superfund site in the country that has a containment but not a clean-up plan. The Mayor Pro Tem indicated there is likely precedent for these types of actions and asked if he city attorney's office could research the ability to buffer the site if it presents a hazard to the community. The EPA has not determined that the groundwater remedy is protective. Mayor Pro Tem Johnston stated that she would provide specific evidence and information at the next meeting.

CM Hiltz stated that she did not understand the problem with waiting to understand the full impact of the area surrounding the Superfund site.

CM Bergan stated that property buyers in the immediate area receive a disclaimer.

CM Hiltz reiterated her frustration with prioritizing the impact to the development community, stating that developers should stand by their product in a safe way.

CM Bergan stated that developers don't want to build in areas that will get them sued and follow the current law. CM Bergan agreed that further input from stakeholders would be needed.

CM Berzins made comments about the existing liability to the development community and agreed that more data needs to be presented.

CM Bergan asked Mayor Pro Tem Johnston if this item could be brought back to the September PED meeting. Mayor Pro Temp Johnston stated her support.

HAVANA STREET CORRIDOR STUDY

Huiliang Liu, Principal Transportation Planner, gave a presentation on the Havana Street Corridor Study and discussed the next steps in the process.

The study area is the ½ mile radius around Havana street from Montview Blvd. to Dartmouth Avenue. The purpose of the study is to identify multimodal improvements that make the corridor safer and inviting to pedestrians, facilitate and enhance economic development, diversity, unique characteristics and art. The process began in February 2020. The project has recently completed existing and future conditions analyses. The next phase began in August, identifying the corridor vision, branding, and land use. The process has five phases and will run through June 2021.

Mr. Liu presented information on existing conditions and key takeaways for pedestrians, bicyclists, transit and vehicles. Corridor-wide strategies and detailed conceptual design and cost estimates for selected segments and intersections will be developed through the next phases of the project. Next steps include more public outreach and engagement to stakeholders in a variety of formats, such as one-on-one stakeholder interviews, online survey, newsletter distributions and meetings with the general public.

CM Bergan asked if there were any questions. George Adams stated that due to the short amount of time left, questions could be submitted to staff by email following the meeting. (Hliu@auroragov.org)

AER/SBDC UPDATE

Andrea Amonick provided an update on the AER1 and AER2 programs:

Updated Report on the Aurora Business Grants Related to Covid-19:

Aurora Economic Relief Program (AER 1)
$400,000 for Grants up to $5,000
$381,000 awarded in a total of 87 grants; distributed among all wards with the greatest number going to small businesses in Wards 3 and 4.
Of the grants awarded, 56% were provided to minority-owned companies. Three-quarters of the grants went to either minority- or female-owned business (or businesses that were both).
$600,000 was set aside for loans of up to $50,000 under AER 1;
These have taken longer to approve as there was significant underwriting that had to occur.
16 loans were approved of these 5 withdrew and 2 were converted to grants.
We reviewed a few more loans and expect the final total to be 10 loans, of these four have closed.

Aurora Economic Recovery Program (AER 2)
Program to provide grants up to $15,000 to reimburse businesses for items that will help the business recover/pivot in response to Covid-19.
Non-profits were eligible for grants under this program.
634 applications were received during the week long application period.
484 businesses are eligible – 416 for-profit and 68 non-profit entities
Grant agreements have been sent to 260 of the applicants thru August 7th of those 173 had been returned

Reimbursements are starting to go out the week of August 17th.

Miscellaneous Matters

AEDC

Yuriy Gorlov gave an update on AEDC activities. Mr. Gorlov summarized the new Majestic Subaru project and other projects across the city. Mr. Gorlov stated AEDC participated in the City Center Study recent meeting to help the community understand the city's vision and how they are attracting new businesses. Mr. Gorlov provided some information on remote working and stated that he expects on-site work to return with some safety precautions instituted.

Havana Business District

Chance Horiuchi provided the following update:

- 14 business closures with 6 closed due to the State of Colorado Industry Specific Health Orders or By Choice

- 8 permanent business closures: Imone Korean Restaurant, La Pily #2, Windsor Dental Care, Powerhouse Nutrition and Fitness, Uncle Joe's Hong Kong Style Bistro, R. Stafford, Queen of Angels Catholic Gift & Book Shoppe, El Jaripeo Sports Bar.

- New businesses: Hungry Wolf BBQ near Havana & Yale and Geico Insurance office coming to the Gardens On Havana.

- 100 + restaurants and all of the Havana Motor Mile (20+ auto dealers + 100 auto services) are re-opened, with majority offering dine-in services at 50% capacity, take-out, & delivery.

- We shared the Covid-19 Testing Site info and Round II of the Housing Assistance Program on Monday, 8/10/2020.

- Many businesses are concerned about the Winter months and surviving another possible shut down.

- On-Going construction: Argenta, Stinker Stores, and the Kum & Go are moving forward and in Progress. Safeway gas update/remodel complete

- Multi-Modal Study Collaboration continues, hosted the 1st stakeholder outreach in July, site plan updates on hold during study process

- Have had many inquiries from other businesses wanting to relocate and open in Aurora on Havana Street. We have been connecting new leads to Frank Butz and Robert Oliva with the City. Many are looking for small square footage, drive-throughs, walk-ups and outdoor expansion spaces.

• The small businesses in Aurora are grateful to the city staff, leadership and council for the AER and looking forward to hearing an update from AER program. A few have reached out to share they have heard from city staff regarding the AER program.

• HMM Workforce program: 7 Pickens Tech students received their tools and tool boxes and are working at a HMM dealership

• BID is in constant communication with stakeholders and hosting direct phone calls, check in's & biz visits as needed

• Working on the 2021 Operations Plan and Budget, negotiating 2021 contracts & challenges with not receiving the AV report from the county until 10/13, but budget is due 9/15 to BID attorney, 9/30 to City, requested to extend our submission to the city on budget due to the state's extension on the AV assessments, waiting to hear back from city on process for extension request

• cancelled BID events, contacted vendors, updated comm., in 2021 plan to not host community events due to Covid and significant decrease in the event budget

• received Sales Tax report for Q2: 2020 as of 7/2020
Auto: $2,910,678
Food: $1,797,152
Total: $11,538,268
In a comparison of 2019 and 2020 second quarter Total Sales Tax we were at $94,782 in 2019 and $91,982 in 2020.
3.0% down from Q2's 2019's total sales tax. Bill Levine with the city also shared that when comparing 2019 and 2020's YTD, as of the end of July 2020, our Total Sales Tax collected was at $103,375, 6.7% down compared to the $110,474 total sales tax collected as of July 2019.

• Discontinuing the news racks program along the corridor as request of the city

• Working with Visit Aurora on a marketing/advertising campaign for the BID with the proposed community funds

• Thank you for your continued support of the BID businesses

<u>Aurora Chamber of Commerce Update</u>
Kevin Hogan gave an update on the Chamber of Commerce's projects.

Next week, Mr. Hogan will be touring the new Costco facility. Mr. Hogan was concerned about the reduction in RTD Services. There have been around 150 grants distributed by the chamber. Mr. Hogan stated his concern about the continued protests and news about the press the city is receiving, with some companies backing out of the area. Mr. Hogan also discussed concerns

about the minimum wage increase and gave details about outreach effort. (contact the Chamber of Commerce for more information)

Planning Commission Update
Dennis Lyon stated that they would defer their report to the next PED meeting.

Oil & Gas Advisory Committee Update
Brad Pierce gave a brief update on the Oil and Gas Committee's work, specifically the review of the Oil and Gas Manual. Comments from the committee will be available by August 23.

Business Advisory Board of Aurora
Garrett Walls provided information about fees collected by AFD and suggested that they could be collecting upwards of $1million a year, but do not have the infrastructure to do so at this point in terms of the logistical challenges of collecting the funds. Mr. Walls also discussed the proposed minimum wage increase and testimony to AFD from stakeholders. Mr. Walls will provide comments in writing to PED. Mr. Walls provided meeting information for a business town hall.

CM Bergan asked for clarification on the town hall's agenda.

Retail Development*:*
Bob Oliva gave a summary of the City Center Study public meeting. Mr. Oliva provided some statistics on small businesses being created in the area. also updated the statistic of restaurant closures nationally, at over 25%.

CM Bergan asked about communication with brokers in the absence of the ICSC conference. Mr. Oliva identified they are always in constant contact with local brokers. National brokers are less accessible under these circumstances. Mr. Oliva also identified there has been indications of increases in new businesses starting along with the increases in existing businesses closing and they will continue to observe this data.

SBDC Update – Marcia McGilley
CM Bergan asked Marcia McGilley if this item could be delayed to next month. Ms. McGilley indicated she would provide an update next month but provided a written summary of comments listed below.

1. Continued assistance with financial relief assistance through grant/loan programs besides the AER programs; including:
a. Arapahoe County Cares
https://www.arapahoegov.com/2110/Arapahoe-County-CARES
b. Energize Colorado GAP Funding - State of Colorado
www.EnergizeColorado.com

2. Economic Impact: Aurora Businesses (Jan – Aug 10, 2020)
a. Questions answered by phone: Over 4,000 inquiries
b. 63% Existing Business Owners/37% Start-Ups
c. One-on-one Consulting: Over 700 individual businesses assisted
d. Business Workshops/Webinars:
- # Workshops/Webinars: YTD 75 (annual goal: 53)
- # Attendees: YTD over 1200 attendees (annual goal: 890)

3. New Partnerships/Programs:
a. Asian Pacific Development, SBDC, Office of International and Immigrant Affairs, Denver Metro SBDC – Entrepreneurial Programming assistance
b. Early Childhood Development program – Translation, consulting, guest speaker services; both Marcia McGilley and Elena Vasconez serve on SBDC Network statewide committee for the development of this new program
c. Business Conversations – new webinar series with experts - examples:
i. Are You Selling What your Customers Want?
ii. How to Increase Your Social Media Impact
iii. Management Strategies During Crisis
iv. Retail topics in collaboration with Retail Team (Bob Oliva)

The next PED meeting is September 9th, 2020.

Approved._____

Francoise Bergan, PED Committee Chair

Next meeting date: September 9, 2020 at 8:30 a.m. Teleconference meeting.

Planning and Economic Development Policy Committee
Agenda Item Commentary

Item Title: Subarea C: Proposed Amendments to the UDO Notice and Approvals
Item Initiator: Karen Hancock, Principal Planner
Staff Source: Karen Hancock, Principal Planner
Deputy City Manager Signature:
Outside Speaker:
Council Goal: 4.0: Create a superior quality of life for residents making the city a desirable place to live and work--2012: 4.0--Create a superior quality of life for residents making the city a desirable place to live and wor

ACTIONS(S) PROPOSED ***(Check all appropriate actions)***

- ☒ Approve Item and Move Forward to Study Session
- ☐ Approve Item and Move Forward to Regular Meeting
- ☐ Information Only

HISTORY ***(Dates reviewed by City council, Policy Committees, Boards and Commissions, or Staff. Summarize pertinent comments. ATTACH MINUTES OF COUNCIL MEETINGS, POLICY COMMITTEES AND BOARDS AND COMMISSIONS.)***

The Unified Development Ordinance (UDO) was adopted in August 2019 and became effective in September 2019. Staff brought a batch of amendments to the committee in May 2020 that will address errors, clarifications and omissions. The amendments to the UDO proposed in this item include substantive changes to address concerns from residents in Ward II and character Subarea C. This item was on the August 12, 2020, Planning and Economic Development (PED) policy committee agenda. The discussion is documented in the meeting minutes provided in the September meeting packet. As a result of time constraints, committee members asked that the discussion be continued at the September PED meeting. The committee chair requested that the proposed amendments be presented to the city's Joint Task Force on September 3, 2020. A summary of feedback received will be provided at the PED meeting.

ITEM SUMMARY ***(Brief description of item, discussion, key points, recommendations, etc.)***

During development of the UDO between 2014 and 2019, residents in Ward II and Subarea C on the city's eastern plains, brought a number of issues to the attention of staff, the consultant team and Elected. Although key elements were addressed in the adopted version of the UDO, residents continued to work with their ward representative, Mayor Pro Tem Johnston, to advocate for further amendments to specific sections of the UDO. This item was on the agenda at the request of Mayor Pro Tem Johnston on August 12.

Based on further outreach to staff and the development community, elements of the proposed amendments for Subarea C include the following:

1. For comprehensive plan amendments and rezone applications in Subarea C, require written notice for registered neighborhood groups whose boundaries include or are located within two miles of the property affected. All other development applications would require notice for registered neighborhood groups within one mile -- which is the current UDO standard. [NOTE: This change is proposed because land use changes have the potential for the most significant impact in Subarea C greenfield areas, and it is consistent with State of Colorado House Bill 1205 requiring notification of proposed changes to the comprehensive plan and zoning within two miles of a military installation.]

2. Requiring that Subarea C master plans be subject to public hearings at Planning and Zoning Commission consistent with requirements for Subareas A and B (formerly proposed also for subdivision plats and major site plans); and

3. Recommend delaying the discussion of a proposed additional non-residential buffer on the north side of DADS Landfill (Section 31) until it can be presented at a City Council Study Session.

QUESTIONS FOR Committee

Does the Committee wish to forward the proposed amendments for discussion at a City Council Study Session?

Does the Committee wish to forward to a City Council Study Session a discussion of conditions at the Lowry Landfill Superfund Site?

EXHIBITS ATTACHED:

DRAFT Subarea C Development Notice and Approval Ordinance (3).pdf

ORDINANCE NO. 2020- ____

A BILL

FOR AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AURORA, COLORADO, AMENDING SECTIONS 5.3.1, 5.3.7 AND 5.4.1 OF THE UNIFIED DEVELOPMENT ORDINANCE (UDO) PERTAINING TO FIRST REVIEW NEIGHBORHOOD MEETINGS, NOTICE AND DEVELOPMENT APPROVALS IN SUBAREA C

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AURORA, COLORADO:

Section 1. The City hereby amends Section 5.3.1 of the UDO pertaining to first review neighborhood meetings, which section shall read as follows:

5.3.1. FIRST REVIEW NEIGHBORHOOD MEETING

A. The purpose of the First Review Neighborhood Meeting is to allow residents, businesses and organizations in the area surrounding a proposed development project an early opportunity to learn about the proposed land uses, size, height, and layout of the project, and to give potential applicants an opportunity to hear the residents', business' and organizations' comments and concerns about the potential development after the first review comments have been received.

B. When an application under this UDO is received, notice shall be sent by mail or electronically to those registered neighborhood groups that have boundaries within one mile of the proposed project site**, with the exception of Comprehensive Plan Amendments and Rezone Applications in Subarea C which require written notice to registered neighborhood groups whose boundaries include or are located within two miles of the property affected.**

and to property owners abutting the proposed project site. The notice shall include a project description and a conceptual sketch. City staff shall provide a template for the project description and conceptual sketch.

C. A First Review Neighborhood Meeting is required for those types of applications indicated in Table 146-5.2-1, if:

1. A registered neighborhood group requests a meeting; or

2. The City has received significant comments regarding **the application** as determined by the Planning Director; or

3. The Planning Director determines that the application raises potential controversy or potential unanticipated impacts on the surrounding area.

D. When a First Review Neighborhood Meeting is required pursuant to Subsection C above:

1. The meeting shall be scheduled at least 14 days after the date on which the City sends notice that the application has been received; and

2. Only one meeting is required to be conducted, unless the **applicant fails to comply with the requirements of Subsection E below, or the** Planning Director requires one or more additional meetings; but

3. The applicant may conduct additional meetings beyond those required by the City, at the applicant's option.

E. At any required First Review Neighborhood Meeting, the applicant shall present information about the general land uses proposed to be included in the application, the proposed size, height, and location of any structures to be constructed, and concept-level information about the proposed site including multimodal connectivity, traffic flow, site layout, and building design. Detailed engineering is not required. The material presented shall be adequate to describe the proposed project features listed above without the need for the applicant to have retained project design architects, engineers, or consultants before the meeting is conducted.

F. For any required First Review Neighborhood Meeting, the applicant shall submit proof of notification mailing; a summary of the meeting, including the date, time, and place of the meeting; a list of meeting attendees; any drawings, illustrations, or written information about the project presented at the meeting; topics discussed at the meeting, any areas of neighborhood concern, and any changes to the application to be made by the applicant in response to neighborhood concerns. **Such meeting summary shall be included in any department, Planning and Zoning Commission, or City Council review of the application and shall be available to the public.** Any meeting attendee, or any registered neighborhood organization whose boundaries include the proposed project site may also submit a summary of the meeting, and that summary shall be included in any Department, Planning and Zoning Commission, or City Council review of the application.

G. If a First Review Neighborhood Meeting is required, and subsequent application submittals show that the proposed development is larger, taller, contains significantly reduced multimodal connectivity, or contains significantly different land uses than those presented at the neighborhood meeting, the Planning Director may require that an additional neighborhood meeting be held before the application is reviewed.

Section 2. The City hereby amends Section 5.3.7 of the UDO pertaining to development notice requirements, which section shall read as follows:

5.3.7. NOTICE

Printed, published, mailed, and website notice for different types of development applications submitted under this UDO shall be required as shown in Table 5.2-1 (Summary Table of Procedures), and shall comply with the standards below.

A. Written Notice

1. Notice of the time, date, and place of any public hearing **pertaining to a development application** before the Planning and Zoning Commission or City Council**,** or approval by the Planning Director**,** shall be mailed to the individuals and organizations listed in Subsection 3 below at least 10 calendar days prior to the public hearing **or Director approval**.

2. Notice of the receipt of an application shall be mailed to the individuals and organizations listed in Subsection 3 below within 10 days after receipt of the application.

