A dynamic background image of water splashing, with various droplets and bubbles captured in motion against a light blue background. The water is rendered in shades of light blue and white, creating a sense of movement and freshness.

Joint Compliance Projects for Groundwater Protection

**Nicole Pyett
Regional Hydrogeologist
Ministry of Forests, Lands, Natural Resource Operations
& Rural Development**

**Okanagan Basin Water Board WSC Meeting
Kelowna, BC
April 12, 2018**



Ministry of Forests, Lands, Natural Resource Operations
and Rural Development

Provincial Staff that support groundwater compliance and enforcement

Groundwater Science Staff

Natural Resource Officers

FrontCounterBC Staff

Water Allocation Staff

Provincial Legal Team





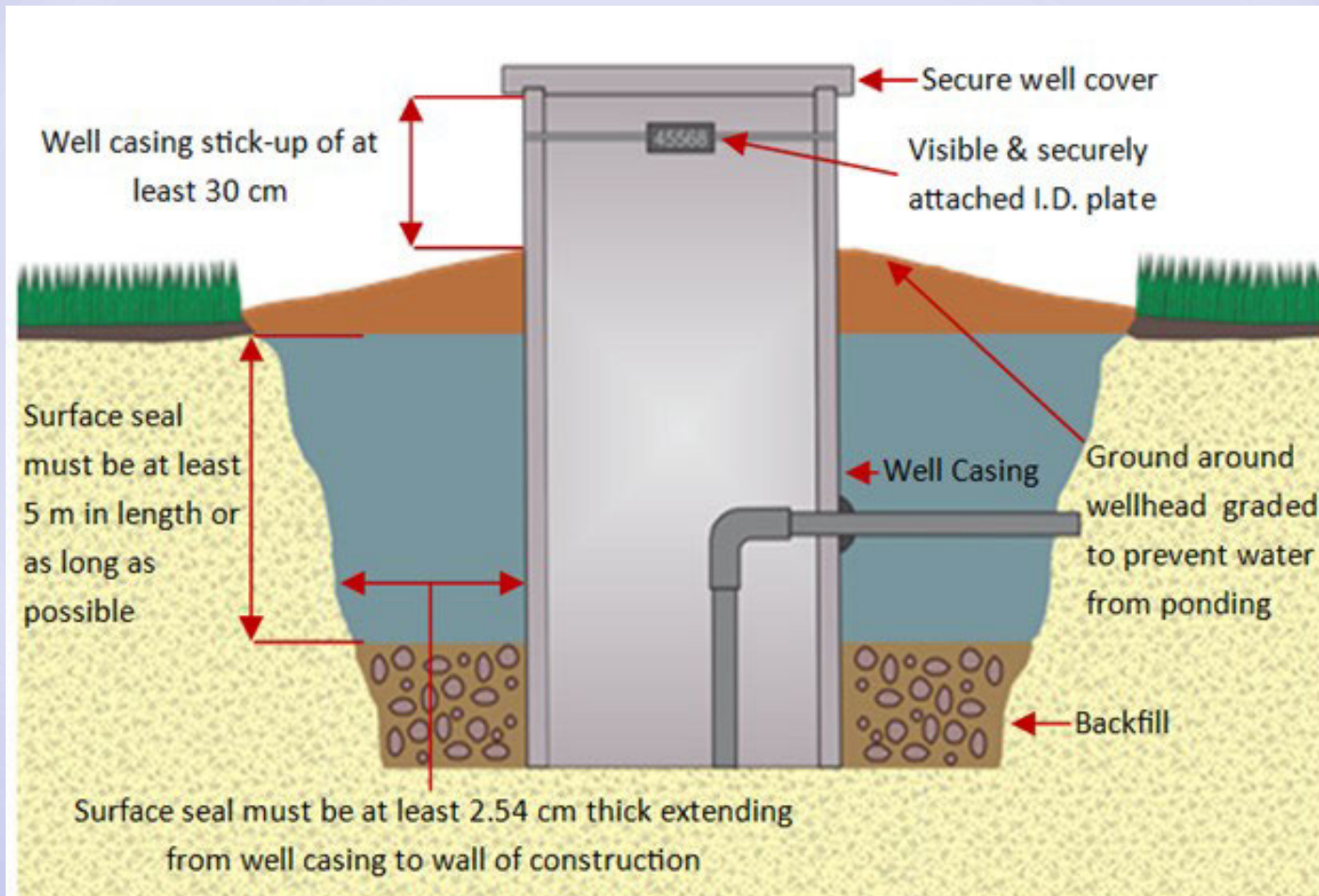
Water Sustainability Act **Part 3, Division 3**

Groundwater Protection Regulation

To promote sustainable use and protection of BC's aquifers by specifying requirements for wells to be properly constructed, maintained, and, at the end of their service, deactivated and decommissioned.

