

# High Winter Water Table Review Policy



## High Winter Water Table Review for Suitability of On-Site Sewage Systems Policy

We work with the septic system design community to coordinate and determine site suitability for On-Site Sewage Systems (OSS).

We established requirements, procedures and guidelines to evaluate and determine the estimated maximum seasonal water table in a proposed drainfield area for parcel development. State and local health codes require us to decide the height of the seasonal water table within 12 months of receipt of an application.

We require a High Winter Water Table (HWWT) review when we find evidence of water table indicators (i.e., soil mottling) within 18 inches of original grade.

### Rule and code references

- Washington State Department of Health (DOH), WAC Chapter 246-272A-0220 (4).
- Health Department Code Chapter 2, On-Site Sewage, Section 29 (E).
- Health Department Code Chapter 2, On-Site Sewage, Section 28 (A) and (B).

### Sources of rainfall data

- [weather.wsu.edu/index.php](http://weather.wsu.edu/index.php) (Washington State University, Puyallup Extension, AgWeatherNet).
- [wrh.noaa.gov/forecast/wxtables/index.php](http://wrh.noaa.gov/forecast/wxtables/index.php) (National Weather Service, NOAA).

### Technical contacts

- Robert Suggs, Technical Lead; [rsuggs@tpchd.org](mailto:rsuggs@tpchd.org)

### Requirements

- We require a separate application and fee for each HWWT parcel review. Complete our [On-Site Sewage Development Application](#) and mark High Winter Water Table Review as application type.
- We allow each HWWT review application a maximum of 4 soil test pits and a maximum of 8 monitoring ports for evaluation. We may assess additional fees for test pits and monitoring ports above the maximum.
- The application must include an accurate site plan showing uniquely numbered monitoring ports and test holes. This site plan must meet and include the following requirements, outlined in Chapter 2, Section 28: Site Plan Requirements (A) and (B):
  - The site plan shall be drawn on only 1 side of paper that is at least 8.5 inches by 11 inches, but not larger than 11 inches by 17 inches.
  - The required scale is 1 inch = 20 feet or 1 inch = 30 feet. If the drawing doesn't fit on the required size paper, you may use a greater scale to depict the entire site on 1 page and an additional page drawn at the required scale to depict the area of the development.
  - The drawing, label and numbers should be clear and legible.
  - The property owner name and phone number on each page.
  - The contractor or applicant name and phone number (if different from the property owner) on each page.
  - The site address and parcel number on each page.
  - The number of each page and total number of pages.

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Effective: December 2015

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- Existing property and easement lines, including line dimensions.
  - A bar scale and a north arrow on each page with scaled drawings. Each page should have the parcel drawn in the same orientation, except the page of greater scale may vary from this requirement.
  - The named access street (both streets if the lot is on a corner).
  - Any existing structures, including labels for use of each.
  - All soil test holes and monitoring ports, uniquely numbered and labeled.
  - Any well(s) on the property or within 100 feet of the property. For each well, show a 100 feet radius.
  - Surface water on or within 100 feet of the property.
- Complete application and submit fee by December 1 to ensure adequate time and conditions for evaluation. Applications received after December 1 may limit our ability to provide a decision on your proposal. We don't guarantee results for late submittals, or sites that don't meet policy conditions, We may need to complete the HWWT review during the following season. We don't provide a refund for an incomplete or denied HWWT review application.
  - We evaluate sites December through April. We may extend this timeframe, as it is critically dependent on significant rainfall events and coordinated field observations.
  - Once site set-up is complete, we will conduct a minimum of 4 site visits for each application site. We require consistent site conditions and set-up during the entire review period and decision-making process. If we require additional data-collection site visits, we will advise the applicant of additional fees required based on our current hourly rate.
  - We will track available rainfall data for the area in question. When a significant rain event occurs, we will evaluate the site within 48-72 hours.
  - A technical staff person will record HWWT review field visits and findings for each site on a standard form.
  - We collect basic information during each HWWT review site visit which includes date, field evaluator, current weather, rainfall observations, water table measurements for each soil test hole and monitoring port. We will note any observable water table rings as appropriate and evaluate in conjunction with rainfall data. We will measure the water table in soil test holes from the uphill side of the hole.
  - Before our first site visit and evaluation, you must prepare the site and install monitoring ports. We require a minimum of 4 monitoring ports per site, with a minimum 2 ports in both the proposed primary and reserve areas. See High Water Table Monitoring Port Detail on page 4 for a cross-section of proper construction.
  - Use light-colored (not black) piping for monitoring ports. If you provide port caps, they must be easy to remove without disturbing the placement of the port. Place ports in native (undisturbed) soil that is separate from any associated soil test pits.
  - We require a minimum 2 soil test holes for both the primary and reserve areas during the HWWT review. You must properly construct and maintain soil test holes for accessibility and safety. Soil test pits must not penetrate any restrictive layer. If they do, they are unacceptable and may not be used. See [Guidelines for Test Pit Construction](#) for On-Site Sewage Systems for proper test pit construction.

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- We will deny site development if the water table consistently measures less than 12 inches below original grade.
- We will approve site development if the water table consistently measures greater than 12 inches below original grade and if the proposed septic system design will meet current standards for vertical separation.
- If you use a curtain drain or other constructed site drainage feature on the site, you must install it before the start of the HWWT review. It must remain as an integral component to the site set-up and review. The designer must provide a cross-section of the construction of the water drainage feature along with the HWWT review submittal.
- Technical staff will review HWWT findings with a Health Department lead and notify the designer or engineer of results. You can direct questions about the review to the assigned staff person.

