

Chapter ILHR 84

BOAT AND ON-SHORE SEWAGE FACILITIES

ILHR 84.01	Applicability	ILHR 84.07	Overboard discharge inactivation
ILHR 84.02	Definitions	ILHR 84.08	On-shore disposal facilities
ILHR 84.03	Approved comparable construction	ILHR 84.09	Alternate facilities
ILHR 84.04	Contract applicability	ILHR 84.10	Operation and maintenance
ILHR 84.05	Approval required	ILHR 84.11	Prohibited facilities
ILHR 84.06	Holding tank, toilet and appurtenances		

Note: Chapter H 80 as it existed on September 30, 1980 was repealed and a new chapter H 80 was created effective October 1, 1980; renumbered to be chapter ILHR 84 effective June 1, 1983.

**ILHR 84.01 Applicability.** This chapter as authorized by s. 30.71, Stats., for the abatement of water pollution through control of the discharge of sewage from boats maintained or operated at any time upon the inland or outlying waters of the state, defined in s. 29.01 (4), Stats., shall be applicable to any boat which is equipped with a toilet.

Note: Section 29.01 (4), Stats., provides: "All waters within the jurisdiction of the state are classified as follows: Lakes Superior and Michigan, Green Bay, Sturgeon Bay, Sawyer's harbor and the Fox river from its mouth up to the dam at De Pere are 'outlying waters.' All other waters, including the bays, bayous, and sloughs of the Mississippi river bottoms, are 'inland waters.'"

History: Cr. Register, September, 1980.; renun. from H 80.01, Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.02 Definitions.** The following definitions shall apply in the interpretation and enforcement of this chapter.

(1) "Department" means the department of industry, labor and human relations.

(2) "Approved" means written approval from the department.

(3) "Boat" means every description of watercraft, other than a sea-plane, on the water, used or capable of being used as a means of transportation on water, s. 30.50 (1), Stats.

(4) "Deodorant" means a substance or process which masks or destroys offensive odor.

(5) "Holding tank" means a permanently installed container which receives the discharge from one toilet or more and retains the sewage for shore disposal.

(6) "Maintain and operate" means to moor and occupy or to navigate, steer, sail, row or otherwise to exercise physical control over the use or movement of a boat.

(7) "Owner" means the person who has lawful possession of a boat by virtue of legal title or equitable interest therein which entitles that person to such possession.

(8) "Portable toilet" means a self-contained unit with a flushing device which retains sewage in a holding tank for disposal to a sewage system acceptable to the department.

## ILHR 84

(9) "Recirculating system" means a holding tank with all necessary appurtenances to provide for the recirculation of flushing liquid and for the receiving, venting and shore removal of sewage.

(10) "Sealed" means making a toilet incapable of discharging sewage into the waters upon which a boat is operated or moored.

(11) "Sewage" means human body wastes.

(12) "Toilet" means any device, facility or installation designed or constructed for use as a place for receiving sewage directly from the human body.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.02 and am. (1) Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.03 Approved comparable construction.** When compliance with this regulation, without modification, appears impracticable, the department shall be so informed in writing, giving reason therefor and any suggested modifications that would reasonably comply with the intent of the law and this regulation, and be requested to approve suggested modifications or to give advice as to acceptable alternate installations or devices.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.03, Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.04 Contract applicability.** Applicable provisions of this regulation shall be construed to be a part of any order or agreement, written or verbal, for the installation of a holding tank, recirculating system, provisions of a portable toilet or shore disposal facility or appurtenances thereto.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.04, Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.05 Approval required.** (1) **GENERAL.** Any prefabricated tank, portable toilet or toilet proposed for installation in boats used upon the inland or outlying waters of the state shall receive the approval of the department. The manufacturer of any prefabricated tank, portable toilet or toilet shall submit, in duplicate, plans and specifications showing construction details for such facility. The owner of a custom built tank or toilet shall similarly submit such details in duplicate for approval prior to installation. The department may require the submission of other information or the unit itself, in the case of a portable toilet, to complete its review.

(2) **APPROVED UNIT LISTING.** The department shall keep a current list of approved prefabricated tanks, portable toilets and toilets for installation on boats and shall provide a copy of such current list to the bureau of law enforcement, department of natural resources.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.05, Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.06 Holding tank, toilet and appurtenances.** (1) **MATERIAL.** Each holding tank and toilet shall be constructed of a plastic which is resistant to acid, alkali and water; stainless steel with comparable resistance or other approved material. Metal combinations shall be galvanically compatible.

(2) **HOLDING TANK STRENGTH.** A holding tank, with all openings sealed, shall show no signs of deformation, cracking or leakage when sub-Register, May, 1983, No. 329

jected to a combined suction and external pressure head of 5 pounds per square inch. It shall be designed and installed so as not to become permanently distorted with a static top load of 200 pounds.

(3) **TEMPERATURE RESISTANCE.** All materials used shall be capable of withstanding a temperature range of from -22° F. (winter storage) to the maximum operating temperature obtainable when operating in an ambient temperature of 140° F.

(4) **MOUNTING.** The tank and toilet shall be rigidly and permanently secured in place in such manner that the tank, toilet and piping will not fall.

(5) **CAPACITY.** The capacity shall be sufficient to receive the waste from the maximum number of persons that may be on board during an 8-hour period. The passenger rating shall be that indicated on the boat's capacity plate or that of a boat of similar size should the plate be illegible or missing.

(a) *Holding tank.* The capacity shall be determined on the basis of contribution of 4-½ gallons per person per 8-hour day for a toilet of the hand pump type. If standard waterflush toilets are installed, the minimum capacity shall be at 13-½ gallons per person per 8-hour day.

(b) *Recirculating toilet.* The capacity of the tank of a recirculating type unit shall be determined on the basis of a contribution of one-quarter gallon per person per 8-hour day.

(6) **CONTROLS.** Each holding tank shall contain a sewage level device which actuates a warning light or other visible gauge when the tank becomes three-fourths full. The light or other device shall be located so that it can be readily observed. The sewage level device shall be in operable condition at any time the boat is used. Such water level indicator shall be installed so as to be removable and be of such design and of such size as to make a watertight seal with a tank opening that is sufficiently large to accommodate the sewage level device.

(7) **MAINTENANCE.** (a) A separate manhole shall be provided in the top of the tank for maintenance purposes. A plate or cap capable of making a watertight seal shall be provided on the opening which shall be of sufficient size to readily permit cleaning and maintenance.

(b) *Deodorant.* Any deodorant used in a holding tank, approved portable toilet or recirculating toilet shall be easily obtainable and constitute a minimum hazard when handled, stored and used according to the manufacturer's recommendations and form no dangerous concentration of gases nor react dangerously with other chemicals used for the same purpose.

(8) **OPENINGS FOR PIPING.** Openings shall be provided in each holding tank for inlet, outlet and vent piping. The openings and pipe fittings shall be so designed as to provide watertight joints between the tank and the piping. Plastic opening fittings shall be of the rigid serrated type. Inlet openings should preferably be such that they could accommodate fittings that would be connected to piping of a minimum nominal inside diameter (I.D.) of 1-½ inches. Outlet openings shall be such as to accommodate at least 1-½ inch I.D. piping. Vent pipe openings shall be able to accommodate fittings for at least a one-half inch I.D. pipe, and should preferably be located at the top of a conical frustum or cylindrical vertical extension

of the tank which is at least 2 inches in diameter at the base and 2 inches or more in height.

(9) **PIPING AND FITTINGS.** (a) *Size.* The piping from a toilet to the holding tank shall be at least as large as the trap of the toilet fixture. The piping from the holding tank or toilet to the pumpout connection shall have a nominal inside diameter of at least one and one-half inches.

