

MISSOULA WATER QUALITY ORDINANCE REVISION

CITY COUNCIL MEETING

6/6/2022

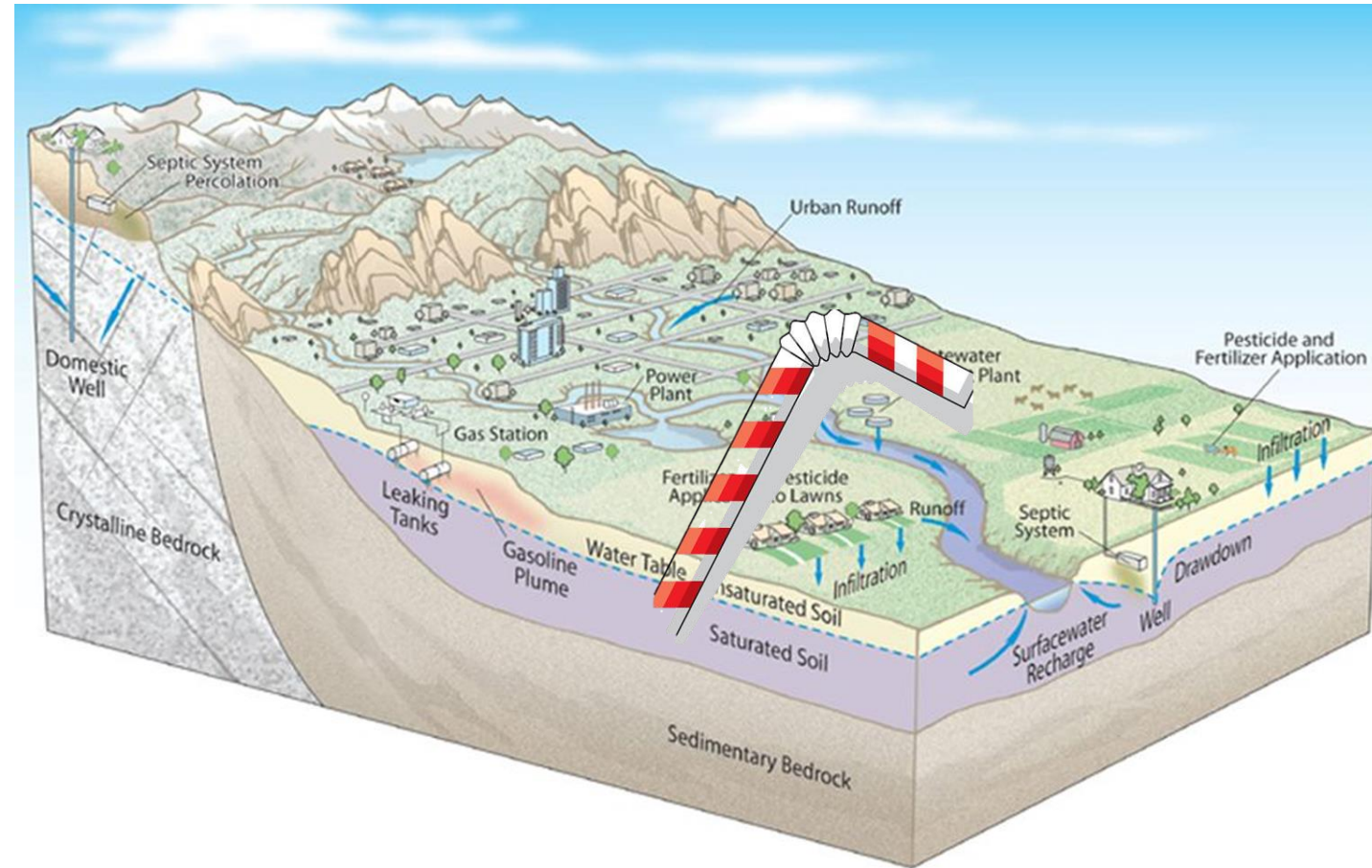
CONTENTS

- History
- Current Ordinance
- General Scope of Changes
- Process and Timeline
- Specific Section Revision Highlights