3. The individuals and organizations to be mailed notice when required by Subsections 1 or 2 above include:

a. The owner of the property affected;

b. All owners of property abutting the property that is the subject of the application; and

c. Each registered neighborhood group whose boundaries include or are located within one mile of the property affected**, with the exception of Comprehensive Plan Amendments and Rezone Applications in Subarea C which require written notice to registered neighborhood groups whose boundaries include or are located within two miles of the property affected.**

Section 3. The City hereby amends Section 5.4.1.E.2 of the UDO, and hereby amends the corresponding flow chart, which shall read as follows:

5.4.1. Plan, Ordinance and Map Changes

E. Master Plan

2. Procedure

a. **All** Subareas ~~A and B~~

i. The Planning Director shall review the application and forward a recommendation to the Planning and Zoning Commission pursuant to all applicable provisions of Section 146-5.3 (Common Procedures).

ii. ii. The Planning and Zoning Commission shall conduct a public hearing on the application and shall make a decision on the application pursuant to all applicable provisions of Section 146-5.3.

~~b. Subarea C The Planning Director shall review the application and make a decision on the Master Plan.~~

Section 4. Pursuant to Section 5-5 of the Charter of the City of Aurora, Colorado, the second publication of this Ordinance shall be by reference, utilizing the ordinance title. Copies of this Ordinance are available at the Office of the City Clerk.

Section 5. All acts, orders, resolutions, ordinances, or parts thereof, in conflict with this Ordinance or with any of the documents hereby approved, are hereby repealed only to the extent of such conflict. This repealer shall not be construed as reviving any resolution, ordinance, or part thereof, heretofore repealed.

INTRODUCED, READ AND ORDERED PUBLISHED this _____ day of _____, 2020.

PASSED AND ORDERED PUBLISHED this _____ day of _____, 2020.

_____

MIKE COFFMAN, Mayor

ATTEST:

_____

SUSAN BARKMAN, Acting City Clerk

APPROVED AS TO FORM:

_____

DANIEL L. MONEY, Senior Assistant City Attorney

Planning and Economic Development Policy Committee
Agenda Item Commentary

Item Title: Presentation and Discussion Regarding the Lowry Landfill Superfund Site
Item Initiator: Karen Hancock, Principal Planner
Staff Source:
Deputy City Manager Signature:
Outside Speaker: MPT Johnston and Linda Kiefer, EPA
Council Goal: 4.0: Create a superior quality of life for residents making the city a desirable place to live and work--2012: 4.0--Create a superior quality of life for residents making the city a desirable place to live and wor

ACTIONS(S) PROPOSED ***(Check all appropriate actions)***

☐ Approve Item and Move Forward to Study Session

☐ Approve Item and Move Forward to Regular Meeting

☒ Information Only

HISTORY ***(Dates reviewed by City council, Policy Committees, Boards and Commissions, or Staff. Summarize pertinent comments. ATTACH MINUTES OF COUNCIL MEETINGS, POLICY COMMITTEES AND BOARDS AND COMMISSIONS.)***

Mayor Pro Tem Johnston requested a discussion about Lowry Landfill Superfund Site at the September PED meeting.

ITEM SUMMARY ***(Brief description of item, discussion, key points, recommendations, etc.)***

Mayor Pro Tem Johnston and Linda Kiefer, EPA, will provide a presentation and initiate a discussion.

QUESTIONS FOR Committee

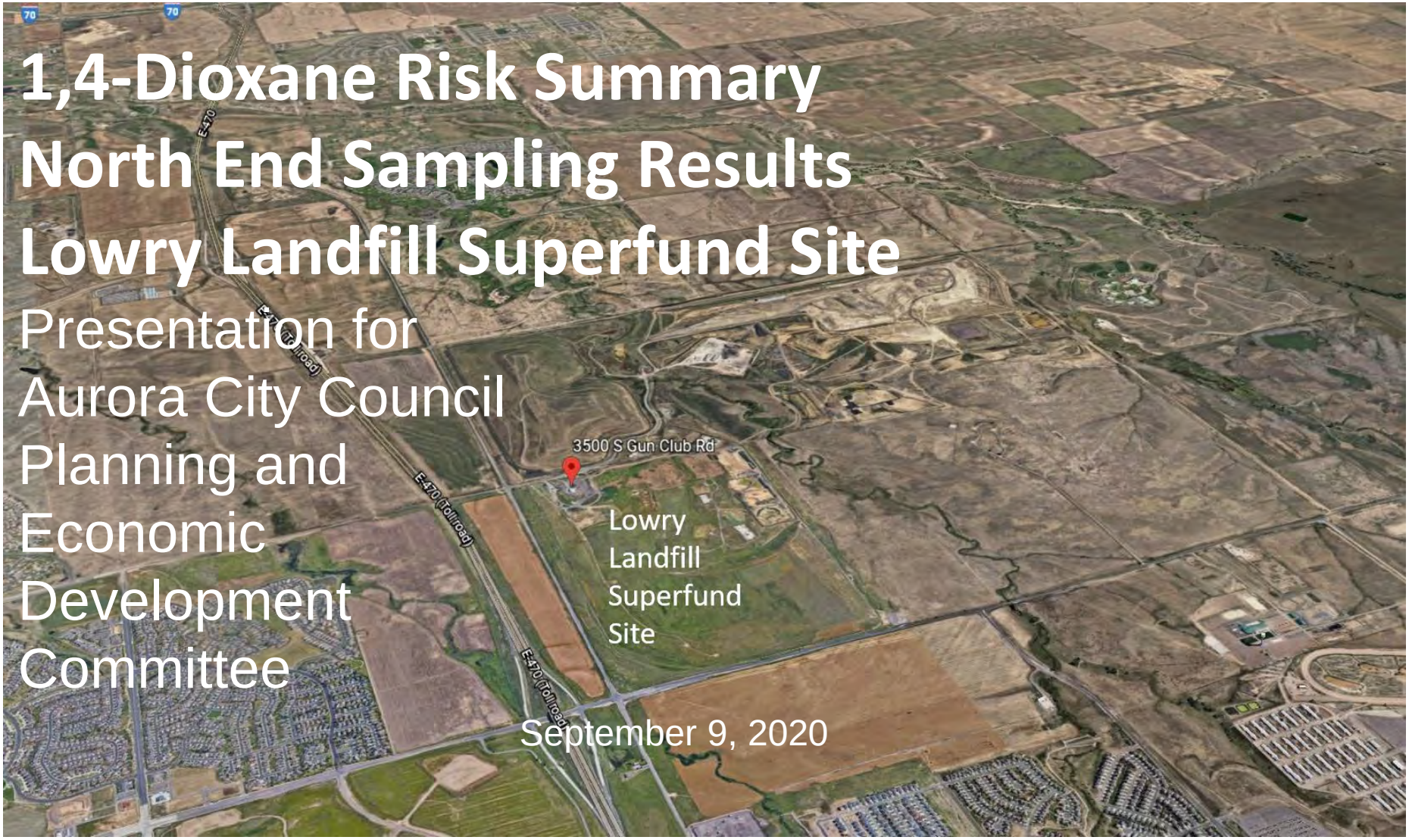
This item is for information only.

EXHIBITS ATTACHED:

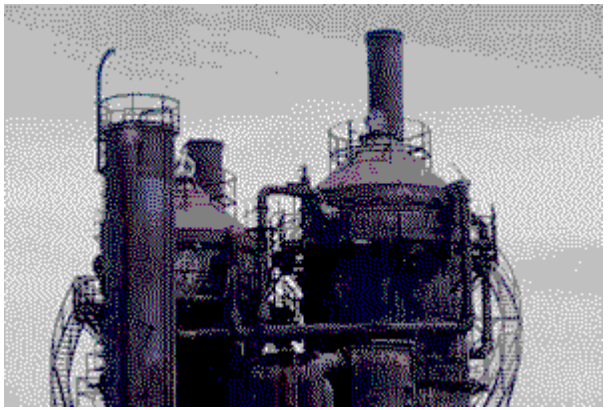
Risk Assessment PPT for Lowry Landfill – Aurora 9-2-2020
NE 1 4 Dioxane Risk Assessment – 9-2-2020

1,4-Dioxane Risk Summary
North End Sampling Results
Lowry Landfill Superfund Site

Presentation for
Aurora City Council
Planning and
Economic
Development
Committee



September 9, 2020



Why Risk Assessment?

U.S. Environmental Protection Agency

Consistent process for evaluating & documenting public health & ecological threats.

Risk Assessment

A Risk Assessment **IS NOT**:

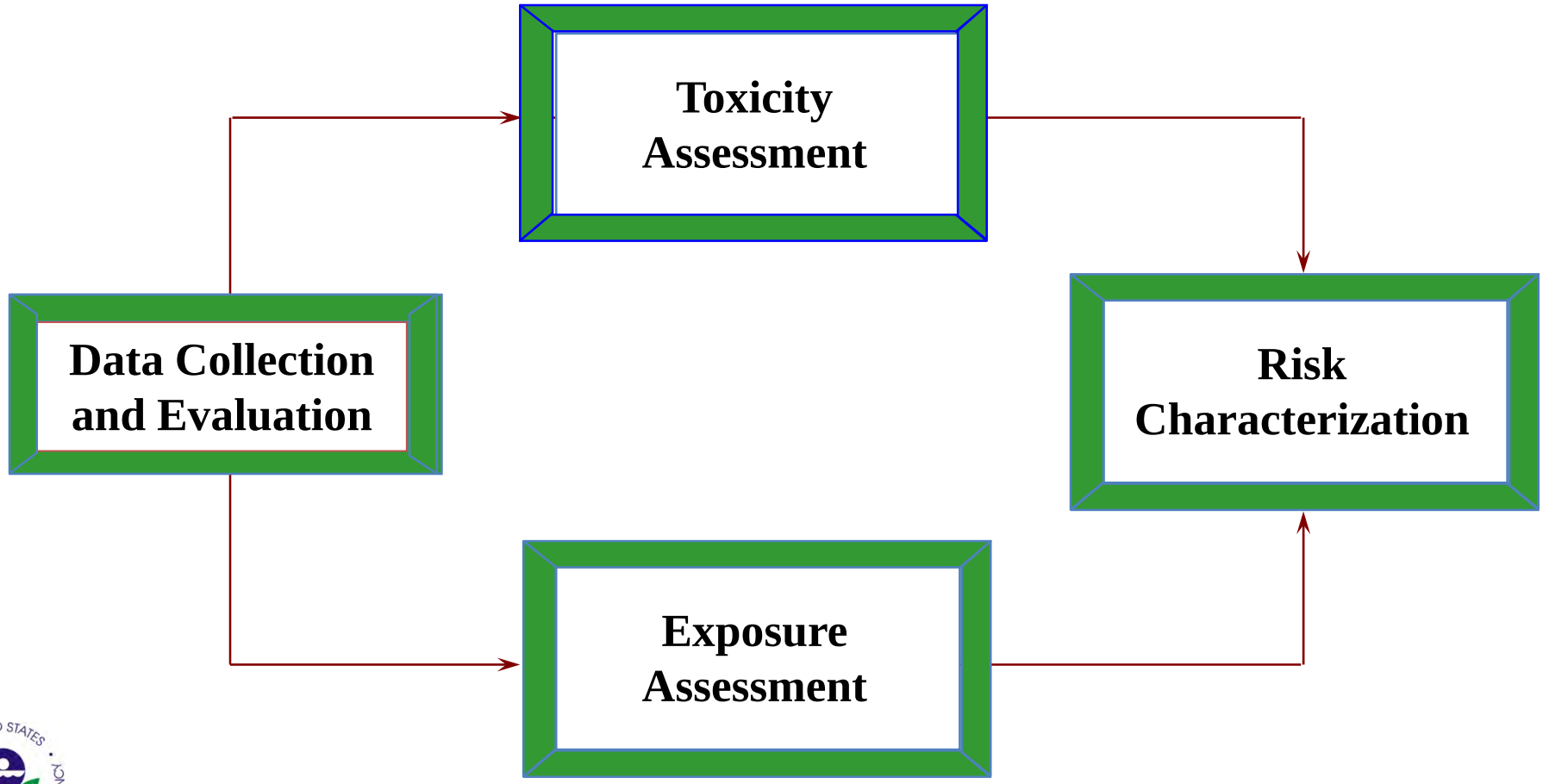
- A study of health conditions you may already have
- A medical examination
- A re-creation of ways you might have been exposed to contaminants in the past from industrial/environmental exposures to current environmental exposures
- A study that will tell you directly whether any existing health problems you have were caused by past contact you may have had with chemicals associated with the Lowry Landfill.

Risk Assessment

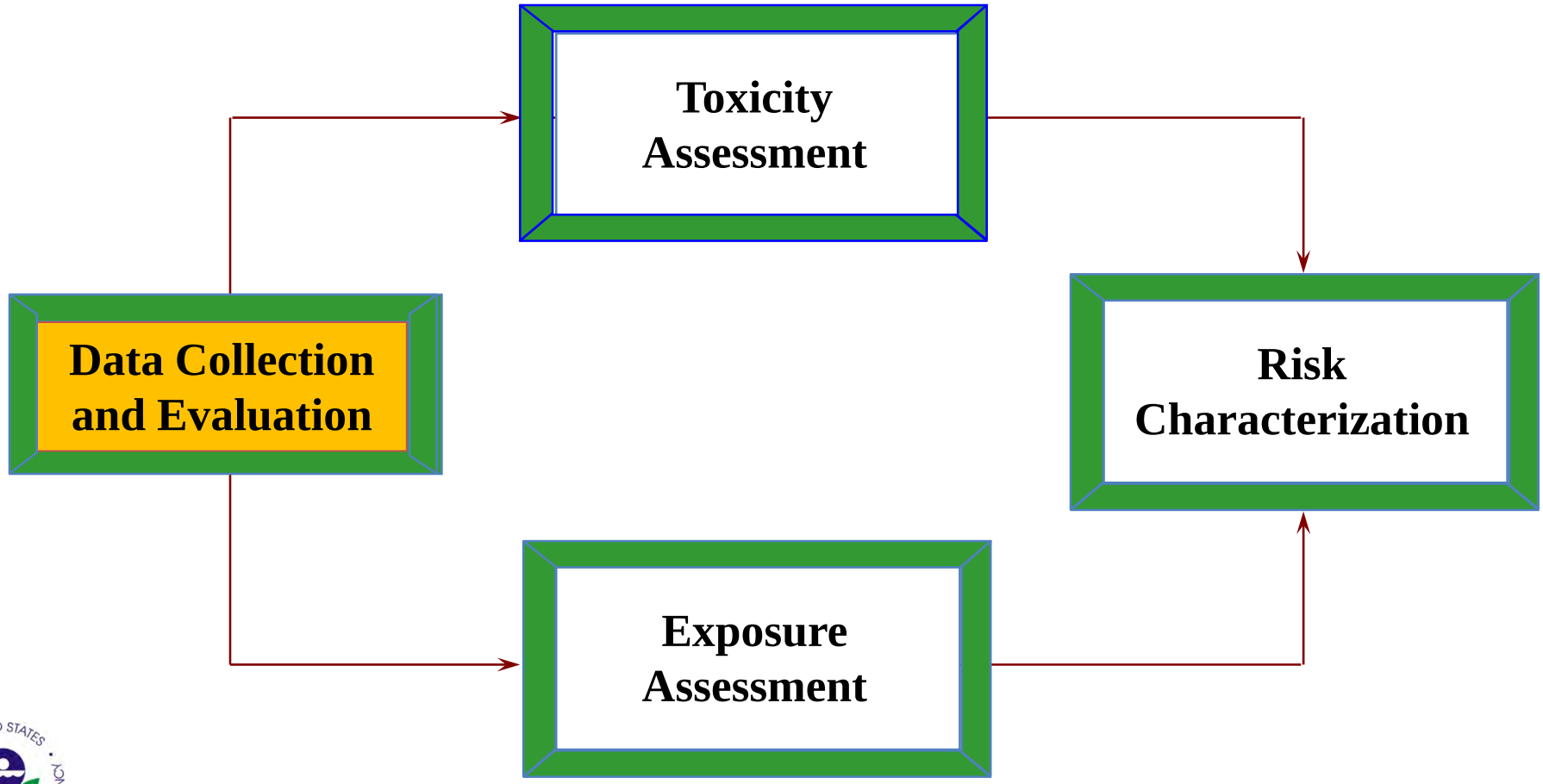
A Risk Assessment **IS**:

- A comprehensive study of the various ways people might come in contact with 1,4-dioxane
- A calculation of how likely it is that human health effects might occur for current/future receptors because of the 1,4-dioxane in your neighborhood – The Risk.
- A way to identify potential health risks
- A tool to assist EPA in protecting your health
- A way for EPA to determine whether shallow groundwater needs some sort of response action

