WASHTENAW COUNTY
PROCESSING PROCEDURES AND GUIDELINES
FOR SUBDIVISIONS AND CONDOMINIUMS

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Section 1: Pre-Preliminary Plat / Condominium Review

The developer, or a designated representative, is encouraged to consult with the Washtenaw County Environmental Health Division (WCEHD) before a Preliminary Subdivision Plat or a Condominium is prepared. The WCEHD will examine the preliminary plan for suitability of an on-site sewage disposal and well water supply and determine the potential availability of municipal sewer and water. WCEHD will make recommendations using the following:

A. Existing available records
B. Soils maps
C. Well information of surrounding properties in the vicinity of the development
D. USGS topographical maps
E. Aerial photos
F. Municipal water and sewer plans
G. Other available records

Section 2: Review Process

Subsequent to receipt of tentative approval by the municipality, the preliminary plan must be transmitted to WCEHD in accordance with Act 288 of the Public Acts of 1967, as amended, and Act 368 of the Public Acts of 1978, as amended. Only one copy of the plan shall be submitted for review purposes. When all the requirements have been completed for approval, one hard-copy plan and electronic plans (PDF) must be submitted to this office.

2.1 Availability of Municipal Water and Sewer

The submission of plans to the WCEHD for review purposes is based on the type of water supply and sewage disposal systems to be provided. Before an on-site water or sewage system can be considered, it must be determined that public water and/or sanitary sewer facilities are not available. There are cases where political boundaries provide almost insurmountable obstacles to the extension of municipal services to nearby subdivisions. Each case of availability will be decided on its own merit. In determining availability, the following shall be given consideration:

A. Distance to the nearest public services from the proposed development (less than one-quarter mile warrants consideration).
B. Planned public services that are to be installed and ready for use within a one-year period.
C. Topography between the proposed development and the public services.
D. Capacity of existing public system and policy of local municipality on service extension.
E. Population density of surrounding area to determine need for public service (Appendix I).

2.2 Initial Submittal Requirements

The EGLE Checklist for Preliminary Review (Appendix II) can be used as a starting point for plan submittal requirements, realizing that WCEHD may require additional items.

A completed plan shall include the following:

A. A site plan that shows the proposed unit layout and individual unit areas, with total acreage and minimum unit size noted.
B. Legal Description of property.
C. Benchmarks, if required.
D. Clear, legible contour lines with either one foot or two-foot increments referenced to United States Geological Survey (USGS) datum.
E. All streams, drains, lakes, ponds and wetlands within 200 feet of the proposed development.
F. Depressions clearly marked by standard notations.
G. All easements and utility lines.
H. The 100-year flood plain elevation of streams as established and approved by the Michigan Department of Environment, Great Lakes and Energy (EGLE).
I. Boring logs of any previous work and location of borings.
J. Any existing wells, cisterns, septic tanks or drainfields.

2.3 Drainfield Isolation Distances

All drainfields, both primary and reserve, must meet the isolation distances in Table 1. Unit boundaries cannot be gerrymandered or flagged to obtain a suitable sewage disposal area.

<table>
<thead>
<tr>
<th>From Drainfield to:</th>
<th>Minimum Horizontal Isolation Distance (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I or Type IIa Well</td>
<td>200</td>
</tr>
<tr>
<td>Individual Private, Type IIb, or Type III Well</td>
<td>100</td>
</tr>
<tr>
<td>Property Line</td>
<td>10</td>
</tr>
<tr>
<td>Right-of-Way</td>
<td>10</td>
</tr>
<tr>
<td>Foundation with no footing drains</td>
<td>15</td>
</tr>
<tr>
<td>Foundation with footing drains</td>
<td>25</td>
</tr>
<tr>
<td>Surface Water Detention Basin 100-year Flood Level</td>
<td>50</td>
</tr>
<tr>
<td>Surface Water (permanent) 100-year Flood Level</td>
<td>100</td>
</tr>
<tr>
<td>Wetlands</td>
<td>50</td>
</tr>
<tr>
<td>Storm Drain</td>
<td>25</td>
</tr>
<tr>
<td>Footing Drain or farm tile, without direct connection to surface water</td>
<td>25</td>
</tr>
<tr>
<td>Footing drain or farm tiles, with direct connection to surface water</td>
<td>50</td>
</tr>
<tr>
<td>Drains or farm tile designed to lower the water table</td>
<td>100</td>
</tr>
<tr>
<td>Top of drop-off</td>
<td>20</td>
</tr>
</tbody>
</table>