MISSOULA AQUIFER - OUR SOLE SOURCE FOR DRINKING WATER

- Unconfined, alluvial, coarse-sand and gravel aquifer. Missoula valley is composed primarily of Tertiary sediment and capped with 100-200' of Quaternary age alluvium
- Saturated aquifer thickness ranges from 50-120' and can be anywhere from 0-100' bgs.
- Clark Fork river in Hellgate Canyon responsible for majority of recharge (~80%)
- Aquifer generally flows SW b/t 30-100'/day toward the Clark Fork and Bitterroot Rivers



WATER QUALITY HISTORY IN MISSOULA

1981 – Arsenic from Milltown Dam discovered in drinking water

1982 – Gasoline from Yellowstone Pipeline leak; La Valle Cr. and groundwater impacted

1984 – Picloram (TORDON) and 2,4 D in PWS wells (dry-sump, Missoula County Weed District)

1985 – Diesel contamination of groundwater at Burlington Northern site in downtown Missoula and **gasoline** contamination of groundwater from UST at Champion Missoula Sawmill.

1986 – Groundwater contamination from **landfill leachate** in Missoula, **coliform bacteria** in Frenchtown, and high levels of **nitrate** detected in Linda Vista area.



The use and improper disposal of perchloroethylene-containing degreasers from dry-cleaning and auto-body shops led to the discovery of drinking water contamination in Missoula in early 1990s.

WATER QUALITY THREATS IN MISSOULA - CONTINUED

1987 –Contaminants (**bicarb, chlorine, magnesium, calcium, sodium, iron**) found in aquifer and Class V stormwater wells inventoried.

1988- PERC discovered in aquifer (1990 too) (19 of the 35 Mtn Water wells had PERC).

1990- University of Montana lift station overflow contaminated groundwater with **E.Coli** and nearby PWS well.

And many more since....PCBs from Stimson, metals, dioxins, Penta at White Pine Sash, PAHs and metals at Hart refinery, PCBs, dioxins and metals at Smurfit-Stone, etc.



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WATER PROTECTION STAGE IS SET