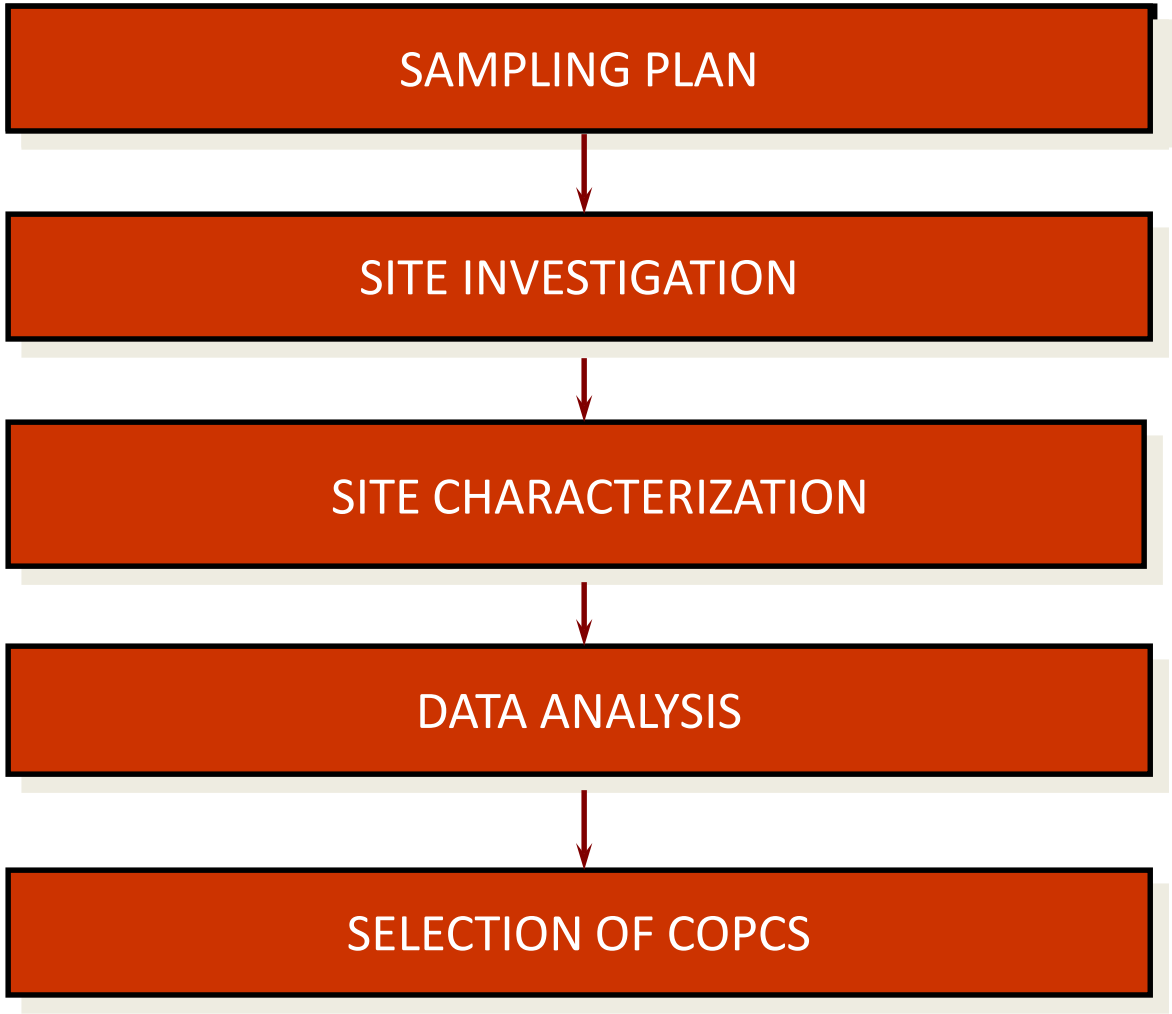
Four Steps of Risk Assessment:



Four Steps of Risk Assessment:



Data Collection and Evaluation



Site Characterization

- Sampling: soil, groundwater, sediment, surface water, soil gas, air, biota
  - Surface soils
  - Groundwater samples
  - Surface water samples

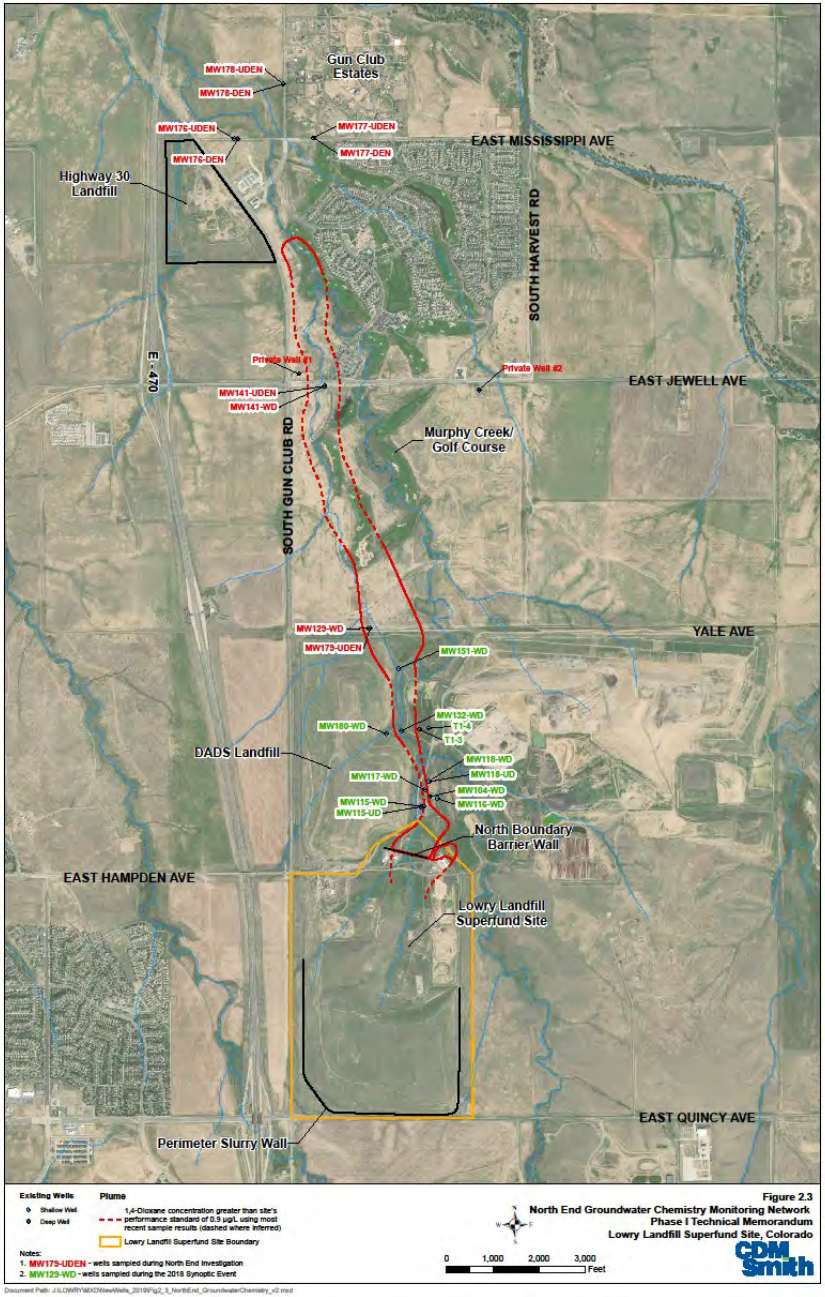
Chemical Contaminants

Analyzed for Volatile Organic Compounds (VOCs), Nitrate, and major anions and cations [USEPA 8260b, 8260-SIM, 1685, 6010B, 300-OA, SM-2320B]

- 1,4-Dioxane in shallow groundwater
- 1,4-Dioxane in surface water
- VOCs

Maps with Sampling Locations and Data for Groundwater and Surface Water in the area north of Yale Avenue

North End Groundwater Chemistry Monitoring Network

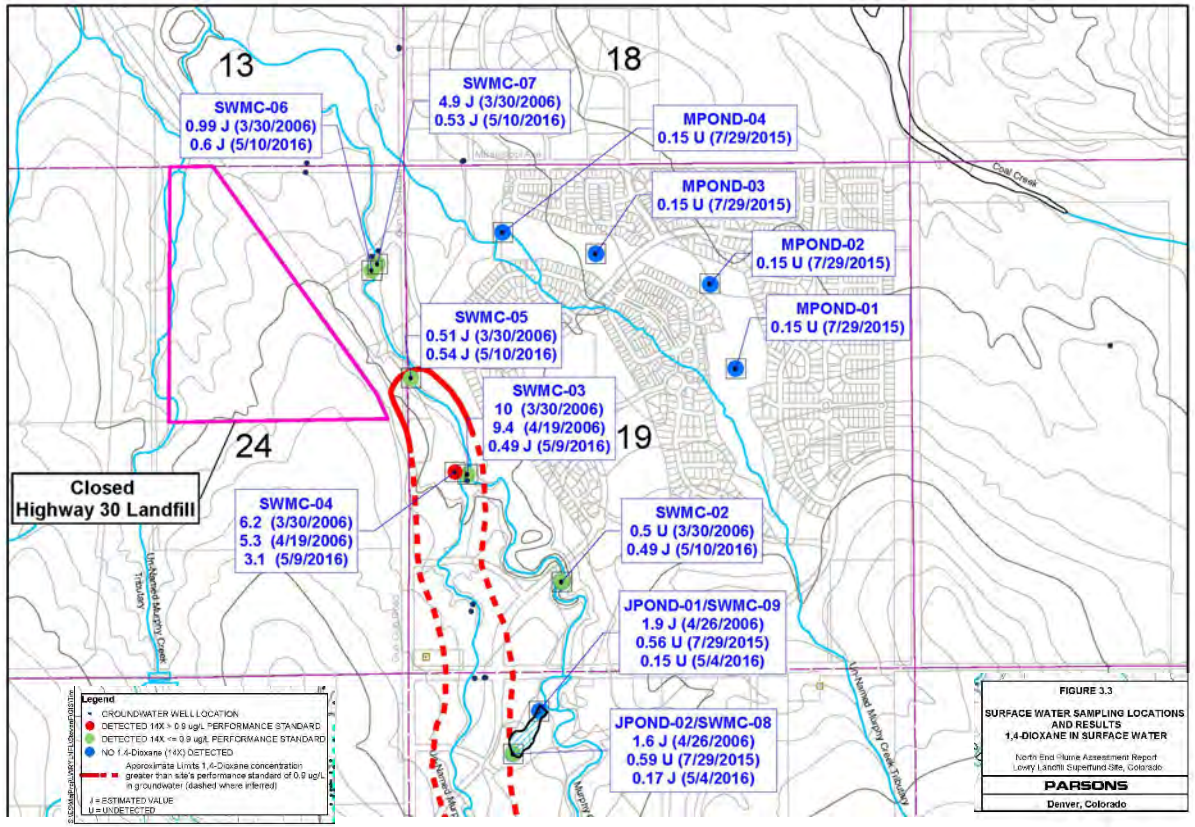


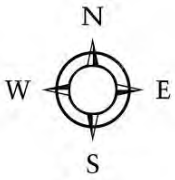
Groundwater in Shallow Aquifer

Monitoring Well MW129-WD

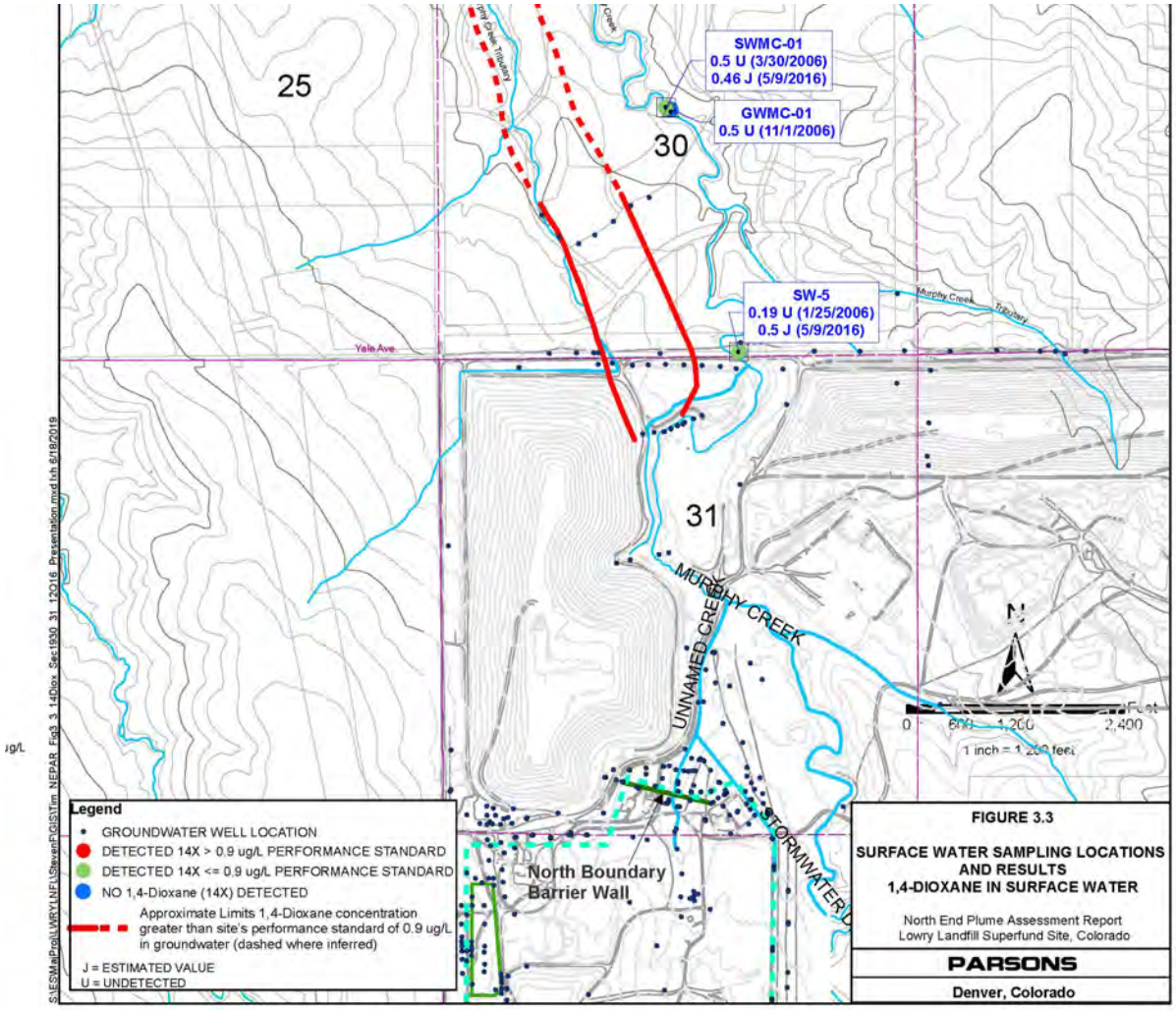
7.4 µg/L of 1,4-dioxane, which is the maximum concentration of 1,4-dioxane detected shallow aquifer in the North End area during the 2018/2019 sampling event

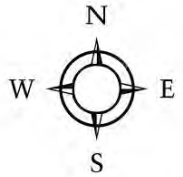
Map of Surface Water Sampling Locations – Part 1 of 2





Map of Surface Water Sampling Locations – Part 2 of 2





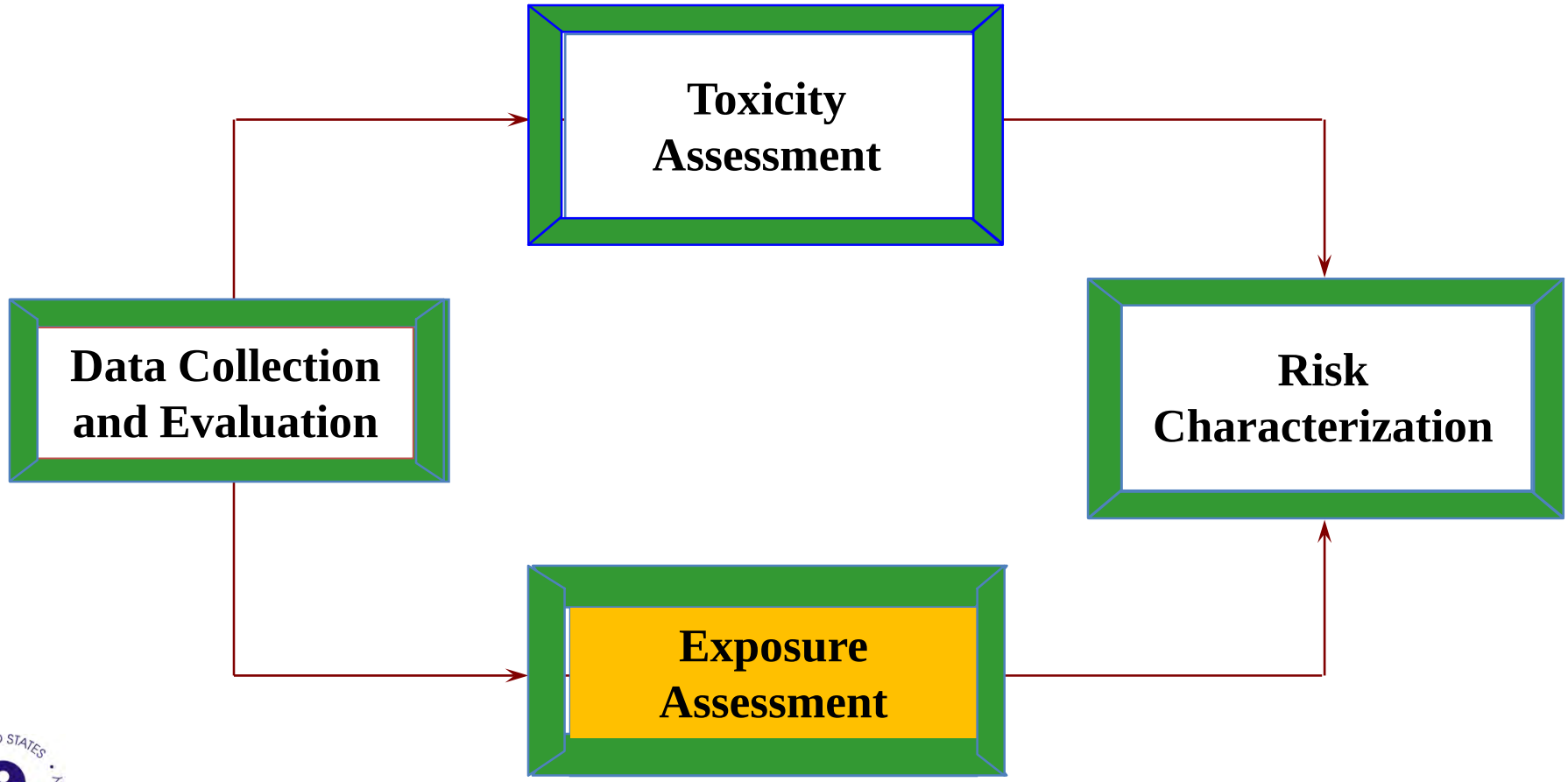
Surface Water Data

	Sampling Locations and Concentrations of 1,4-dioxane in Surface Water in µg/l (parts per billion)								
Date of Sampling	**SW-5**	**GWMC-01**	**SWMC-01**	**SWMC-02**	**SWMC-03**	**SWMC-04**	**SWMC-05**	**SWMC-06**	**SWMC-07**
1/25/2006	ND(0.19 U)								
3/30/2006			ND(0.5 U)	ND(0.5 U)	10	6.2	0.51 J	0.99 J	4.9 J
4/19/2006					9.4	5.3			
11/1/2006		ND(0.5 U)							
5/9/2016	0.5 J		0.46 J		0.49 J	3.1			
5/10/2016				0.49 J			0.54 J	0.6 J	0.53 J