## Recommendations

- Maintain access to the site, soil test holes and monitoring ports throughout the review timeframe. During the wet season, sites can experience heavy vegetative growth that may limit or prevent access for continued review. We may require you to clear brush and re-excavate soil test pits along with reinspection fee(s).
- Submit HWWT review applications early in the season in order to meet the deadline and allow for the flexible scheduling of initial site visits.

## Definitions

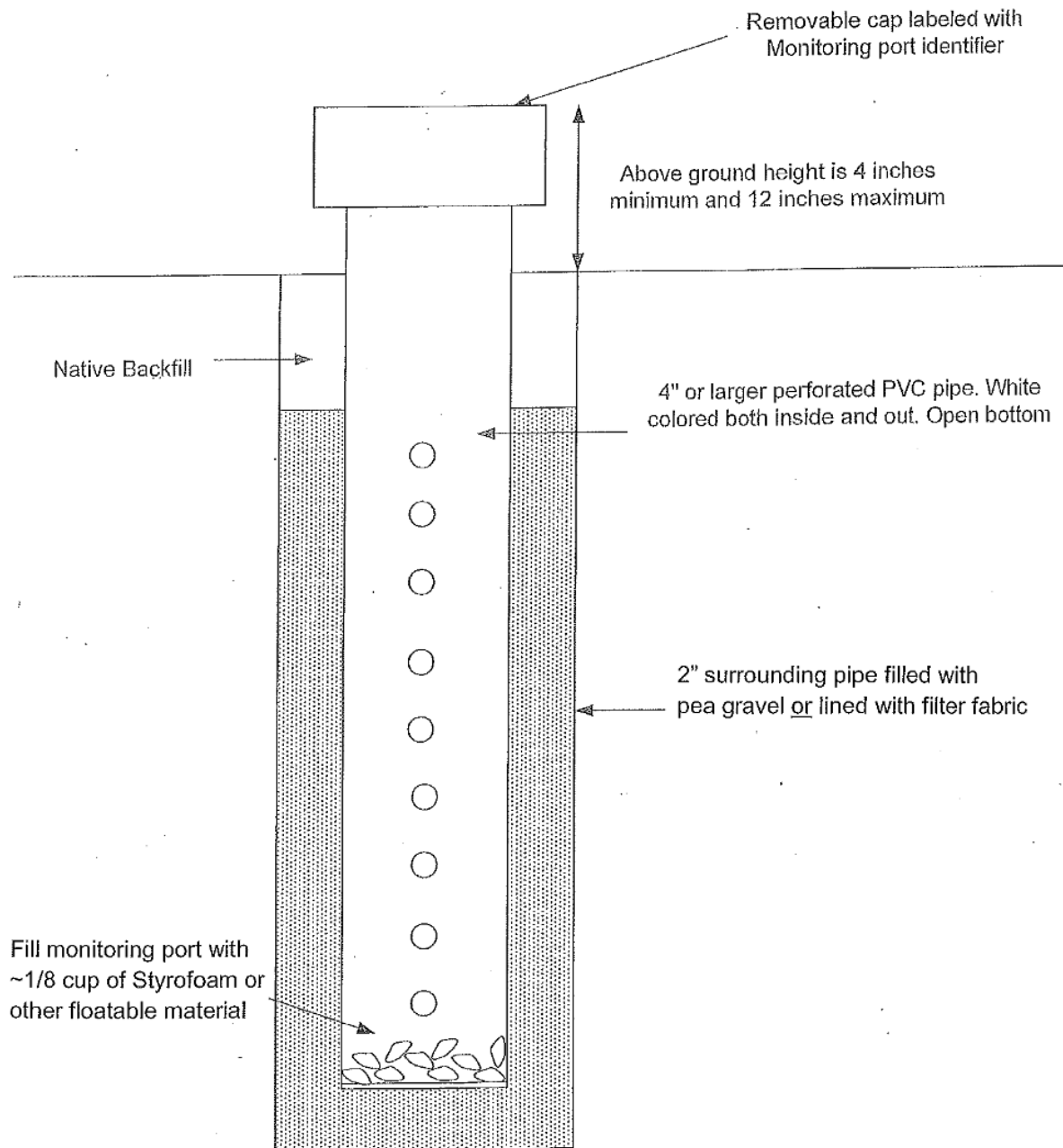
- Significant rain event: 0.5 inches or more during a 24-hour period.
- Vertical separation: The depth of unsaturated, original, undisturbed soil of soil types 1-6 between the bottom infiltrative surface of a soil dispersal component and the highest seasonal water table, a restrictive layer, or soil type 7.
- Water table: The upper surface of a saturated zone, whether permanent or seasonal.
- Groundwater: Subsurface water occupying the zone of saturated soil, permanently, seasonally, or as the result of the tides.
- Health Officer: Tacoma-Pierce County Health Department Health Officer, or authorized representative of the Health Officer.

## Resources

- High Winter Water Table Monitoring Port Detail (see page 4).
- [Guidelines for Test Pit Construction for On-Site Sewage Systems](#) (DOH).

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## High Winter Water Table Monitoring Port Detail



Installation depth of monitoring port needs to extend at least 12" below the desired depth you are attempting to use for vertical separation requirement of a design.

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