



Well Aware



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Severn Sound Environmental Association

Woodland Beach
Property Owners Association Meeting
July 9, 2011



Severn Sound Environmental Association

- **Mission:** To sustain environmental quality and ensure continued protection through implementing a legacy of wise stewardship of Severn Sound and its tributaries.

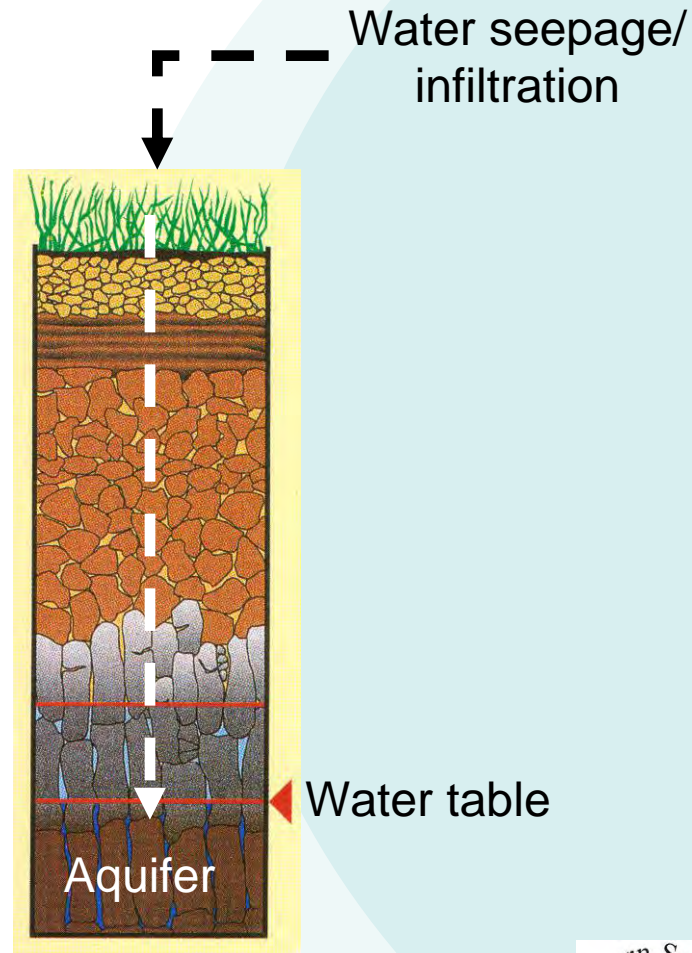


Are You Well Aware?