	Sampling Locations and Concentrations of 1,4-dioxane in Surface Water in µg/l (parts per billion)							
Date of Sampling	**JPOND-01/SWMC-09**	**JPOND-02/SWMC-08**		**Date of Sampling**	**MPOND-01**	**MPOND-02**	**MPOND-03**	**MPOND-04**
4/26/2006	1.9 J	1.6 J						
7/29/2015	ND(0.56 U)	ND(0.59 U)		7/29/2015	ND(0.15 U)	ND(0.15 U)	ND(0.15 U)	ND(0.15 U)
5/4/2016	ND(0.15 U)	0.17 J						

U indicates 1,4-dioxane was not detected (ND); J indicates the detection was estimated

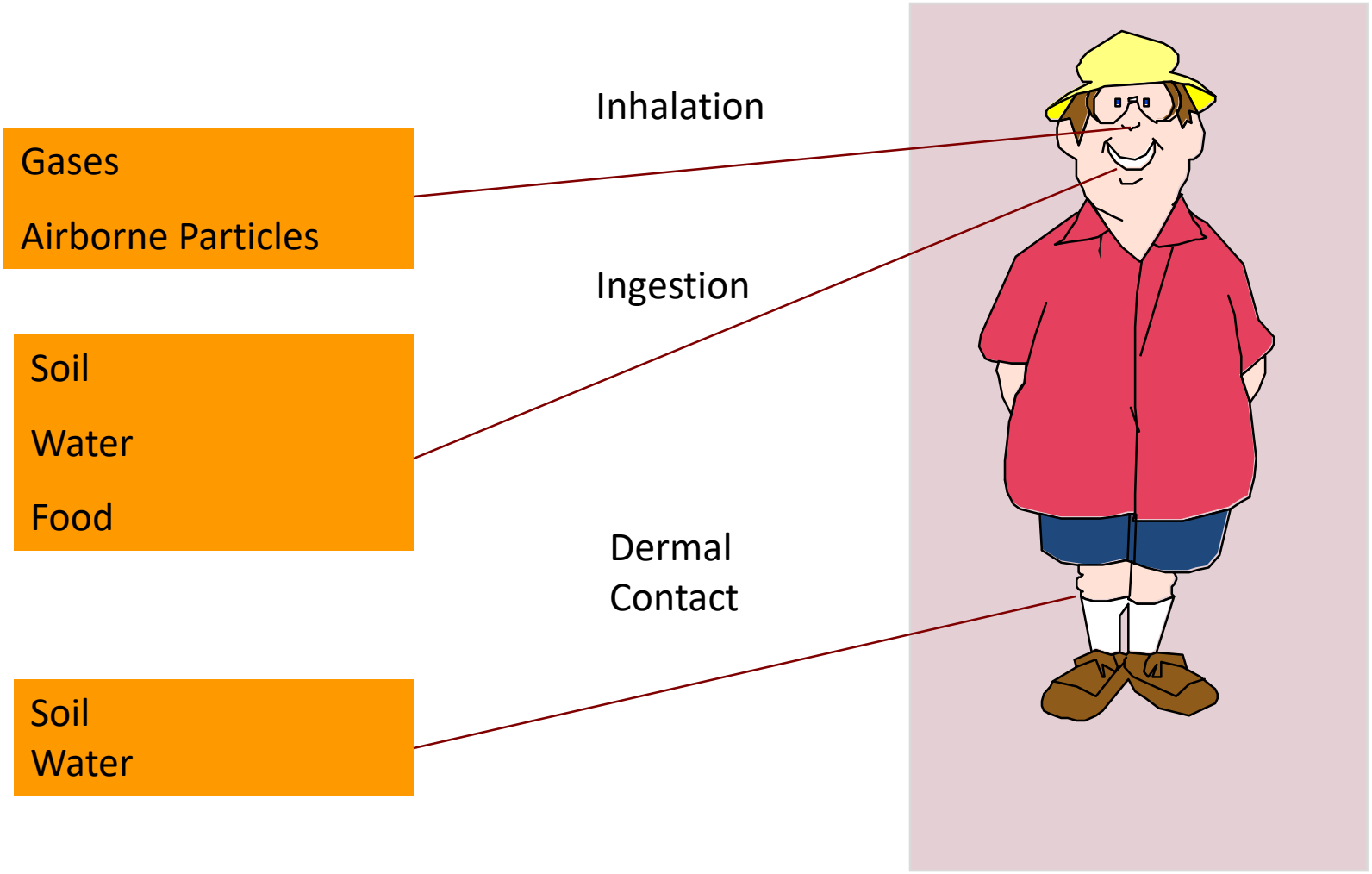
Four Steps of Risk Assessment:



A Completed Exposure Pathway

- A source & mechanism of chemical release
- A transport medium
- A point of human contact/exposure point
- An exposure route at the contact point

What Is an Exposure Route?



How Do We Calculate Chemical Intake?

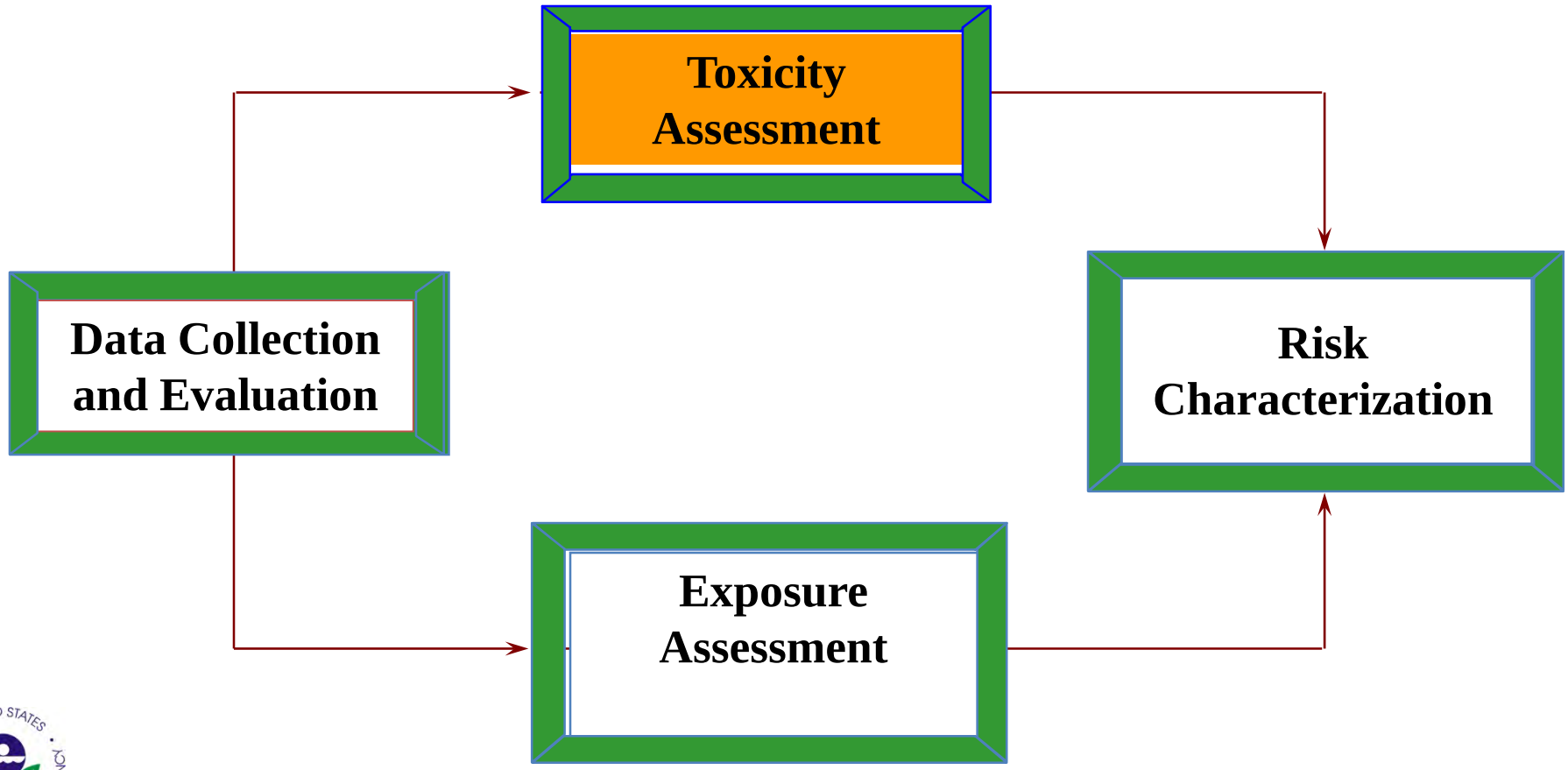
Concentration in soil, water, or air X **Exposure Parameters: Specific to the receptor and exposure scenario**

$$Dose = \frac{Chemical\ Concentration \times Intake\ Rate \times Exposure\ Frequency \times Exposure\ Duration}{Body\ Weight \times Averaging\ Time}$$

Estimating Exposure

- Utilize concentration of contaminant in media (micrograms per liter) and exposure parameters to calculate dose for each chemical.
- Exposure point concentrations do not change with population
- Exposure point concentrations:
  - Resident, groundwater: 2.9 µg/L
  - Groundskeeper, surface water: 1.9 µg/L
  - Golfer, surface water: 1.9 µg/L
  - Adolescent, surface water: 1.9 µg/L

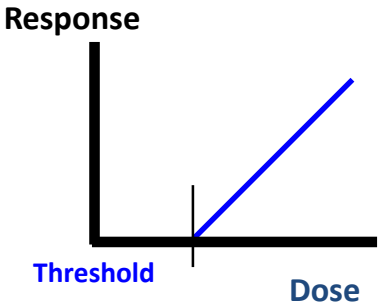
Four Steps of Risk Assessment:



Some Basic Toxicological Concepts

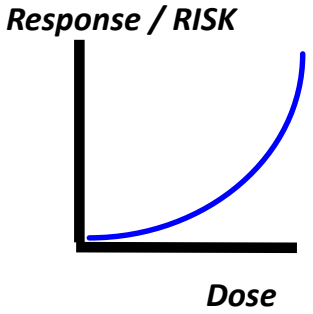
- Two categories of toxic chemicals:
- Noncarcinogenic Chemicals
  - Believed to act via a “threshold” mechanism of action. This means that there is a level of exposure (i.e., a threshold) below which it is unlikely to have an effect.
- Carcinogenic Chemicals
  - Believed to act via a “nonthreshold” mechanism of action. There is a risk associated with any exposure level.

Toxicology Dose-Response: Threshold Effects



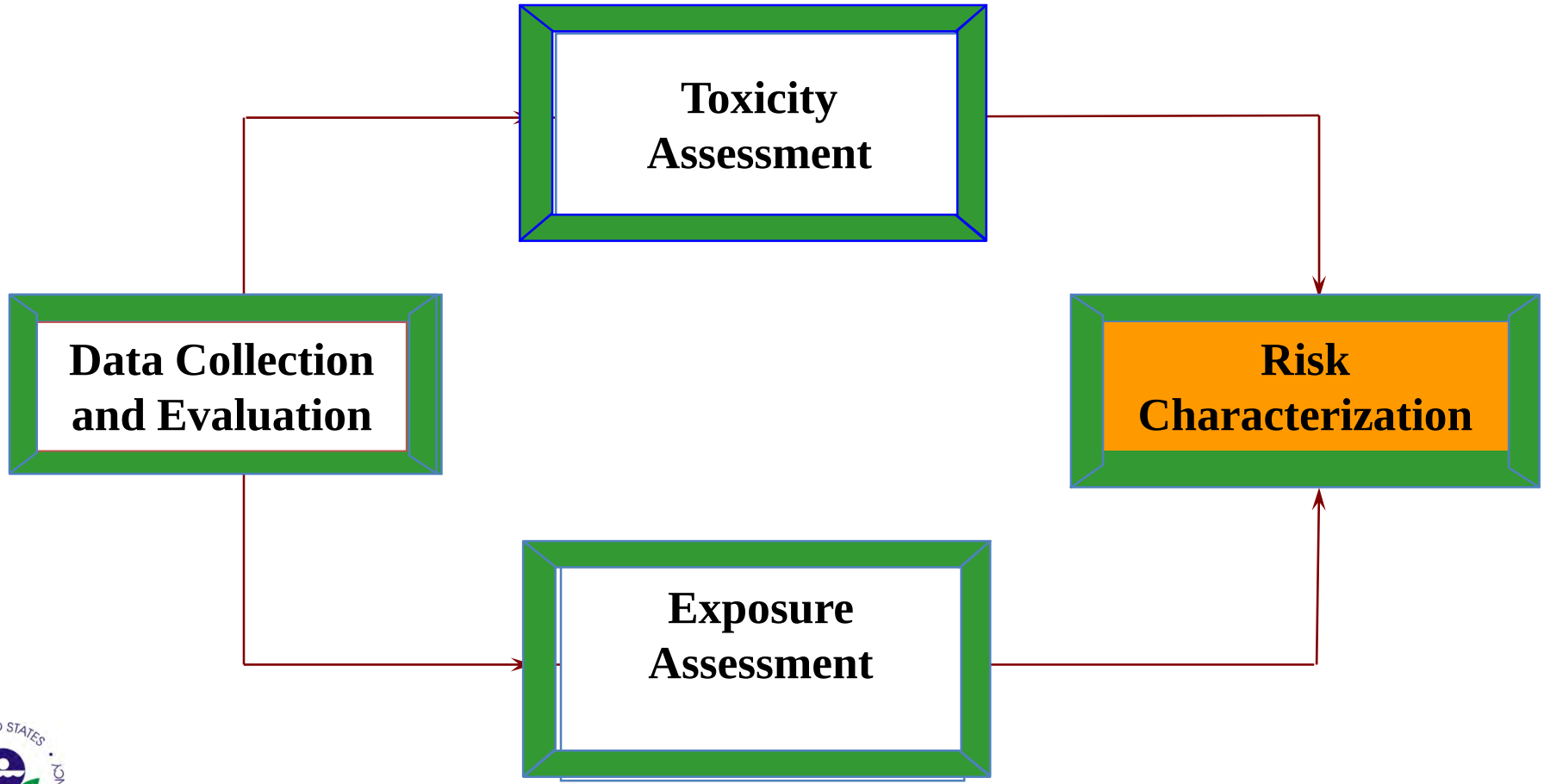
- **X-axis is dose:** How much exposure?
  - Concentration of chemical (ug/l).
- **Y-axis is response:** Incidence of effects.
  - Number of individuals responding at each dose
- **Threshold dose for toxicity observed.**
- **Use uncertainty-factors to establish comparable dose in humans.**

Toxicology
Dose-Response:
Non- Threshold Effects for Chemicals



- ***X-axis is dose:*** *How much exposure?*
  - *Concentration of chemical (ug/l).*
- ***Y-axis is the tumor incidence:*** *Incidence of tumors (OR RISK).*
  - *Percent of population with tumor.*
- ***No-threshold for toxicity is assumed.***
- ***Do not use uncertainty factors to establish comparable dose in humans.***

Four Steps of Risk Assessment:

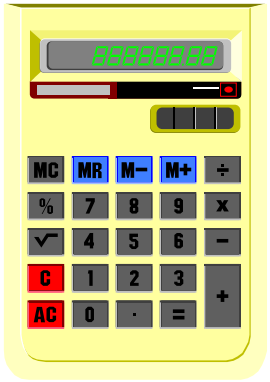


Hazard Index for Non-Carcinogens (Threshold Toxicants)

- Goal: Calculation of a Hazard Quotient

FROM SITE

Concentration x **Calculated Contact** = **Calculated Dose** / **Acceptable Dose** < 1



FROM TOXICOLOGY

Risk Characterization for Carcinogens

- *Goal: Calculation of Potential Cancer Risk*

FROM TOXICOLOGY

Cancer Slope

x

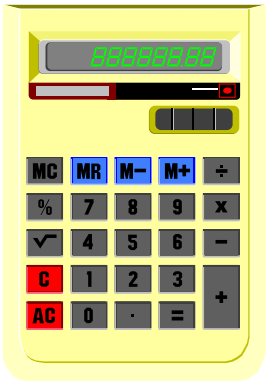
FROM SITE

Calculated Exposure

=

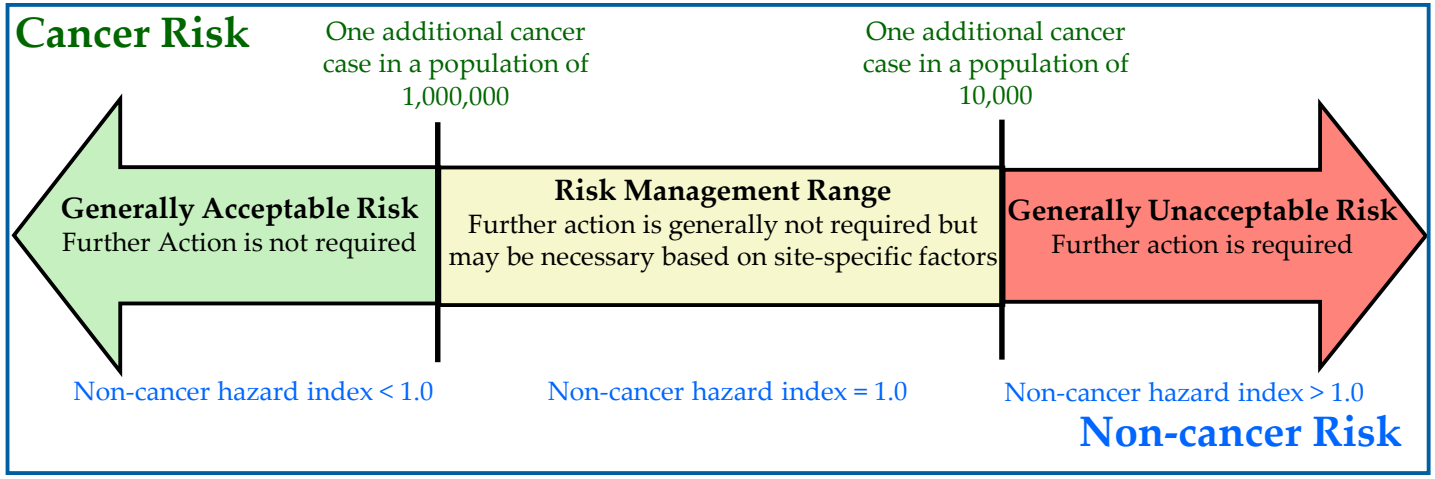
Calculated Risk

Acceptable Risk



REGULATORY AGENCY

Risk Perspective



Risk for the North Boundary Plume

- Future Resident

Ingestion	Inhalation	Dermal Contact	Total Cancer Risk
4×10^{-6}	2×10^{-6}	1×10^{-8}	6×10^{-6}
4 in 1,000,000	2 in 1,000,000	1 in 100,000,000	6 in 1,000,000

