Southwest District Health

Environmental Health Services
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SUBDIVISION ENGINEERING REPORT

THE FOLLOWING INFORMATION SHALL BE SUBMITTED TO SOUTHWEST DISTRICT HEALTH FOR RELEASE OF SANITARY RESTRICTIONS UNDER IDAHO CODE TITLE 50, CHAPTER 13, FOR THE USE OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS UNDER IDAHO CODE TITLE 1, CHAPTER 3:

GENERAL

Southwest District Health (SWDH) requires pre-development meetings for subdivisions and planned unit developments prior to application being submitted to this office. SWDH shall be provided at least 48-hours notification to observe all test holes. A SWDH representative must be on site during the initial site evaluation and test hole excavation. Engineers assume responsibility for properly designing drainfield system locations predicated upon soil analysis and flow use requirements.

The fee for administration of sanitary restrictions is due and payable at the time plans are submitted to SWDH. SWDH will not review the Subdivision Engineering Report until the fee is paid. SWDH requires at least ten (10) working days for review of a Subdivision Engineering Report. Engineering reports are to be submitted and certified by an Idaho licensed professional engineer (Idaho code 54-1202(C)). Engineering reports are required to be complete and concise and each item must be addressed. In order to expedite the approval process, SWDH recommends the engineer of record conduct careful pre-planning measures to properly and functionally satisfy the requirements outlined in this document. Any aspect of the design of the proposed development which, in the opinion of SWDH, is likely to cause serious public health problems or degradation of the environmental quality, shall be cause for the Health Authority to declare that sanitary restrictions have not have been satisfied under Idaho Code, Title 50, Chapter 13, section 1326.

The Subdivision Engineering Report outline is as follows:

I. SUBDIVISION APPLICATION: Complete the Subdivision Application. Submit this application as the cover page of your completed Subdivision Engineering Report. The Subdivision Application may be completed legibly handwritten (use blue or black ink), or typed. Place engineer's stamp with Idaho license number on Subdivision Application. Engineers must be registered and licensed with the State of Idaho under I.C. Title 54, Chapter 12. Stamp and signature must be placed on the Subdivision Application.

II. SUBDIVISION ENGINEERING PLAT MAP:[1,2,3,4,6,7,8,9,10,11,12] This will include a scaled drawing, map, or plat, of a subdivision. An eighteen by twenty-seven inch (18" x 27"), and an eight and one-half by eleven inch (8 ½" x 11") map of the proposed subdivision shall be provided. The plat shall contain the following information:

A. Topographic map with five (5)-foot contours when any portion of the lot(s) has a grade(s) greater than 8%. Otherwise, the topographic map shall have ten (10)-foot contour lines (pursuant to subsection 005.04.g.v.).[6]

B. Show proposed lot lines and dimensions, and all existing structures within the proposed development (pursuant to subsection 005.04.g. vi and vii.).[6]

C. State that the minimum lot sizes have been achieved. Lot sizes shall meet or exceed minimums stated as follows. (These densities are also subject to the Nutrient Pathogen evaluation under III.B, in maintaining conformance with IDAPA 58.01.11):[8]

Minimum Lot Areas			
Class	Soil Type	Minimum Lot Area	Minimum Lot Area
		Private Water Supply	Public Water Supply
1	A-1, A2a, A2b	43,560 SqFt (1 Acre)*	(1/2 Acre)
2	B-1, B-2	43,560 SqFt (1 Acre)*	(2/3 Acre)
3	C-1, C-2	43,560 SqFt (1 Acre)*	(3/4 Acre)

*Lot(s) <1 acre may be approved when it can be demonstrated (via an NP study) that no significant impact will occur, and the requirements outlined in IDAPA 58.01.03. can be maintained.

