

# Controlled Groundwater Area (CGA) Discussions on Comments

Libby Groundwater Site

Libby, Montana

January 25, 2018

# AGENDA

1. Introductions and Sign In
2. Libby Groundwater Site Background Relevant to CGA
  - Decision documents and remedies selected
  - Role of institutional controls (ICs) in the remedies
  - Scope of the FFS for the Upper Aquifer
  - Current land and water use in area
3. Discussions on Proposed CGA
  - Boundaries
  - Restrictions/allowances
  - Enforcement
4. Technical Questions/Comments on Numerical Model Calibration and Simulations to Evaluate the CGA
5. Contents of the CGA Petition
6. Next Steps

# Decision Documents and Remedies Selected

- q 1986 Record of Decision (ROD) - interim remedy
  - Buy water plan
  - City ordinance preventing new well installation
- q 1988 ROD - remedy for soil and Upper Aquifer groundwater
  - Soil excavation and treatment (in progress)
  - Groundwater treatment (in progress)
  - Institutional controls
- q 1993 Explanation of Significant Differences (ESD) - remedy for Lower Aquifer groundwater
  - Technical impracticability (TI) waiver of groundwater cleanup goals
  - Long-term monitoring
  - Institutional controls
- q 1997 ESD - updated soil and groundwater cleanup levels

# Role of Institutional Controls (ICs) in the Remedies

- q ICs are part of the current Upper and Lower Aquifer remedies, and part of the future modified Upper Aquifer remedy
  
- q City ordinance 1353
  - Enacted in October 20, 1986 to provide immediate protection to groundwater users
  - Prohibits installation of wells for purpose of human consumption and irrigation
  
- q Proposed Controlled Groundwater Area (CGA)
  - In response to the identification of areas above or near known contaminated groundwater and without groundwater use restrictions
  - Technically based
  - Restrictions will be similar to the City ordinance
  - Includes areas of impacted groundwater outside the City limits

# Scope of the Upper Aquifer FFS

- q Active remediation in the former waste pit source area
- q Active and passive treatment downgradient
- q Continued ICs

