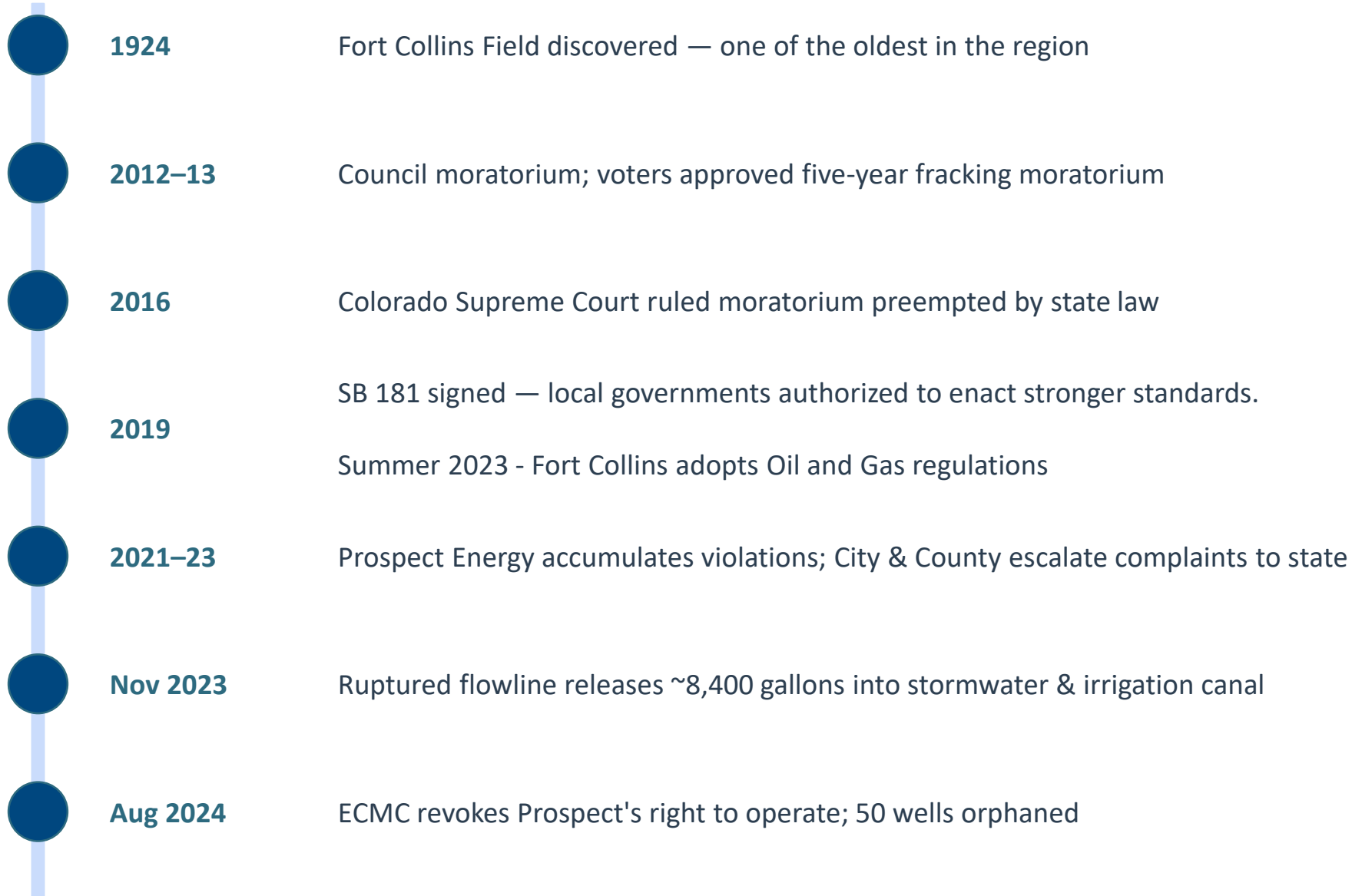




# Orphaned Oil & Gas Well Plugging & Abandonment

First Reading of Ordinance — Waiving City-led Basic Development Review procedures for Larimer County-Led Plugging of Orphaned Wells

# Background: Fort Collins Field



# Well Locations — NE Fort Collins



Indicates location and number of wells to be plugged that are within Fort Collins City limits



Indicates location of wells already plugged or outside of Fort Collins City Limits



North

## Legend

### YELLOW STAR

Wells to be plugged within City limits (10 total)

