

JEFFERSON COUNTY PUBLIC HEALTH Board of Health	TITLE: Onsite Wastewater Treatment System Standards for the Indian Hills / Parmalee Gulch Area.
SUBJECT: Standards for the issuance of onsite wastewater treatment systems within and upslope of the Prohibition Area.	ADOPTION / REVISION DATES: October 16, 2002; January 15, 2008; January 20, 2015; Month Day, Year EFFECTIVE DATE: Month Day, Year
APPROVED BY: Board of Health, Date Signed:	

PURPOSE

To establish onsite wastewater treatment system (OWTS) application and permit standards for the Indian Hills / Parmalee Gulch area based on the Board of Health’s Finding of Fact and Resolution dated Month Day, Year.

STATEMENT OF POLICY

IT IS THE POLICY OF THE JEFFERSON COUNTY BOARD OF HEALTH (the “Board”) that the following OWTS standards shall apply in the Indian Hills/Parmalee Gulch area.

DEFINITIONS

“Higher level treatment (HLT)” with nitrogen reduction	<i>an onsite wastewater treatment system that produces effluent that meets or exceeds Treatment Level 2N or 3N as provided for in the Jefferson County onsite wastewater treatment system regulations</i>
“Hybrid Parcels”	<i>those parcels that consist of both Prohibition Area lots and upslope area lots. Hybrid parcels may be permitted if the soil treatment area (STA) will be installed on the upslope area lots.</i>
“Prohibition Area”	<i>those lots identified in Attachment A</i>
“Segregated system”	<i>an onsite wastewater treatment system which segregates toilet wastewater for separate treatment and / or disposal, such as a composting toilet or vault</i>
“TL1 system”	<i>an onsite wastewater treatment system that includes only a septic tank for pretreatment of wastewater prior to discharge to a soil treatment area (STA)</i>
“Upslope Area”	<i>the land and property outside of the OWTS Prohibition Area that slope towards the OWTS Prohibition Area</i>

A. NEW ONSITE WASTEWATER TREATMENT SYSTEMS IN THE PROHIBITION AREA

This section applies to any new OWTS on vacant land in the Prohibition Area.

Given that the Resolution:

1. prohibits the discharge of additional nitrate from OWTS in the Prohibition Area, and,
2. seeks to decrease the discharge of nitrate from OWTS in the Prohibition Area.

The installation of new OWTS in the Prohibition Area cannot be permitted unless a decrease of the mass loading of nitrate discharged in the Prohibition Area is demonstrated.

The development/construction proposal must demonstrate a minimum 25% net nitrate mass load reduction above and beyond what is required for the new development (see example in Attachment B,

Table 1: Acres Required to Dilute and Attenuate the Nitrogen Load to a Groundwater Nitrate Goal of 10 milligrams per liter by Number of Bedrooms and by Treatment Level.) This may require the applicant to also upgrade another OWTS, or offer another acceptable alternative which results in at least a 25% net nitrate mass load in the area of the development/construction proposal.

The subject properties must be no more than one mile apart from each other, preferably in the same neighborhood or subdivision or in a location that drains to the same part of the Prohibition area.

If a subject property consists of two or more lots, the lots within each subject property must be merged into a single parcel through the Jefferson County Planning and Zoning Department’s property merger agreement process.

If a property owner desires to remove and replace an existing dwelling or business and the existing OWTS does not include nitrogen reduction, the OWTS must be upgraded to, or replaced with a nitrogen-reducing higher-level treatment with nitrogen reduction system with a treatment level that meets or exceeds the requirements of this Section A above. If the building being replaced is planned to have more bedrooms or stronger waste than the existing building, it must follow the requirements of Section A of this Policy for the number of bedrooms allowed or the strength of waste being proposed and will be limited by the available acreage.

B. NEW OWTS IN THE UPSLOPE AREA, OR HYBRID AREA IN THE PARMALEE GULCH WATERSHED

This section applies to any new OWTS outside of the Prohibition Area.

PROPERTY SIZE	TREATMENT LEVEL REQUIRED
less than 2-acres*	Minimum TL3N or segregated system
2 to 4-acres	Minimum TL2N or segregated system
4-acres or more	TL1 system

*Properties smaller than one acre will not be approved for a permit unless a proposal demonstrates a net reduction of nitrogen mass loading to the watershed.

C. REPAIR OR REPLACEMENT OF EXISTING OWTS

If the existing OWTS does not include nitrogen reduction, the OWTS must be upgraded to, or replaced with higher-level treatment with nitrogen reduction and **must** follow the table in Section B above.

If a building being replaced is planned to have more bedrooms or stronger waste than the existing building, it must demonstrate a net reduction of nitrogen loading to the watershed.

D. PROPERTIES APPLYING FOR BUILDING PERMITS

Building permit applications associated with living spaces on a parcel must be reviewed by Jefferson County Public Health (JCPH) or “Department” to determine the wastewater volume and strength capacity of the existing OWTS and the OWTS wastewater volume and strength capacity required for the proposed build-out. Existing OWTS that do not meet the required capacity for the proposed build-out must be upgraded to the standards set forth in this policy.

