# House Bill 2145 Well Construction Program Modernization



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# Overview

- Background and Need for Modernization
- HB 2145 Status
- -1 Amendment
- - 2 Amendment
- Third amendment under discussion
- Questions and comments

#### Water well diagram



#### Access port

Wells must have a port to allow access for measuring water level.

#### To water delivery system

#### Well identification number

#### Top terminal height

The top of the well must be capped and extend at least one foot above finished ground surface or pump house floor.

#### Sands and gravel

#### Well seal

The seal prevents surface water from entering the well. The well must be sealed to at least 18 feet or 5 feet into a consolidated layer, whichever is greater.

#### Water bearing sands and gravels

#### Impermeable layer

Water cannot penetrate this layer which prevents the upper aquifer from commingling with or contaminating the lower aquifer. Sealing the well below this point is required to prevent commingling.

#### Casing

The casing supports the sides of the well and prevents the well hole from caving.

#### Non water bearing conglomerates

#### Static water level

The stabilization level or elevation of water surface in a well not being pumped.

#### Perforations

Holes in the casing allow water to enter the well.

#### Riser pipe and pump wiring

#### Water bearing zone

#### Pump

Sometimes the pump is mounted on the top of the well. Generally, domestic wells use submersible pumps.

## Components of a Well





# Protect Public Health & Safety

 Prevent wells from serving as a conduit for groundwater contamination

 EX. Improperly sealed well at gas station led to groundwater contamination in private wells used for drinking.





# Protect Groundwater Resources for Use

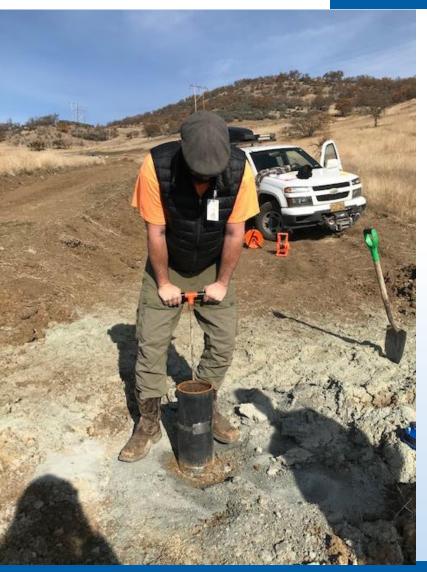
- Prevent draining of aquifers and groundwater declines
- EX. Commingling in Mosier.
  - Water levels dropped ~4 ft/year
  - Total 150-200 feet



Commingling: Depletes the aquifer like pumping 24 hours a day every day of the year until fixed



# **Current Status**



- 250,000+ wells in Oregon
- 5 inspectors funded by start card fees
- •~3,000 new wells each year
  - ~30% average inspection rate
- 2019: 932 wells inspected
  - 10% with deficiencies



#### Need for Program Improvements

- 2016 Secretary of State Audit
- 2017 Integrated Water Resources Strategy
- 2019-2024 Strategic Plan
- Insufficient Resources
- Maximize limited resources to reduce well construction deficiencies, protect the public, and groundwater resources





# Objectives

- Provide Assistance: Help landowners address well issues
- Prevent Deficiencies: Ensure licensed well drillers have proper knowledge and experience
- Identify Deficiencies: Improve Department's ability to plan inspection workloads to increase inspection efficiency; timely identify and correct deficiencies
- Driller Responsibility: Address driller concerns about time responsible for deficiencies, while considering WRD's limited resources and responsibility on landowners



#### HB 2145 Status

- Stakeholder Engagement Ongoing
- House Bill 2145 Intro
- Amendment -1
  - Has some errors that will require correction
  - Replaces measure. Removes section 2 of HB 2145 Intro.
- Amendment -2
  - Replaces measure. Only contains section 2 of HB 2145 Intro.
- Third amendment proposal under discussion
  - Technical well log reviews

# -1 Amendment



# Well Repair, Replacement, and Abandonment Fund

#### **Problem**

- Droughts, groundwater declines, aging wells, deficient wells
- Owners may not have resources to fix or abandon
- Household water source
- Reduce threats to groundwater resource and public health