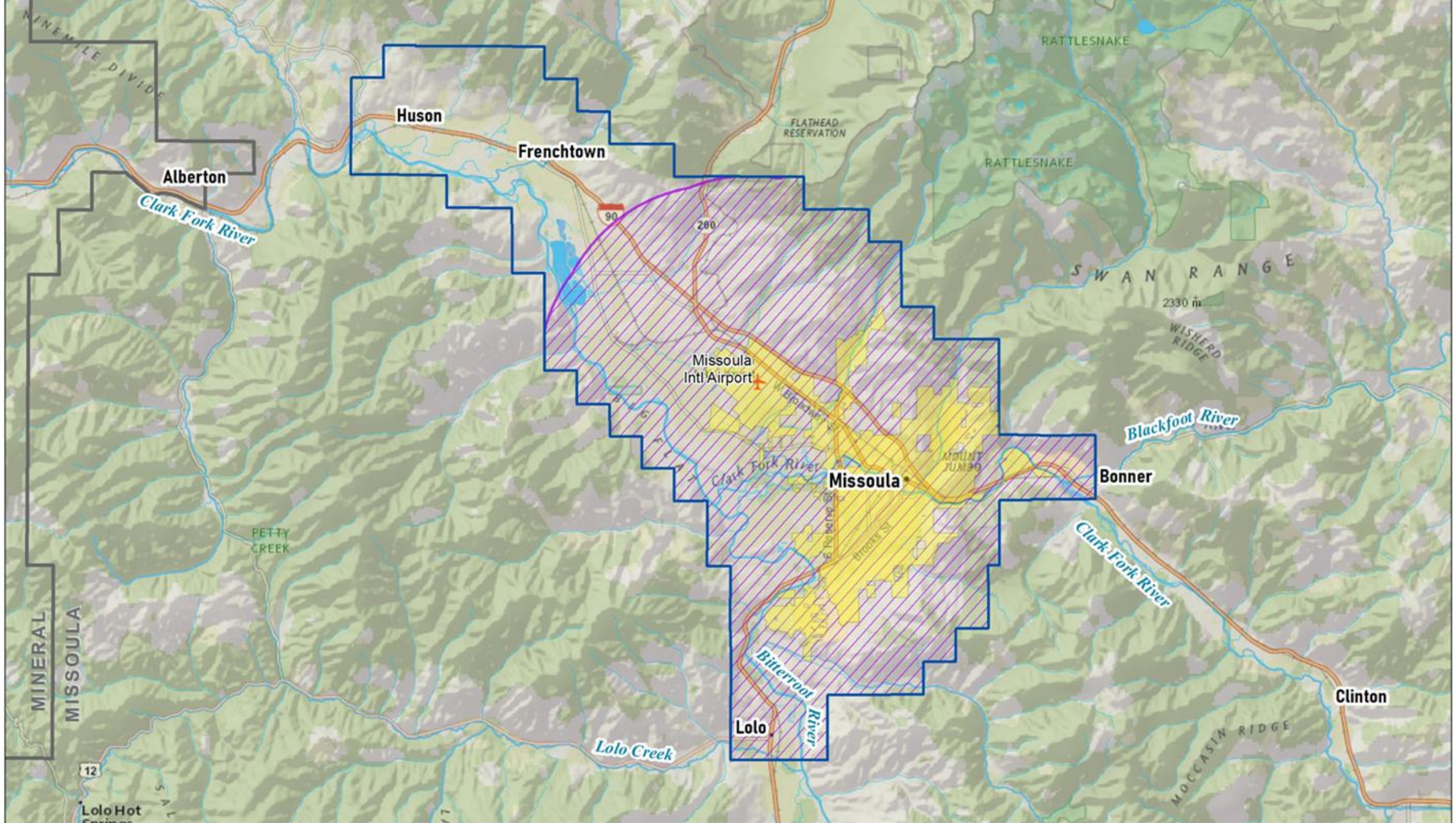
- **1988 – Water Quality Advisory Council** formed to advise the Water Quality District Board on matters relating to water quality.
- **1988 - Sole Source Aquifer** designation (first one in Region 8) achieved. Requires any federally funded projects to complete an environmental impact analysis
- **1991** – State statute established that allowed for formation of local Water Quality Districts (MCA Title 7 Chapter 13).

Purpose of local water quality districts is to **protect, preserve, and improve the quality of surface and groundwater.**