E. WELL WATER TEST FOR ALL OW PERMITS ISSUED IN THE PARMALEE GULCH

A sample of well water from the well serving the property, analyzed for total coliform bacteria and nitrates (NO3-N), is required before a construction, repair or a Use (transfer of Title) permit is issued. Results of

the analysis must be provided to JCPH. No water analysis is required for property that does not have a well and is served by the Indian Hills Water District.

F. USE PERMITS OR TRANSFER OF TITLE PERMITS

At the time of a covered transaction under Section 9 – Use Permits of the Jefferson County Public Health Onsite Wastewater Regulations, (Regulations), the owner of an OWTS must obtain a Use Permit in accordance with the Regulations. If during the Use Permit process, it is discovered that no JCPH OWTS permit exists, the owner must demonstrate the OWTS is sized per Section 12 – Wastewater Flow and Strength - of the Regulations. If the OWTS does not comply with Section 12, then the OWTS must be upgraded or expanded to comply with the Regulations and applicable sections of this Policy.

Malfunctioning or damaged components must be properly abandoned and replaced with components that meet the standards set forth in the Regulation and this Policy.

G. CESSPOOLS

Cesspools must be abandoned and replaced with a conforming OWTS when discovered.

H. TANK REPLACEMENTS

Repairs that involve only a tank replacement must follow the table in Section B above and must comply with all other aspects of the Regulations and applicable sections of this Policy.

If the soil treatment area (STA) meets the required setbacks per the Regulations, the Department will not require replacement of the STA unless the existing STA is showing signs of surfacing effluent or other signs of malfunction, is a cesspool, pit privy, or no permit record exists for the existing STA. A site evaluation and/or profile hole tests may be required to demonstrate that the required vertical separation distance to limiting layers is met and the STA is sized to comply with Section 15 – Design Criteria for Soil Treatment Areas of the Regulations.

I. PIT PRIVIES

Pit privies currently serving existing limited occupancy structures as defined in the Regulations must be upgraded to a minimum of vaulted privies at the time of title transfer or before any building permit application is approved provided it is intended to remain a limited occupancy residence. If the residence has a permanent water supply an approved OWTS with an STA must be installed.

J. VAULTED PRIVIES AND WASTEWATER VAULTS

Vaulted privies and wastewater vaults serving existing structures may continue to be used as such as long as they are found to be in compliance with the Regulations, Sections 18.2 and 18.3.

Vaulted privies may be converted to wastewater vaults to accommodate water carried plumbing fixtures for limited use occupancy dwellings as defined in the Regulations. A Limited Use Occupancy Agreement must be completed.

ADDITIONAL NOTES

- Staff shall review and approve applications for all OWTS unless minimum lot sizes are not met, or the proposal is for a TL1 system when this policy requires an HLT system. Permit applications for OWTS that do not conform to this policy will be denied by the Department and appeals of permit denials may be heard by the Board of Health per the Regulations.
- Minor repairs, such as replacing broken pipes or distribution boxes are exempt from permitting requirements.

ATTACHMENT A

Indian Hills Prohibition Area

List of legal lots where issuance of new onsite wastewater treatment system permits is prohibited.
 Revised 12-16-2014 based on approval of the Board of Health – see 2014 prohibition Area Revision folder.

Indian Hills Filing 1	Block 1	Lots 2-18
Indian Hills Filing 1	Block 2	Lots 1-23
Indian Hills Filing 1	Block 3	Lots 1-49
Indian Hills Filing 1	Block 4	Lots 1-33; Lots 43-87; Lots 109-135; Lots 151-163
Indian Hills Filing 1	Block 5	Lots 1-48
Indian Hills Filing 1	Block 6	Lots 1-78
Indian Hills Filing 1	Block 7	All Lots
Indian Hills Filing 1	Block 8	Lots 1-15
Indian Hills Filing 1	Block 9	Lots 1-25
Indian Hills Filing 1	Block 10	Lots 1-19
Indian Hills Filing 1	Block 11	Lots 1-14
Indian Hills Filing 1	Block 12	Lots 1-11
Indian Hills Filing 2	Block 1	Lots 1-49
Indian Hills Filing 2	Block 5	Lots 1-4
Indian Hills Filing 2	Block 8	Lots 18-35
Indian Hills Filing 2	Block 10	Lots 2-6
Indian Hills Filing 2	Block 11	Lots 32, 34, 36, & 37
Indian Hills Filing 2	Block 13	All Lots
Indian Hills Filing 3	Blocks 1-9	All Lots
Indian Hills Filing 4	Block 1	Lots 1-22
Indian Hills Filing 4	Block 2	Lots 1-51
Indian Hills Filing 4	Block 3	Lots 1-7, 20-22
Indian Hills Filing 4	Block 8	Lots 1-83
Indian Hills Filing 4	Block 9	Lots 1-30
Indian Hills Filing 4	Block 10	Lots 1-98
Indian Hills Filing 4	Block 11	Lots 18-52
Indian Hills Filing 4	Block 12	Lots 20-54
Indian Hills Filing 4	Block 14	Lots 19-24, 52-56, 76-81
Indian Hills Filing 5	Block 1	Lots 1-14
Indian Hills Filing 5	Block 7	Lots 1-34
Indian Hills Filing 5	Block 8	Lots 36-150
Indian Hills Filing 5	Block 9	Lots 1-90
Indian Hills Filing 5	Block 10	Lots 1-43
Indian Hills Filing 5	Block 11	Lots 1-25
Indian Hills Filing 5	Block 12	Lots 1-39
Indian Hills Filing 5	Block 14	Lots 31, 33, 35, 37, 39, 41, 43, 45, 47, 49
Indian Hills Filing 5	Block 15	Lots 14-23
Indian Hills Filing 5	Block 18	Lots 1-14
Indian Hills Filing 5	Block 20	Lots 38-67
Indian Hills Filing 5	Block 23	Lots 1-6, 46-52
Indian Hills Filing 5	Block 25	Lots 1-3, 13
Indian Hills Filing 5	Block 26	Lots 25-29
Alpine Village (Filing 6)		Lots 8801, 8803, 8805, 9420, 9430, 9440, 9450, 9501-9527, 9529-9537, 9539, 9541, 9543-9547, 9601-9610, 9709, 9711-9716, 9720, 9721; Tract M, 9702, 9704, 9706, 9708, 9710