# Current Land and Water Use Within CGA

## q Former Mill

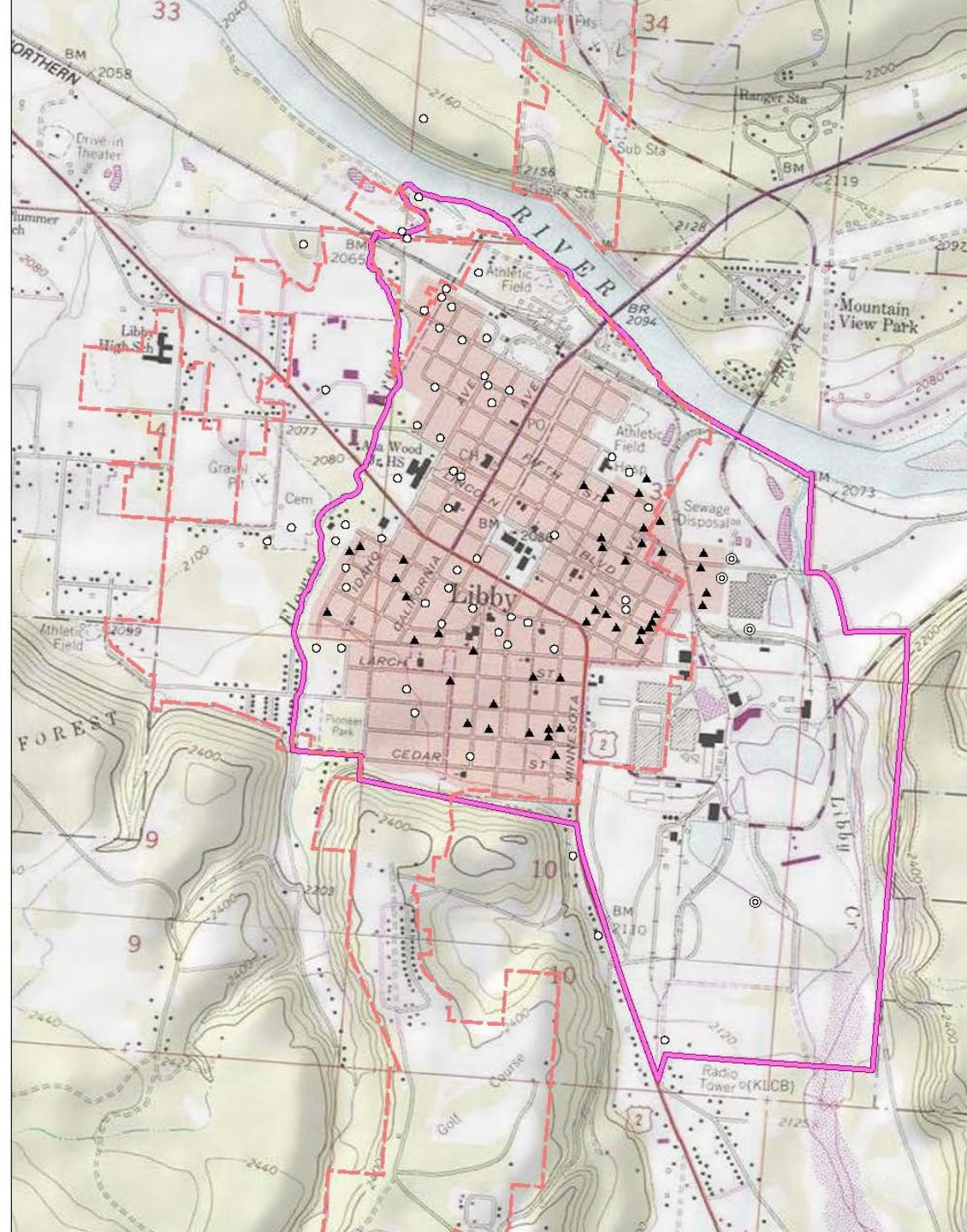
- Industrial, commercial
- Dewatering well
- Remediation wells
- Surface water rights

## q City

- Residential, industrial, commercial
- City water (Flower Creek)
- Some domestic and irrigation wells