MISSOULA VALLEY WATER QUALITY DISTRICT

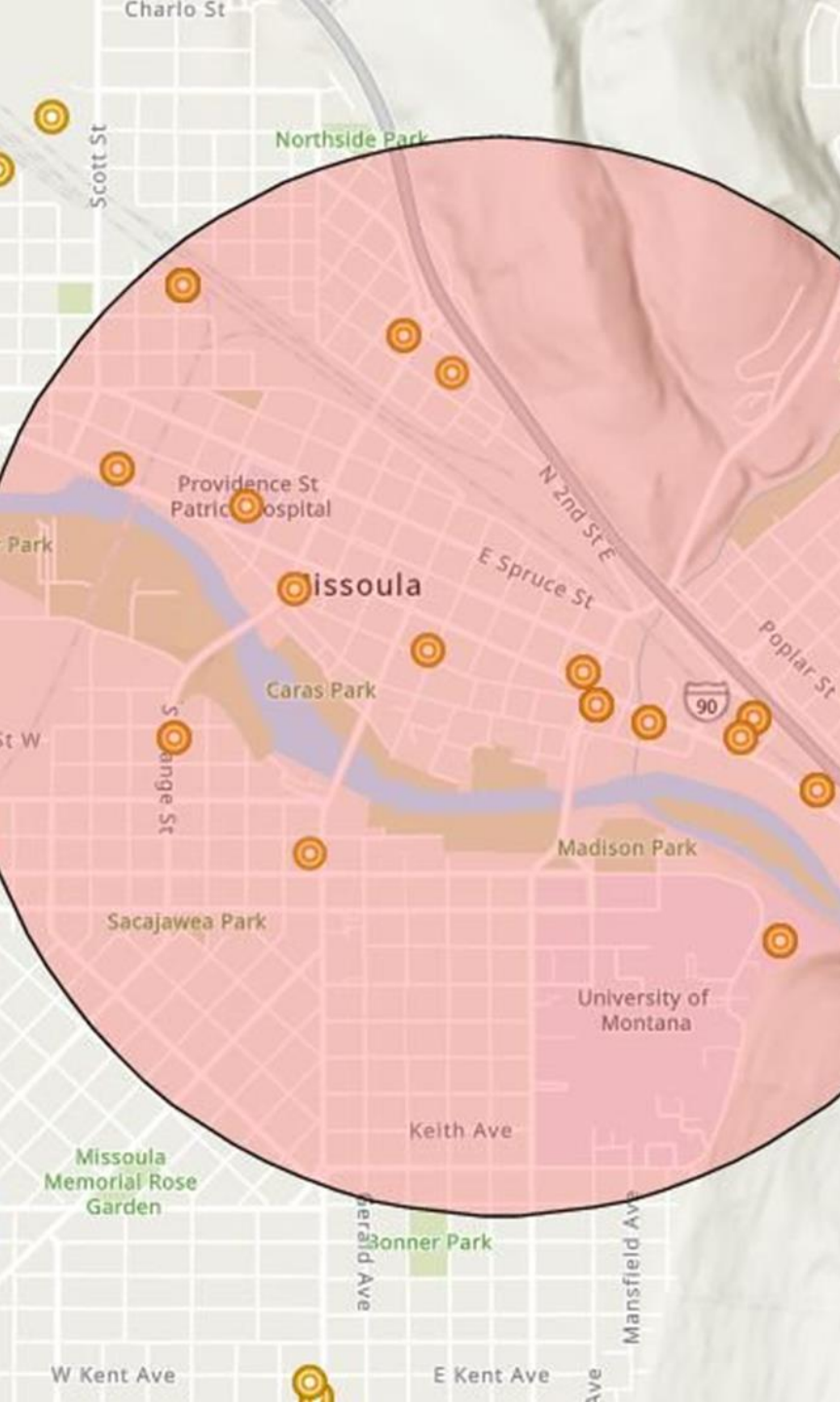
- **1993 - Missoula Water Quality District**
 - -Administered by MCC
- **1994 - Aquifer Protection District**
- **(Title 13.26 City of Missoula)**
 - **Health and Safety Ordinance**
 - **District**





Water Quality District &

Missoula City Limits



WATER QUALITY ORDINANCE – LAST MAJOR UPDATE IN 2000

- Code is a tool to help **prevent** contamination and **protect** water resources
- Original ordinance was largely reactionary – sale of PERC, Class V injection wells, fueling stations, dry cleaners, bulk fuel storage, etc.
- Established permit and storage requirements for regulated substances.
- Updated in 2000 (and again in 2008) for deicer
- General prohibition - cannot “cause contamination”

In past 20+ years – opportunity to use tool, identify new threats, and find better ways to prevent contamination.