Hazard quotient = 0.03

Acceptable risk range is 1×10^{-6} to 1×10^{-4}; Hazard <1

Risk for the North Boundary Plume

- Groundskeeper

Ingestion	Dermal Contact	Total Cancer Risk
4×10^{-7}	1×10^{-9}	4×10^{-7}
4 in 10,000,000	1 in 1,000,000,000	4 in 10,000,000

Hazard quotient = 0.0003

Acceptable risk range is 1×10^{-6} to 1×10^{-4}; Hazard <1

Risk for the North Boundary Plume

- Recreational User (Adult Golfer)

Ingestion	Dermal Contact	Total Cancer Risk
5×10^{-9}	2×10^{-11}	5×10^{-9}
5 in 1,000,000,000	2 in 100,000,000,000	5 in 1,000,000,000

Hazard quotient = 0.0005

Acceptable risk range is 1×10^{-6} to 1×10^{-4}; Hazard <1

Risk for the North Boundary Plume

- Adolescent:

Ingestion	Dermal Contact	Total Cancer Risk
9×10^{-9}	6×10^{-10}	1×10^{-8}
9 in 1,000,000,000	6 in 10,000,000,000	1 in 100,000,000

Hazard quotient = 0.00002

Acceptable risk range is 1×10^{-6} to 1×10^{-4}; Hazard <1

Summary

- Estimate of risks for exposure to 1,4-Dioxane
  - in Groundwater
  - in Surface Water
- All estimated risks are

  within the acceptable risk range,

  defined in the National Contingency Plan

  as one in one million [1×10^{-6}] to

  one in ten thousand [1×10^{-4}]

Points to Remember

- Risk Assessment- Assesses risk using science and science policy assumptions
- In order for a risk to approach an unacceptable level, the groundwater concentrations would have to be greater than 46 ug/L (parts per billion)
- Copies of the risk assessment and more information about Lowry Landfill can be found at www.epa.gov/superfund/lowry-landfill

1,4-Dioxane Risk Summary
North End Sampling Results
Lowry Landfill Superfund Site

The USEPA uses standard risk assessment methodology for all sites to provide a consistent, scientifically based process to evaluate potential threats to public health and the environment. A risk assessment provides the basis for: 1) determining the need for action; 2) identification of contaminant levels that are protective of public health; 3) comparison of remedial alternatives; and 4) evaluation and documentation of public health threats. Under the National Contingency Plan [NCP, 40 CFR §300], an acceptable risk range is defined as one additional cancer case associated with the exposure to contamination in a population of one million (typically expressed as 1 in 1,000,000 or 1×10^{-6}) to one-in-ten-thousand (1 in 10,000, 1×10^{-4}). Risks greater than one-in-ten thousand (1 in 10,000, 1×10^{-4}) generally require some form of action to mitigate those risks. Estimated cancer risks of 1×10^{-6} to 1×10^{-4} are within the risk management range and, depending on the circumstances, do not require action.

The USEPA risk assessments traditionally evaluate two exposure scenarios: an average exposure scenario (AVG) and a reasonable maximum exposure scenario (RME). The AVG scenario uses the average exposure concentration for each media and the RME scenario uses the 95th percentile Upper Confidence Limit (UCL) on the mean exposure value to represent exposure point concentrations. The RME scenario is intended to represent high-end exposures that are reasonably expected to occur at a site.

Lowry Landfill Superfund Site evaluations indicate that the community or environmental receptors are not exposed to significant concentrations of 1,4-dioxane in groundwater north of the site. However, the USEPA assessed the potential risks to human health and the environment to provide context for the levels detected. Intermittent exposure to surface water occurs in Murphy Creek and the ponds in and around Murphy Creek Golf Course. For this evaluation, the USEPA used highly conservative exposure scenarios to illustrate the potential risks associated with the observed 1,4-dioxane concentrations in surface water and groundwater. The risk evaluation focused on cancer risk because this is the predominant health hazard from exposure to 1,4-dioxane; however, the noncancer hazard quotient was also calculated to evaluate other effects of exposure, such as damage to the liver, kidneys, or nervous system. The USEPA considers a hazard quotient less than 1 acceptable. This exercise demonstrated there is no significant exposure/risk from the concentrations detected, even under these highly conservative, unlikely, and hypothetical exposure scenarios. The exposure scenarios and calculated cancer risks and noncancer hazards associated with 1,4-dioxane in the North End Area are described below. Uncertainties associated with these calculations are described after the presentation of potential risks from groundwater and surface water.

Groundwater

The North End groundwater plume contains low levels of the organic compound 1,4-dioxane. The highest concentration of 1,4-dioxane north of Yale Avenue in the most recent sampling effort was 7.4 micrograms per liter (µg/L) at monitoring well MW129-WD in 2019. The average 1,4-dioxane concentration was calculated to be 1.4 µg/L and the 95th percentile UCL was 2.9 µg/L. The groundwater samples used in the risk evaluation were collected from the shallow,

upper aquifer (weathered Denver formation), which is not used as a drinking water source. Groundwater samples from deeper wells did not contain detectable concentrations of 1,4-dioxane.

Although the shallow aquifer is not a source of drinking water, if a future hypothetical resident utilized the shallow aquifer for drinking water at an assumed concentration of 2.9 µg/L (the RME exposure scenario), they might be exposed to an increased theoretical excess cancer risk of 6×10^{-6} – meaning 6 people out of a total population of 1,000,000 exposed in this scenario might be expected to develop cancer related to 1,4-dioxane exposure from the shallow groundwater. This calculation was based on conservative assumptions. The hypothetical future residents considered in the evaluation included a child (age 0 to 6 years, assumed to weigh 15 kg, consuming 0.78 liters per day [L/day], showering, and exposed to contaminated groundwater 350 to 365 days a year for 6 years) and an adult (age 6 to 26 years, weighing 80 kg, consuming 2.5 L/day, showering, and exposed to contaminated groundwater 350 to 365 days a year for 20 years). Using the Risk Assessment Information System (RAIS, https://rais.ornl.gov/cgi-bin/prg/RISK_search), the increased cancer risk was estimated for potential exposure pathways including ingestion, inhalation, and dermal exposure, as shown in the table below. The noncancer hazard quotient was calculated to be 0.03.

Table 1. Risk Assessment Summary for Hypothetical Future Residents

Ingestion	Inhalation	Dermal Contact	Total Hypothetical Cancer Risk
4×10^{-6} (4 in 1,000,000)	2×10^{-6} (2 in 1,000,000)	1×10^{-8} (1 in 100,000,000)	**6×10^{-6} (6 in 1,000,000)**

The total cancer risk for hypothetical future residents is at the low end of the USEPA's risk management range and the hazard quotient is below the acceptable limit of 1, indicating that action is not required. In addition, exposure to 1,4-dioxane in groundwater is not occurring and is not expected to occur in the future. The City of Aurora does not permit installation of groundwater wells in the shallow aquifer where 1,4-dioxane has been detected and 1,4-dioxane has not been detected in deeper groundwater monitoring wells in the North End Area.

Surface Water

The surface water in Murphy Creek and ponds near and adjacent to the golf course contain low levels of 1,4-dioxane. The concentrations of 1,4-dioxane detected in surface water are presented on Figure 3.3 of the North End Investigation report. The maximum concentration of 1,4-dioxane detected in surface water was 10 µg/L at sampling location SWMC-03 in 2006; however, the highest concentration detected in recent samples was 3.1 µg/L at sampling location SWMC-04 in 2016. Using the recent surface water data collected in 2016, the average concentration of 1,4-dioxane in surface water from Murphy Creek was calculated to be 0.7 µg/L and the 95th percentile UCL on the mean surface water concentration was 1.9 µg/L. In the most recent sampling event, 1,4-dioxane was either not detected in the golf course ponds or was detected at a concentration just above the method detection limit (JPond-02/SWMC-08, 0.17 J [estimated] on May 4, 2016). Therefore, the human exposure point values used for this risk evaluation were

based on the surface water concentrations from Murphy Creek. Although risk calculations were conducted to evaluate the potential risks from exposure to 1,4-dioxane in surface water, the USEPA has no indication that significant human exposure to this water is occurring or that the 1,4-dioxane levels in these samples reflect affects from Lowry Landfill Superfund Site.

Of the potential workers in the North End Area, the golf course groundskeeper has the highest potential for exposure to surface water bodies and irrigation water from the on-site reclaimed water pond. The risk assessment assumes the groundskeeper is an adult with a body weight of 80 kg and is exposed to the surface water 252 days per year (6 days a week for 42 weeks) for 25 years. It is assumed the groundskeeper would be exposed to the contaminated surface water with a 1,4-dioxane concentration of 1.9 µg/L for 6 hours per day and would ingest 0.11 liter of surface water per hour. The skin surface area exposed would include 813 square centimeters (cm^2) of the hands, forearms, feet, and lower legs. Using the RAIS and the calculated 95th percentile UCL concentration (1.9 µg/L), the potential risks were estimated for incidental ingestion of and dermal contact with surface water, as shown below. The total cancer risk for the golf course groundskeeper is below the USEPA's risk management range and the noncancer hazard quotient was calculated to be 0.0003, which is well below the acceptable noncancer risk of 1, indicating that no action is necessary to address potential risks to groundskeepers from 1,4-dioxane in surface water.

Table 2. Risk Assessment Summary for Golf Course Groundskeeper

Ingestion	Dermal Contact	Total Cancer Risk
4×10^{-7} (4 in 10,000,000)	1×10^{-9} (1 in 1,000,000,000)	**4×10^{-7}** **(4 in 10,000,000)**

A recreational visitor (e.g., a golfer) may be exposed to surface water containing 1.9 µg/L of 1,4-dioxane through incidental ingestion or dermal contact while playing golf. Because the golf course is open for approximately half a year, the risk evaluation assumes that an 80 kg golfer visits the course 45 times a year, plays the course in 6 hours, retrieves golf balls from the surface water in Murphy Creek exposing their hands, forearms, feet, and lower legs to the surface water for one hour (total skin surface area of 813 cm^2), and incidentally ingests some of the surface water (0.11 L each hour) each visit to the golf course for a total duration of 10 years. Based on these conservative assumptions, the golfer's increased cancer risk is below the USEPA's risk management range, as shown on the table below. The noncancer hazard quotient was calculated to be 0.0005, which is below the acceptable value of 1.

Table 3. Risk Assessment Summary for Recreational User (Adult Golfer)

Ingestion	Dermal Contact	Total Cancer Risk
5×10^{-9} (5 in 1,000,000,000)	2×10^{-11} (2 in 100,000,000,000)	**5×10^{-9}** **(5 in 1,000,000,000)**

If an adolescent recreational user were exposed to 1.9 µg/L of 1,4 dioxane in the surface water bodies near the golf course, the estimated cancer risks are slightly lower than for the adult golfer described above. This risk exposure scenario assumes that an adolescent (age 6 to16 years) weighing 44.3 kg would be playing in the surface water 45 days per year over a period of 10 years. Each time the individual plays in the water, it is assumed they will incidentally ingest small amounts of surface water (0.12 L/hr) and also will be exposed through the skin (assuming a skin surface area of 13,350 cm^2). The estimated cancer risks for an adolescent recreational user through incidental ingestion and dermal contact are shown below. The noncancer hazard quotient was calculated to be 0.00002. The total hypothetical cancer risk and noncancer hazard are below the USEPA's acceptable risk management levels.

Table 4. Risk Assessment Summary for Recreational User (Adolescent)

Ingestion	Dermal Contact	Total Cancer Risk
9×10^{-9} (9 in 1,000,000,000)	6×10^{-10} (6 in 10,000,000,000)	**1×10^{-8}** **(1 in 100,000,000)**

Ecological Risk

The aquatic toxicity of 1,4-dioxane has been estimated at 201 milligrams per liter (mg/L) for algae to 666 mg/L for fish based on the EPA's Ecological Structure Activity Relationships estimation program (EPA 2019). In the United States, only Michigan has a chronic water quality value for mammals, set at 22 mg/L (2,200 µg/L) (Michigan Department of Environment, Great Lakes, and Energy, 2019). In contrast, the highest concentration of 1,4-dioxane detected in surface water in the North End Area was 10 µg/L (that is, 0.01 mg/L) at SWMC-03 in 2006. Therefore, ecological risk is not expected from surface water exposures in the North End Area.

Risk Assessment Uncertainty

This section describes uncertainties in the exposure assumptions and calculations that may impact the risk assessment conclusions.

Reasonable Maximum Versus Maximum Exposure Scenarios

As mentioned previously, standard USEPA risk assessment methodology uses RME assumptions to calculate potential risks to health and the environment. Under the RME scenario, the risk to potential receptors is calculated using the 95th percentile UCL to represent the high-end concentration receptors are reasonably expected to be exposed to at a site. However, risks to potential receptors may be higher if the maximum detected concentration is used in the risk evaluation, rather than the 95th percentile UCL. For example, if a future, hypothetical resident utilized the shallow aquifer for drinking water and installed a well in the vicinity of MW129-WD, they may be exposed to 7.4 µg/L of 1,4-dioxane, which is the maximum concentration of 1,4-dioxane detected in the North End Area during the 2018/2019 sampling event. The estimated cancer risk to a hypothetical future resident would increase if the resident was exposed to the maximum concentration of 1,4-dioxane, rather than the 95th percentile UCL

concentration (Table 5). However, the probability that a future user would place a drinking water well in the area of maximum plume concentration is very low (as this well is on the northern boundary of the Denver Arapahoe Disposal Site along Yale) which is why the USEPA methodology uses the 95th percentile UCL on the mean contaminant concentration to estimate a high-end exposure.

Table 5. Total Cancer Risk for Hypothetical Future Residents for Varying Exposure Scenarios

Reasonable Maximum Exposure Scenario		**Maximum Concentration Scenario**	
95th UCL Concentration of 1,4-Dioxane in Groundwater	Total Cancer Risk	Maximum Concentration of 1,4-Dioxane in Groundwater	Total Cancer Risk
2.9 µg/L	6×10^{-6} (6 in 1,000,000)	7.4 µg/L	2×10^{-5} (2 in 100,000)

Similarly, if the maximum detected concentration of 1,4-dioxane in surface water (10 µg/L) was used to estimate risk for the groundskeeper, golfer, and adolescent recreational user, the cancer risks would increase. However, these risks are still at the low end or below the acceptable risk range, as shown on the table below.

Table 6. Total Cancer Risks with Maximum Concentration of 1,4-Dioxane in Surface Water

Groundskeeper	**Adult Golfer**	**Adolescent Recreational User**
2×10^{-6} (2 in 1,000,000)	3×10^{-8} (3 in 100,000,000)	5×10^{-8} (5 in 100,000,000)

The risk assessment process uses standardized exposure factors to represent potential human exposure to contaminants in soil, groundwater, surface water, and vapor. The exposure assessment includes assumptions for average body weight, ingestion rates of water and soil, inhalation rates, body surface areas, and frequency and duration of exposure, which are based on investigations of actual human exposure reported in scientific literature. As such, individuals vary their behavior and the assumptions used for exposure assessment may under- or over-estimate an individual's actual exposure.

Variations in Data

The USEPA acknowledges 1) there is a limited data set and 2) there are a number of factors that influence surface water concentrations that include sources of contamination not related to the Lowry Landfill Superfund Site. The concentrations of 1,4-dioxane in Murphy Creek may vary over time, creating some uncertainty in the assessment of potential risks to receptors exposed to surface water. The 1,4-dioxane concentrations detected in 2006 were higher than those detected at the same locations in 2016. For example, at SWMC-03, 1,4-dioxane was detected at

concentrations of 10 µg/L and 9.4 µg/L in 2006 but the concentration decreased to 0.49 µg/L (J-qualified or estimated) in 2016. Similarly, at SWMC-04, 1,4-dioxane was detected at 6.2 and 5.3 µg/L in 2006 and at 3.1 µg/L in 2016. If the shallow groundwater is the source of the surface water in Murphy Creek, the concentrations should decrease as the groundwater concentrations decrease in the shallow groundwater plume over time.

Contribution of Other Detected Constituents to Site Risk

Compounds other than 1,4-dioxane detected in groundwater and surface water may contribute to site risks. Groundwater in the North End Area contains low levels of 1,4-dioxane and six volatile organic compounds (all detected at levels below site performance standards): acetone, 1,1-dichloroethane, naphthalene, tetrachloroethene, toluene, and trichloroethene. Acetone and toluene were the only volatile organic chemicals detected in surface water. Acetone is a common laboratory contaminant and is not thought to be related to site contamination. Therefore, acetone is not included in the risk assessment calculations. Toluene is not a carcinogen so it would not contribute to the cancer risk but was evaluated for its noncancer hazards. The concentrations of the volatile organic compounds detected in North End Area groundwater are shown on Table 7.