(b) *Material.* All waste and venting piping shall be made of galvanized steel, wrought iron or yaloy pipe; lead; brass; type M copper; or flexible or rigid plastic pipe. Assembly shall be made with threaded fittings in the case of ferrous or brass pipe; lead or solder type fittings in the case of lead and copper pipe; and with threaded fittings, insertible clamp type fittings or weldable fittings in the case of plastic pipe. Clamps, usable only with plastic pipe, shall be made of stainless steel. All piping materials and fittings shall be capable of withstanding a pressure of at least 75 pounds per square inch and a combined maximum suction and external pressure head equivalent to 50 feet of water.

(c) *Location.* No piping, other than that for venting, associated with the boat sewage system shall pass through the hull. The vent pipe shall terminate with an inverted U-bend, the opening of which shall be above the maximum water level in the toilet or holding tank. At least one vent terminal shall be constantly open to the atmosphere. The terminal of the outlet pipe shall be of the female connection type and be located above the holding tank in a manner that makes gravity discharge of the contents impractical. It shall have an airtight capping device marked "WASTE" and the cap and flange shall be embossed with the word "WASTE".

(10) **ELECTRICAL SYSTEM.** The electrical system associated with the boat holding tank or toilet system shall conform to accepted practice and create no hazards.

(11) **PORTABLE TOILET.** Each portable toilet shall meet the material requirements and temperature resistance requirements of subs. (1) and (3). Exposed surfaces shall be of reasonably smooth and cleanable material. Capacity of the flush tank and holding tank shall be adequate for the intended use. Portable toilets shall be designed to prevent spillage of contents of the holding tank when the toilet is tipped or portable toilets shall be secured on board.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.06, Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.07 Overboard discharge inactivation.** No boat equipped with a means of discharging sewage directly from a toilet or holding tank into the water upon which the boat is moored or is moved shall enter inland or outlying waters of the state until such means of discharge is inactivated. An owner or operator of a boat equipped with such means of discharge shall contact a representative of the department of natural resources or a local law enforcement official with respect to inactivation before entering state waters. Overboard discharge inactivation shall include as a minimum either disconnection of the toilet piping, removal of the pumping device, securely plugging the discharge outlet, sealing of the toilet bowl with wax or other method approved by the official contacted. The inspecting official shall provide the boat owner or operator with a signed written statement as to the method of inactivation accepted. The owner

Register, May, 1983, No. 329

or operator shall give information as to the inland or outlying waters he plans to navigate and as to the time of stay on such waters.

Note: Discharge of wastes from boats in any form would be contrary to s. 29.29 (3), Stats.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.07, Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.08 On-shore disposal facilities.** (1) **PUMP.** A self-priming pump, suitable for pumping sewage, shall be provided for the on-shore removal of sewage from boat holding tanks and toilets; the installation of which shall be in accord with the appropriate state and local regulations. Head characteristics and capacity shall be based on installation needs for the site. The pump may be either fixed in position or portably mounted.

(2) **SUCTION HOSE.** The suction hose shall be of non-collapsible quality, preferably made with reinforcement. A quick-connect dripproof connector shall be fitted to the end of the hose that is attached to the boat piping outlet.

(3) **DISCHARGE HOSE.** Quality flexible hose, compatible with the pump characteristics, may be used. All permanent piping shall conform to the state plumbing regulations. (ch. ILHR 82)

(4) **SEWAGE DISPOSAL REQUIREMENTS.** (a) *Public facilities.* When connection to a public sanitary sewer is economically feasible, the disposal piping shall be designed to discharge thereto. (s. ILHR 82.05)

(b) *Private facilities.* When a public sewer is not available, a private sewage disposal system installed in compliance with applicable state plumbing regulations shall be provided unless adequate private treatment and disposal facilities are already available. (s. ILHR 82.05 and ch. ILHR 83.)

(5) **WATER SUPPLY REQUIREMENTS.** The on-shore disposal facility shall be served by a water supply piping system to permit flushing of the facilities serviced. If a potable water supply is the source for flushing, the distribution piping shall be protected from backsiphonage and backpressure.

(6) **PLAN APPROVAL.** Every owner, personally or through an authorized representative, shall obtain written approval from the department prior to award of any new or modified construction of shore disposal facilities set forth in this section. Three sets of plans and specification of such new or modified shore disposal facilities to be constructed for the purpose of pumping out boat holding tanks and toilets, receiving sewage from portable toilets, and disposing of the sewage shall be submitted to the department for review as to acceptability. Plans and specifications shall cover in detail the materials to be used, the pump characteristics, the water supply system, and when applicable, the size and construction of the septic or holding tank, results of soil percolation and boring tests and layout of the soil absorption system. Location of all wells within 50 feet of the absorption system, the surface water high water level and the general topography of the area shall be shown on the plans.

(7) **DISPOSAL OF PORTABLE TOILET WASTES.** Sewage from portable toilets shall be discharged into an approved fixture or other approved device designed to receive sewage.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.08, Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.09 Alternate facilities.** (1) **CHEMICAL TYPE TOILETS.** Nonrecirculating chemical toilets may be used in lieu of a toilet flushed by water provided the container is not portable and the use of on-shore pumping facilities is provided for in the design of the unit. The design of the toilet and on-shore disposal adaptation shall be approved.

(2) **INCINERATOR TYPE TOILETS.** An approved incinerator type toilet may be used in lieu of a toilet flushed by water provided it is of adequate capacity to handle the passenger load. Equipment for on-shore removal and disposal of resulting ash shall be kept on board.

(3) **PORTABLE TOILETS.** An approved portable toilet may be used in lieu of a permanently installed toilet provided it is of adequate capacity to handle the passenger load. Sewage in the holding tank shall be properly disposed of on shore. Units shall be temporarily secured on board, if necessary, to prevent spillage of contents.

History: Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.09, Register, May 1983, No. 329, eff. 6-1-83.

**ILHR 84.10 Operation and maintenance.** All facilities controlled by this chapter shall be maintained in good operating condition at all times. All necessary tools for repair and maintenance shall be kept on board or on dock, as the case may be, and shall be properly stored when not in use. Extra fuses for electrical equipment and extra indicator lights shall be on hand. Pump-out suction hoses should be adequately drained through the pump before disconnection and then properly stored or capped. Pumping equipment shall be shut off before the hose is disengaged from the boat outlet pipe. Any equipment on board shall not be used or operated to allow discharge of sewage to surface waters.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.10, Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 84.11 Prohibited facilities.** No person shall use or permit to be used as a holding facility for sewage a pail, plastic bag or any other type of portable, semiportable or disposal receptacle aboard boats not specifically permitted by the provisions of this chapter.

History: Cr. Register, September, 1980, No. 297, eff. 10-1-80; renum. from H 80.11, Register, May, 1983, No. 329, eff. 6-1-83.

Chapter ILHR 85

SUBDIVISIONS NOT SERVED BY PUBLIC SEWERS

SUBCHAPTER I — Scope and Application

- ILHR 85.001 Purpose (p. 309)
- ILHR 85.002 Scope (p. 309)
- ILHR 85.003 Application (p. 309)
- ILHR 85.004 Community systems (p. 310)
- ILHR 85.005 Saving and severable clauses (p. 310)
- ILHR 85.01 Definitions (p. 310)

SUBCHAPTER II — Administration and Enforcement

- ILHR 85.02 Department review (p. 312)

SUBCHAPTER III — Lot Standards

- ILHR 85.03 Lot area and average lot widths (p. 313)
- ILHR 85.04 Elevation (p. 314)
- ILHR 85.05 Outlot restrictions (p. 316)

SUBCHAPTER IV — Soil Evaluation

- ILHR 85.06 Soil tests (p. 317)

Note: Chapter H 65 as it existed on May 31, 1983 was repealed and a new Chapter ILHR 85 was created effective June 1, 1983.

SUBCHAPTER I—SCOPE AND APPLICATION

**ILHR 85.001 Purpose.** Pursuant to s. 145.23, Stats., the purpose of this chapter is to promote public health by establishing minimum lot sizes and lot elevations necessary for proper sewage disposal in subdivisions not served by a public sewer.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 85.002 Scope.** (1) The provisions of this chapter apply to all proposed subdivisions that include proposed lots which are not to be served by existing public sewers or where provisions assuring for such service have not been made. Provisions assuring the availability of public sewer service shall be made through city, village, town or town sanitary district resolution or other official action requiring that all buildings within the proposed subdivision be served by public sewers prior to occupancy.