2.4 Soil Evaluation

Contact the WCEHD to schedule a site visit. The site visit must include a design engineer/professional and a representative from WCEHD. The design professional shall locate and log all soils test pits. Before any review may be conducted, all applicable fees must be paid, and the application must be deemed complete. The design professional shall certify, in writing, that test pits are accurately located on site plans.
A. A minimum of two backhoe cuts in the proposed drainfield in the presence of a WCEHD representative is required.
B. All test pits must be logged, accurately located by the design professional, and submitted with the subsequent plan provisions.

2.5 Additional Information Required Before Preliminary Approval
A. Completed Subdivision Site Report (Appendix III).
B. Written statement from the local municipality operating the nearest water and sewer systems stating the availability and accessibility of public sewers and/or water.
C. Plan showing the following:
   i. Proposed detention and retention ponds and other stormwater infrastructure.
   ii. Established 100-year floodplain areas and elevations, and normal high-water levels / legal lake levels for waterfront property.
   iii. The proposed well location for each unit with 100-foot isolation arc.
   iv. A minimum rectangular area of 4,000 square feet must be shown for both the primary and the reserve drainfield for each unit.
   v. All existing septic tanks, drainfields, and groundwater wells within 200 feet of the proposed development.
D. Boring logs of any previous soil work.
E. All soils logs shall be presented in a profile form. Date of excavation, as well as grade elevations of test pits, should appear on this log.
F. Water well logs within one-eighth mile of the proposed development and within one-quarter mile for sparsely populated areas.
G. All plans shall be prepared and sealed by a professional engineer.
H. No land balancing (cutting and/or filling) shall take place prior to preliminary approval from the WCEHD. For changes made to approved grading and elevation plans after approvals, an updated plan must be submitted along with the plan review fee.
I. All field work, such as grading of the drainfield areas or deep-cut drainfield construction, shall be certified by a design professional (professional engineer, registered sanitarian, professional surveyor, professional geologist, or professional approved by the department). The written certification shall acknowledge that the work has been completed and meets all approved plans.
J. Compliance with other state and local requirements; including but not limited to: township zoning, soil erosion and sedimentation control, EGLE Part 31 (Groundwater Discharge), EGLE Part 41 (Wastewater Construction) and EGLE Part 303 (Wetland Protection).

Section 3: Test Wells and Hydrogeological Study Procedures
These procedures are intended to test unconsolidated formations for a water supply for single-family dwellings in a proposed subdivision. The procedures may be modified to conform to site and development conditions.
3.1 Public Groundwater Supply Wells
The Michigan Safe Drinking Water Act, Act 399 PA 1976, as amended, defines types of public water supplies:

A. “Type I” or “Community Water Supply”: Provides year-round service to 25 or more residents OR 15 or more living units. Examples include municipalities, apartment buildings and mobile home parks. Permits are required from EGLE.

B. “Type II” or “Noncommunity Water Supply”: Provides not less than 25 people OR 15 or more service connections for at least 60 days per year. Examples include schools, churches, campgrounds and restaurants. Permits are required from the local health department.

C. “Type III”: All public water supplies that are not a Type I or Type II; serves less than 25 people AND 15 service connections or operates for less than 60 days per year. Examples include duplexes and small office buildings. Permits are required from the local health department.

3.2 Private Groundwater Supply Wells
A private water supply serves a single-family home. If the units in a proposed development are to be supplied by individual private wells, a hydrogeological study must be submitted to the WCEHD as required under the provisions of the Subdivision Control Act. P.A.288 of 1967. It is the sole intent of the hydrogeological study to provide information on the suitability of the groundwater supply in terms of protection, quality and quantity.

3.3 Scope of Work and Hydrogeological Report Format
The work to be done under this section consists of final surveying, developing and sampling of one or more test wells. The number of test wells is primarily dependent on the size and location of the site.