ATTACHMENT B

Standard 5 of the **DEMONSTRATION OF NITRATE LOAD DECREASE** requires the total acreage of the subject properties must be equal to or greater than the total acreage for properties with the same number of bedrooms and treatment level listed in Table 1 below.

Table 1: Acres Required to Dilute and Attenuate the Nitrogen Load to a Groundwater Nitrate Goal of 10 milligrams per liter by Number of Bedrooms and by Treatment Level

Treatment Level		TL1	TL2	TL3	TL2N	TL3N
Nitrogen Remaining After Treatment		100%	100%	100%	50%	29%
Number of Bedrooms	Number of People	Acres Required to Dilute and Attenuate the Nitrogen Load to a Groundwater Nitrate Goal of 10 milligrams per liter				
1	2	1.5	1.5	1.5	0.8	0.45
2	4	3.1	3.1	3.1	1.5	0.89
3	6	4.6	4.6	4.6	2.3	1.34
4	7	5.4	5.4	5.4	2.7	1.56
5	8	6.2	6.2	6.2	3.1	1.78
6	9	6.9	6.9	6.9	3.5	2.01
7	10	7.7	7.7	7.7	3.8	2.23

(Information to be added regarding the mathematical model used to calculate lot sizes included in the table)

INSTRUCTIONS

FOR THE EXISTING PROPERTY (Subject Property 1)

1. Select the row with the number of bedrooms proposed for the existing developed property.
2. Select the column with the proposed treatment level for the existing property.

A1 = The intersection of the number of bedrooms row and treatment column provides the Acres Required to Dilute and Attenuate the Nitrogen Load to a Groundwater Nitrate Goal of 10 milligrams per liter.

FOR THE VACANT PROPERTY (Subject Property 2)

3. Select the row with the number of bedrooms proposed for the existing developed property.
4. Select the column with the proposed treatment level for the existing property.

A2 = The intersection of the number of bedrooms row and treatment column provides the Acres Required to Dilute and Attenuate the Nitrogen Load to a Groundwater Nitrate Goal of 10 milligrams per liter

To proceed with the permit application, the total acreage of the subject properties must be equal to or greater than A1 + A2.

EXAMPLE 1

Subject Property 1 = Developed 0.5-acres, existing 3-bedroom single family dwelling with TL1, proposed upgrade to TL3N

Subject Property 2 = Undeveloped 2.0-acres, proposed 5-bedroom single family dwelling with TL3N.

Given the above, go to Table 1 and find the A1 acres and A2 acres required for the respective subject properties.

For this example,

A1 for Subject Property 1 = 1.34-acres

A2 for Subject Property 2 = 1.78-acres

A1 + A2 = 3.12-acres

The total acreage for the subject properties = 0.5-acres + 2.0-acres = 2.5-acres.

Since the total acreage for the subject properties is less than the total acreage Table 1 requires, the proposal **FAILS** to meet Standard 5 of the DEMONSTRATION OF NITRATE LOAD DECREASE.

To **PASS** Standard 5, Subject Property 2 must be at least 2.62-acres OR scaled back to 2-bedrooms with TL3N.

PROPOSAL EXAMPLE

Owner proposes to develop a vacant lot in the Prohibition Area and owns a developed property in the Prohibition Area.

Property 1: Upgrade an existing treatment level 1 OWTS, or lesser treatment level OWTS, to treatment level 3N.

Property 2: Install a new treatment level 3N on a vacant property.

Assuming similar wastewater flow volume and nitrate concentration for each property; the proposal will result in a 42% reduction of the current nitrate load from the properties subject to this proposal.