D. Show any lots/parcels, or any portion thereof, that may be within a floodway. (In this context, a floodway is the channel of a watercourse and the adjacent land areas where erosional

characteristics may exist that indicate an area where inundation of a subsurface sewage disposal system could occur.) Color-code the floodway areas on the plat. The Engineering Report must conform to local flood plain planning and zoning requirements (pursuant to subsection 005.04.0.).[6]

E. Show ground slope (pursuant to subsection 008.02.a and d.).[6]

1. Whenever a primary or replacement drainfield set-aside area includes a slope of greater than twenty percent (20%), the engineer must plat precisely on the topographical map where the drainfield(s) could be placed. Appropriate steep slope systems (20-45%) will be required for each impacted lot.

2. Color-code all areas in the proposed development which consist of natural slopes greater than 20%. Different colors should be used to differentiate between slopes of 20-45%, slopes between 46-100%, and areas over 100% slope or (45º).

F. Show down slope cuts or scarp (areas of 100% slope or 45º). Whenever a steep slope exists (to include manmade cuts and scarps that will be constructed during the development of each lot), that could allow sewage seepage, or could cause run-off damage, an engineered setback from this feature must be designated and platted and included in the Subdivision Engineering Report. Setback requirements are as follows (pursuant to subsection 008.02.d.):[6]

Down Slope Cut or Scarp Soil Types:	A	B	C
Impermeable Layer Above Base	75’	50’	50’
Impermeable Layer Below Base	50’	25’	25’

G. Show irrigation lines and utility right-of-way(s). If underground irrigation lines or other pipelines and utilities are present, indicate the locations on the plat map (pursuant to subsection 008.02.d and 005.04.g.ii and vi.).[6]

H. Show all easements and proposed encroachments. Whenever the sewage source (residence, commercial building, etc.) and the drainfield system are to be installed on opposite sides of a right-of-way (gas pipeline, underground power line, irrigation canal, road, etc.), the users of the right-of-way must be notified, and encroachment approvals submitted (pursuant to subsection 005.04.g.vi.).[6]

I. Show storm water run-on and run-off. Show drainage and run-off direction on streets and roads and any other drainage features on the plat map. If storm water will be conveyed to the subsurface via piping systems that meet the Idaho Department of Water Resources (IDWR), definition of a Class V Injection Well (I.C. Title 42, Chapter 39), then the seepage beds and associated best management practices must be approved by IDWR. A Notice of Construction and Shallow Injection Well Inventory Form is required (pursuant to subsection 005.04.0.).[6]

J. Show all surface water sources (i.e., rivers, streams, lakes, ponds, spring discharges, irrigation ditches, drains, etc.) within 300 feet of the proposed development. Designate if the water sources are temporary, intermittent, or permanent (pursuant to subsection 005.04.g.iii.).[6]

K. Show existing wells within 150 feet of the development (pursuant to subsection 005.04.g.i and ii.).

L. Show existing septic tanks and drainfields within 150 feet of the development. Septic tanks are to be located 50 feet or more from private wells, and 100 feet or more from community wells. Septic drainfields must be located 100 feet or more from private or public wells (pursuant to subsection .005.04.g.i.ii and 008.02.d.).[6]

M. Please indicate if the proposed subdivision is in the county, impact zone, or city limits. Additionally, indicate if public or central wastewater collection facilities are within 200 feet of the proposed subdivision (pursuant to subsection .005.04.m and .005.05.e.).[6]

N. Subdivision Engineering Plat and Subdivision Engineering Report shall contain engineer's seal, date, and signature under I.C. Title 54, Chapter 12.

III. SEWAGE DISPOSAL SYSTEM:[1,2,3,6,7,8,12,13]

A. Individual Sewage Disposal Area.

1. Submit a soil profile report and/or analysis showing a depth of at least ten feet (10'), or at least six feet (6'), below the bottom of the proposed absorption systems for each lot proposed. Sufficient test holes shall be dug in each subdivision to portray adequately the character of the soil, normal and seasonal groundwater levels, and depths to bedrock. Include soil profile logs as part of the Subdivision

Engineering Report. The information will be utilized to show that each lot has suitable soils for the treatment and disposal of effluent for each lot for the release of Sanitary Restrictions. Utilize U.S. Department of Agriculture soil classifications specified in the TGM.