Abandonment of a dug well contaminated by oil



# Well Repair, Replacement, and Abandonment Fund



Well burned over in Obenchain fire

#### **Proposal**

- Establish authority for program to repair, replace, or abandon:
  - deficient wells
  - household uses for persons of lower or moderate income
  - household uses in areas of declining groundwater levels
  - to address other water management purposes



# Well Constructor Skills

#### **Problem**

- Improper welding and seal placement
- Major construction deficiency
- Contribute to contamination or commingling



Bad weld allowing water to leak at joint



## Well Constructor Skills



#### **Solution**

- Complete an arc welding training, professional certification, or proficiency test
  - New driller to obtain license
  - Existing driller if deficiency found
- Driller allow Department to observe and inspect work as being performed



## Well Constructor Skills

#### **Problem**

- Continuing Education program sunsets in 2022
- Continuing Education
  Committee limited
  representation

#### **Proposal**

- Extends sunset date to 2030
- Modify Committee to include:
  - groundwater quality or public health
  - employee safety



# Well Inspection Efficiency

#### **Problem**

- No time limit for submitting start cards
- Department does not know when actual work begins or when seal placement will occur
- Difficulty finding well with location information
- Hinders inspections
- Mailed start cards may not be received timely
  - Start card and well log manually entered



# Well Inspection Efficiency

#### **Proposal**

- No later than 72 hour start card submission; 60-day expiration
- Specifies required info on start card including GPS location
  - Construction and seal placement timelines
    - Notification 4 hours prior to seal placement if different
- Notification on day work begins
- Waiver of timelines (-1 amendment wrong)
- GPS required on well log
- Electronic submission of well log and start cards by 2024



# Timely Enforcement

#### **Problem**

- Need to be able understand deficiencies associated with a driller
- Identify deficiencies quickly for timely correction
- Enforcement takes time, until enforcement complete can continue to drill

#### **Proposal**

- Specify on well log bonded driller as well as those that did the work
- Provide agency with injunction authority

#### Other Solutions (not included in -1)

- Third proposal related to technical well log reviews
- Demerit system for future



#### Other

- Clarifies existing processes, Department vs. Commission
- Clarifies start card and well log required for individuals constructing their own well (-1 amendment wrong)

- Operative dates of most provisions of the bill are July 2023 or July 2024
  - Exceptions 2022
    - Well repair, replacement, and abandonment fund
    - Continuing Education Program

# -2 Amendment



# Driller Responsibility

#### **Problem**

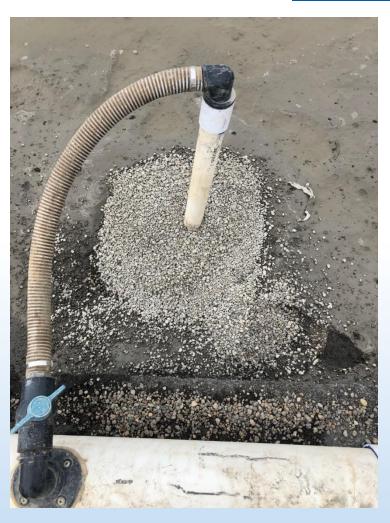
- Drillers responsible for deficiencies for the life of license
- Landowner responsible if driller is not
- Department cannot inspect every well with existing resources
  - 10% 2019 wells inspected have deficiencies
  - 70% of wells not inspected
- Difficult for owner to know if a well is properly constructed



Improper seal



# Driller Responsibility



Improper seal: Wrong type of materials

#### **Proposal**

- 3 years: seal placement observation and well log review
- 10 years: well log review
- 15 year maximum

# Other Proposals

**Amendments Under Discussion** 



## Additional Proposal

#### **Under Discussion**

- Technical well log review
- Add two positions for well log technical review
  - How to pay for? Increase start card fee?
- Shift responsibility of map and exempt use fee submittal to well driller, allowing the Department to reallocate work of 1FTE to technical well log review



### Well Log Technical Review

#### Well Log Reviews

- Complement but not replacement to the Department's inspections
- With limited resources can be a tool to broaden the scope of review to identify some deficiencies
  - Test: 6% of logs reviewed indicated a potential deficiency
- Not all deficiencies can be identified through well log review
  - Does not mean the well is properly constructed
  - 10% of wells inspected deficient

# OREGON



WATER RESOURCES DEPARTMENT