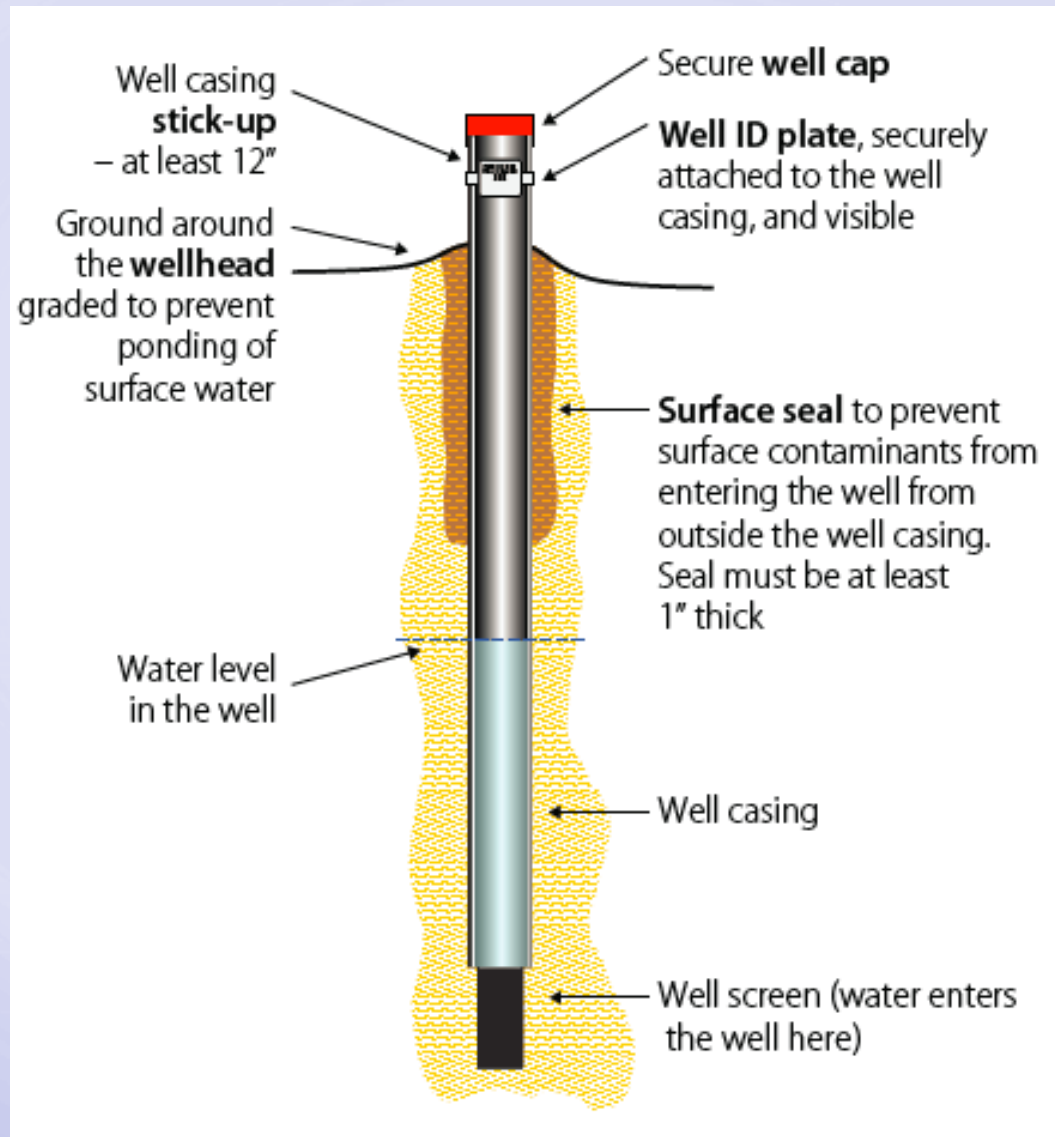


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Provincial Compliance Model

- Set requirements that are clear, practical & enforceable
- Support education and encourage voluntary compliance
- Verify compliance through monitoring, inspections and audits
- If compliance is not attained, adjust program management approach or compel compliance through enforcement.