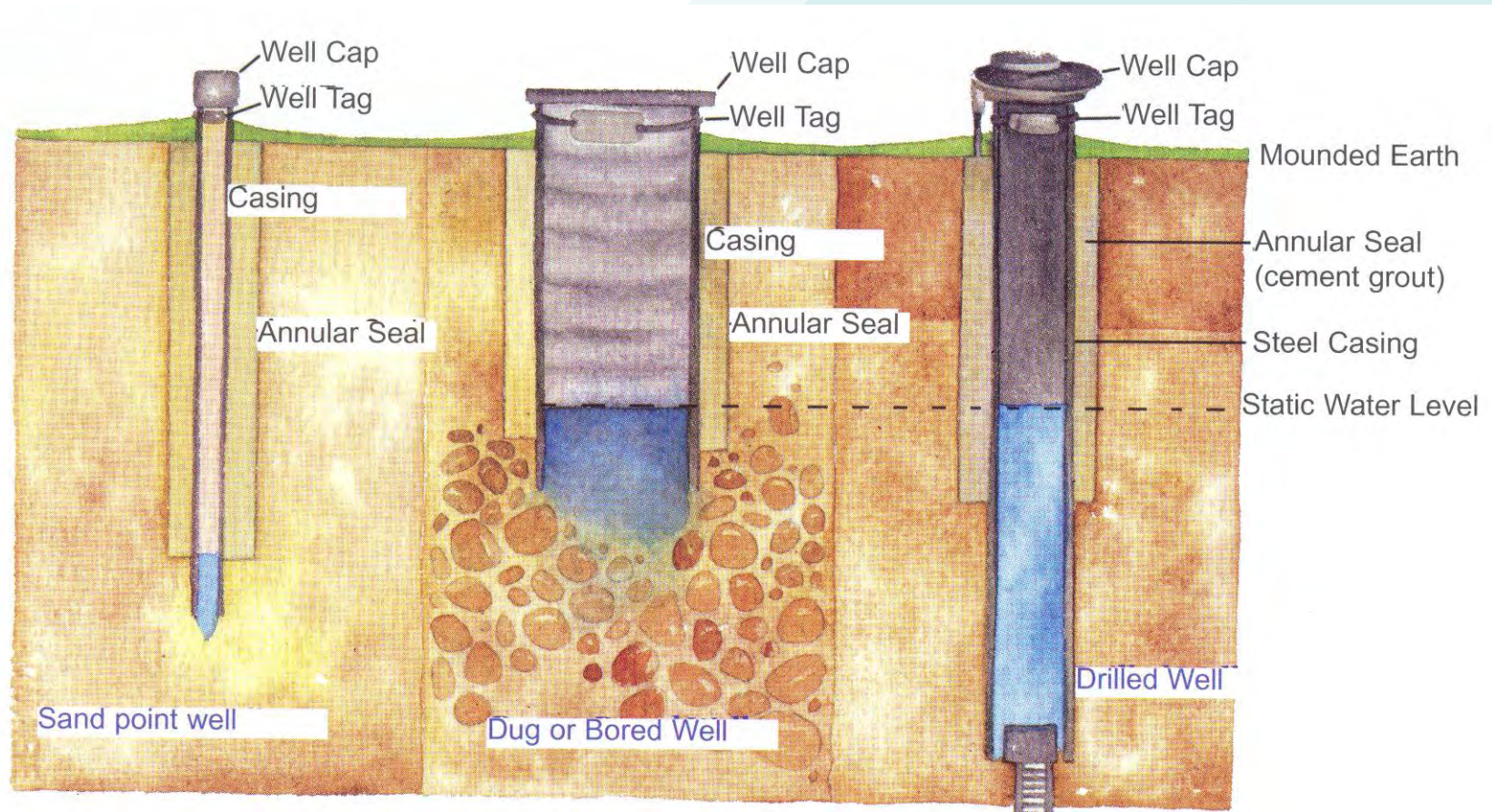
- Groundwater Basics
- Well Basics
- Well Maintenance
- Water Quality
- Septic System Operation & Maintenance
- Resources



Groundwater Basics

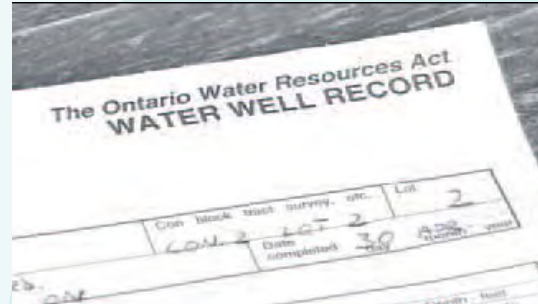


Well Basics – Types of Wells



Well Basics – Your Well

- Type
- Depth
- Age
- Casing height & material
- Type & condition of cap
- Condition of casing



The Ideal Well

- Uphill from potential contaminants
- Separation distance:
 - 15 m (50 ft) for drilled well water tight to 6 m (20 ft) deep
 - 30 m (100 ft) for all other wells
- Well is less than 25 years old
- Well is not below ground or in a pit





The Ideal Well

- Casing is at least 40 cm (16”) above grade
- Sealed to 6 m (20 ft); inspected annually
- No space between well casing and ground
- Accessible/visible
- Shallow-rooted ground cover around well
- Vermin-proof cap
- No unused wells



The Good



- Casing 40+ cm above grade
 - Vermin-proof cap



The Good



- Vermin-proof cap
- Screened vents clean
(no insects or spider webs inside well)



The Good



- No insects or spider webs inside well



The Bad & The Ugly – Sand Point



- Well inside a pit (below grade)
- Inset cap – debris works its way inside



The Bad & The Ugly – Dug/Bored



- Well less than 40 cm above grade
- Not enough separation distance to garage
- Storage of potential contaminants beside well



The Bad & The Ugly – Dug/Bored



- Casing deteriorating (surface water can enter)
 - Casing less than 40 cm above grade



The Bad & The Ugly – Dug/Bored



- Duct tape used as a 'sealant' on well cap
- Casing less than 40 cm above grade



The Bad & The Ugly – Dug/Bored



- Gaps between concrete tiles
- No sealant used between tiles

The Bad & The Ugly – Drilled



- Poor location – beside driveway (damage to well from vehicle/wood?)