(2) Pursuant to s. 236.45, Stats., when required by local ordinance, the provisions of this chapter will apply to other divisions of land that do not meet the definition specified in s. ILHR 85.01 (21) for subdivision.

Note: Upon request, the department will review and comment on plans for other proposed divisions of land provided the appropriate fee as specified in s. Ind 69.22, Wis. Adm. Code, is received.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 85.003 Application.** The application of this chapter shall be limited as follows:

(1) The requirements in ss. ILHR 85.03 to 85.06 apply only to subdivision lots that will have one single family dwelling and one on-site sewage disposal system.

(2) For all other subdivision lots that do not fall within the scope of sub. (1), written department approval as to the availability of suitable soils for soil absorption shall be obtained prior to submitting a plat for review in accordance with s. 236.12, Stats.

(a) Department acceptance shall not be issued unless adequate initial and replacement areas for soil absorption are available to dispose of the proposed wastewater flows specified in ch. ILHR 83.

(b) The soil absorption areas shall comply with the site and soil test requirements of ch. ILHR 83.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 85.004 Community systems.** Where individual subdivision lots are to be served by a community system of collection and disposal of sewage effluent by soil absorption, the recorded final plat shall be clearly marked to indicate this condition.

(1) If the components of such a community system are not in place and available to all of the lots when a plat is received by the department for review in accordance with s. 236.12, Stats., the department shall not certify that plat until the city, village, town or town sanitary district has, by resolution or other official action, required that buildings within the subdivision will be served by the community system prior to occupancy.

(2) All components of a community system shall be owned and maintained by a special purpose district.

(3) All components of a community system shall be accessible through easements, public right-of-ways or land ownership.

(4) (a) The effective soil absorption area for a community system shall be provided by at least 3 areas of equivalent size that together total at least 150% of the minimum area required under s. ILHR 85.003 (2).

(b) Each third of the effective soil absorption area shall alternately rest for 12 month periods, during which time each of the other 2 thirds shall be alternately dosed with a distribution supply pressure of at least 2.5 feet of head.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 85.005 Saving and severable clauses.** Should any portion of this chapter be declared invalid or unconstitutional for any reason, the remainder of this chapter shall not be affected thereby.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 85.01 Definitions.** For the purpose of this chapter, the following terms are defined as:

(1) "Approved" means being acceptable to the department.

(2) \* "Average lot width" means the number computed by using distances between nonparallel side lot lines which are perpendicular to the line bisecting the angle formed by the side lot lines using the portion of the lot containing the minimum lot area. The average width between parallel lot lines is the perpendicular distance between them.

(3) "Bedrock" means the rocks that underlie soil material or that are at the earth's surface. Bedrock is encountered where the weathered in-place consolidated material larger than 2 millimeters in size is greater than 50% by volume.

\*See Appendix for further explanatory material.



(4) "Color" means the moist color of the soil based on the Munsell soil color charts.

(5) "Community water supply system" means a water system so designated and approved by the department of natural resources.

(6) "County" means the local governmental unit responsible for the regulation of private sewage systems as defined in s. 145.01 (15), Stats.

(10) "Minimum continuous suitable soil area" means that area of a lot which is contiguous and meets all of the requirements specified in s. ILHR 85.04 relating to flooding, high groundwater, bedrock, permeability, land slope and size.

(11) "Minimum lot area" means the area specified in s. ILHR 85.03 as the minimum area for a given situation.

(12) "Mound system" means a soil absorption system complying with the requirements of s. ILHR 83. 23.

(13) "Outlot" means a parcel of land, other than a lot or block, so designated on the plat.

(14) "Percolation test" means the method specified in s. ILHR 85.06 of testing absorption qualities of the soil.

(15) "Permeability" means the ease with which liquids move through soil.

(16) "Plat" means a map of a subdivision.

(17) "Public sewer" means sewers and treatment facilities used in connection therewith that ultimately result in surface discharge of effluent and that are also acceptable to or approved by the department of natural resources.

(18) "Soil" means all unconsolidated material overlying bedrock.

(19) "Soil boring" means an observation pit dug by hand or backhoe, a hole dug by augering or a soil core taken intact and undisturbed with a probe.

(20) "Soil saturation" means the state where all the pores in a soil are filled with water. Water will flow from saturated soil into a soil boring.

(21) "Subdivision" means a division of a lot, parcel or tract of land by the owner thereof, or the owner's agent for the purpose of sale or of building development, where:

(a) The act of division creates 5 or more parcels or building sites of 1½ acres each or less in area; or

(b) Five or more parcels or building sites of 1½ acres each or less in area are created by successive divisions within a period of 5 years.

Note: See s. ILHR 85.002 as to the application of this chapter as it pertains to land divisions that are defined by local ordinance as subdivisions.

(22) "System" means a soil absorption system for disposal of sewage effluent.

## SUBCHAPTER II—ADMINISTRATION &amp; ENFORCEMENT

**ILHR 85.02 Department review.** \* (1) **SUBMITTAL.** (a) Plats of proposed subdivisions not served by public sewers shall be submitted to the department in accordance with the procedures specified in s. 236.12, Stats.

(b) In accordance with ch. 236, Stats., at least 3 copies of the plat for a proposed subdivision not served by public sewers shall be provided to the department for review.

(2) **PLATS.** All copies of plats submitted for department review shall be clear, legible and permanent, and shall include sufficient information for the department to judge if the proposed subdivision complies with the requirements of this chapter.

(a) Applicable information to be provided on a plat shall include, but not limited to:

5. Lot areas not meeting the minimum continuous suitable soil area requirements specified in s. ILHR 85.04.

(b) Applicable data to accompany the plat shall include, but not limited to:

1. Soil boring data;
2. Soil profile descriptions;
3. Percolation test data; and
4. Groundwater monitoring data.

(3) **FORMS.** Data for all soil tests shall be submitted on forms furnished by the department. The forms shall be signed by a soil tester who is certified by the department.

Note: Forms furnished by the department may be used for other purposes, if the purpose is identified on the form by the soil tester.

(4) **INVESTIGATIONS.** (a) The department or county may conduct field investigations to verify, including, but not limited to:

1. Depth to soil mottles;
2. Depth to observed groundwater;
3. Soil textures;
4. Depth to bedrock;
5. Land slope; and
6. Soil percolation rates.

(b) The department or county may require backhoe pits to be provided and may require percolation tests to be conducted under department or county supervision.

(c) The department or county may require the monitoring of groundwater levels in accordance with s. ILHR 85.06 (4) for proposed subdivisions where the natural soil has been altered.

\*See Appendix for further explanatory material.

(5) **REVOCATION OF CERTIFICATION.** The department may rescind plat certification, issued under the provisions of this chapter, for any false statements or representation of facts on which the certification was issued.

(6) \* **FEEES.** Fees for department plat review and field investigations shall be submitted in accordance with s. Ind 69.22, Wis. Adm. Code.

(7) **PENALTIES.** The department may impose penalties and obtain additional remedies for violations of this chapter or ch. 236, Stats., as provided in ss. 145.02 (3) (f), 145.12 (1) and (2), and 236.31 (2), Stats.

Note #1: Section 145.02 (3) (f), Stats., states that the department may issue special orders directing and requiring compliance with the rules and standards of the department promulgated under this chapter whenever, in the judgment of the department, the rules or standards are threatened with violation, are being violated or have been violated. The circuit court for any county where violation of such an order occurs has jurisdiction to enforce the order by injunctive and other appropriate relief. The attorney general or the district attorney of the county where the violation of the order occurs shall bring action for its enforcement. The department may issue an order under this paragraph to abate a violation of s. 146.13 or 146.14.