2. To verify test hole findings, when soil suitability appears questionable, the engineer shall conduct percolation tests, sieve analysis (with hydrometer when appropriate), or other method of analysis to verify soil acceptability.

3. Specify, lot-by-lot, for each drainfield site, the normal high groundwater level, and the height of the seasonal high groundwater level.

4. Provide a geological and hydrological hazard report (faults, sinkholes, slides, nearby landfills, etc.)

5. Provide the following for each lot in the subdivision. Provide these specifications on 8 ½" x 11" sheets for each lot. The information shall be provided to enable the installer to know where drainfield systems are not allowed. At a minimum, the specification sheets are to include the following:

    a. Subdivision name, block and lot, parcel size, etc.

    b. Include a reduced portion of the subdivision engineering plat. This copy of the plat shall show the lot being discussed, and show the test hole location.

    c. Provide dimensions and setback requirements where drainfields are not allowed.

    d. Each individual lot's specification sheet must clearly, and in bold print, specify that all wells must be greater than 100' from drainfields, and list any additional measurements or requirements as specified in Sections IV.A., item 1, of this document. The information is intended to educate and inform applicants of potential health risks associated with contaminants from non-regulated water supplies, if applicable.

e. If additional space is needed, use an additional 8 ½" x 11" sheet. Each sheet must state the subdivision name, block and lot, parcel, etc., and inclusive pages for each lot's set of specification sheets (e.g., page 2 of 2 pages).

6. SWDH may require additional test holes prior to permit issuance. Test holes will be conducted at the proposed drainfield location as indicated on the plot plan submitted during the application process.

7. SWDH may require site specific locations or zones for wells and drainfields under the following conditions:

a. Small lots (i.e., lots smaller than two acres).

b. Specific well and/or drainfield placement requirements as specified in a Nutrient Pathogen study.

c. Site specific groundwater monitoring conducted to establish normal and seasonal high groundwater elevations. SWDH may require additional groundwater monitoring if applicant's desired drainfield site is not located at the previously monitored location.

d. Amplified setback requirements (i.e., intermittent or permanent bodies of water requiring horizontal separation that greatly limits drainfield location(s)).

B. A Nutrient Pathogen study may be required on platted subdivisions in areas of concern. This requirement may be applied by IDEQ or SWDH under the authorities in IDAPA 58.01.03[6] and IDAPA 58.01.11.[8]

1. SWDH will not require a Nutrient Pathogen study for subdivisions where all buildable lots meet or exceed two (2) acres with nitrogen reducing systems discharging less than 16mg/l in total nitrogen, three (3) acres with nitrogen reducing systems discharging less than 27mg/l in total nitrogen, or for subdivisions where all buildable lots meet or exceed five (5) acres in size.

C. A Large Soil Absorption System (LSAS) is a subsurface sewage disposal system designed to receive 2,500 gallons or more wastewater per day, or where the wastewater flow from the entire project exceeds 2,500 gallons/day, but is separated into separate absorption modules (pursuant to subsection 003.20.).[6]

1. Submit a subsurface sewage disposal application to SWDH. State the type of system being proposed. Provide SWDH opportunity to conduct a site evaluation. Provide soil and groundwater data to SWDH to determine site suitability. Provide the nature and quantity of blackwaste and wastewater the system is to receive, including the basis for that estimate.

2. Submit system plans to the Idaho Department of Environmental Quality (IDEQ) and SWDH for review and approval.

3. Provide a plan approval letter from the IDEQ.

4. Provide SWDH with one (1) copy of the approved plans, and obtain a subsurface sewage disposal permit from SWDH.

5. Submit operations and maintenance papers to SWDH and IDEQ.

6. Provide a copy of as-built plans to SWDH and IDEQ upon the subsurface sewage disposal system installation.

7. LSAS drainfields may be required to be 300' from a domestic water supply well. If utilizing an LSAS, please provide the correct LSAS/well buffer zone around the LSAS.