GOALS OF REVISION

- **Incorporate existing policies** into code for most common sources of pollution – petroleum & fuel releases, sediment, road maintenance, etc.
- To **clearly communicate expectations** on how to not “cause contamination” to the public (BMPs)
- **Add** organization, clarity, MMC language and enforcement consistency, and updated references.
- **Removal** of requirements covered by state or federal regulations.
- **If it isn't broke...**

THE PROCESS



PUBLIC NOTICES AND OUTREACH

Summary

All Projects 1 04 May '22 - 02 Jun '22 Update

SELECTED PROJECTS: "Ordinance updating protections for Missoula's aquifer"

TRAFFIC

Visitors Summary

Missoula County Voice from 04 May'22 to 02 Jun'22

[DAILY](#) [MONTHLY](#)

- WQAC public meetings in 2019, 2020, 2022
- BCC public meeting 2022
- WQD Board and Health Board public meetings

We (Phillips 66) are in favor of the proposed changes, and greatly appreciate the MCCHD's willingness to listen to and evaluate the validity of comments provided by Industry during this process. Specifically, the MCCHD's willingness to align with Industry Standard (API 653 Inspection Criteria, 20-year interval vs 10-year interval, as adopted in Section 2.0 of the BMP Manual) will reduce total VOC and benzene emissions associated with degassing of large capacity tanks associated with the completion of internal inspections; without reducing Industry accepted safeguards for evaluating the internal integrity of large capacity tanks. We appreciate the MCCHD's efforts.

* Select a section of the graph to zoom

Pageviews Visitors Visits New Registrations

Highlights

TOTAL VISITS	MAX VISITORS PER DAY	NEW REGISTRATIONS
413	136	1
ENGAGED VISITORS	INFORMED VISITORS	AWARE VISITORS
4	47	368

- Missoula County Voice – May 2022
- Received and incorporated feedback from various regulated facilities in Missoula (e.g. Missoula airport, Phillips66, Loves Travel Plaza, Pro-Wash

DEFI

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- NEW replac
- NEW diamet
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PROHIBITED ACTIVITIES - 13.26.032 (PG.7)

This section was existing but included only basic prohibitions (violate the ordinance, permit, or generally “cause contamination”). Largely pulls in language from various sections of the ordinance.

- **NEW** – prohibit discharge to MS4, anything that is not an “Allowable Discharge”
- **NEW** – prohibit storm water discharge from Tank Fueling Area **directly** to any storm drain (would apply to new and existing fueling facilities)
- **NEW** – prohibit storm water discharge from Vehicle Fueling Area **directly** to any storm drain (would apply to new and existing fueling facilities)
- **REVISED** – Prohibition on Construction or Operation of an Industrial or Commercial Injection Well – removed caveat that an EPA Underground Injection Control Permit may be issued
- **REVISED** – Prohibition on Installation of a new well if primary structure is within 200 ft of a main – added Public Water Supplies (PWS) that are not regulated by PSC.
- **NEW** – Prohibition on connecting a structure to a well if the structure is within 200 ft of an existing PWS.

REGULATED SUBSTANCES AND POLLUTION PREVENTION – 13.26.034 (PG.8)

- A Person who operates the following businesses or performs the following activities, including but not limited to: *Auto repair, Bulk Petroleum Storage, Carpet cleaning, Chlorinated Water discharge, Dry-Cleaning, Fueling Facilities, Livestock Housing, Pressure washing, Restaurants, Road maintenance, Vehicle washing, and Well development* must comply with minimum required Best Management Practices. (NEW)
- A Person who owns, operates or controls a Facility which Handles Regulated Substances in an amount equal to or greater than the Threshold Quantities must comply with minimum required Best Management Practices. (NEW)
- A Person who owns, operates or controls a Facility at which a Regulated Substance equal to or greater than the Threshold Quantity shall provide secondary containment for that substance. The minimum BMPs for secondary containment listed in the BMP manual must be met. This rule does not apply to petroleum products in Underground Storage Tanks, vehicle fuel Tanks, Large Capacity Petroleum Storage Tanks, and Regulated Substances sold for retail in a container equal to or less than 5 gallons capacity. (REVISED - Added BMP manual reference and replaced "bulk fueling facilities" with Large Capacity Petroleum Storage Tanks because a separate set of requirements apply in lieu of secondary containment)

NEW SECTION - FUELING FACILITIES 13.26.036 (PAGE 9)