Note #2: Section 145.12 (1), Stats., states that any person, firm or corporation who otherwise violates any provisions of this chapter, shall be fined not less than \$10 nor more than \$100 or imprisoned for 30 days or both. Each day such violation continues shall be a separate offense.

Note #3: Section 145.12 (2), Stats., states that any person violating this chapter or failing to obey a lawful order of the department, or a judgment or decree of a court in connection with this chapter, may be imprisoned for not more than three months or fined not more than \$100.

Note #4: Section 236.31 (2), Stats., states that any municipality, town, county or state agency with subdivision review authority may institute injunction or other appropriate action or proceeding to enjoin a violation of any provision of this chapter, ordinance or rule adopted pursuant to this chapter. Any such municipality, town or county may impose a forfeiture for violation of any such ordinance, and order an assessor's plat to be made under s. 70.27 at the expense of the subdivider or his agent when a subdivision is created under s. 236.02 (8) (b) by successive divisions.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

### SUBCHAPTER III—LOT STANDARDS

**ILHR 85.03 Lot area and average lot widths.** (1) **GENERAL.** The area of any unsewered lot shall be sufficient to permit the installation and use of a soil absorption system and one replacement system based upon the results of soil tests conducted in accordance with s. ILHR 85.06.

(2) **AREA AND WIDTH.** Except as provided in sub. (3), each lot, based upon its percolation rate classification and its water supply system, shall have a minimum lot area and a minimum average lot width not less than that specified in Table 85.03. Any portion of a lot having a width of less than 30 feet shall not be considered in determining the minimum lot area.

(a) *Community water supply.* The department shall consider a community water supply system available, if plans for such a supply system have been approved by the department of natural resources. In addition, the controlling local governmental unit shall by resolution or other official action require water service lines to be extended to buildings within the subdivision prior to occupancy.

(b) *Easements.* 1. Any easement or combination of adjacent easements which is greater than 20 feet wide shall not be considered in determining minimum lot area unless approved in writing by the department.

\*See Appendix for further explanatory material.

2. The minimum lot area shall not be divided by any easement unless approved in writing by the department.

(3) **LOT COMBINATIONS.** Pending installation of public sewers, the minimum lot areas and the minimum average lot widths specified in Table 85.03 may be provided through use of 2 or more lots, if suitable lot combinations are designated on the recorded final plat.

**Table 85.03**  
**LOT AREAS AND WIDTHS**

Class	PERCO- LATION RATE  Minutes Required for Water to Fall One Inch	PRIVATE WATER SUPPLY SYSTEMS			COMMUNITY WATER SUPPLY SYSTEMS		
		Minimum Lot Area (square feet)	Minimum Average Lot Width (feet)	Minimum Continuous Suitable Soil Area (square feet)	Minimum Lot Area (square feet)	Minimum Average Lot Width (feet)	Minimum Continuous Suitable Soil Area (square feet)
1	Under 10	20,000	100	10,000	12,000	75	6,000
2	10 to less than 30	20,000	100	10,000	14,000	75	7,000
3	30 to less than 45	25,000	100	12,500	16,000	75	8,000
4	45 to 60	30,000	100	15,000	18,000	100	9,000
5	greater than 60 to 120 (mound systems only)	30,000	100	15,000	18,000	100	9,000

Note: Chapter NR 112, Wis. Adm. Code, requires a 1,200 foot separation between potable water supply wells and proposed or existing sanitary landfills. The department of natural resources should be consulted if a community water supply well is located in or near a proposed unsewered subdivision.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 85.04 Elevation.** Unless reduced under sub. (7), each lot, based upon its percolation rate classification and its water supply system, shall have a minimum continuous suitable soil area not less than that specified in Table b 85.03. The minimum continuous suitable soil area shall meet all of the elevation requirements specified in this section relating to flood-water, high groundwater, bedrock, permeability and land slopes.

(1) **FLOODWATER.** (a) *Rivers, streams and flow-through lakes.* All of a lot's minimum continuous suitable soil area and at least 90% of a lot's minimum lot area shall be above the elevation of the regional flood as defined in ch. NR 116, Wis. Adm. Code. Where this is a factor, the regional flood elevation shall be delineated and so labeled on the recorded final plat. This elevation shall be verified by the department of natural resources.

(b) *Other bodies of water.* All of a lot's minimum continuous suitable soil area and at least 90% of a lot's minimum lot area shall be at least 2 feet above the highest known water elevation of any body of water not covered under par. (a). Where this is a factor, the contour 2 feet above the highest known water elevation shall be delineated and so labeled on the recorded final plat.

(2) **GROUNDWATER AND BEDROCK.** (a) *Subsurface systems.* Except as provided in par. (b), the minimum continuous suitable soil area shall have a minimum of 3 feet of soil between the bottom of the proposed systems and high groundwater and bedrock.

(b) *Mound systems.* Where mound systems are proposed, the minimum continuous suitable soil area shall have a minimum of 2 feet of soil from existing grade to high groundwater and bedrock.

(c) *Noncomplying areas.* Any lot areas not meeting the requirements of pars. (a) or (b) shall be delineated on all plats.

(3) **PERMEABILITY.** (a) *Subsurface systems.* Except as provided in par. (b), within the minimum continuous suitable soil area, a percolation rate of 60 minutes per inch or faster shall exist for the depth of the proposed systems and to at least 3 feet below that.

(b) *Mound systems.* Within the minimum continuous suitable soil area where mound systems are proposed, a percolation rate of 120 minutes per inch or faster shall exist for a depth of at least 2 feet below the existing grade.

(c) *Noncomplying areas.* Any lot areas not meeting the requirements of par. (a) or (b) shall be delineated on all plats.

(4) **LAND SLOPES.** (a) *Subsurface systems.* 1. Except as provided in par. (b), land slopes within the minimum continuous suitable soil area shall not exceed 20%. A land surveyor registered in Wisconsin shall certify that all minimum continuous suitable soil areas do not have any land slopes exceeding 20 percent.

2. Areas where land slopes exceed 20% shall be accurately delineated on a plat.

(b) *Mound systems.* 1. Where mound systems are proposed:

a. Land slopes shall not exceed 12% within minimum suitable soil areas with percolation rates of 30 minutes per inch or faster; or

b. Land slopes shall not exceed 6% within minimum suitable soil areas with percolation rates slower than 30 minutes per inch, but not slower than 120 minutes per inch.

2. A land surveyor shall certify to the department that all minimum continuous suitable soil areas for proposed mound systems are free of land slopes exceeding the percentages of subd. 1.

(5) **MOUND SYSTEMS.** The recorded final plat shall clearly indicate which lots, if any, must use mound systems due to the availability of suitable soils.

(6) **EASEMENTS.** Minimum continuous suitable soil areas shall not include any easement, unless approved in writing by the department.

(7) **REDUCED MINIMUM CONTINUOUS SUITABLE SOIL AREAS.** The minimum continuous suitable soil areas may be reduced to not less than the minimums specified in Table 85.04 if building area, well area and 2 system areas are preplanned and designated on the recorded final plat.

(a) *General.* The shape and location of such preplanned areas shall be such that 2 trench type systems can be installed to serve a 4 bedroom home.

1. Preplanned areas shall be clearly shown either on all plats or on separate sheets, provided that the recorded final plat is clearly marked to show which lots have preplanned areas.

2. No changes in preplanned areas may be made unless approved in writing by the department.

**Table 85.04**  
**PREPLANNED LOTS**

LOT CLASS	MINIMUM SQUARE FEET REQUIRED FOR EACH PREPLANNED SYSTEM AREA (MINIMUM OF TWO AREAS REQUIRED)
1	2,000
2	3,000
3	3,600
4	3,900

(b) *Separating distances.* The reduced minimum continuous suitable soil areas shall be at least:

1. Fifty feet from the high water mark of any lake, stream or other watercourse, well or water reservoir;

2. Twenty-five feet from any habitable building or dwelling or building with below grade foundation which will remain in use after sale of the lot;

3. Twenty feet from the top of land slopes exceeding 20% except where the top of the aggregate of a system is at or below the level of the flow line of an adjacent roadside ditch; and

4. Five feet from any lot line.

(c) *Approved comparable lot layout design.* When compliance with the requirements of this section is impractical and satisfactory proof is provided that systems can be installed in complete accord with ch. ILHR 83, the department may approve in writing further reductions in depths and areas of the minimum continuous suitable soils.