A competent Hydrogeologist and/or Professional Engineer must document such work. The results of these findings shall be submitted to the WCEHD in a written report. The hydrogeological report and its contents shall follow the detailed format outlined in sections 3.4 through 3.11.

3.4 Preliminary and Background Information
Under the preliminary and background section of the report, the following information shall be provided:

A. Location of the proposed development
B. Background information regarding the subject property such as previous use and any environmental issues that may be of concern.

3.5 Requirements of Private Residential Wells

A. Minimum of ten gallons per minute (gpm) yield.

B. Minimum of ten feet continuous clay protection above the water-bearing formation. The ten-foot clay layer must be found below the first 25 feet from the ground surface. If ten feet of clay protection is not available, then the bottom of the casing or top of the screen must be 50 feet below the static water level in the well casing. In such case, the minimum horizontal distance between a drainfield and a well shall be no less than 150 feet.

C. Analysis of existing water supplies.
   i. This analysis shall provide information about existing wells located within a reasonable distance (usually one-quarter mile radius) from the proposed development.
ii. Copies of all well logs within one-quarter mile from the proposed development shall be included with the report. Providing these copies without proper analysis is unacceptable. Analysis of existing groundwater supplies shall include the following information in the area under consideration:
   a) Low-yield wells and dry holes
   b) Groundwater contamination
   c) Aquifer vulnerability

3.6 Test Wells

The following chart shall be followed to determine the number of test wells for the development.

<table>
<thead>
<tr>
<th>Number of Units</th>
<th>Number of Test Wells</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-25</td>
<td>3</td>
</tr>
<tr>
<td>26-50</td>
<td>4</td>
</tr>
<tr>
<td>51-100</td>
<td>5</td>
</tr>
<tr>
<td>101+</td>
<td>To Be Determined</td>
</tr>
</tbody>
</table>

The required number of test wells may be adjusted depending on the location and geometry of the development, as well as nearby well records and reliable hydrogeological data. Please note that in addition to the test wells, observation wells will also be required for the aquifer pump test.

The test well locations shall be coordinated between the WCEHD and the hydrogeologist or engineer. The following are required prior to test well development:

A. A scaled plan showing the location of the test wells shall be submitted to the WCEHD for approval prior to commencement of the work.
B. Applicable permits must be obtained from the WCEHD prior to commencement of work.
C. All test wells must be drilled by a Michigan Registered Water Well Drilling Contractor.
D. An accurate well log describing the formation and related information as required under P.A. Act 368, 1978, must be obtained. The log should show every change in formation.
E. The well should be drilled to a minimum of 100 feet or through and impermeable layer of over ten feet in thickness. The screen should be set at the deepest water-bearing formation. If this information is unacceptable, a shallower formation could be tested or the well drilled deeper, whichever is most acceptable.

3.7 Determining Groundwater Flow Direction

The hydrogeological investigation shall determine the groundwater flow direction as part of this study. Groundwater flow direction may be made by either triangulation (Three Well Method) or by contouring of the groundwater.
3.8 **Aquifer Pump Test**

The well shall be pumped until clear. The contractor shall furnish and install necessary pumping equipment, including throttling devices if necessary, to control rate of discharge and temporary discharge pipe and fittings to conduct water away from the site. Controls and appurtenances shall be capable of being operated without interruption. A pumping test shall be made with the pumping rate and the pumping level noted.

All test wells shall be pumped to determine pumping capacity as gallons per minute (gpm). For developments of 100 units or less, one aquifer-pumping test shall be conducted on a test well closest to the center of the planned development. Additional aquifer pumping tests shall be conducted for each additional group of 100 units, or any portions thereof.

3.9 **Aquifer Pumping Procedures**

The aquifer pump test is one of the most accurate methods that can be used to estimate aquifer parameters. An aquifer pump test consists of a production or pumping well, which discharges groundwater from the aquifer, and observation wells from where the drawdown/recovery in the water level is measured. Two observation wells are considered adequate under most circumstances, however additional observation wells may be required as determined by the WCEHD. The pumping and observation wells may be constructed in such a way to allow later conversion to potable drinking water supplies if the development has received approval for the locations of said well(s) and the wastewater systems.