Table 7. Detected Concentrations of Volatile Organic Compounds in North End Groundwater

Monitoring Well	Sample Date	Chemical	Concentration (µg/L)
MW129-WD	9/12/2018	1,1-Dichloroethane	**1.7**
		Tetrachloroethene	**0.63 J (estimated)**
		Trichloroethene	**0.35 J (estimated)**
MW176-DEN	3/19/2018	Tetrachloroethene	0.31 J (estimated)
MW176-UDEN	5/2/2019	Toluene	**0.23 J (estimated)**
		Naphthalene	0.76 J (estimated)
MW177-UDEN	2/19/2019	Naphthalene	0.57 J (estimated)
MW178-UDEN	2/19/2019	Naphthalene	**0.77 J (estimated)**

Note: **Bold text** indicates the maximum detected concentration of each chemical.

The potential risks to hypothetical future residents represent the most conservative risk scenario. Therefore, potential risks to residents from other detected compounds were calculated using standard exposure assumptions. As described earlier, the assessment of risks from 1,4-dioxane in groundwater were calculated using the RME concentration (2.9 µg/L). However, due to the low frequency of detection for the other volatile organic constituents, the maximum detected concentration for each chemical (shown in bold font on Table 7) was used in the risk estimation. The maximum detected concentrations were screened with the USEPA Regional Screening

Levels (RSL) for residential tap water use; naphthalene and 1,4-dioxane were the only contaminants that exceeded the RSLs. However, as a conservative measure, the increased cancer risk for all detected compounds was estimated for potential exposure pathways including ingestion, inhalation, and dermal exposure and are shown in Table 8 below. The total noncancer hazard index from all contaminants for future residential exposure was calculated to be 0.3, which is below the acceptable level for noncancer hazards.

Table 8. Risk Assessment Summary for Hypothetical Future Residents

Compound	Ingestion	Inhalation	Dermal	Total Hypothetical Cancer Risk
1,1-Dichloroethane	1×10^{-7}	5×10^{-7}	9×10^{-9}	**6×10^{-7}**
1,4-Dioxane	4×10^{-6}	2×10^{-6}	1×10^{-8}	**6×10^{-6}**
Naphthalene	1×10^{-6}	5×10^{-6}	7×10^{-7}	**7×10^{-6}**
Tetrachloroethene	2×10^{-8}	3×10^{-8}	1×10^{-8}	**6×10^{-8}**
Toluene*	- - -	- - -	- - -	- - -
Trichloroethene	5×10^{-7}	4×10^{-7}	5×10^{-8}	**7×10^{-7}**
Total Risk	**5×10^{-6} (5 in 1,000,000)**	**8×10^{-6} (8 in 1,000,000)**	**8×10^{-7} (8 in 10,000,000)**	**1×10^{-5} (1 in 100,000)**

*The cancer risk for toluene was not calculated because it is not a carcinogen. The hazard quotient for toluene is 0.0001.

As shown on Table 8, the addition of other detected compounds increases the incremental cancer risks but the total cancer risk is still within the risk management range and the noncancer hazard is less than 1, indicating that no action is necessary to address potential risks to hypothetical future residents from chemicals in groundwater. In addition, these calculations were based on conservative assumptions and the total risk to potential receptors from contamination originating from the Lowry Landfill Superfund Site is likely lower than shown on Table 8.

There is uncertainty in the source of volatiles detected in the shallow groundwater in the North End plume. As shown on Table 7, the compounds 1,1-dichloroethane and trichloroethene were only detected in monitoring well MW129-WD. In addition, the maximum concentration of tetrachloroethene was detected in this well. Well MW129-WD is located at the Yale Avenue boundary, more than a mile south of the nearest residence. 1,1-Dichloroethane, tetrachloroethane, and trichloroethane were not detected in wells MW141-WD or MW141-UDEN. Therefore, it is unlikely that the compounds detected in groundwater at MW129-WD are indicative of contamination in the downgradient plume, near the residential developments. Furthermore, toluene and naphthalene were only detected in the deep monitoring wells north of East Mississippi Avenue (MW176-UDEN, MW177-UDEN, and MW178-UDEN). There were no detections of these chemicals in wells located between Yale Avenue and East

Mississippi Avenue, indicating that the constituents identified in the northern-most wells likely do not originate from the Lowry Landfill Superfund Site. Hence, the risk associated with these constituents detected north of East Mississippi Avenue may not be attributed to the Lowry site. Therefore, the inclusion of detected compounds other than 1,4-dioxane in the risk evaluation may over-estimate the actual site risks.

Evaluation of Vapor Intrusion to Indoor Air

Volatile compounds in shallow groundwater may volatilize and enter indoor air through a process called vapor intrusion. 1,4-Dioxane was the only compound detected in shallow groundwater above site performance standards. Other volatile organic compounds detected in the North End Area monitoring wells are listed in Table 7. However, these compounds were only detected in monitoring wells more than a mile away from current residences (MW129-WD) or were only detected in deep groundwater monitoring wells (i.e., MW176-UDEN, MW177-UDEN, and MW178-UDEN) and were not detected in the paired shallow groundwater monitoring wells (MW176-DEN, MW177-DEN, and MW178-DEN). Therefore, the calculation of potential risks from vapor intrusion of contamination in shallow groundwater to indoor air is focused on 1,4-dioxane.

The USEPA Vapor Intrusion Screening Level for 1,4-dioxane in deep groundwater is 2,900 µg/L and the Michigan Vapor Intrusion Screening Level for shallow groundwater is 1,900 µg/L (MDEQ 2018). The highest concentration of 1,4-dioxane in the North End Area groundwater (7.4 µg/L) is significantly lower than these screening levels. Therefore, there is no evidence of unacceptable risk to receptors and ambient air, soil gas, or indoor air data have not been collected.

In general, vapor intrusion of the semi-volatile 1,4-dioxane is not considered a major route of exposure because of the relatively low potential of 1,4-dioxane to move from the groundwater phase to the vapor phase. Vapor intrusion and volatilization from groundwater or surface water are not considered significant sources of exposure to the general population because the Henry's Law constant 4.8 x 10^{-6} atm-m^3/mol at 25°C (approximately 77°F) and high water solubility of 1,4-dioxane (greater than 800 grams per liter) indicate that 1,4-dioxane will primarily remain in the aqueous phase and that volatilization to air will be limited (USEPA, 2018). Therefore, groundwater contaminated with 1,4-dioxane in direct contact with a building foundation or present in a dewatering sump would not result in significant exposure to residents. Furthermore, the highest concentrations of 1,4-dioxane found in the most recent sampling of monitoring wells is 7.4 µg/L (MW129-WD, February 7, 2019). Based on these factors, the vapor intrusion pathway is considered incomplete.

As a conservative evaluation of the potential risks to hypothetical future residents, the USEPA calculated the concentration of 1,4-dioxane in groundwater that would result in unacceptable risk (defined as either cancer risks higher than 1 x 10^{-4} or 1 in 10,000 or a noncancer hazard quotient above 1) from vapor intrusion to indoor air. For this scenario, the upper bound is limited by the noncancer hazard quotient of 1 instead of the upper end of the risk management cancer risk range as described below. These calculations assumed that shallow groundwater containing 1,4-dioxane was in direct contact with the foundation of a residence. However, there is no

evidence to indicate that this assumption is true. The calculations concluded that the concentration 1,4-dioxane in groundwater would need to be approximately 159,000 µg/L to result in an unacceptable hazard to residents through inhalation of indoor air (USEPA, 2019). The concentrations of 1,4-dioxane in water that correspond to the USEPA's acceptable noncancer hazard range of 0.1 to 1.0 is 15,900 to 159,000 µg/L. In contrast, the highest concentration of 1,4-dioxane detected in groundwater in the North End Area was 7.4 µg/L (in monitoring well MW129-WD in 2019). Therefore, vapor intrusion of 1,4-dioxane into indoor air would not pose an unacceptable risk to residents.

References

Interstate Technology Regulatory Council (ITRC, 2020). Environmental Fate, Transport, and Investigative Strategies: 1,4-Dioxane, March 2020. Available at: https://14dx-1.itrcweb.org/wp-content/uploads/2020/03/14DX-Fate-and-Transport.pdf. Accessed July 2020.

US Environmental Protection Agency (EPA, 2018). Problem Formulation of the Risk Evaluation for 1,4-Dioxane. edited by U.S. Environmental Protection Agency – Office of Chemical Safety and Pollution Prevention. Washington, DC: EPA-740-R1-7012.

EPA 2019. Vapor Intrusion Screening Level Calculator, https://www.epa.gov/vaporintrusion/vapor-intrusion-resources

Michigan Department of Environmental Quality. (MDEQ, 2018). 1,4 Dioxane in Ann Arbor: October 27, 2016 Town Hall Meeting Questions & Answers, Version 2.

EAST ALAMEDA AVE

13 18 17

Gun Club Estates

Highway 30 Landfill

EAST MISSISSIPPI AVE

SOUTH HARVEST RD

24 19 20

Approximate Limits of North End Study Area

E - 470

EAST JEWELL AVE

SOUTH GUN CLUB RD

Murphy Creek/ Golf Course

26 25 30 29

YALE AVE

DADS Landfill

35 36 31 32

North Boundary Barrier Wall

EAST HAMPDEN AVE

Lowry Landfill Superfund Site

02 01 06 05

EAST QUINCY AVE

Perimeter Slurry Wall

11 12 07 08

1,4-Dioxane concentration greater than site's performance standard of 0.9 µg/L using most recent sample results (dashed where inferred)

Lowry Landfill Superfund Site Boundary

N W E S

0 1,000 2,000 3,000 Feet

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
http://water.state.co.us/DWRIPub/Documents/GWCRulesAtlas.pdf, 1991.

Figure 2.1
Approximate Limits of North End Study Area
Phase I Technical Memorandum
Lowry Landfill Superfund Site, Colorado

CDM Smith

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MW178-UDEN
MW178-DEN
Gun Club Estates
MW176-UDEN
MW176-DEN
MW177-UDEN
MW177-DEN
EAST MISSISSIPPI AVE
Highway 30 Landfill
SOUTH HARVEST RD
E - 470
Private Well #1
Private Well #2
EAST JEWELL AVE
MW141-UDEN
MW141-WD
SOUTH GUN CLUB RD
Murphy Creek/ Golf Course
MW129-WD
MW179-UDEN
MW151-WD
YALE AVE
MW132-WD
MW180-WD
T1-4
T1-3
DADS Landfill
MW118-WD
MW118-UD
MW117-WD
MW104-WD
MW115-WD
MW116-WD
MW115-UD
North Boundary Barrier Wall
EAST HAMPDEN AVE
Lowry Landfill Superfund Site
Perimeter Slurry Wall
EAST QUINCY AVE

Existing Wells

- Shallow Well
- Deep Well

Plume

- 1,4-Dioxane concentration greater than site's performance standard of 0.9 µg/L using most recent sample results (dashed where inferred)
- Lowry Landfill Superfund Site Boundary

Notes:
1. **MW179-UDEN** - wells sampled during North End Investigation
2. **MW129-WD** - wells sampled during the 2018 Synoptic Event

N W E S

0 1,000 2,000 3,000 Feet

Figure 2.3
North End Groundwater Chemistry Monitoring Network
Phase I Technical Memorandum
Lowry Landfill Superfund Site, Colorado

CDM Smith

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13

18

24

19

25

30

31

SWMC-06
0.99 J (3/30/2006)
0.6 J (5/10/2016)

SWMC-07
4.9 J (3/30/2006)
0.53 J (5/10/2016)

MPOND-04
0.15 U (7/29/2015)

MPOND-03
0.15 U (7/29/2015)

MPOND-02
0.15 U (7/29/2015)

MPOND-01
0.15 U (7/29/2015)

SWMC-05
0.51 J (3/30/2006)
0.54 J (5/10/2016)

SWMC-03
10 (3/30/2006)
9.4 (4/19/2006)
0.49 J (5/9/2016)

Closed
Highway 30 Landfill

SWMC-04
6.2 (3/30/2006)
5.3 (4/19/2006)
3.1 (5/9/2016)

SWMC-02
0.5 U (3/30/2006)
0.49 J (5/10/2016)

JPOND-01/SWMC-09
1.9 J (4/26/2006)
0.56 U (7/29/2015)
0.15 U (5/4/2016)

JPOND-02/SWMC-08
1.6 J (4/26/2006)
0.59 U (7/29/2015)
0.17 J (5/4/2016)

SWMC-01
0.5 U (3/30/2006)
0.46 J (5/9/2016)

GWMC-01
0.5 U (11/1/2006)

SW-5
0.19 U (1/25/2006)
0.5 J (5/9/2016)

Lowry Landfill
Superfund Site

North Boundary
Barrier Wall

Mississippi Ave.

Yale Ave.

Gun Club Road

Coal Creek

Un-Named Murphy Creek Tributary

Murphy Creek

Murphy Creek Tributary

UNNAMED CREEK

MURPHY CREEK

STORMWATER D

N

0 600 1,200 2,400 Feet

1 inch = 1,200 feet

Legend

- GROUNDWATER WELL LOCATION
- DETECTED 14X > 0.9 ug/L PERFORMANCE STANDARD
- DETECTED 14X <= 0.9 ug/L PERFORMANCE STANDARD
- NO 1,4-Dioxane (14X) DETECTED
- Approximate Limits 1,4-Dioxane concentration greater than site's performance standard of 0.9 ug/L in groundwater (dashed where inferred)

J = ESTIMATED VALUE
U = UNDETECTED

FIGURE 3.3

SURFACE WATER SAMPLING LOCATIONS AND RESULTS 1,4-DIOXANE IN SURFACE WATER

North End Plume Assessment Report
Lowry Landfill Superfund Site, Colorado

PARSONS

Denver, Colorado

S:\ES\MapPro\LWRYLNFL\Steven\GIS\Tim NEPAR Fig3_3 14Diox Sec1930 31 12Q16 Presentation.mxd kli 6/18/2019

ug/L

Planning and Economic Development Policy Committee
Agenda Item Commentary

Item Title: Proposed ordinance to: 1.) Create the Oil and Gas Division, 2.) amend the UNIFIED DEVELOPMENT ORDINANCE (UDO) for Oil and Gas Regulations, and 3.) adopt the Oil and Gas Manual
Item Initiator: moore, jeffrey
Staff Source: moore, jeffrey
Deputy City Manager Signature:
Outside Speaker:
Council Goal: 6.4: Provide appropriate stewardship of natural resources to ensure long-term sustainability for the city--2012: 6.4--Provide appropriate stewardship of natural resources to ensure long-term sustainability for the cit

ACTIONS(S) PROPOSED ***(Check all appropriate actions)***

☐ Approve Item and Move Forward to Study Session

☐ Approve Item and Move Forward to Regular Meeting

☒ Information Only

HISTORY ***(Dates reviewed by City council, Policy Committees, Boards and Commissions, or Staff. Summarize pertinent comments. ATTACH MINUTES OF COUNCIL MEETINGS, POLICY COMMITTEES AND BOARDS AND COMMISSIONS.)***

The Oil and Gas Division has proposed the best method of implementing future oil and gas regulations is via a technical manual, titled the Oil and Gas Manual. This ordinance will officially create the Oil and Gas Division, and give the Manager certain authority to establish new rules in the future. This ordinance will remove existing sections from the UDO related to oil and gas, and refer to the Oil and Gas Manual for all oil and gas regulations. A presentation of this process of updating the UDO and creating the Oil and Gas Manual was given to City Council in Study Session on May 18, 2020. The same presentation was given to the Oil and Gas Advisory Committee on May 20, 2020 (reported to PED on June 10, 2020). The same presentation was given to the Planning and Zoning Commission in Study Session on April 22, 2020.

ITEM SUMMARY ***(Brief description of item, discussion, key points, recommendations, etc.)***

This ordinance will officially create the Oil and Gas Division, and give the Manager certain authority to establish new rules in the future. This ordinance will remove existing sections from the UDO related to oil and gas, and refer to the Oil and Gas Manual for all oil and gas regulations.

QUESTIONS FOR Committee

Are there questions about the process used to create the Oil and Gas Manual (OGM)? Are there questions about the stakeholders (including the public) engaged in the creation of the OGM? Does the Committee understand that future updates to the OGM will first go to the Oil and Gas Advisory Committee, prior to promulgation?

EXHIBITS ATTACHED:

Oil Gas UDO Changes_9.2.pdf
Oil Gas_Chapter 135_9.3.pdf
OGC Memo to PED Jeffrery Moore Comments on OGM

ORDINANCE NO. 2020- ____

A BILL

FOR AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AURORA, COLORADO AMENDING SECTIONS OF THE UNIFIED DEVELOPMENT ORDINANCE PERTAINING TO OIL AND GAS DEVELOPMENT

WHEREAS, certain sections of the Unified Development Ordinance pertain to oil and gas facilities and locations in the City of Aurora; and

WHEREAS, oil and gas facilities and locations shall now be governed by Chapter 135 and the rules and regulations set forth in the Oil & Gas Manual; and

WHEREAS, certain sections of the Unified Development Ordinance shall be amended to coincide with Chapter 135 and the rules and regulations set forth in the Oil & Gas Manual.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AURORA, COLORADO:

Section 1. That section 146-3.3.5.DD of the City Code of the City of Aurora, is hereby amended to read as follows:

D.D. Each Oil and Gas Facility and Oil and Gas Location shall be subject to Chapter 135 and the rules and regulations set forth in the Aurora Oil & Gas Manual, as amended.