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Tools to ensure groundwater protection

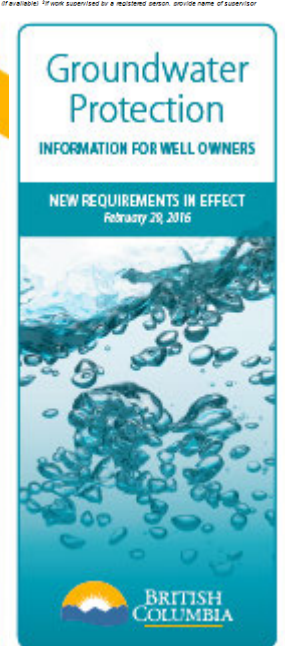
- Education
- Advisory letters
- Warning letters
- Tickets
- Orders
- Charges

BRITISH COLUMBIA
MINISTRY OF FORESTS,
LANDS AND NATURAL
RESOURCE OPERATIONS 3300-25 / Water Protect

Inspection Date (YYYYMMDD) / Time (hh:mm): _____ Inspector: _____
Site or Water System Name: _____
Well owner: _____ Phone No.: _____
Site contact: _____ Phone No.: _____
Site Coordinates (NAD 83, Zone & UTM or *Lat/Long dd.ddddd): _____
Location address or legal description (PID): _____
Mailing address: _____
Well location description: _____

Well Tag Number: _____ Well status Active Deactivated Decommissioned
Well ID Plate No. _____ Well ID Plate location Not in Use (see comments)
ID plate location Strapped to casing Outside Pump house Well pt Other
 Other _____ See comments
Construction date _____ Well pt drained Yes No See comments
Construction method _____ Well string Estimated distance to nearest water well _____ m Unknown
Secure well cap/cover Yes No See comments
Class of well _____ Type of cap Sanitary Bottle (glass adapter style) Other (e.g. hard pipe) See comments
Subclass of well _____ Well depth _____ m Unknown
Driller name _____ Well diameter _____ cm _____ inches
Driller company _____ Drilling registered Yes No Supervised? _____
Driller class Water well Geotechnical/Environmental Geotechnical/Environmental
Pump installer name _____ Well maintenance Clear access to well No foreign matter stored within 3 m
Pump installer company _____ Grading promotes drainage away from wellhead
Pump installer registered Yes No Supervised? _____ Flowing well Yes No See comments

*If not in WELLS database, attach well construction record, if available. If work supervised by a registered person, provide name of supervisor.





Joint Groundwater Compliance Pilot Project

Participants:

Groundwater Science staff

Natural Resource Officers

Interior Health - Environmental Health Officers

Purpose:

Enhance groundwater protection in rural areas by coordinating a multi-agency groundwater compliance project focused on small water systems.



Why Small Water Systems?

- Potential to offer greater public health and environmental benefit
- Commonly have issues related to GPR compliance.
- Provide opportunity to inform operators on regulatory & licensing requirements



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and **R**ural **D**evelopment