The following procedure shall be followed when conducting an aquifer pump test:

- **A.** The observation wells shall be installed at right angles to each other. The location of the observation wells shall be on the nearest adjacent units from the pumping well.

- **B.** Static water level readings in all wells shall be taken prior to the pumping test. It is highly recommended that such reading be taken after static water stabilization has occurred and over a period equal to at least one-quarter of the anticipated lengths of the aquifer test.

- **C.** The pump driver must maintain a constant flow for the anticipated duration of the test.

- **D.** The “pump well” must operate for a period of no less than four hours and at a pumping rate of at least 20 gpm. This pumping rate should allow significant drawdown to occur in all of the observation wells over the time of the test.

- **E.** Observation wells and pumping well water level measurements shall be taken at logarithmic intervals. A recommended schedule for drawdown measurements from the start of pumping:
  - i. Every minute for the first 10 minutes.
  - ii. Every two minutes from 10 to 20 minutes.
  - iii. Every five minutes from 20 to 30 minutes.
  - iv. Every 15 minutes from 30 to 60 minutes.
  - v. Every 30 minutes from 60 to 180 minutes.
  - vi. Every 60 minutes from 180 to the end of the test.

- **F.** Accuracy of drawdown measurements should be within 0.01 feet.

- **G.** Groundwater recovery measurements shall be made in accordance with the drawdown schedule above. These measurements shall be recorded until all water levels in all wells are within 95 percent of the original static water level for not less than one-third (1/3) the length of the pumping period. A recommended schedule from the end of pumping (recovery):
  - i. Every two minutes for the first 10 minutes.
ii. Every five minutes from 10 to 30 minutes (20 minutes total).

iii. Every ten minutes from 30 to 60 minutes (30 minutes total).

iv. Every 15 minutes from 60 to 120 minutes (one-hour total).

v. Every 30 minutes from 120 to 240 minutes (two hours total).

vi. Every 60 minutes through the conclusion of the test.

3.10 Water Quality Testing

Groundwater samples shall be collected to conduct bacteriological and chemical analysis from all test wells. The samples shall be tested by an EGLE certified laboratory and the results included in the hydrogeological report. The parameters in Tables 3 through 5 shall be analyzed for each test well within the proposed development.

Additional sampling may be required depending on the development location and nearby conditions (primarily within one-quarter mile). Additional testing may include, but are not limited to, pesticides, herbicides, PCB’s, 1,4-dioxane, semi-volatile organic compounds, and methane and hydrogen sulfide gases. Rock wells must be tested for explosive gases. Similarly, a reduction in sampling requirements may be granted if enough information is available to allow for such reduction.

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Maximum Contaminant Level (MCL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coliform Bacteria</td>
<td>Zero</td>
</tr>
<tr>
<td>Chloride</td>
<td>250 mg/L</td>
</tr>
<tr>
<td>Fluoride</td>
<td>4.0 mg/L</td>
</tr>
<tr>
<td>Hardness (CaCO₃)</td>
<td>&lt;200 mg/L</td>
</tr>
<tr>
<td>Nitrate</td>
<td>10 mg/L</td>
</tr>
<tr>
<td>Nitrite</td>
<td>1.0 mg/L</td>
</tr>
<tr>
<td>Sodium</td>
<td>230 mg/L</td>
</tr>
<tr>
<td>Sulfate</td>
<td>250 mg/L</td>
</tr>
</tbody>
</table>

Table 3. Bacteriological and Chemical Analysis Testing

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Maximum Contaminant Level (MCL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.006 mg/L</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.010 mg/L</td>
</tr>
<tr>
<td>Barium</td>
<td>2.0 mg/L</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.004 mg/L</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.005 mg/L</td>
</tr>
<tr>
<td>Chromium</td>
<td>0.1 mg/L</td>
</tr>
<tr>
<td>Copper</td>
<td>1.3 mg/L</td>
</tr>
<tr>
<td>Iron</td>
<td>0.3 mg/L</td>
</tr>
<tr>
<td>Lead</td>
<td>0.015 mg/L (action level)</td>
</tr>
</tbody>
</table>