~~D.D Oil and Gas Facility~~

~~1. Purpose~~

~~The City Council declares that the purpose of this Section is to facilitate the development of oil and gas resources within the city limits and to mitigate potential land use conflicts between oil and gas development and existing and planned land uses. Nothing in this Section shall be construed as giving the City the authority to enforce state regulations. If it is established by competent evidence that a proposed oil and gas facility fails to meet the regulations in this Section, the permit for such facility may be denied.~~

~~2. Permitted and Conditional Uses~~

~~a. Permitted Use~~

~~A well site or oil and gas facility is a permitted use in any base zone district and any overlay district unless prohibited by state law, provided the exterior boundary of such site or facility is more than 1,000 feet from a platted residential lot, a platted lot line containing either a building unit or a high occupancy building unit, or a POS zone district, and the use complies with the requirements of this Section. Required separation distances shall be measured as stated in applicable state regulations.~~

b. Conditional Use

A well site or oil and gas facility is a conditional use in any zone district, subject to the requirements in Section 146-5.4.3.A (Conditional Use) where the exterior boundary of such well site or oil and gas facility is to be located 1,000 feet or less from a platted residential lot, a platted lot line containing either a building unit or a high occupancy building unit, or a POS zone district. Required separation distances shall be measured as stated in applicable state regulations.

3. General Provisions

a. Continuance of Existing Wells

Well sites and production sites that exist on the Effective Date of the regulations codified in this Section 146-3.3.5.DD, or that are later annexed to the city, may continue operating without the issuance of an oil and gas permit, unless the area of the production site is expanded or new wells are drilled on the site. The construction or reconstruction does not require that accessory equipment in a production site or a well site conform to the development standards in this Section. The right to operate a well site or production site terminates if the use is discontinued for six months or more, other than by temporary abandonment or shut-in that is in conformance with COGCC regulations.

b. Existing Accessory Equipment and Pumping Systems

Accessory equipment and pumping systems that exist on the Effective Date of the regulations codified in this Section 146-3.3.5.DD or that are located within territory that is later annexed to the city may continue operating without the issuance of an oil and gas permit. Any renovation or repair of nonconforming accessory equipment or pumping systems shall be permitted without an oil and gas permit, provided the work does not increase the extent of nonconformity. Any replacement of existing accessory equipment or any addition of accessory equipment shall conform to this Section. The replacement or addition of individual tanks, treaters, or separators does not necessitate that the remainig accessory equipment, access roads, or a well site, conform to the development standards in this Section.

c. Applicability of Section

This Section shall apply to the permitting, construction, erection, maintenance, alteration, repair, and location of wells, accessory equipment, or structures within the city.

d. Conflicts with Other Provisions

Nothing in this Section 146-3.3.5.DD shall be construed to limit other applicable City ordinances that are not in conflict with this Section. If a conflict occurs between this Section and other regulations, this Section shall govern.

e. Permit Required

Subject to Subsections (3)(a) and (3)(b) above, it is unlawful for any person to drill a well or reactivate a plugged or abandoned well, operate a production site, or perform initial installation of accessory equipment or pumping systems unless an oil and gas permit has first been granted in accordance with the procedures in this Section. The initial permit shall allow twinning of a well and relocation of accessory equipment or gathering and transmission lines provided the activities comply with the development standards of this Section. If the twinning of a well or relocation of accessory equipment or gathering and transmission lines occurs, the operator shall file a revised plan with the Planning Director within 30 days. The revised plan shall show any changes from the approved oil and gas permit and demonstrate how the changes comply with the development standards of this Section. When an oil and gas permit has been granted for a well, reentry of the well for purposes of sidetracking, deepening, recompleting, or reworking does not require an oil and gas

permit amendment. It is unlawful for any person to fail to perform all conditions required by an oil and gas permit.

f. Granting of Permit for Unplatted Property

An oil and gas permit for a well site or production site may be granted on unplatted property.

g. Designation of Agent

Every operator of any well subject to this Section shall designate an agent residing within the state to receive legal process, orders, and notices. Notice of a change in agent must be submitted by certified mail to the Planning Director within10 calendar days of the change.

h. Oil and Gas Permit Submittal Requirements

An application for an oil and gas permit pursuant to this Section shall be filed with the Planning Department and must include all information required by the Planning Department, including:

i. Site plan (proposed layout, access, landscape plan, fence, tanks, containment, colors, lighting plan, and haul routes, as well as existing easements, rights-of-way, and a depiction of all visible improvements within 500 feet of the well). Landscape and fence plans are required when a well pad is within 1500 feet of a platted residential lot or a platted lot line containing, a building unit or high occupancy building unit (as those two terms are defined in state law), or a City-owned park, reservoir, or golf course.

ii. Context map (distance to nearest structures, how site fits in relation to adopted Master Plan).

iii. Traffic impact study or memorandum, road haul routes, proposed mitigation.

iv. Water quality control plan (drainage).

v. Operations plan.

a. Source of water supply (City Council approval is necessary if water is supplied by the City).

b. Emergency response plan (including contact information with fire department).

c. Mitigation plan (hours of operation, lighting, noise, dust, weed control, fluid disposal, and reclamation).

d. Road maintenance agreement.

vi. Completed application form, ownership (surface, mineral) authorization, and demonstration of interest in property.

4. Development Standards

a. Setbacks

Operators shall comply with all applicable COGCC regulations regarding setbacks.

b. Production Site Containment

Operators shall comply with all applicable COGCC regulations regarding production site containment.

c. Visual Impacts and Aesthetics

The following visual mitigation requirements shall apply to oil and gas well sites and production sites:

i. To the maximum extent practicable, an existing or proposed well site and a production site shall be located away from prominent natural features such as distinctive rock and land forms, vegetative patterns, river crossings, land in the POS zone district, and other designated landmarks.

ii. To the maximum extent practicable, a well site and a production site shall be located to avoid hilltops and ridges to prevent the appearance of pump jack and accessory equipment profiles on the horizon.

iii. Electric pumping systems shall be required in areas where feasible.

iv. No tanks located in a production site shall exceed 20 feet in height.

v. To the maximum extent practicable, the applicant shall locate facilities at the base of slopes to provide a background of topography and natural cover.

vi. To the maximum extent practicable, the applicant shall align access roads to follow existing grades and minimize cuts and fills.

vii. All facilities shall be painted in uniform, non-contrasting, and non-reflective color tone similar to the Munsell Soil Color Coding System. The colors shall be matched to land and not to sky and shall be slightly darker than the adjacent landscape, to the maximum extent practicable. Exposed concrete shall be colored to match the soil color to the maximum extent practicable.

viii. Electrical lines servicing pumping and accessory equipment shall be installed below ground only.

ix. After commencement of production operations, all excavation slopes, both cut and fill, shall be planted and maintained with grasses, plants, or shrubs for the purposes of adequate erosion control.

x. Upon abandonment, the site operations shall be cleaned, holes filled, equipment removed, and the land graded to return the site to its original condition as soon as weather and pit conditions will permit, consistent with applicable COGCC regulations. All such reclamation shall be completed within six months, unless an extension is granted by the COGCC.

d. Best Management Practices (BMP)

BMPs are mitigation measures applied to areas being developed for oil and gas to promote energy development in an environmentally sensitive manner. Operators shall employ BMPs to the maximum extent practicable. As a condition of approval, BMPs may be required for conditional uses to ensure mitigation of land use impacts from a proposed well or production site on the surrounding area. BMPs may only be required where a finding is made based upon evidence at a public hearing that such requirement would not constitute an operational conflict with COGCC regulations. An operational conflict exists where imposition of the BMP would conflict with the application of state statutes and rules, or would materially impede or destroy the state interest as provided in the Act. BMPs include but are not limited to:

i. Closed loop systems instead of open pits.

ii. Recycling of flow back water on site.

iii. Vapor recovery systems instead of flaring of gases.

iv. Baseline water quality monitoring.

5. Access Roads

a. Private Roads

All private roads used to access an oil and gas production site shall be improved prior to the start of production activity and maintained according to the standards in this Subsection, which shall control in a conflict. Access roads to the production site shall be subject to review by the City Engineer in accordance with the City standards and specifications, and the following minimum standards:

i. A graded roadway conforming to the Aurora Roadway Design and Construction Specifications Manual, including provisions for positive drainage flow from the roadway surface. In addition, cross-drainage of waterways shall be provided (in the form of roadside swales, gulches, rivers, and creeks) as prescribed by an approved drainage report and drainage plan.

ii. Maintained to provide a roadway passable for emergency vehicles and without irregular surfaces, deteriorated features, or obstacles that would delay the passage of emergency vehicles.

b. Access from Public Right-of-Way

All proposed access roads to production sites that gain access off of a paved public right-of-way shall be improved as required in this Section. In addition, the point of intersection with the public right-of-way shall be improved to the following minimum standards:

i. An access width of 23 feet with paved 29 foot radii at each side of the access road at the point of intersection with the public right-of-way capable of sustaining an imposed weight limit of 185,000 pounds; and

ii. A minimum of six inches of asphalt pavement over the initial 100-foot portion of the proposed access road, beginning at the edge of the existing pavement of a paved public right-of-way.

iii. Any gating system crossing the primary access drive into the site must provide a minimum 23 foot opening width. A Knox lock or other approved Knox Hardware must be integrated into the gating system to allow for emergency access.

c. Truck Traffic Hours, Routes

The hours and routes of truck traffic on public roads providing access to the well or production site shall be such that the trip capacity levels and road conditions are not impaired or damaged. Approval of a permit under this Section may be conditioned upon the designation of access routes and hours of hauling.

d. Traffic Impacts, Performance Bond

The permittee shall be responsible for any damage to public roads caused by truck traffic accessing well sites. The permittee shall mitigate and repair damage to city roadways, culverts, and bridges that results from oil and gas facility construction and the traffic generation due to operation of the oil and gas facility. The applicant shall consult with the Director of Public Works, to determine such impacts, and may be required to enter into a road maintenance agreement, and post a performance bond or other security to fund the repair of public infrastructure as a condition on the issuance of the permit.

6. Additional Performance Standards

All oil and gas well structures and equipment shall be maintained so that they do not become a hazard or injurious to public health and safety. In addition, the following performance standards shall apply:

a. Flood Hazard

Unless otherwise stated in this Section, all wells and accessory equipment shall comply with all applicable provisions of Section 146-2.6.1 (-FPO overlay district) pertaining to flood hazard regulations.

b. On-site Transport

All oil or gas shall be transported from the well to the on-site treatment facilities and production pits by buried pipeline.

c. Air Emissions

Air contaminant emission sources shall comply with the permit and control provisions of the state air quality control program (C.R.S. §§ 25-7-101 *et. seq.*.) and the rules and regulations promulgated by the State Air Quality Control Commission. The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere.

d. Noise

Operators shall comply with all applicable COGCC regulations regarding noise.

e. Wildlife Impact Mitigation; Natural Area Zones

When a well or production site is located in a significant wildlife habitat, as defined by the Colorado Parks and Wildlife, or in a natural area or open space, as designated in the Comprehensive Plan or other applicable planning document, the applicant shall indicate as such and the applicant shall consult with the State Division of Wildlife or the City Parks, Recreation, and Open Space Department to obtain recommendations for appropriate site-specific and cumulative impact mitigation procedures. The operator or owner shall implement the procedures recommended by the City after consultation with the State Division of Wildlife. The applicant shall not engage in activities that threaten endangered species, natural areas, or designated open spaces or parks.

f. Signs

Each well and production site shall post a legible sign in a conspicuous place, which is three to six square feet in area. The sign shall bear the current name of the operator, a current telephone number including area code, where the operator may be reached at all times, name or number of the lease, and number of the well printed thereon. The sign shall warn of safety hazards to the public and shall be maintained on the premises from the time materials are delivered for drilling purposes until the well site and production site is abandoned.

g. Fencing

Notwithstanding any provision of Section 146-4.7.9 (Fence and Wall Regulations) to the contrary, fencing shall be provided as follows:

i. Within all Residential zone districts, all pumping systems and accessory equipment used in the operation of a well shall be screened on all sides by a non-flammable privacy fence.

ii. If any part of a well pad is within 1,500 feet of a platted residential lot, a platted lot line containing either a building unit or a high occupancy building unit, or a government-owned park, reservoir, or golf course, fencing shall be required. The fence shall be non-flammable, and shall be designed to screen the production equipment and provide security for the well site. The maximum height of the fence is nine feet. The specific material used for the fence shall be based on compatibility with adjacent development and visibility from surrounding residential development.

iii. Access through the fence shall be provided by a solid gate that preserves the integrity of the screening. The access gate shall be securely locked to prevent access by unauthorized persons.

h. Landscaping

All facilities shall comply with those landscaping, buffering, and screening requirements in Section 146-4.7.5.N (Oil and Gas Well Sites and Facilities).

i. Lighting

Lighting shall be downcast, and shall not shine beyond the boundaries of the drilling operation or oil and gas facility.

j. Ponds and Modular Large Volume Tanks

The use of uncovered ponds and modular large volume tanks for storage of liquids associated with the drilling or stimulation of wells is permitted on a temporary basis. All ponds and modular large volume tanks must be removed once the drilling phase and the completion phase of the well is finished.

~~k. Compatibility with Approved Master Plans~~

~~The location and operations of the oil and gas facility shall be compatible with the approved Master Plan for the subject property.~~

~~7. Notice to Purchasers~~

~~a. A seller of real property upon which an oil or gas well or facility has been located shall provide written notice of the existence of such well to a purchaser of such real property prior to the closing of the sale. The seller shall cause the following notice to be recorded with the clerk and recorder of the appropriate county:~~

~~**Notice: The property known as [legal description and address] contains an oil and/or gas well.**~~

~~This requirement to provide notice to prospective purchasers and record such notice shall only apply to the transaction between the developer or builder and the initial purchaser and does not apply upon any subsequent sale of the property.~~

~~b. Vendors of residentially zoned real property within a state-determined setback shall provide the following notice to prospective purchasers in 14-point bold type on a single sheet of paper that is signed by the prospective purchaser prior to entering into a contract for purchase:~~

~~**Notice of nearby oil and gas facility.**~~

~~**This property is located within a state-determined setback from an oil and gas facility.**~~

~~Vendors of residentially zoned real property within a state-determined setback from an oil and gas facility shall cause the following notice to be recorded with the clerk and recorder of the appropriate county:~~

~~**Notice**~~

~~**The property known as [legal description and address] is located within a state-determined setback from an oil and gas facility.**~~

~~This requirement to provide notice to prospective purchasers and record such notice shall only apply to the transaction between the developer or builder and the initial purchaser and does not apply upon any subsequent sale of the property~~.

Section 2. That section 146-4.6.3.C, Table 4.6-1 of the City Code of the City of Aurora hereby amended to read as follows:

Table 4.6-1
Required Off-Street Parking

sf. = square feet
gfa = gross floor area

Number Required	Category	Required Parking
	Mining ~~Oil and Gas Facility~~ Railroad Track Transit Facility Electric Power Generator Station Solar Collector as a Primary Use Telecom Facility, Tower Telecom Facility, Freestanding Monopole Telecom Facility, Freestanding Unipole Telecom Facility, Freestanding, Stealth Utility, Major Utility, Minor Wind Energy System, Large Bio-medical Waste Treatment Facility	No Parking Requirement

Section 3. That section 146-4.7.9.O of the City Code of the City of Aurora, Colorado is hereby amended to read as follows:

A. Screening of Outdoor Storage, Equipment, Asphalt, Concrete, Landscape Yards, Surface Parking Lots, ~~Oil and Gas Facilities~~, Substations or Pump Stations

1. Permitted Materials

Permitted materials include the following, all of which must be opaque:

a. Walls consisting of brick, stone, and integrally colored decorative concrete masonry units (CMUs);

b. Decorative and durable pre-cast concrete panels

c. Composite wood

d. Closed style wood fences

2. Prohibited Materials

Color cladded, welded wire, chain link, Omega or similar welded wire may not be utilized to meet screening requirements.

Section 4. The City section 146-5.1.2.B. of the City Code of the City of Aurora, Colorado is hereby amended to read as follows:

B. Powers and Duties

The Planning and Zoning Commission has the following powers and duties related to this UDO.

1. To make recommendations to City Council regarding the Comprehensive Plan and proposed amendments to that plan as described in Section 146-5.4.1.A.

2. To make recommendations to City Council regarding the text of this UDO and proposed amendments to the text of this UDO as described in Section 146-5.4.1.C;

3. To make recommendations to City Council regarding the Official Zoning Map and proposed amendments to that map as described in Section 146-5.4.1.C

4. To make decisions on all those types of applications indicated as a Planning and Zoning Commission decision in Table 5.2-1 (Summary Table of Procedures).

5. To make decisions on Oil and Gas Location applications pursuant to the criteria set forth in the Oil & Gas Manual and A.M.C. chapter 135, as amended.

~~5.~~ **6.** To make recommendations to City Council regarding a plan for capital improvements as provided in Section 9-5 of the City Charter.

~~6.~~ **7.** To exercise any additional powers conferred by statute or Charter at the request of City Council.