The Bad & The Ugly – Drilled



- Well inside a pit (below grade)



The Bad & The Ugly – Drilled



- No vermin-proof cap
(insects and spiders accessing well)



The Bad & The Ugly – Drilled



Poor location – close to potential contaminants,
potential for vehicles to damage well



The Bad & The Ugly – Drilled



- View of well is blocked by decorative item (potentially a home for vermin)
- Well is located in garden (chemical application?)

The Bad & The Ugly – Drilled



- View of well is blocked by shrub
- Impact of roots on seal around the casing?



The Bad & The Ugly – Drilled



- Hydrant – potential route for contaminants to enter well (if no backflow preventer)
- Use of hydrant causes erosion around well (impact on seal?)



The Bad & The Ugly – Drilled



- Lilies blocking view of well and impede ventilation (premature corrosion of casing)

Well Maintenance



Accessible



Annular Seal



Well Casing



Well Cap



Well Pit



Water Testing

- 3 x **each year** (wet conditions)
- After plumbing work/well repairs
- Change in taste, odour, appearance
- Unexplained health problems
- After flooding



Well
Aware
www.wellaware.ca

Remember-3 times a year!
After a heavy rain is the best time to test.

test date 1

test date 2

test date 3

please use non-permanent ink



How to Sample for Bacteria

- **Free** bacteria testing for well owners is available (Health Unit)
- use sample bottle
- follow instructions
- do not contaminate
- refrigerate



Bacterial Contamination



In case of contamination



STOP DRINKING THE WATER

- Use bottled water, or
- Sterilize water (boil OR chlorinate, not both)
- Re-sample water, address possible sources of contamination and improve well



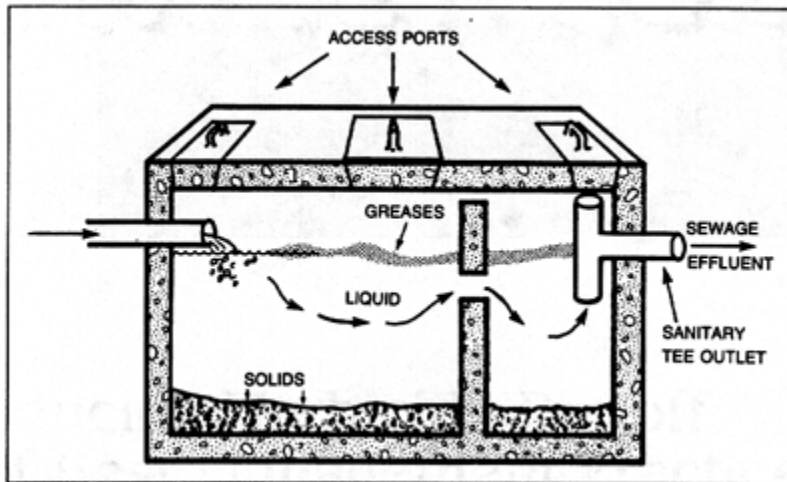
Well Disinfection & Water Treatment

- “shocking” is a temporary measure, not a solution to an ongoing problem
- Treatment is sometimes necessary
- Treatment should be the final option: reduce contaminants & improve well first



Septic Systems

- Treatment system, not disposal system
- Living system – requires bacteria to function properly
- Components: tank and leaching bed



Septic Systems – Do:

- Conserve water
- Pump tank regularly (every 2-5 years)
- Keep solids (grease, food waste) out of the system
- Buy environmentally-friendly cleaners & detergents
- Avoid septic system additives
- Pursue necessary repairs as they are discovered
- Keep activities & heavy objects off the septic bed
- Re-route drainage away from the septic bed



Septic Systems - Signs of Trouble:

- Striping of grass on leaching bed
- Soggy, spongy areas
- Liquid on surface
- Odours
- Slow drains or sewage back-ups
- Nitrates or bacteria in well water test

Call a licensed septic contractor for assistance



Summary – Be Well Aware

- Water protection starts at home
 - eliminate risky activities near well
 - ensure septic system works properly
- Maintain your well - annual assessment
- Test your well water regularly
- Hire only licensed well contractors
- Have unused wells properly plugged & sealed



Resources

Well Aware Home Visits

- Voluntary, confidential, non-regulatory visit to help identify potential risks to well water
- Limited number of visits funded in 2011

Natural Shorelines Program

- Free plants for projects that enhance fish & wildlife habitat along lakes/ivers



Thank You

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