Table 4. Metals Testing
### Table 4. Metals Testing (continued)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Maximum Contaminant Level (MCL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.002 mg/L</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.05 mg/L</td>
</tr>
<tr>
<td>Nickel</td>
<td>0.1 mg/L</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.05 mg/L</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.02 mg/L</td>
</tr>
<tr>
<td>Zinc</td>
<td>5.0 mg/L</td>
</tr>
</tbody>
</table>

### Table 5. Additional Water Quality Testing

<table>
<thead>
<tr>
<th>Analytes</th>
<th>Testing Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatile Organic Compounds (VOCs)</td>
<td>USEPA Methods 502.2 or 524.2.</td>
</tr>
<tr>
<td>Per- and Polyfluoroalkyl Substances (PFAS)</td>
<td>USEPA Methods 537 version 1.1 or 537.1.</td>
</tr>
</tbody>
</table>

### 3.11 Final Hydrogeological Report

Upon completion of all the necessary fieldwork as outlined above, and upon generating all the pertinent data, a written report shall be submitted to the WCEHD office for review and approval. The hydrogeologist or engineer must certify in writing that the groundwater aquifer will supply the proposed development on a long-term basis and is adequate in terms of quality and quantity. The report shall include the following presented below:

A. Preliminary and background information
B. Development location
C. Ideal conditions for private residential wells
D. Analysis of existing residential wells
E. Regional hydrogeologic conditions
F. Development/site hydrogeological conditions
G. Water quality analysis
H. Aquifer pumping test(s)
I. Drawdown and recovery data
J. Prediction of future drawdown
K. Conclusions
L. Recommendations about the groundwater supply

Test wells, if constructed according to applicable standards, can be used as a drinking water supply upon approval from the WCEHD. If not used for drinking water, the wells must be properly plugged by a Registered Well Driller and abandonment records submitted to WCEHD for approval prior to final approval issuance.
Section 4: Deep Excavation Drainfield Requirements

If permeable soil for construction of a standard disposal field cannot be found near the surface, there may be dry porous sand and gravel soil at greater depths that can be developed by excavation and backfill for disposal of septic effluent. The following should be adhered to when deep cut sewage disposal systems are utilized in a subdivision project:

A. No excavation of more than 20 feet from undisturbed original grade shall be permitted.
B. The thickness of the approved material must be uniformly four feet or greater.
C. Excavation shall not be made into or through saturated soils.
D. The location of the pre-excavated drainfield area must be clearly marked on the plans submitted for approval. Labeling or cross-hatching is acceptable.
E. At a minimum, two property corners and two drainfield points must be staked for every unit prior to excavation. All stakes must be clearly labeled with the unit number.
F. All deep excavations shall be 100% cut-down unless prior approval for T-trench excavation is granted by WCEHD.
   i. For a T-trench excavation, 100% of the required drainfield surface area is excavated for the first six feet. The remaining cut down to suitable soils can be made utilizing an excavation centrally located in the drainfield exposing a minimum of 50% of the required surface area or 800 square feet, whichever is greater. The transition between surface areas must have a slope no flatter than 1-foot vertical to 10-foot horizontal (Appendix IV).
G. The bottom of the excavation shall be clean and free of any traces of surface wash. The interface between the natural sand formation and fill sand must be uncompacted and friable prior to filling.
H. The open excavation should be protected from surface runoff to prevent washing of silt and debris into the hole during rain events. If “smearing”, compaction or silting does occur, the soil face in the excavation shall be raked or loosened before the sand fill is added.
I. Backfilling of pre-excavated drainfields must only use clean medium or 2NS sand (see Section XV of the Washtenaw County Engineering Guidelines for On-Site Sewage Disposal Systems for sand specifications). Compaction using machine equipment is not allowed. Overfilling the deep excavation is required to compensate for soil settlement between the time the fill is placed and when the system is utilized.
J. A WCEHD representative must inspect the cut down and fill operation. The engineer or design professional must also inspect this work and submit his or her written certification to the WCEHD prior to final approval by this office.
K. The four corners of the pre-excavated drainfield site shall be marked with 4 x 4 wooden posts.
L. The finished grade shall be crowned to divert surface water away.
M. WCEHD and EGLE will jointly make the final decision on approval of a cut down proposal when cuts will be in excess of ten feet, but not more than 20 feet. Hydrogeologic information verifying the protection of usable aquifers is necessary.
Appendix I:
Connection of Subdivisions to Public Utilities
WASHTENAW COUNTY PROCESSING PROCEDURES AND GUIDELINES FOR SUBDIVISIONS AND CONDOMINIUMS