### RED ASTERISK

Wells already plugged or outside City limits

## Key Neighborhoods

- Hearthfire
- Water's Edge
- Richard's Lake
- Richard's Lake Park

*Area bounded by Douglas Rd (N) and Turnberry Rd (E)*

# Grant and Closure Plan

**\$5.2M**

ECMC Orphan Well  
Program grant

**50**

Former Prospect Energy  
wells covered

**10**

Wells within  
Fort Collins city limits

**July 2028**

Target completion  
deadline

## Three-Phase Work Plan

### Phase I

Plug wells &  
remove surface equipment

### Phase II

Site remediation

### Phase III

Full reclamation within  
6 months of plugging  
(ECMC Rules)

*City–County Coordination: Larimer County serves as fiscal agent to simplify administration. The City committed \$17,000 in Air Quality funds and is an active participant throughout all phases.*

# Proposed Waiver — LUC 4.3.4(F)(6)



| LUC § 4.3.4(F)(6) Requirement                                                          | How the ECMC / County Grant Process Satisfies It                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>§ 4.3.4(F)(6)(a)(I)</b><br>Pre-construction site characterization                   | ECMC requires a baseline soil and groundwater assessment before any plugging work begins at each site.                                                                                                                                                                            |
| <b>§ 4.3.4(F)(6)(a)(II)</b><br>Plugging to current standards under oversight           | All wells plugged to Rule 317B standards under direct ECMC oversight by licensed contractors selected through Larimer County’s competitive RFP process.                                                                                                                           |
| <b>§ 4.3.4(F)(6)(a)(III)</b><br>Post-plugging soil & groundwater verification          | Verification by licensed professionals required before grant file closes. ECMC Form 27 remains open until soils meet ECMC standards — open-ended, state-supervised oversight.                                                                                                     |
| <b>§ 4.3.4(F)(6)(a)(IV)</b><br>Site reclamation                                        | Full reclamation within six months of plugging per Rule 317B, documented and certified by the state before the grant file closes.                                                                                                                                                 |
| <b>§ 4.3.4(F)(6)(c)(II)</b><br>Recording with County Clerk & Recorder                  | ECMC requires each plugged well location and any pipeline abandoned in place to be recorded with the Larimer County Clerk and Recorder.                                                                                                                                           |
| <b>§ 4.3.4(F)(6)(c)(III)</b><br>Permanent monumenting                                  | ECMC requires installation of a permanent brass plaque at each plugged well location.                                                                                                                                                                                             |
| <b>§ 4.3.4(F)(6)(a)(III)(vi)</b><br>Notification to adjacent property owners           | Larimer County and Fort Collins Planning staff hosted an Open House in the Hearthfire neighborhood on June 16, inviting neighbors within 2,000 feet, with presentations by ECMC Orphan Well Program staff and Larimer County Public Health.                                       |
| <b>§ 4.3.4(F)(6)(a)(III)(vi)</b><br>Five-year annual soil gas & groundwater monitoring | Designed for developer-initiated construction near wells of unknown history. ECMC Form 27 is more protective: baseline documented before plugging, Rule 317B standards applied under oversight, and monitoring stays open with no fixed end date until soils meet ECMC standards. |



## Staff Recommendation: Adopt the Ordinance

- Waiving Basic Development Review requirements under LUC 4.3.4(F)(6) for the 10 orphaned wells within Fort Collins city limits covered by the Larimer County / ECMC grant program.
- *All LUC 4.3.4(F)(6) standards are met through ECMC grant obligations. No City review is required; no fiscal impact to the City is anticipated.*



# Backup Slides

Supplemental data on regional air quality and health context



# Regional Air Quality Context — Northern Front Range



## Ozone Nonattainment — The Regional Context

- Northern Front Range is in nonattainment for ozone
- O&G emissions are the primary anthropogenic contributor — 30–35% of NAA ozone formation (Ramboll, 2025); 50–65% on worst ozone days (Evans & Helmig, 2017; McDuffie et al., 2016)
- All 50 former Prospect wells sit within the ozone NAA — currently shut-in, not plugged; aging infrastructure can continuously leak methane and VOCs, especially during ozone season
- Plugging reduces methane to near zero — properly plugged wells avg. 0 g/hr vs. 586 g/hr for unplugged abandoned wells (Riddick et al., 2024)
- ECMC Orphan Well Program: 1,872 orphaned sites statewide (March 2026)

## What Plugging Resolves — and What Comes Next

- Phase I plugs wells and removes surface equipment — stopping direct methane and VOC emissions
- Larimer County Health: optical gas imaging leak detection at each site, before and after plugging
- Subsurface soil gas and VOC migration addressed through ECMC Form 27, open until soils meet standards
- Phase II remediation addresses remaining site contamination, distinct from the plugging work itself
- All 10 City-limits wells are within 2,000 ft of at least one residence — a distance at which research documents elevated short-term BTEX health risks (Carr et al., 2019)