Project Well Inspections in South Area

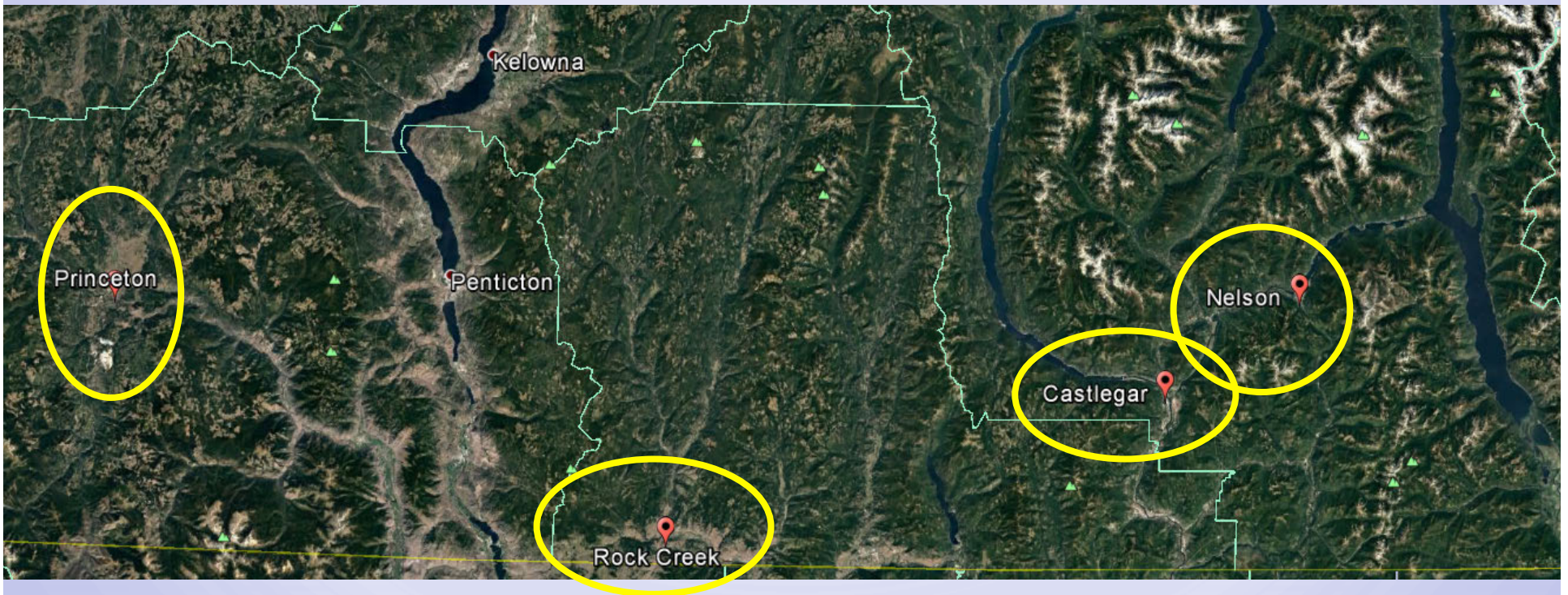


Photo Credit: Google Earth



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Joint inspections conducted by NROs with GW staff



*Inspections conducted over 4 days on 44 wells / 31 sites
in the Regional Districts of Okanagan-Similkameen and
Central Kootenay.*



Inspection Results

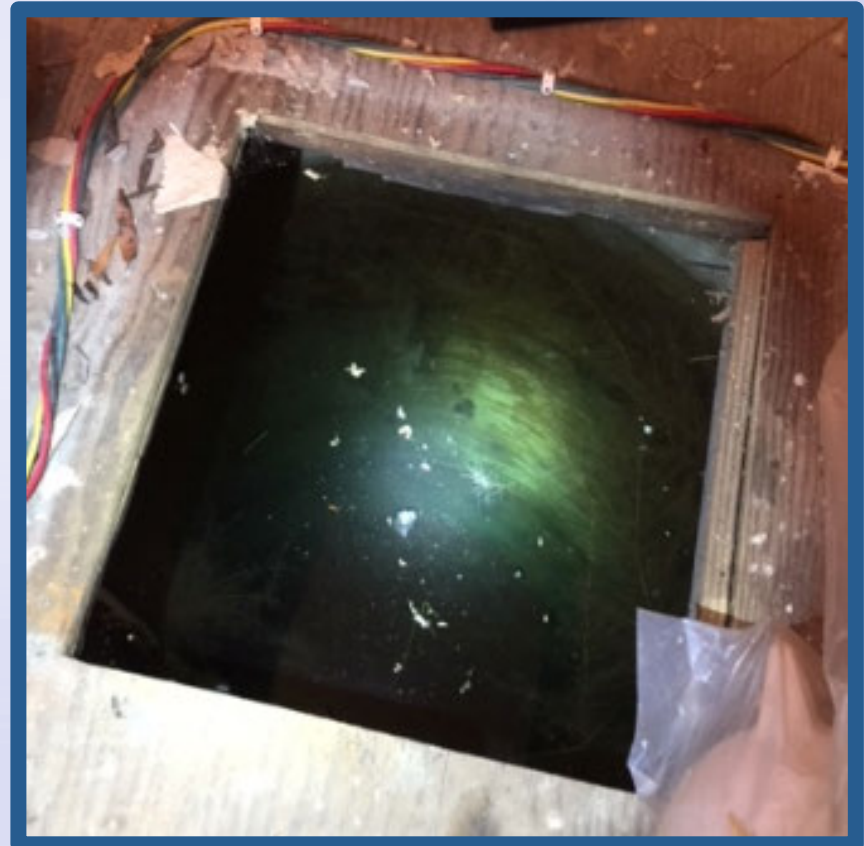
Some wells were found to be in excellent condition...