Note: Chapter ILHR 83 contains requirements for systems proposed to be installed at sites which have been altered by filling or attempts to overcome steep slopes.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

**ILHR 85.05 Outlot restrictions.** Any outlots that do not meet the lot area, width, or elevation requirements specified in ss. ILHR 85.03 and 85.04 shall be restricted by a clearly labeled restriction on the recorded final plat. This restriction shall prohibit the construction of buildings for human habitation until public sewers are available and shall prohibit the installation of soil absorption systems on such outlots.

History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

#### SUBCHAPTER IV—SOIL EVALUATION

**ILHR 85.06 Soil tests.** The evaluation of soil profiles, percolation testing and monitoring of groundwater shall be conducted by a soil tester certified by the department. Either the soil tester or land surveyor shall certify on a plat submitted to the department that all soil test sites shown thereon are accurately located and that all soil test depths are referenced to the final grade of the subdivision as established during the time of testing.

**Note #1:** Forms furnished by the department can be used for other purposes if the purpose is identified on the form by the soil tester.

**Note #2:** Since there can be considerable variation in the ability of soil to absorb sewage effluent on the individual lots in an approved subdivision, attention is directed to the necessity of conducting individual lot soil borings, profile evaluations and percolation tests as specified in ch. ILHR 83 prior to construction of any system.

(1) **SOIL BORINGS.** Each soil boring shall be of a size and extent to determine the soil characteristics important to on-site liquid waste disposal. Soil borings shall be conducted prior to percolation testing to determine whether the soils are suitable to warrant percolation tests and if suitable, at what depths percolation tests shall be conducted.

(a) *General.* The use of power augers for soil borings is prohibited. If soil borings are not dug with a backhoe, the soil tester shall so report on the soil test data form. The soil borings shall be distributed as uniformly as possible and their locations shall be shown on a plat submitted to the department.

(b) *Number of soil borings.* 1. At least one soil boring per acre shall be made initially, if a detailed soil map for the area is not available to the department.

2. At least one soil boring per 3 acres shall be made initially, if a detailed soil map for the area is available to the department.

3. Where initial soil borings indicate marked variations in depths to bedrock, high groundwater or restrictive permeability, at least 2 soil borings per acre shall be made.

4. Where proposed lot areas exceed one acre and where uniform soil conditions exist, at least one soil boring per 5 acres shall be made.

(c) *Depth of soil borings.* 1. All soil borings shall extend to a depth of at least 6 feet or to bedrock, if present at a lesser depth.

2. All soil borings in minimum continuous suitable soil areas shall extend at least 4 feet below an expected depth of a system.

3. The depth of a soil boring shall be referenced to the final grade of the subdivision.

(2) **SOIL PROFILE DESCRIPTIONS.** Soil profile descriptions shall be written for all borings.

(a) *General.* Soil profile descriptions shall indicate the thickness in inches of the different soil horizons observed. Horizons shall be differentiated on the basis of color, texture, soil mottles or bedrock.

(b) *Data.* Soil profile descriptions shall include:

1. The depth to observed groundwater, if present;

2. The depth to bedrock, if present;
3. The depth to soil mottling, if present;
4. An estimated depth to high groundwater; and
5. The texture and color of the soil horizons.

(c) *Observed groundwater.* Observed groundwater shall be reported at the level groundwater reaches in the boring or at the highest level of sidewall seepage into the boring. Measurements shall be made from ground surface. Soil above the water level in the soil boring shall be checked for the presence of soil mottles.

(d) *Bedrock.* The depth to bedrock except monolithic sandstone shall be established at the depth in a soil profile where greater than 50% of the weathered in-place material is consolidated. Monolithic sandstone bedrock shall be established at the depth where an increase in resistance to penetration of a knife blade occurs.

(e) *Soil mottles.* Zones of seasonal or periodic soil saturation shall be estimated at the highest level of soil mottles. The department or county may require a detailed description of the soil mottles on a marginal site. The abundance, size, contrast and color of the soil mottles should be described in the following manner:

1. Abundance; a. Few, if the mottled color occupies less than 2% of the exposed surface;

b. Common, if the mottled color occupies from 2 to 20% of the exposed surface; or

c. Many, if the mottled color occupies more than 20% of the exposed surface.

2. Size, referring to length of the mottle measured along the longest dimension:

a. Fine, if the mottle is less than 5 millimeters;

b. Medium, if the mottle is from 5 millimeters to 15 millimeters; or

c. Coarse, if the mottle is greater than 15 millimeters.

3. Contrast, referring to the difference in color between the soil mottle and the background color of the soil:

a. Faint, if the mottle is evident but recognizable only with close examination;

b. Distinct, if the mottle is readily seen but not striking; or

c. Prominent, if the mottle is obvious and one of the outstanding features of the horizon.

4. Color of the mottle.

(f) *Color patterns not indicative of soil saturation.* 1. One Foot Exception. Soil profiles that have an abrupt textural change of finer textures overlying at least 4 feet of unmottled, loamy sand or coarser textures, can have a mottled zone in the finer textures. If the mottled zone is less than 12 inches thick and is immediately above the textural



change, then a system may be installed in the underlying loamy sand or coarser textures. If any soil mottles occur within the underlying loamy sand or coarser textures, then the site shall be unsuitable. The department or county may determine certain coarse sandy loam soils to be included as a coarse material.

2. Other Soil Color Patterns. Soil mottles can occur that are not due to zones of seasonal or periodic soil saturation. Examples of such soil conditions not limited by enumeration are as follows:

- a. Soil mottles formed from residual sandstone deposits;
- b. Soil mottles formed from uneven weathering of glacially deposited material, or glacially deposited material that may have been originally gray in color. This may include concretionary material in various stages of decomposition;
- c. Deposits of lime in a profile derived from highly calcareous parent material;
- d. Light colored silt or dark colored clay coats deposited on soil ped faces;
- e. Soil mottles that are usually vertically oriented along old or decayed root channels with a dark organic stain usually present in the center of the mottled area; and
- f. Greenish colored calcite deposits.

3. Reporting Exceptions. A soil tester shall not disregard any mottled soil condition. If soil mottles are observed that may not be due to periodic saturation, the soil tester shall report such condition and may request a determination from the department or county as to suitability of the site.

(3) PERCOLATION TESTS AND PROCEDURES. Percolation tests shall be distributed as uniformly as possible in suitable soil areas and their locations shall be shown on a plat submitted to the department.

(a) *Percolation test hole.* A percolation test hole shall be dug or bored. The hole shall have vertical sides and have a horizontal dimension of 4 to 8 inches. The bottom and sides of the hole shall be carefully scratched with a sharp pointed instrument to expose the natural soil. All loose material shall be removed from the hole and the bottom shall be covered with 2 inches of gravel or coarse sand.

(b) *Number of percolation tests.* 1. At least one percolation test per acre shall be made initially, if a detailed soil map for the area is not available to the department.

2. At least one percolation test per 3 acres shall be made initially, if a detailed soil map for the area is available to the department.

3. Where percolation test results indicate marked variations in soil permeability, at least 2 percolation tests per acre shall be made.

4. Where proposed lot areas exceed one acre and where uniform soil conditions exist, at least one percolation test per 5 acres shall be made.

5. Where loamy sand or coarser material exists for the thickness of the proposed systems and to at least 3 feet below that, percolation tests are not required.

6. The department may waive the necessity for conducting soil percolation tests where a detailed soil map clearly indicates soil permeability equivalent to the class of lot proposed. Such a waiver shall be obtained in writing from the department prior to the review of a preliminary or final plat submitted in accordance with ss. 236.11 and 236.12, Stats.