D. Central sewage disposal system (i.e., more than two (2) connections under separate ownership, but less than 2,500 gallons flow per day) will comply with the TGM, and Sections III.A. and B., of this document (pursuant to subsection 003.08.).[6]

IV. <u>WATER SYSTEMS/QUALITY</u>:[1,2,3,4,7,8,9,10]

A. Central and/or individual water systems must meet the certification requirements of I.C. 50-1334.

1. Provide a statement of the availability and potability of water to meet demands of the subdivision. The statement must address nitrates/nitrites, arsenic, and/or any other groundwater contaminant the Engineer of Record feels may be appropriate for the protection of public health. A list of possible groundwater contamination constituents and their associated Maximum Contamination Level (MCL) can be located in the Idaho Ground Water Quality Rules as referenced above. Regional information may be available at the U.S. Geological Survey, the IDWR, or the IDEQ. Groundwater contaminants exceeding current MCL must be addressed within this report, and on individual lot specification sheets. Additional measures are also welcome, and may be required, to educate and inform applicants of potential health risks associated with these contaminants from non-regulated water supplies.

    a. Specify whether the water source is individual wells, a community system, existing public water supply, or a new public water supply.

2. Furnish a statement that abandoned water wells have been sealed to prevent entrance of contaminants, and provide the well abandonment papers if applicable.

B. Individual water. Verify that each lot meets the recommended standards for individual water supplies, I.C. 50-1334(1)

C. Central water, I.C. 50-1334(2)(3), and pursuant to subsection 007.17 and 008.02.d.[6]

1. Submit an approval letter from IDEQ stating that the water supply is approved and recommending the lifting of sanitary restrictions.

2. Show all public water distribution lines.

V. WATER QUALITY IMPACT:[2,3,8]

A. Submit a statement pertaining to the projected effect of the development on the existing water quality. This may be part of the Nutrient-Pathogen study.

VI. HAZARDS TO SAFETY:[5]

A. Submit a statement that safety hazards (i.e., abandoned mine shafts, chemicals, nearby landfills, etc.) have been corrected or are not present.

VII. OTHER:[6]

A. Please provide a signed copy with this submittal of the Findings of Facts, Conclusions of Law and Order (FCO's), from the appropriate county. It is to be noted that certain county ordinances may require additional information beyond the scope of this report.

VIII. FINAL PLAT:[1]

A. The plat shall make reference to restrictions on file with the county recorder as set by the health authority.

B. Please provide SWDH an 8 ½" by 11" paper copy of the final plat when submitting mylar for final SWDH approval. This is to ensure that the mylar being signed by SWDH matches the approved engineering report. Failure to submit may result in mylar signature delay by SWDH.

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[1] Idaho Code, Title 50, Chapter 13, (Plats and Vacations)

[2] Idaho Code, Title 39, Chapter 36, (Water Quality)

[3] Idaho Code, Title 39, Chapter 1, (Environmental Quality--Health)

[4] Idaho Code, Title 37, Chapter 21, (Domestic Water and Ice)

[5] Idaho Code, Title 52-101

[6] Rules for Individual and Subsurface Sewage Disposal Systems, IDAPA 58.01.03.

[7] Rules of the Southwest District Health Department, IDAPA 41.03.01

[8] Ground Water Quality Rule, IDAPA 58.01.11.

[9] Idaho Rules for Public Drinking Water Systems, IDAPA 58.01.08.

[10] Well Construction Standards Rule, IDAPA 37.03.09.

[11] State of Idaho, Catalog of Stormwater Best Management Practices for Idaho Cities and Counties (Idaho Department of Health & Welfare, DEQ, July 1997.)

[12] Technical Guidance Manual for Individual and Subsurface Sewage Disposal.

[13]Idaho Water Quality Standards and Wastewater Treatment Requirements, IDAPA 58.01.02.