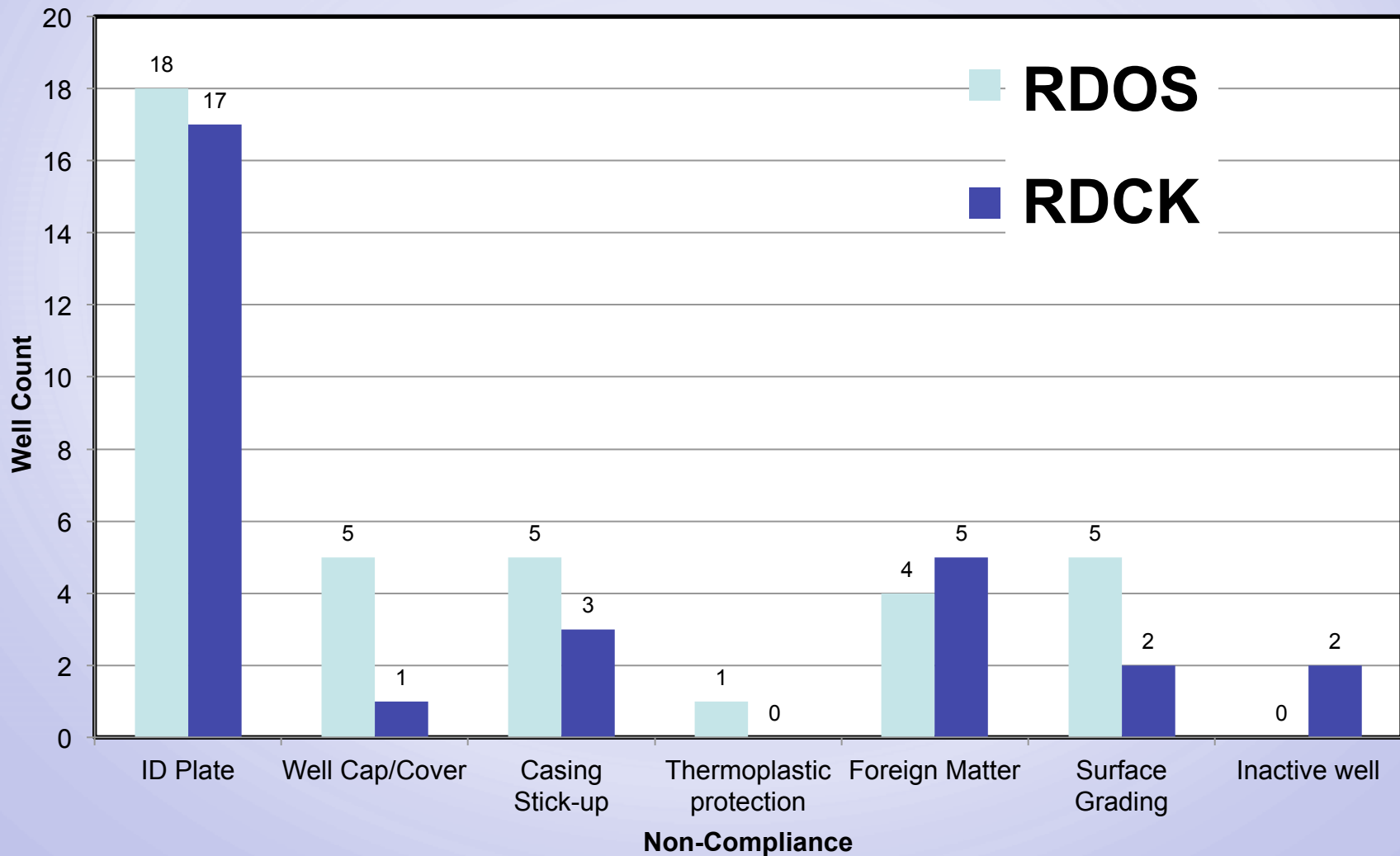
Inspection Results

And some were not...





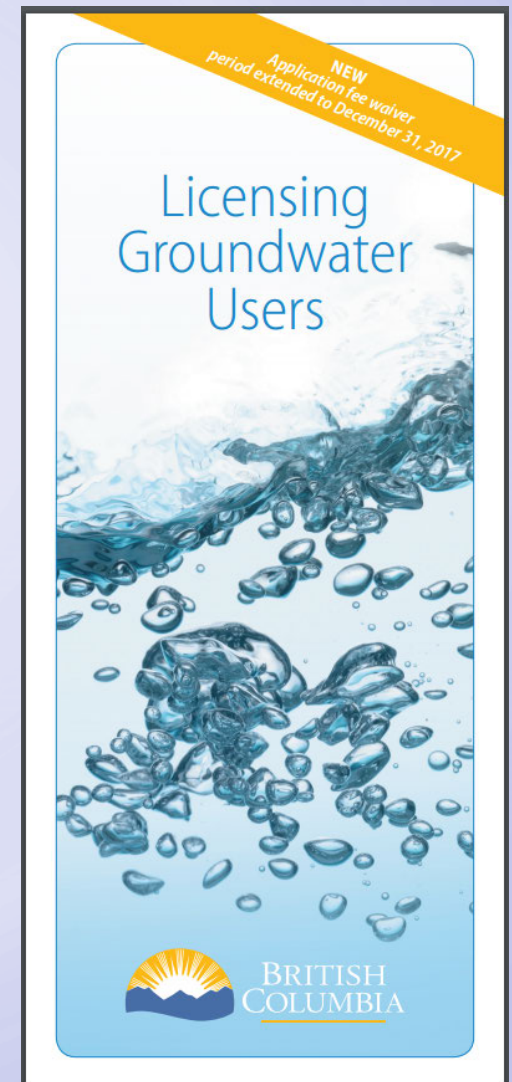
Inspection Results





Address Information Gaps Amongst Stakeholders

- Need for water supply systems to apply for an authorization to divert and use groundwater under the WSA (Groundwater Licensing) not completely understood.
- Many well owners/operators unaware of WSA & GPR requirements for well construction, maintenance and operation.
- Varying levels of expertise and awareness with respect to the condition of their water supply system.





Summary of Outcomes

Enhanced groundwater protection through:

- A proactive groundwater compliance and enforcement project;
- Multi-agency co-operation;