(c) *Depth of percolation test.* Except as provided in subds. 1. and 2., all percolation tests shall be made at the depth at which the soil absorption systems are to be installed. The final grade of the subdivision shall control the percolation test depth.

1. Additional percolation tests may be required at depths to 3 feet below proposed systems in order to show that percolation rates are 60 minutes per inch or faster therein.

2. Where mound systems are proposed, percolation tests shall be conducted within 12 to 24 inches from the ground surface at the depth of the estimated slowest permeability.

(d) *Test procedures in sandy soils.* For percolation tests conducted in sandy soils the percolation test hole shall be carefully filled with clear water to a minimum depth of 12 inches above the bottom of the hole. The time for this amount of water to seep away shall be determined and this procedure shall be repeated. If the water from the second filling of the hole seeps away in 10 minutes or less, the test may proceed immediately as follows. Water shall be added to a point not more than 6 inches above the gravel or coarse sand. Thereupon, from a fixed reference point, water levels shall be measured at 10 minute intervals for a period of one hour. If 6 inches of water seeps away in less than 10 minutes, a shorter interval between measurements shall be used, but in no case shall the water depth exceed 6 inches. If 6 inches of water seeps away in less than 2 minutes, the test shall be stopped and a rate of less than 3 minutes per inch shall be reported. The final water level drop shall be used to calculate the percolation rate. Soils not meeting the above requirements shall be tested as in par. (e).

(e) *Test procedures in nonsandy soils.* For percolation tests conducted in nonsandy soils, the percolation test hole shall be carefully filled with clear water and a minimum water depth of 12 inches shall be maintained above the bottom of the hole for a 4-hour period by refilling whenever necessary or by use of an automatic siphon. Water remaining in the hole after 4 hours shall not be removed. Thereafter, the soil shall be allowed to swell not less than 16 hours nor more than 30 hours. Immediately following the soil swelling period, the measurements for determining the percolation rate shall be made as follows. Any soil which has sloughed into the hole shall be removed and the water level shall be adjusted to 6 inches over the gravel or coarse sand. Thereupon, from a fixed reference point, the water level shall be measured at 30 minute intervals for a period of 4 hours unless 2 successive water level drops do not vary by more than 1/16 of an inch. At least 3 water level drops shall be observed and recorded. The hole shall be filled with clear water to a point not more than 6 inches above the gravel or coarse sand whenever it becomes nearly empty. Adjustment of the water level shall not be made during the last 3

measurement periods except to the limits of the last measured water level drop. If the first 6 inches of water seeps away in less than 30 minutes, the time interval between measurements shall be 10 minutes and the test shall be run for one hour. The water depth shall not exceed 6 inches at any time during the measurement period. The drop that occurs during the final measurement period shall be used in calculating the percolation rate.

(f) *Interpretation of percolation rates.* In interpreting percolation test results, the percolation rates for the same kind of soil which establish larger minimum lot areas shall be used to determine compliance with s. ILHR 85.03.

(4) **MONITORING GROUNDWATER LEVELS.** A property owner or developer has the option to provide documentation that soil mottling or other color patterns at a particular site are not an indication of seasonally saturated soil conditions or high groundwater levels. Documentation shall be made by monitoring groundwater observation wells in accordance with the procedures specified in this subsection.

(a) *Precipitation.* The monitoring shall only be conclusive in a near normal spring season when the precipitation equals or exceeds, for the consecutive periods of September 1st through the last day of February and March 1st to through May 31st, 8.5 inches and 7.6 inches, respectively.

1. The presence of water above a level 3 feet below the estimated system depth for a period of at least 7 days shall be indicative of unsuitable soils regardless of the amount of rainfall.

2. Precipitation totals shall be calculated from data gathered at weather stations of the national weather service or other approved recording stations.

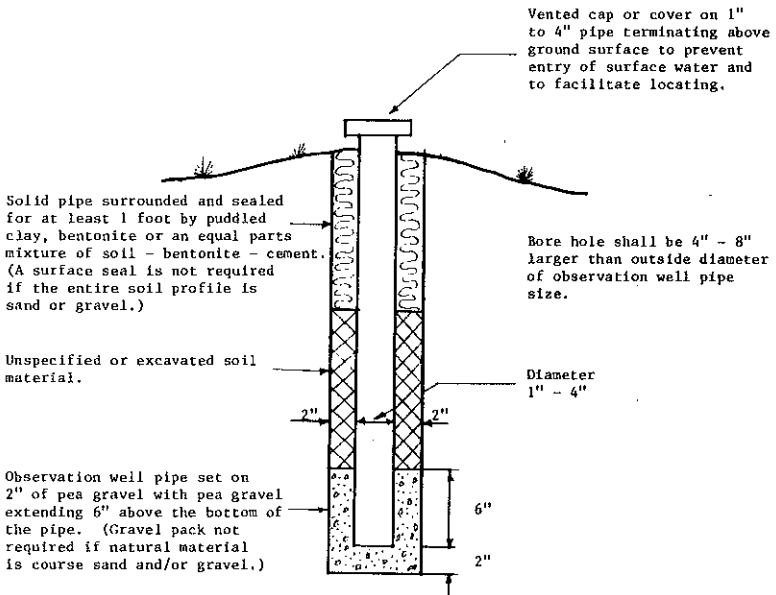
3. In determining whether a near normal spring occurred where sites are subject to regional water tables, such as large areas of sandy soils, the fluctuation over the several year cycle shall be considered. In such cases, data obtained from the United States geological survey shall be used to determine if a regional water table was at or near its normal level.

(b) *Artificial drainage.* Areas where groundwater levels are to be monitored shall be carefully checked for drainage tile and open ditches which could have altered high groundwater levels. Where such factors are involved, documentation of the location, design, ownership and maintenance responsibilities for such drainage shall be provided. Documentation shall include proof that the drainage network has an adequate outlet that will be maintained. Sites drained by agricultural drain tile shall not be acceptable for system installation.

(c) *Monitoring procedures.* 1. Prior to beginning groundwater monitoring each year, the soil tester shall notify the department and county of intent to monitor. The department shall be consulted for number, location and depth of monitoring wells prior to installation.

2. Monitoring wells for observing groundwater levels shall be designed, constructed and installed in accordance with Figure 85.06.

Figure 85.06  
MONITORING WELL



a. Except as provided in subpar. b., monitoring wells shall extend at least 3 feet below an expected depth of a system.

b. The department may require at least one well to be more than 3 feet deeper than proposed systems in areas subject to regional water tables.

(d) *Observations.* 1. The first observation and measurement of any groundwater in monitoring wells shall be made between March 1st and March 15th. Similar observations and measurements shall be made thereafter every 7 days or less until June 1st or until the site is determined to be unsuitable, whichever comes first. If water is observed at any time above a level 3 feet below the estimated system depth, an observation shall be made 4 days later. If water is present above a level 3 feet below the estimated system depth at both observations, the site shall be unsuitable. If water is not observed above a level 3 feet below the estimated system depth at the second observation, monitoring shall continue as originally scheduled.

2. The occurrence of rainfall of  $\frac{1}{2}$  inch or more within a 24 hour period during the monitoring may necessitate observations at more frequent intervals.

(e) *Percolation tests.* If monitoring of groundwater levels is conducted in mottled loess, the monitoring shall include percolation tests conducted in the loess at the proposed system depth and 3 feet below during the period of April 1st through April 22nd. The department shall supervise a representative number of such percolation tests.

(f) *Monitoring data.* Whether or not monitoring indicates suitable site conditions, one copy of the following groundwater monitoring data shall be submitted to the department and to the county. The data in subsd. 7 and 8 is not required for unsuitable sites.

1. A map showing test locations, preferably at a scale of 1" = 100'.
2. Soil profile descriptions.
3. Soil series if available from soil maps.
4. Dates observed.
5. Depths of wells and results of observations.
6. Local precipitation data; monthly from September 1st to June 1st and daily during monitoring.
7. Ground elevations at the wells or a 2 foot topographic contour map of the area.
8. Information on artificial drainage.