JAMES J. BLANCHARD, Governor

DEPARTMENT OF PUBLIC HEALTH
2500 N. LOGAN
P.O. BOX 30035, LANSING, MICHIGAN 48909
Raj H Wiener, Acting Director

MEMORANDUM

TO: Environmental Health Directors
   County, City, and District Health Departments

FROM: Thomas C. Hoogerhyde, P.E., Chief
      Division of Environmental Health
      Bureau of Environmental and Occupational Health

SUBJECT: Connection of Subdivisions to Public Utilities

DATE: 04/14/89

The decision concerning when to require the extension of municipal sewer and/or water service to a subdivision project considered for approval under the Subdivision Control Act, Act 288, P.A. of 1967, can be a difficult one. Traditionally, the state and local health departments have utilized engineering and economic considerations as the determining factors. Increasingly, however, we are forced to consider political boundaries in these determinations.

Rule 560.405(a) promulgated by the Michigan Department of Public Health with the Subdivision Control Act, states:

"Notice of approval or rejection of the preliminary plat shall be sent to the proprietor and the governing body within 30 days of receipt of the preliminary plat and site report. A preliminary plat shall be rejected for one or more of the following reasons:

(a) Failure to provide for installation of public water and sanitary sewer facilities where they are available for immediate use for the subdivision or where the proposed subdivision is in a location for which water and/or sewer services are planned."

In the past, municipal utilities were deemed available when those utility systems had capacity to serve the project in question and when extension of the systems to the project were determined to be economically feasible. When the subdivision and the utility systems were located in different municipalities and agreements between those municipalities for utility service were not in existence, annexation was often a requirement for obtaining service. In those situations, the developer was directed to take the necessary steps to have the project annexed to the municipality and thereby obtain the required service.
In recent months, we have been involved in projects where the township losing property strongly objects to the annexation. When a township objects to the annexation, we must consider key provisions of the previously cited Subdivision Control Act rule as well as a provision of the Mandatory Connection Provision of the Public Health Code, Act 368, P.A. of 1978. As stated previously, the Subdivision Control Act rule requires that the utility systems be "available for immediate use." In addition, Section 12753(2) of the Public Health Code states:

"Structures in which sanitary sewage originates lying outside the limits of a city, village, or township in which the available public sanitary sewer lies shall be connected to the available public sanitary sewer after approval of both city, village, or township in which the structure and the public utility lies and if required by the city, village, or township in which the sewage originates."

These statutes require that the utility systems be "available for immediate use" and that in the case of sewers, when the project is in one municipality and the utility systems are in another, both municipalities must approve the connection.

If the township losing property objects to the annexation, the only resolution is a hearing before the Boundary Commission. Such hearings are associated with lengthy delays and the requirements of the "available for immediate use" test cannot be met. In addition, if the township objects to annexation, they are also not approving the connection.

Accordingly, when considering these matters, the following procedure should be followed. An analysis of whether public utilities are available from an engineering and economic basis should be made by the developer’s consulting engineer. Michigan Department of Public Health staff should be consulted concerning this determination. If public utilities are deemed available, the developer should be directed to make arrangements to have them extended to serve the project.

If the utility systems are owned and operated by a municipality other than the municipality the project is located in, and if annexation is required as a condition of service, the developer must request annexation. If the township where the project is located objects to annexation (resolution of township board) the utilities will not be considered available for immediate use and the project can be evaluated for utilization of on-site sewage disposal systems and/or individual wells.

Determination of public utility availability, conducted in this manner, will be consistent with the provisions of both the Subdivision Control Act and the Public Health Code.