- **Any New or Replacement Underground Storage Tank system at a Fueling Facility must be approved by DEQ, if applicable, prior to obtaining a building permit. (REVISED)**
- **Existing facilities have until Dec 31, 2024 to meet minimum storm water drainage BMPs (NEW)**
- **Other sections of ordinance referencing fueling facility operations and infrastructure moved to BMP manual**

UPDATED FUELING FACILITY BMPS

- Storm water cannot discharge directly to storm drains from tank fueling and vehicle fueling areas. (REVISED)
- Direct drainage on fueling pads to containment vaults or through oil-water separator. (NEW)
- Tank fueling drainage options – vegetated swale, catch chamber or oil-water separator to a swale or dry-well (NEW)
- Drainage BMPs must operate at full capacity during storm events. (NEW)
- Provide breakaway hoses and nozzles on fuel dispensers, automatic pump shut-off thresholds or trained staff, and maintain sufficient spill response materials onsite (REVISED)
- Large Capacity Tank Inspections updated to industry standard – referencing API 653 5th Edition (NEW)



FUELING



2010 Fueling island drains to injection well spilled.



2021 Tank Fueling Area overflow of 100 gal of gasoline to 3 injection wells

2018 - Tank Fueling overflow. Lot drains to injection well.

Drainage to injection well with evidence of past spill.



Drive off. Tank fueling area drains to injection well, entire site drains to surface outfall

DEICER SPECIFICATIONS – 13.26.038 (PG.10)

- Secondary containment required for all threshold quantities of deicer regardless of application (NEW)
- Storage and Field Application section (MOVED to BMP manual)
- Liability section REMOVED





POLLUTION PREVENTION PERMIT REQUIREMENTS – 13.26.050 (PAGE 11)

- **NEW** - Permitted facilities must **follow** the approved Pollution Prevention Plan (Formerly facilities were only required to **submit** Pollution Prevention Plans for approval)
- **NEW** – Significant Changes to a Facility's floorplan, chemical inventory, disposal practices, emergency response plan, etc. must be pre-approved by the Department. Extensive changes require a modification request and application fee.

BMP MANUAL

- Dry Cleaning
- Deicer
- Fueling Facilities
- Bulk Petroleum Storage
- Auto Maintenance
- Carpet Cleaning
- Chlorinated Water Discharge
- Livestock Waste
- Power Washing
- Restaurant Grease
- Road Maintenance
- Vehicle Washing
- Well Development

Best Management Practices for Pollution Prevention



Satisfies Missoula Valley Water Quality Ordinance Title 13.26
Approved Month, day, 2020

ADDITIONAL

- Auto Maintenance
- Carpet Cleaning
- Chlorination
- Livestock
- Pressure Washing
- Food Service
- Road Maintenance
- Concrete
- Vehicle Wash
- Well Development



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REMOVALS

- LEPC Reporting Requirement – Federal Right-to-Know Act
- Facility Closure Permits (13.26.060)
- UST requirements no longer under local control



OVERVIEW OF CODE REVISION

- Re-organized the ordinance for clarity
- Moved current BMPs into a manual (secondary containment, fueling, dry-cleaning, deicing, etc.)
- Codified policies into regulation – car washing, carpet cleaning, power washing, well-development, allowable discharges, etc. and developed a Best Management Practice Manual.
- Incorporated industry standards for integrity testing large capacity petroleum storage tanks
- Updated Fueling Facility requirements to protect both surface and groundwater
- Removed regulatory statements from definitions
- Prohibited connection of a structure to non-drinking water wells if a PWS is within 200'
- Included deicer in list of regulatory substances
- Made Pollution Prevention Plans explicitly enforceable and require approval for changes
- Aligned enforcement and criminal penalties with Municipal Code
- Removed requirements already covered by state or federal regulations (UST review, LEPC reporting, etc.)

QUESTIONS?

Comments and Questions at
<https://missoulacountyvoice.com/>