- Effective outreach to small water system operators;
- Provide information on regulatory and licensing requirements, and;
- Direct resolution of over 70 compliance issues.



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and **R**ural Development

Reporting Groundwater Protection Concerns

Report All Poachers and Polluters (RAPP)

Report Natural Resource Violations

1-877-952-7277

#7277 (Cellular Dial)

www.for.gov.bc.ca/hen/nrv/report.htm

Report a Violation Online

R.A.P.P.
Report All Poachers and Polluters
Conservation Officer 24 Hour Hotline
1-877-952-RAPP (7277)
Cellular Dial - #7277



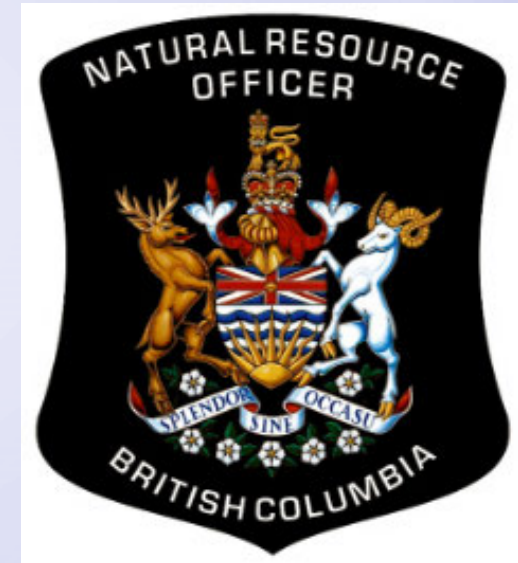
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Acknowledgements