TCH: JCA
cc: Lee E. Jager, P.E., Chief, Bureau of Environmental and Occupational Health
cc: Cletus Courchaine, P.E., Chief, Division of Upper Peninsula
cc: K. Cleland, P.E., Acting Division Chief, Division of Water Supply
Appendix II:
Checklist for Preliminary Review
# Checklist for Preliminary Review

Subdivisions, Condominium Developments, and Less than 1 Acre Land Division

Review Date(s) __________________________ Submittal Date ________________
Name of Proposed Development ____________________________________________
Road/Street __________________________ Township __________________________
County ____________ Subdivision ________ Condominium ________ < 1 Acre Land Division ________

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>N/A</th>
</tr>
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</tbody>
</table>

I. Owner or representative submitted 3 preliminary plat drawings or condominium subdivision plans

II. Subdivision and Condominium Site Report (EQP1755) required for subdivisions and condominiums

III. Preliminary plat drawing/condominium subdivision plan shows or includes:

A. Location of All Soil Evaluations

B. Contours
   1. Existing and proposed 5-foot contour intervals
   2. Where groundwater is within 6 feet, 2-foot contour intervals shown?
   3. For waterfront property, 2-foot contour intervals shown?
   4. Contour intervals, if differing from above ______
   5. Lot size/unit boundary more than 1 acre?

C. Cutting and Filling
   1. Is extensive cutting or filling of land proposed?
   2. If yes, is this shown on the plan?
   3. If yes, is the type of fill to be used shown?

D. Physical Features - Existing or Proposed
   1. River(s), Stream(s), Creeks(s)
   2. Lake(s)
   3. County Drain(s)
   4. Other Subsurface Drains
   5. Lagoon(s)
   6. Bay(s), Slip(s), Waterways, and/or Canal
   7. Artificial Impoundment(s)

E. Floodplain
   1. Established 100-year floodplain area and elevation, if applicable
   2. Normal high-water level, if waterfront property
### III. Preliminary plat drawing/condominium subdivision plan shows or includes (continued)

<table>
<thead>
<tr>
<th>F. Location of Existing Facilities and Structures</th>
<th>YES</th>
<th>NO</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Buildings</td>
<td></td>
<td></td>
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<tr>
<td>2. Sewage Systems</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. High-tension Towers and/or Lines</td>
<td></td>
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<tr>
<td>4. Utility Easements</td>
<td></td>
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<tr>
<td>5. Excavations</td>
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<td></td>
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<tr>
<td>6. Bridges</td>
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<tr>
<td>7. Culverts</td>
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<tr>
<td>8. Gas Wells, Oil Wells, and/or Injection Wells,</td>
<td></td>
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<tr>
<td>9. Water Wells - Includes Test Wells</td>
<td></td>
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<tr>
<td>10. Underground Storage Tanks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Drainage Easements</td>
<td></td>
<td></td>
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<tr>
<td>12. Other, explain</td>
<td></td>
<td></td>
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</tbody>
</table>

| G. Building Setback Lines                        |     |    |     |
| 1. Road(s)                                       |     |    |     |
| 2. Waterfront                                    |     |    |     |
| 3. Lot Lines/Unit Boundaries, if established or  |     |    |     |
| proposed                                         |     |    |     |

| H. Proposed Water Well Locations, if required     |     |    |     |

| IV. Proposed Sewage Soil Absorption Areas shown, if required |     |    |     |

| V. Proposed Single Family House Location shown     |     |    |     |

| VI. Limited Common Element and General Common Element (for Condominium Subdivisions) shown? |     |    |     |

| VII. Copy of Soil Profile Evaluations as per Rule 420 A. By a credentialed person demonstrating competence such as engineer, surveyor, geologist, sanitary, soil scientist |     |    |     |
| B. Soil horizon depths, texture, structure, mottling |     |    |     |
| C. Depth-to-high groundwater elevation or bedrock   |     |    |     |

| VIII. Copy of Existing Water Well Records or Test Well Logs |     |    |     |

| IX. Yield or Performance Testing, if applicable      |     |    |     |

| X. Water Quality Sample Results                      |     |    |     |

| XI. Engineer or Surveyor Seal on the Plans           |     |    |     |
This checklist is intended to aid the review of submittals in accordance with the On-Site Water Supply and Sewage Disposal Rules for Land Divisions and Subdivisions and does not cover every proposed situation.
## WASHTENAW COUNTY PROCESSING PROCEDURES AND GUIDELINES FOR SUBDIVISIONS AND CONDOMINIUMS

**SUBDIVISION AND CONDOMINIUM SITE REPORT**

This information is required under authority of 1978 PA 368, 1978 PA 59, and 1967 PA 288.