(g) *Plat restriction.* Where expected depths to high groundwater are based on results of groundwater monitoring, the department may require a restriction on the plat prohibiting installation of systems below certain depths.

(5) WINTER SOIL TESTING. Soil testing shall be done only when weather and light conditions make accurate evaluation of site conditions possible. Soil testing attempted under winter conditions is difficult and precautions shall be observed.

(a) *Soil evaluations.* Soil profile evaluations conducted between November 15th and March 15th shall be in accordance with the following procedures:

1. Soil borings shall be made with a backhoe;
2. Soil profiles shall be evaluated only between the hours of 10:00 a.m. and 2:00 p.m. when the sky is not completely overcast; and
3. Frozen soil material shall be thawed for hand texturing.

(b) *Percolation tests.* Percolation tests that are unprotected shall be conducted only on days when the air temperature is 20° F or higher and the wind velocity is 10 mph or less. A heated structure or other protection from freezing shall be provided when the weather conditions listed above are not met. The bottom of the test hole shall be at least 12 inches below frost depth. If water freezes in the test hole at any time, the test data shall be void.

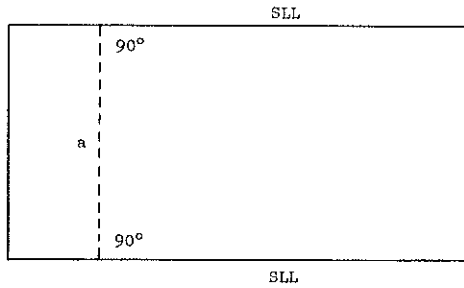
History: Cr. Register, May, 1983, No. 329, eff. 6-1-83.

APPENDIX

The material contained in this appendix is for clarification purposes only. The notes, illustrations, etc. are numbered to correspond to the number of the rule as it appears in the text of the chapter.

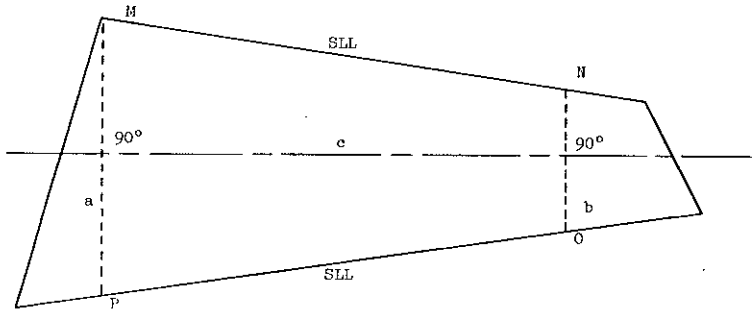
A 85.01 (1) Average Lot Width. The following illustrations and formulas are provided to explain the methods of average lot width determination.

(a) *Parallel Lot Lines.*



Average Lot Width is the perpendicular distance between Side Lot Lines (SLL)

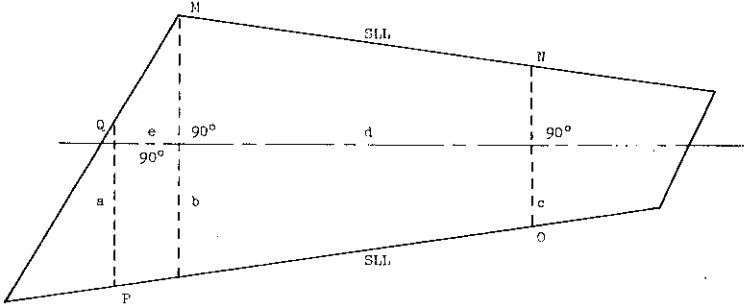
(b) *Nonparallel Lot Lines.*



Average Lot Width is  $\frac{a + b}{2}$ , area of MINOP equals Minimum Lot Area and line c bisects angle formed by lines MN and OP extended.



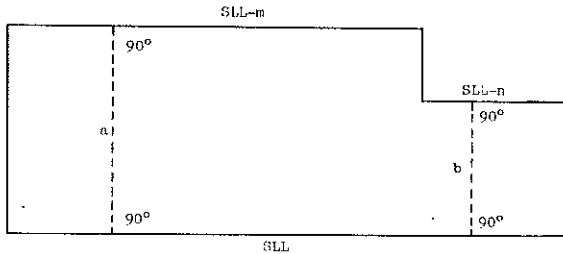
(c) *Nonparallel Lot Lines, Alternate 1.*



Average Lot Width is  $\frac{a + b}{2} \times \frac{e}{e + d} + \frac{b + c}{2} \times \frac{d}{e + d}$

Area of MNOFQ equals Minimum Lot Area and line d bisects angle formed by lines MN and OP extended. d is the perpendicular distance between lines b and c. e is the perpendicular distance between lines a and b.

(d) *Parallel Side Lot Lines, Alternate.*

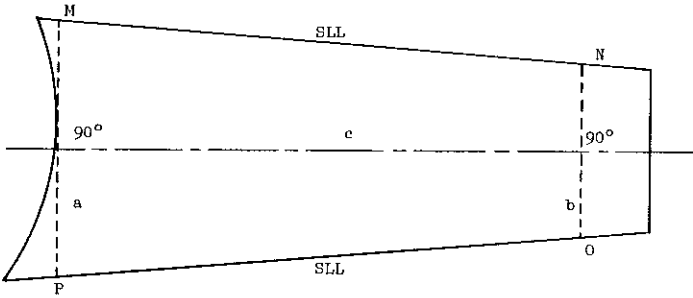


Average lot width is  $a \times \frac{m}{m + n} + b \times \frac{n}{m + n}$

Use only that part of length n that, when added to area of m portion of lot, satisfies minimum area requirements.

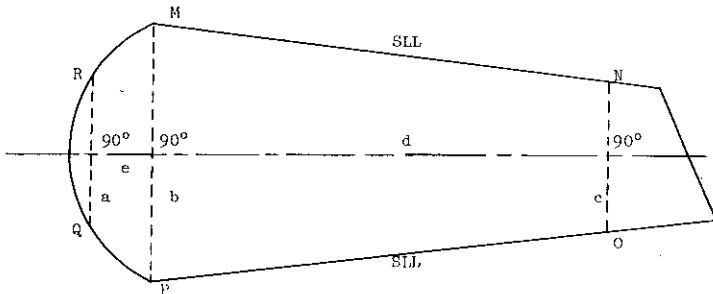
ILHR 85

(e) *Nonparallel Lot Lines, Alternate 2.*



Average Lot Width is  $\frac{a + b}{2}$ , area of MNOP equals Minimum Lot area and line c bisects angle formed by lines MN and OP extended. c is the perpendicular distance between lines a and b.

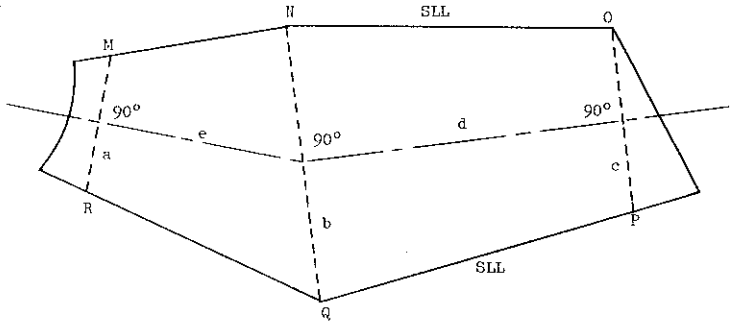
(f) *Nonparallel Lot Lines, Alternate 3.*



Average Lot Width is  $\frac{a + b}{2} \times \frac{e}{e + d} + \frac{b + c}{2} \times \frac{d}{e + d}$

Area of MNOPQR equals Minimum Lot Area and line d bisects angle formed by lines MN and OP extended. d is the perpendicular distance between b and c. e is the perpendicular distance between lines a and b.