Section 5. The City hereby repeals section 146-5.4.3.A.4 of the City Code pertaining to oil and gas permit procedures and review criteria; notice; appeal:

~~4. Oil and Gas Permit Procedures and Review Criteria; Notice; Appeal~~

~~a. Applicability~~

~~i. The application for oil and gas drilling or operation of a production site in a location more than 1,000 feet from a platted residential lot, a platted lot line containing either a building unit or a high density building unit, or a government-owned park, reservoir, open space or golf course shall be submitted to the Planning Director. The Director shall issue the oil and gas permit for drilling if it is determined that the application complies with the requirements of this Section 146-5.4.3.A.4.~~

~~ii. An application for drilling or operation of a production site in a location less than 1,000 feet from a platted residential lot, a platted lot line containing either a building unit or a high density building unit, or an existing or proposed City-owned park, reservoir, open space, or golf course shall be submitted to the Planning and Zoning Commission for consideration at a public hearing. The applicant, abutting property owners, the surface owner, and any interested party may be heard.~~

~~b. Notice~~

~~Notice of the application shall be mailed by the applicant to property owners within one-half mile, to registered neighborhood groups within one mile, and to the surface owners of the subject property at least10 calendar days prior to a decision by the Planning Director or Planning and Zoning Commission.~~

~~c. Criteria for Approval or Denial~~

~~i. Approval~~

~~An oil and gas permit for a well drilling site or production site shall be approved or approved with conditions if the application conforms to the requirements of this Section and complies with:~~

~~a. The submittal requirements;~~

~~b. The provisions, development standards, and performance standards of this Section; and~~

~~c. The applicable requirements of the fire code and City storm drainage criteria manual, and storm water quality criteria approved by the Director of Water and the Director of Public Works.~~

~~ii. Denial~~

~~An application for an oil and gas permit for a well drilling site or production site shall be denied if:~~

~~a. The application does not meet the requirements listed in this Section.~~

~~b. The applicant has failed to comply or otherwise violated the terms and conditions of a previous permit or has failed to make any mitigation or damage payments to the City required by a previous permit.~~

~~d. Failure to Comply with the Conditions~~

~~Failure to comply with the conditions imposed on a permit shall be grounds for revocation of the permit. Notice of an alleged violation of conditions shall be provided to the permittee, who may request a hearing before the City Council on the alleged violation.~~

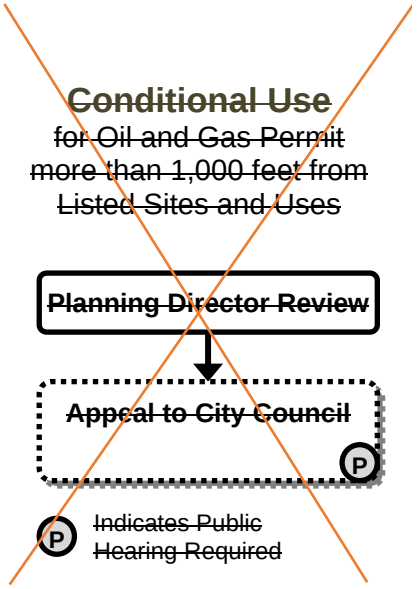
~~e. Appeals~~

~~i. From Planning Director~~

Any administratively-approved well permit application, interpretation, or decision of the Planning Director concerning this Section may be appealed by an applicant, by the owner of the subject property, or by the owner of a property that abuts the subject property. The notice of appeal must be filed with the City Manager within 14 calendar days of the director's decision. Such appeal shall specifically state the grounds for the appeal. If an appeal is filed, the Planning and Zoning Commission shall schedule a public hearing according to the procedures described in Section 146-5.3 (Common Procedures). The Planning and Zoning Commission shall review the appeal based on the various requirements of this Section 146-5.3.13 and shall ensure that the intent and specific requirements of this UDO are met. At the conclusion of the hearing, the Planning and Zoning Commission shall approve, approve with conditions, or deny the permit.

ii. **From Planning and Zoning Commission**

A decision by the Planning and Zoning Commission may be appealed to the City Council provided such appeal is received by the Planning Director within 14 calendar days after the Planning and Zoning Commission's action on the permit. Such appeal may be filed by the applicant or any abutting property owner and shall specifically state the grounds for appeal. The City Council shall hold a public hearing on the application. At the conclusion of the hearing, council shall approve, approve with conditions, or deny the permit.



Section 6. That section 146-5.4.3.B of the City Code of the City of Aurora, Colorado is hereby amended to read as follows:

B. Site Plans

All applicable provisions of Section 146-5.3 (Common Procedures) apply unless specifically modified by the provisions of this Section 146-5.4.3.B. ~~Oil and gas wells are processed under the provisions of Section 0 and are not subject to this Section.~~

Section 7. That the definitions set forth below from section 146-6.2 of the City Code of the City of Aurora, Colorado are hereby amended to read as follows:

Oil and Gas Facility

Shall mean equipment or improvements used or installed at an Oil and Gas Location for the exploration, production, withdrawal, gathering, treatment, or processing of crude oil, condensate, E&P waste, or gas. Any well, wellhead, flowlines, tanks, surface equipment, or associated infrastructure used in the development, production, storage, or marketing of oil, natural gas, natural gas liquids, or other hydrocarbon resources.

~~**Oil and Gas Facility**~~

~~As used in the context of oil and gas regulations in Section 146-3.3.5.DD, the following terms have the following meanings:~~

1. ~~*Accessory Equipment*~~

   ~~Any equipment that is integral to the production and operation of an oil or gas well, including but not limited to tanks, treaters, separators, and production pits.~~

2. ~~*Act*~~

   ~~The Colorado Oil and Gas Conservation Act, C.R.S. §§ 34-60-101 *et. seq.*, as amended.~~

3. ~~*Building Unit*~~

   ~~The meaning as set forth in the COGCC regulations.~~

4. ~~*Berm*~~

   ~~An earthen barrier of compacted soils preventing the passage of liquid materials or providing screening from adjacent uses as may be specified in an applicable development standard.~~

5. ~~*COGCC*~~

   ~~The Colorado Oil and Gas Conservation Commission.~~

6. ~~*COGCC Regulations*~~

   ~~The rules and regulations promulgated by the COGCC and codified at 2 C.C.R. Title 404, as amended.~~

7. ~~*Designated Agent*~~

   ~~The designated representative of any producer, operator, transporter, refiner, or gasoline or other extraction plant operator or owner.~~

8. ~~*Distance from a well site to a platted residential subdivision, platted lot line containing either a building unit or high density building unit*~~

   ~~The distance from the edge of the well pad (graveled area not including access road) to the nearest platted residential lot line, or a platted lot line that contains a building unit or a high density building unit.~~

9. *Gas*

All natural gases and all hydrocarbons not defined in this Article 146-6 as oil.

10. *High Occupancy Building Unit*

The meaning as set forth in the COGCC regulations.

11. *Injection Well*

Any hole drilled into the earth into which fluids are injected for purposes of secondary recovery, storage, or disposal pursuant to authorizations granted by the COGCC.

12. *Oil*

Crude petroleum oil and any other hydrocarbons, regardless of gravities, that are produced at the well in liquid form by ordinary production methods, and that are not the result of condensation of gas before or after it leaves the reservoir.

13. *Oil and Gas*

Oil or gas or both oil and gas.

14. *Oil and Gas Well*

A hole drilled into the earth for the purpose of exploring for or extracting oil, gas, or other hydrocarbon substances.

15. *Oil and Gas Facility*

Equipment or improvements used or installed at an oil and gas location for the exploration, production, withdrawal, gathering, treatment, or processing of oil or natural gas.

16. *Operating Plan*

A general description of an oil or gas well facility identifying purpose, use, typical staffing pattern, seasonal or periodic considerations, routine hours of operation, source of services and infrastructure, and any other information related to regular functioning of that facility.

17. *Operator*

The person designated as operator and named in COGCC form 2 or a subsequently filed COGCC form 10.

18. *Owner*

Any person with a working interest ownership in the oil and gas or leasehold interest therein.

19. *Platted Residential Subdivision*

A subdivision that has been approved and recorded and is located in a zone that allows residential uses.

20. *Production Pits*

Those pits used for initial settling, temporary storage, or disposal of produced water by permeation or evaporation after drilling and initial completion of the well.

21. *Production Site*

That surface area immediately surrounding proposed or existing production pits, or other accessory equipment necessary for oil and gas production activities, exclusive of transmission and gathering pipelines.

22. *Tank*

Any container used in conjunction with the production or storage of petroleum and hydrocarbon substances, stored at or near atmospheric pressure.

23. *Treatment Facilities*

Any plant, equipment, or other works used for the purpose of treating, separating, or stabilizing any substance produced from a well.

~~24. *Twinning*~~

~~The drilling of a well adjacent to or near an existing well bore when the existing well cannot be drilled to the objective depth or produced due to an engineering problem such as collapsed casing or formation damage.~~

~~25. *Well*~~

~~An oil and gas well or an injection well.~~

~~26. *Well Site*~~

~~That surface area of a proposed or existing well or wells and its pumping systems.~~

Section 8. Severability. The provisions of this Ordinance are hereby declared to be severable. If any section, paragraph, clause, or provision of this Ordinance shall, for any reason, be held to be invalid or unenforceable by a court of competent jurisdiction, the invalidity or unenforceability of such section, paragraph, clause, or provision shall not affect any of the remaining provisions of this Ordinance.

Section 9. Pursuant to Section 5-5 of the Charter of the City of Aurora, Colorado, the second publication of this Ordinance shall be by reference, utilizing the ordinance title. Copies of this Ordinance are available at the Office of the City Clerk.

Section 10. All acts, orders, resolutions, ordinances, or parts thereof, in conflict with this Ordinance or with any of the documents hereby approved, are hereby repealed only to the extent of such conflict. This repeal shall not be construed as reviving any resolution, ordinance, or part thereof, heretofore repealed.

INTRODUCED, READ AND ORDERED PUBLISHED this _____ day of _____, 2020.

PASSED AND ORDERED PUBLISHED this _____ day of _____, 2020.

_____
MIKE COFFMAN, Mayor

ATTEST:

_____
SUSAN BARKMAN, Interim City Clerk

APPROVED AS TO FORM:

Ian J Best
_____
IAN BEST, ASSISTANT CITY ATTORNEY

ORDINANCE NO. 2020- ____

A BILL

FOR AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AURORA, COLORADO, ADDING CHAPTER 135-101 *et seq*. OF THE CITY CODE PERTAINING TO OIL AND GAS RULES AND REGULATIONS

WHEREAS, the General Assembly granted the City of Aurora certain local authority to oversee oil and gas operations within its jurisdiction through the Colorado Oil and Gas Conservation Act, C.R.S. 34-60-101 *et seq*. and the Local Government Land Use Act C.R.S. 29-1-104(1)(h), both as amended; and

WHEREAS, certain rules and regulations are necessary for the proper oversight of oil and gas operations within the City of Aurora to protect the health, safety, welfare and environment, and wildlife.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AURORA, COLORADO:

Section 1. That the City Code of the City of Aurora, Colorado, is hereby amended by adding a section, to be numbered 135-101 which section reads as follows:

Sec. 135-101 – Oil & Gas Division
There is hereby created an Oil & Gas Division within the City of Aurora. The Oil & Gas Division shall be responsible for the effective administration of oil and gas operations within the City. The Oil & Gas Manager shall be immediately responsible to the city manager or the city manager's designee for the effective administration of the Oil & Gas Division.

Section 2. That the City Code of the City of Aurora, Colorado, is hereby amended by adding a section, to be numbered 135-102 which section reads as follows:

Sec. 135-102 – Rules and Regulations, Manual
(1) It shall be the duty of the Oil & Gas Manager to promulgate reasonable rules and regulations to facilitate the proper oversight of all oil and gas operations within the City of Aurora. Such rules and regulations may be referred to as the "Oil & Gas Manual". The Oil & Gas Manual shall have full force and effect when published as set forth in section 2-3. Any future modifications to the Oil & Gas Manual shall be promulgated pursuant to section 135-104.

Section 3. That the City Code of the City of Aurora, Colorado, is hereby amended by adding a section, to be numbered 135-103 which section reads as follows:

Sec. 135-103 – Violations

(1) Except as otherwise provided in the Oil & Gas Manual it is unlawful to construct, install, or cause to be constructed or installed, any Oil and Gas Location or Oil and Gas Facility within the city unless approval has been granted by the City either by administrative approval or agreement. The unlawful drilling or redrilling of any well or the production therefrom is a violation of this section.

(2) It shall be unlawful to violate any provision of the Oil & Gas Manual. Each of the following actions, or inaction when action is required, is unlawful and is a violation of this section:

(a) Failure to comply with any standard, specification, regulation, requirement, or best management practice (BMP) set forth in the Oil & Gas Manual.

(b) Failure to comply with any condition attached to a permit or approval under the Oil & Gas Manual.

(c) Failure to prevent leaks, spills, and emissions, however, fines for such emissions shall be limited by C.R.S. 29-20-104, as amended.

(3) Any person violating any provision of this Chapter or the Oil & Gas Manual shall be subject to the fines set forth in section 1-13. The jail sentence set forth in section 1-13 shall not be applicable to violations of this section. Each day a violation continues shall constitute a separate violation.

Section 4. That the City Code of the City of Aurora, Colorado, is hereby amended by adding a section, to be numbered 135-104 which section reads as follows:

Sec. 135-104 – Modifications to Oil & Gas Rules and Regulations, Manual

(1) Prior to modifying the Oil & Gas Manual, the Oil and Gas Manager shall provide notice and written copies of such changes to the Oil and Gas Advisory Committee. The Committee shall provide written recommendation to the Oil and Gas Manager after such presentation.

(2) Legislative changes to the Manual shall be made through ordinance. Non-legislative changes to the Manual shall be made administratively. After changes to the Oil & Gas Manual are presented to the Oil and Gas Advisory Committee the Council may call-up any proposed change to the Oil & Gas Manual pursuant to section 135-105. If such changes have not been called-up by the City Council by the second full City Council meeting after the changes have been presented to the Oil and Gas Advisory Committee the revised Oil & Gas Manual shall become effective pursuant to the section 2-3 requirements.

Section 5. That the City Code of the City of Aurora, Colorado, is hereby amended by adding a section, to be numbered 135-105 which section reads as follows:

> **Sec. 135-105 – Call Up of Oil & Gas Rules and Regulations, Manual**
> **(1) Any member of the City Council may move to call up the proposed changes to the Oil & Gas Manual.**
> **(2) If the motion passes the proposed changes shall be brought before the City Council as soon as practicable following the date on which the proposed changes were presented to the Oil and Gas Advisory Committee.**
> **(3) The City Council shall have the authority to approve the changes as presented or remand with further instructions regarding the proposed changes to the Oil & Gas Manual.**
> **(4) If the motion does not pass, or the changes are not called up, the Oil & Gas Manager may proceed to modify the Oil & Gas Manual pursuant to section 2-3.**

Section 6. Severability. The provisions of this Ordinance are hereby declared to be severable. If any section, paragraph, clause, or provision of this Ordinance shall, for any reason, be held to be invalid or unenforceable by a court of competent jurisdiction, the invalidity or unenforceability of such section, paragraph, clause, or provision shall not affect any of the remaining provisions of this Ordinance.

Section 7. Pursuant to Section 5-5 of the Charter of the City of Aurora, Colorado, the second publication of this Ordinance shall be by reference, utilizing the ordinance title. Copies of this Ordinance are available at the Office of the City Clerk.

Section 8. All acts, orders, resolutions, ordinances, or parts thereof, in conflict with this Ordinance or with any of the documents hereby approved, are hereby repealed only to the extent of such conflict. This repeal shall not be construed as reviving any resolution, ordinance, or part thereof, heretofore repealed.

INTRODUCED, READ AND ORDERED PUBLISHED this _____ day of _____, 2020.

PASSED AND ORDERED PUBLISHED this _____ day of _____, 2020.

_____
MIKE COFFMAN, Mayor

ATTEST:

_____
SUSAN BARKMAN, Interim City Clerk

APPROVED AS TO FORM:

Ian J Best
_____

IAN BEST, ASSISTANT CITY ATTORNEY

MEMO

TO: JEFFREY MOORE, OIL AND GAS DIVISION MANAGER
PLANNING AND ECONOMIC DEVLOPMENT POLICY COMMITTEE

FROM: BRAD PIERCE, CHAIR OIL AND GAS ADVISORY COMMITTEE

SUBJECT: COMMENTS FOR THE OIL AND GAS MANUAL

DATE: SEPTEMBER 2, 2020

I am pleased to provide the comments from the Oil and Gas Advisory Committee for the draft Oil and Gas Manual.

The committee greatly appreciates the opportunity to provide comments on the proposed Oil and Gas Manual. The committee provided numerous comments and suggestions to Jeffrey Moore. Subsequently we met twice on WebEx, on July 15, 2020 and August 19, 2020, to discuss Mr. Moore's to response to our comments.

For brevity we will highlight several areas.

Variances

In Section 2.05 of the Manual the variance process is described. Specifically, the Oil & Gas Division shall approve, approve with conditions, or deny a variance request. There are several sections where the operator may apply for a variance. We suggest that all potential variance requests are identified in the pre-application process. Variance requests should be made at the time of the Oil and Gas Application submission. We also suggest that an appeal process for variance requests be created. The process should include a timeline for review and decision.

Previously Drilled Wells

A portion of Section 7.05, currently says "Within ninety (90) days before the purchase date, the Operator must submit a written report demonstrating compliance with all BMPs or a plan to bring the Oil and Gas Location and all Oil and Gas Facilities into compliance by the purchase date." It is unclear whether 'Operator' means the seller or the purchaser. In either case it is unrealistic to require Operators to submit a report demonstrating compliance by the purchase date. We suggest 'a written report demonstrating compliance with all BMPs' be deleted. Further we suggest the purchaser be responsible for submitting the plan for compliance. We understand Mr. Moore is going revise this section.

Administrative Approval of Oil and Gas Permits

The current Oil & Gas permitting process allows for certain applications to be administratively approved. This manual appears to require an appearance before the Planning and Zoning commission for any new application. It's unclear why the administrative approval process has been eliminated. Much of the recent Oil and Gas Development in the City of Aurora is taking place in undeveloped, and sparsely populated areas of the City. In cases where a densely populated neighborhood is potentially affected, a Planning and Zoning Hearing seems appropriate. However, when an Operator chooses a site that will likely have little impact on the existing population, it seems reasonable for it to continue to be processed Administratively.

Call Up by City Council

The Oil and Gas Manual states that 1) Planning Commission decisions on Oil and Gas Locations, 2) Administrative Approval on Oil and Gas Permits, and 3) Administrative Approvals for Oil & Gas Midstream Permits, are all subject to call up by City Council. What purpose does this City Council Call-up serve? It appears to add risk and uncertainty to the future of an application. One of the major components of the Operator Agreements is that the locations listed in the agreements were approved. On what grounds can City Council call-up an application? If an Operator follows the process described in the manual, shouldn't a permit be approved?

Respectfully Submitted,

Brad Pierce
Chair, Oil and Gas Advisory Committee