

Composite Suitability Classes from “An Ecological Study for the Twin Cities Metropolitan Area”

| Type | Dominant Land Use | Subsidiary Land Uses |
|------|-------------------|---------------------------------|
| 1 | U I* | |
| 2 | U II | |
| 3 | U II* | |
| 4 | U III | |
| 5 | U IV | Rec IV |
| 6 | U V | Ag IV, Fi, Esp |
| 7 | Ag I* | |
| 8 | Ag I | U III |
| 9 | Ag II | U III, Rec II |
| 10 | Rec II | Fh, Esp |
| 11 | Rec III | |
| 12 | Rec IV and V | Ag IV, Fi |
| 13 | Fh | U IV, Ag IV, Rec IV, Rec V, Esp |
| 14 | Fh or Fi | U III, Ag, III, Esp |
| 15 | Fh or Fi | U III, Ag II, Rec II, Esp |
| 16 | Esp, Eg | Ag IV, Rec IV, Fi |
| 17 | Eg | Fi |
| 18 | Eg | U IV, Ag IV, Fi |

| Type | Co-Dominant Land Uses |
|------|-----------------------|
| 19 | U I*, Ag I* |
| 20 | U II, Ag II |
| 21 | U II*, Ag II* |
| 22 | U III, Ag III |
| 23 | U I*, Rec I |
| 24 | U II, Rec I |
| 25 | U II*, Rec I |
| 26 | U I*, Ag I*, Rec I |
| 26A | U II, Ag I, Rec 1 |
| 28 | Protection |

* Restricted land use over aquifer recharge area

Urbanization

Residential Developments

| Suitability Class | Description |
|-------------------|---|
| U I | Multiple family Multi-storied Sewered Upper limit depends upon desirable density (possible limit 120 du/acre) |
| U II | Multiple family 2-3 storied Sewered Upper limit set by housing type and requirements of site coverage, parking, etc. (possible limit 20 du/acre) |
| U III | Single family Detached, Clustered, or Terraced Sewered Upper limit set by housing type, space requirement, etc. (possible limit 8 du/acre) |
| U IV | Single family Detached On-site sewage disposal Upper limit set by percolation rate of individual soils for satisfactory working of septic fields (possible lower limit 1 du/3 acres may even be less in certain areas) |
| U V | Essentially non-urban |

Non-Residential Urban Uses

| Use | Suitability Class | | | | |
|------------------|-------------------|------|-------|------|-----|
| | U I | U II | U III | U IV | U V |
| Heavy Industry | X | | | | |
| Light Industry | X | X | | | |
| Major Commercial | X | X | | | |
| Minor Commercial | X | X | X | | |
| Institutional | X | X | X | | |

Agriculture

| Suitability Class | Description |
|-------------------|---|
| Ag I | General farming with no restrictions |
| Ag II | General farming with some restrictions Certain conservation measures are necessary, such as contour ploughing and strip cropping |
| Ag III | Agriculture is limited. Moderate conservation measures are necessary, such as permanent cover and rotation cropping |
| Ag IV | Poor for agriculture. Only marginal farming is practicable with extensive conservation measures |

Forestry

| Suitability Class | Description |
|-------------------|-------------------------------------|
| Fh | High potential for forestry |
| Fi | Intermediate potential for forestry |

Recreation

| Suitability Class | Description |
|-------------------|---|
| Rec I | Most suitable with no restrictions |
| Rec II | Suitable with no restrictions |
| Rec III | Suitable with some restrictions |
| Rec IV | Moderately suitable, with many localized restrictions |

Extraction

| Suitability Class | Description |
|-------------------|---|
| Eg | Extraction can occur generally anywhere over a given extractable material |
| Esp | Extraction can occur only on specific sites over a given extractable material |

Protection

Ecological elements which represent a hazard to life and health and those which are unique, scarce, or vulnerable.

This category includes:

- Wooded swamps
- Marshes
- Wet meadows
- Flood plains
- Major rivers, lakes and ponds
- Streams
- Intermittent streams
- Aquifer recharge zones
- Forests
- Slopes vulnerable to erosion
- Bluffs and escarpments
- Eskers and kames
- Terrace-edges, valleys, and gorges
- Ridges, hills, and promontories,
- Limits of glaciation
- Peat and clay deposits
- Bedrock in river plain
- Galena limestone, Decorah shale, and conglomerates
- Parks and wildlife refuges
- Private open space

For more detailed information about the land use suitability classes used, including criteria for assigning the categories see:

Wallace, McHarg, Roberts, Todd. (1969). *An ecological study of the Twin Cities metropolitan area : Final report*. Philadelphia: [publisher not identified].

[\(Link to the University of Minnesota Libraries catalog record\)](#)