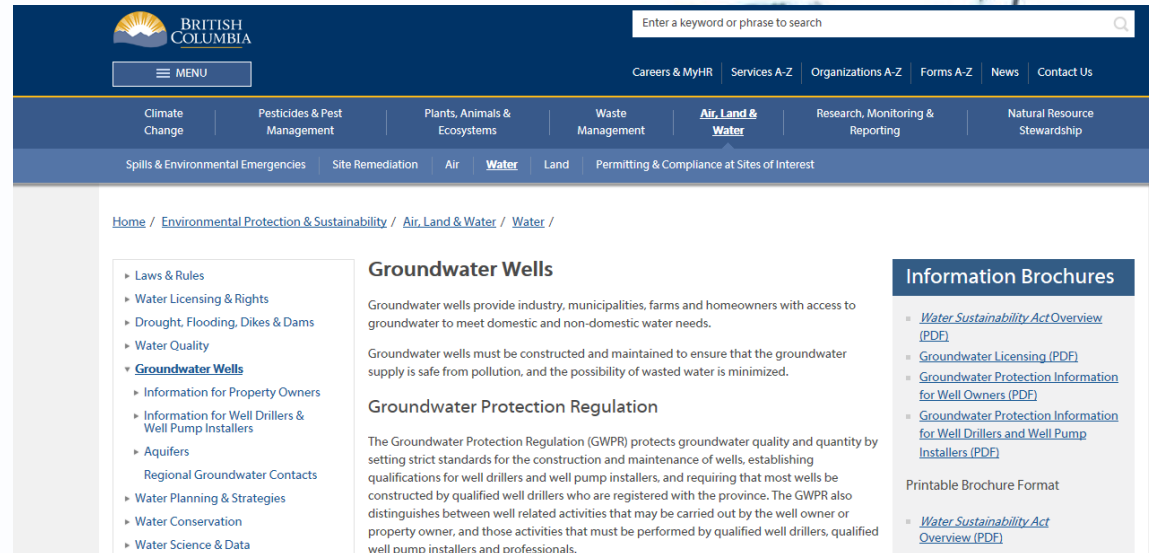


QUESTIONS?

For further information:

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells>

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250-490-2285



The screenshot shows the British Columbia Government website page for Groundwater Wells. The page features a dark blue header with the British Columbia logo and a search bar. Below the header is a navigation menu with categories such as Climate Change, Pesticides & Pest Management, Plants, Animals & Ecosystems, Waste Management, Air, Land & Water, Research, Monitoring & Reporting, and Natural Resource Stewardship. The main content area is titled "Groundwater Wells" and includes a section for "Groundwater Protection Regulation" and a list of "Information Brochures".

Groundwater Wells

Groundwater wells provide industry, municipalities, farms and homeowners with access to groundwater to meet domestic and non-domestic water needs.

Groundwater wells must be constructed and maintained to ensure that the groundwater supply is safe from pollution, and the possibility of wasted water is minimized.

Groundwater Protection Regulation

The Groundwater Protection Regulation (GWPR) protects groundwater quality and quantity by setting strict standards for the construction and maintenance of wells, establishing qualifications for well drillers and well pump installers, and requiring that most wells be constructed by qualified well drillers who are registered with the province. The GWPR also distinguishes between well related activities that may be carried out by the well owner or property owner, and those activities that must be performed by qualified well drillers, qualified well pump installers and professionals.

Information Brochures

- Water Sustainability Act Overview (PDF)
- Groundwater Licensing (PDF)
- Groundwater Protection Information for Well Owners (PDF)
- Groundwater Protection Information for Well Drillers and Well Pump Installers (PDF)

Printable Brochure Format

- Water Sustainability Act Overview (PDF)
- Groundwater Licensing (PDF)