Review cannot be completed without providing this information.

<table>
<thead>
<tr>
<th>1. SUB CONDO</th>
<th>2. NAME OF PROPOSED SUB/CONDO</th>
<th>3. COUNTY</th>
<th>4. SECTION &amp; TOWNSHIP</th>
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<tr>
<th>5. PROPRIETOR</th>
<th>6. ADDRESS</th>
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<tr>
<th>7. INTENDED USE:</th>
</tr>
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<tbody>
<tr>
<td>Single Family □</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>8. ADJACENT PROPERTY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Same Ownership? Yes □ No □</td>
</tr>
<tr>
<td>(b) Public Ownership? Yes □ No □</td>
</tr>
<tr>
<td>(c) Developed? Yes □ No □ If yes, type of development</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. NUMBER OF ACRES</th>
<th>10. NUMBER OF LOTS/UNITS</th>
<th>11. MINIMUM LOT/UNIT AREA (FT²)</th>
</tr>
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<tbody>
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<thead>
<tr>
<th>12. WATER SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance to nearest existing public water system</td>
</tr>
<tr>
<td>Is a public water system, all or in part, intended to be utilized for this development? Yes □ No □</td>
</tr>
<tr>
<td>If yes, type: □ Municipal: Name______________ or □ Community System Serving Proposal</td>
</tr>
<tr>
<td>□ This development will utilize individual wells. Attach information to support suitability of the water supply such as well record data, water sample results, yield or performance testing data, and other hydrogeological information. (See Rules 404 thru 415.)</td>
</tr>
</tbody>
</table>

COMMENTS: ___________________________

<table>
<thead>
<tr>
<th>13. WASTEWATER TREATMENT AND DISPOSAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance to nearest existing public sewer system</td>
</tr>
<tr>
<td>Is a public sewer system, all or in part, intended to be utilized for this development? Yes □ No □</td>
</tr>
<tr>
<td>If yes, type: □ Municipal: Name______________ or □ Community System Serving Proposal</td>
</tr>
<tr>
<td>□ This development will utilize individual onsite systems. Attach or record on the preliminary plat, a report of soil profile evaluations to a minimum of six (6) feet (using the USDA classification system). The report shall include soil horizon depths, soil texture, soil structure, soil mottling, and depth to high groundwater elevation or bedrock. (See Rules 416, 420, and 421.)</td>
</tr>
</tbody>
</table>

COMMENTS: ___________________________

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<thead>
<tr>
<th>14. ENGINEER/SURVEYOR COMPLETING SITE REPORT FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ____________________ LICENS#: ____________</td>
</tr>
<tr>
<td>Firm: __________________________________________</td>
</tr>
<tr>
<td>Address: ________________________________________</td>
</tr>
</tbody>
</table>

Engineer/Surveyor statement of site suitability for onsite water supply and/or onsite sewage treatment and disposal. See Rule 403(g). Include statement below or attach.

__________________________________________
__________________________________________
__________________________________________
 Signed: ___________________________ Date: ___________________________

The Department of Environment, Great Lakes, and Energy, Onsite Wastewater Program, or authorized local health department, receives 3 copies of the site report if a public water or public sewage system is not available.
Appendix IV: Pre-Excavated Deep Excavation
WASHTENAW COUNTY PROCESSING PROCEDURES AND GUIDELINES FOR SUBDIVISIONS AND CONDOMINIUMS

Site Contamination (FUD)
Drainfield (Subdivision)
Per-Excavated Deep Excavation

Textured soils are encountered. Area may be increased if fine
fill must be uncompacted and
formation and sand back.
The natural permeable soil
wash, the interface between
clean & free of any traces
of heavy soil or surface
800 SF minimum. The bottom
Bottom of excavation to be

Surfaced Water

Backfill with soils

Drainfield installation
Remove at time of
place 4x4 post

Existing
6-12"