(g) *Nonparallel Lot Lines, Alternate 4.*



$$\text{Average Lot Width is } \frac{a + b}{2} \times \frac{e}{e + d} + \frac{b + c}{2} \times \frac{d}{e + d}$$

Area of MNOPQR equals Minimum Lot Area, line e bisects angle formed by MN and QR extended and line d bisects angle formed by NO and PQ extended. d is the perpendicular distance between b and c, e is the perpendicular distance between a and b.

**A 85.02 Department Review.** The following narrative further describes the plat submittal procedures required by ch. 236, Stats.

**SUBDIVIDING LANDS IN WISCONSIN—A SUMMARY OF CHAPTER 236, STATUTES**

Divisions of land into smaller parcels are usually shown on the ground by means of some type of monument at each corner of the land parcel involved. These land parcels or divisions can be shown on drawings that are called plats. Creation of these parcels occurs when the plat is recorded by the Register of Deeds in the county in which the parcels are located. A state level subdivision is one means of creating land parcels and is defined in s. 236.02 (8), Stats. A land division is a state level subdivision if 5 or more parcels, each 1½ acres or less, are created within a 5 year period. Lower density land divisions can also be defined by local ordinances as being state level subdivisions. If a state level subdivision is proposed, 3 state agencies may have authority to either certify or object to plats of that subdivision. Each agency has specific limitations as to the scope of their review.

The department of development reviews plats of all state level subdivisions for conformity with the technical requirements in ch. 236, Stats., such as survey accuracy, monumentation and document preparation. As the lead state agency, they also coordinate the plat submittal process.

The department of transportation reviews plats of all state level subdivisions abutting state trunk highways, federal highways and interstate highways. Their review is based on conformity with ch. HY 33, Wis. Adm. Code, which covers number and location of street access points from subdivisions to highways.

The department of industry, labor and human relations reviews plats of all state level subdivisions not served by public sewers. This review is based on the requirements in this chapter — ILHR 85, Wis. Adm. Code.

In addition to review by the above state agencies, ch. 236, Stats., also mandates review by local units of government in which the proposal is located. If within a municipality, only the approval of the municipality is needed. If within the extraterritorial jurisdiction of a municipality, the approvals of the town and county are required and the approval of the municipality may be required. If outside extraterritorial jurisdiction, the approvals of the

town and county are required. County planning agencies or county park commissions can also have authority to object to these plats. Approving authorities must either reject or approve final plats within 60 days of receipt. No approvals can be issued until after all agencies having authority to object have certified that they have no objections to the proposal. No plat can be recorded until all approvals are obtained. None of the lots within the subdivision can be sold until after said recording.

Chapter 236, Stats., requires that one of the following 2 submittal procedures be followed. The subdivider or agent may submit the original plat to the approval authority for the unit of government, either a municipality or a town, in which the proposal is located. That authority then within 2 days makes copies and sends them to the department of development, to all other approving authorities, and to the county objection authority, if there is one. The department of development must then transmit copies to the other state agencies having review authority. All state agencies having review authority must then, within 20 days, either return one certified copy of the plat to the approving authority, or inform the subdivider and all approving or objecting authorities of any objections to the proposal.

In lieu of the above procedure, the subdivider or agent can submit the original plat to the department of development which then makes copies and sends them to all agencies having authority to object. Those agencies then have 20 days to either return one certified copy of the plat to the department of development, or inform the subdivider and all objecting authorities of any objections to the proposal. If there are no objections, the department of development returns the certified original to the subdivider or agent.

As per s. 236.13 (5), Stats., any person aggrieved by an objection to a plat or a failure to approve a plat may appeal therefrom as provided in s. 62.23 (7) (e) 10-15, Stats., within 30 days of notification of the rejection of the plat. Where the failure to approve is based on an unsatisfied objection, the agency making the objection shall be made a party to the action. The court shall direct that the plat be approved if it finds that the action of the approving authority or objecting agency is arbitrary, unreasonable or discriminatory.

Chapter 236, Stats., also allows municipalities, towns and counties to adopt land division ordinances which are more restrictive. For example, a county could require state and local level review of a land division creating more than 2 parcels, each of 10 acres or less, within 10 years. Also, ch. 236, Stats., does not require submittal of preliminary plats, but approving authorities can so require. The department of natural resources, although not an official reviewing authority, does have input in the plat review process. They do, upon request, advise the department of development of whether or not the requirements for public access in s. 236.16, Stats., have been met for subdivisions abutting navigable lakes or streams. Upon request they also advise the department of industry, labor and human relations of whether or not reported regional flood levels are correct.

#### DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS PLATTING PROGRAM

Formal action on subdivision plats can be taken by the department only if the copies of the plat are submitted in accordance with statutory requirements. In other words, the department is obliged to conduct a formal review and take formal action on copies of plats received *only* from the department of development. The department will comment informally on plats for other land divisions received from other sources, provided appropriate fees are received.

Chapter ILHR 85, Wis. Adm. Code, indicates in the first subchapter the conditions under which provision for public sewer service facilities can be considered as having been made. If such facilities are not provided, the regulations then establish minimum lot area and elevation requirements which are primarily based on soil and site characteristics.

The results of soil percolation tests conducted in accordance with the indicated procedure establish minimum lot area except in instances where detailed soil survey maps clearly show favorable soil permeability factors or where sandy soil conditions prevail. Soil percolation tests need not be conducted if the department waives the need for the tests and bases minimum lot area on detailed soil map information. If sandy soils prevail and lot layout is otherwise acceptable, percolation tests are not required. Minimum lot areas can be reduced by providing an approved community water supply or by use of lot combinations pending public sewer service.

The lot elevation requirements of ch. ILHR 85, Wis. Adm. Code, are related to the area requirements. Elevation standards are established for flooding, land slopes and depth to high groundwater, bedrock or soil with unacceptable percolation rates. The first subsection under the elevation requirements establishes the minimum area of each lot which must be free of all elevation limitations. These minimum continuous areas can be reduced if locations of soil absorption systems, and setbacks from buildings and wells are replanned on the plat. Flooding is evaluated on the basis of the regional flood elevation (100 year flood).

Groundwater is usually evaluated on the basis of estimated high groundwater levels using soil mottling. If groundwater, bedrock or permeability conditions are not clearly defined, a field investigation may be conducted to obtain necessary information.

One of the most important sections of ch. ILHR 85, Wis. Adm. Code, deals with obtaining soil boring and soil percolation test data. This section requires that a certified soil tester conduct the tests, indicates how the data is to be submitted, how many tests are required and how the tests are to be conducted.

A note is included in this chapter to signal that results of soil tests submitted in support of proposed subdivisions usually are not adequate in number for use in designing soil absorption systems on individual lots and that an adequate number of tests properly located must be conducted on each individual lot to obtain design information for soil absorption systems for septic tank effluent disposal.

A 85.02 (6) Fees. The following are the plat review fees from ch. Ind 69, Wis. Adm. Code.

Ind 69.22 Platting-Subdivision Without Public Sewers. (1) APPLICATION. The fees for department plat review and investigations of subdivisions not served by public sewers conducted in accordance with ch. ILHR 85, Wis. Adm. Code and ch. 236, Stats., shall be determined as follows:

(a) *Plat Reviews.* The fee for an initial plat submission shall be computed on the basis of \$20.00 per lot.

(b) *Resubmitted Plats.* The fee for a resubmitted plat shall be \$50.00 per plat.

(c) *Field Investigations.* The fee for any field investigation requested by the subdivider will be \$300.00 per day or fraction thereof per subdivision.

(d) *Groundwater Monitoring Review.* The fee for department review of groundwater monitoring data will be \$100 per subdivision.

(2) COLLECTION OF FEES. All fees shall be remitted to the department at the time that the plats are submitted for review or when field investigations are requested or conducted. No plat certifications will be made until the fees are received by the department.