## q County

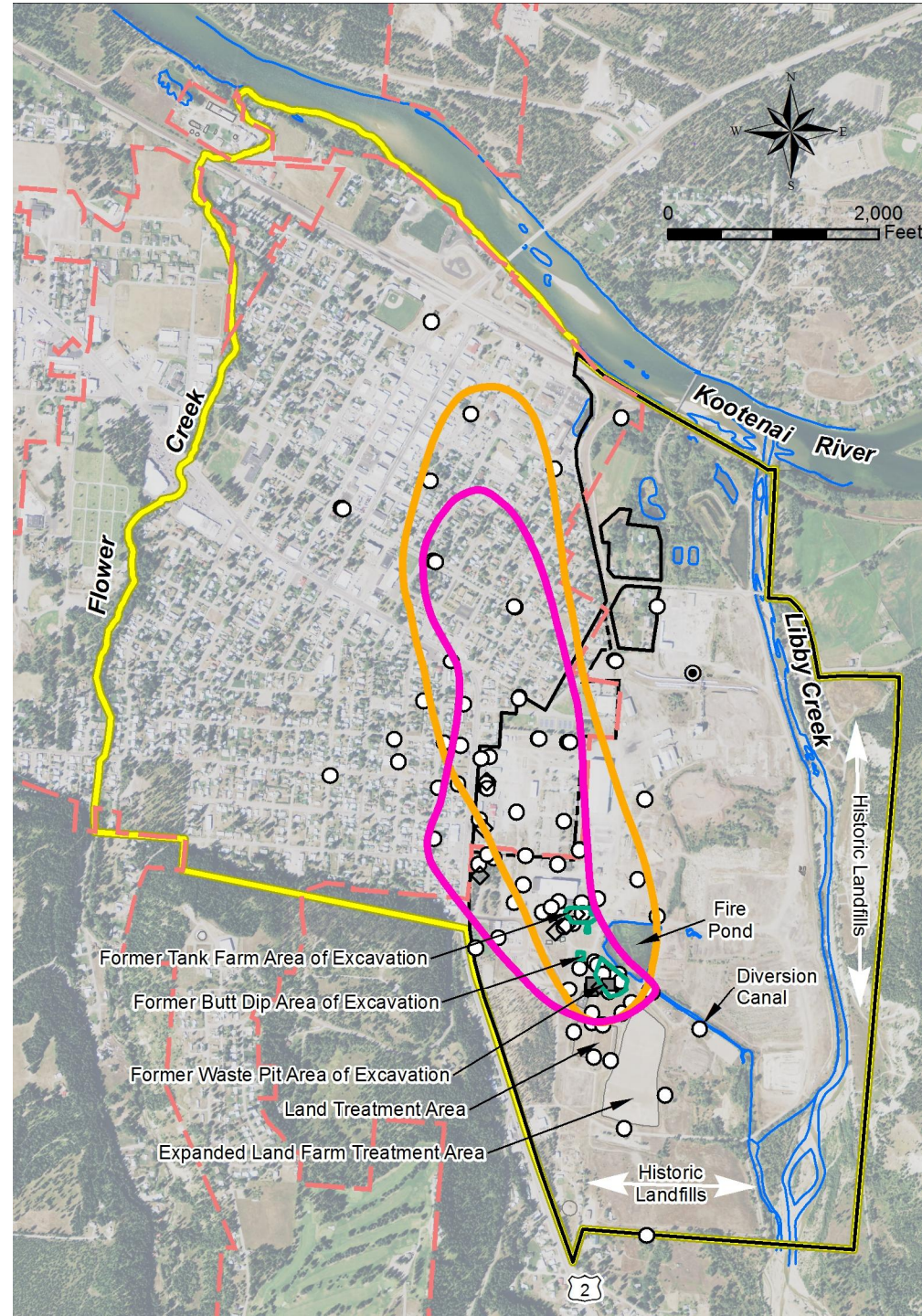
- Residential, industrial, commercial
- Some domestic and irrigation wells
- City water is available at most locations



# Proposed CGA Boundary

- q 1,123 acres
- q CGA includes:
  - Existing plumes
  - Buffer zone to address effects of pumping on plumes
- q Iterative approach used to develop boundary
- q Features easy to identify; more implementable and enforceable

-  Proposed CGA Boundary
-  Libby City Limits
-  Upper Aquifer PCP Plume
-  Lower Aquifer PCP Plume



## Proposed CGA Restrictions/Allowance

- q Prevent the installation of wells for the purpose of human consumption, irrigation, or commercial/industrial use within the CGA
- q Allow the installation of monitoring and remediation wells approved by the EPA and MDEQ within the CGA
- q Resolution of existing wells to be determined



# Proposed CGA Enforcement

- q Board of Health sponsors
- q DNRC approves
- q EPA and DEQ enforce
  - DNRC forwards requests for wells other than human consumption and irrigation to EPA/DEQ for consideration

# Technical Questions/Responses on Numerical Model Calibration and Simulations to Evaluate the CGA

# Contents of CGA Petition

- q CGA Supporting Information Document
  - Site background
  - Hydrogeology
  - Extent of groundwater contamination
  - CGA purpose, boundaries, and restrictions
  - Property ownership and water rights
- q Appendix – Model Technical Memorandum
  - Brief discussion of flow model calibration
  - CGA pumping simulations

# Next Steps

q Discussion

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