

# Appendix



Summary List of Tools and Applicability

Policy	Relevant Area			Tool Type			Ease of Implementation			Benefits to Community		
	Existing Utility Service	Future Utility Service	No Utility Service	Land Use Regulation or Policy	Utility Regulation or Policy	Incentive	Easy	Moderate	Difficult	Economic	Environmental	Quality of Life
Adequate Public Facilities ordinance	X	X		X	X				X			X
Best Management Practices (BMPs)	X	X	X		X			X			X	
Brownfield and greyfield development	X	X	X	X		X		X		X	X	X
Capital Improvements Plan	X	X			X		X			X		X
Cluster Development	X	X	X	X		X	X				X	X
Conditional Rezoning	X	X	X	X		X	X			X	X	X
Downzone critical environmental areas	X	X	X	X				X			X	X
Geographic Information Systems	X	X	X				X			X	X	
Green Infrastructure Plan	X	X	X	X			X				X	X
Growth Management	X	X	X	X				X		X	X	X
Green buildings / LEED	X	X	X			X		X			X	X
Infill development	X			X		X	X			X	X	X
Low Impact Development	X	X	X	X	X			X			X	X
Mixed-use Development	X	X	X	X		X	X			X	X	X
Native Landscaping	X	X	X			X	X				X	
Onsite Runoff Storage	X	X	X		X		X				X	
Performance-based zoning	X	X	X	X	X				X		X	
Protect Riparian Areas	X	X	X	X				X			X	X
Priority Funding Areas	X	X			X			X		X		X
Private Community Wastewater Systems			X		X			X			X	
Planned Unit Development	X	X	X	X		X	X			X	X	X
Policies to Manage Water Demand	X	X	X		X				X	X	X	
Site Plan Review of Natural Features	X	X	X	X			X				X	
Subdivision Design Standards	X	X	X	X			X				X	X
Transportation Options	X	X	X		X			X		X	X	X
Transfer of development rights		X	X	X		X			X	X	X	
Transfer/Pooling of stormwater mitigation	X	X	X		X	X			X		X	
Tree protection ordinance	X	X	X	X			X				X	X
Utility Demand Zoning	X	X		X	X				X	X	X	
Watershed Plan	X	X	X	X				X			X	X



**Model Ordinances**

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## STORM WATER MANAGEMENT

### Section 1. PURPOSE

The purpose of this chapter is to protect the public health, safety and welfare of COMMUNITY residents and to protect property values, quality of life, and natural systems relating to storm water runoff control and management. The COMMUNITY finds it is a matter of public concern and benefit to protect waterways and properties within the COMMUNITY and to reduce the future need for public expenditures relating to flooding, water quality, and storm water system maintenance. It is therefore the purpose of this chapter to establish minimum storm water management requirements and controls to accomplish the following objectives:

- A. To reduce flood damage;
- B. To minimize increased storm water runoff rates and volumes due to changes in land use;
- C. To minimize the physical deterioration of existing watercourses, culverts and bridges, and other structures;
- D. To encourage water recharge into the ground where geologically favorable conditions exist;
- E. To prevent an increase in non-point source pollution;
- F. To maintain the integrity of stream channels for their biological functions, as well as for drainage and other purposes;
- G. To minimize the impact of changes in land use upon stream bank and streambed stability;
- H. To reduce erosion from earth change or construction projects;

- I. To preserve and protect water supply facilities and water resources by means of controlling increased flood discharges, stream erosion, and runoff pollution;
- J. To reduce storm water runoff rates and volumes, soil erosion, and non-point source pollution, wherever practicable, from lands proposed for redevelopment that were not previously developed with storm water management controls meeting the purposes and standards of this chapter;
- K. To reduce the adverse impact of changing land use on neighboring properties and waterways and, to that end, this chapter establishes minimum standards to protect waterways from degradation resulting from changing land use;
- L. To regulate the contribution of pollutants to stormwater discharges and prohibit illicit discharges; and
- M. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance.

### Section 2. DEFINITIONS

For purposes of this ordinance, the following terms shall have the following meanings:

- A. **Best Management Practices (BMPs):** A practice or combination of practices that have been determined by St. Clair County to be the preferred method of preventing, minimizing, or reducing pollution and other effects of storm water runoff.
- B. **Construction Site Storm Water Runoff:** Storm water runoff from a development site following an earth change.
- C. **Cut:** An earth change, which lowers topography or removes soil.



- D. **Design Storm:** A rainfall event of specified size and return interval that is used to calculate the runoff volume and peak flow rate that must be handled by a storm water management system.
- E. **Detention:** A system, which is designed to capture storm water and release it over a given period of time through an outlet structure at a controlled rate.
- F. **Detention Basin:** A constructed basin that temporarily stores storm water runoff before discharging into a surface water, including the following:
1. **Constructed Wetland:** A detention basin that uses a variety of depths to create conditions suitable for the growth of wetland plants.
  2. **Wet Extended Detention Basin:** A detention basin that removes sediments and other pollutants from storm water runoff by the use of a permanent pool and by detaining the storm water runoff for an extended time period.
- G. **Detention Time:** The length of time water is held in a detention basin. This time is dictated by the amount of water stored and the release rate of same.
- H. **Development:** The installation or construction of impervious surfaces on a development site that require, pursuant to state law or local law, the COMMUNITY approval of a site plan, subdivision plat, condominium, land division, road approval, or other approvals required for the development of land or the erection of buildings or structures; provided, however, that for purposes of this chapter only, developed or development shall not include the actual construction of, or an addition, extension or modification to, an individual single-family detached dwelling.
- I. **Discharge:** The rate of flow or volume of water passing a given point, expressed as cubic feet per second.
- J. **Disturbed Area:** The surface of land from which vegetation has been removed or subjected to earth moving activities.
- K. **Drain:** Any drain as defined in the Drain Code of 1956, as amended, being MCL 280.1, et seq., other than an established county or intercounty drain.
- L. **Drainage:** The collection, conveyance, or discharge of ground water and surface water.
- M. **Drainage Area:** The entire upstream land area from which storm water drains to a particular location.
- N. **Earth Change:** Any human activity which removes ground cover, changes the slope or contours of the land, or exposes the soil surface to the actions of wind and rain. Earth change includes, but is not limited to, any excavating, surface grading, filling, landscaping, or removal of vegetative roots.
- O. **Erosion:** The process by which the ground surface is worn away by action of wind, water, gravity or a combination thereof.
- P. **Fill:** Earth or other materials added to existing topography to change the contour of the land.
- Q. **First Flush:** Storm water runoff containing a highly concentrated pollutant load that occurs during the early stages of a storm as a result of the washing effect of runoff on pollutants that have accumulated on the land. For purposes of these rules, the first flush at a particular location within a storm water



management system consists of runoff from the first 0.5 inch of precipitation over the entire drainage area upstream of that location.

- R. **Hazardous Materials:** Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.
- S. **Grading:** Any stripping, excavating, filling, and stockpiling of soil or any combination thereof and the land in its excavated or filled condition.
- T. **Illegal Discharge:** Any direct or indirect non-storm water discharge to the storm drain system, except as exempted in Section \_\_\_\_\_ of this ordinance.
- U. **Illicit Connections:** An illicit connection is defined as either of the following: Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or, Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.
- V. **Impervious:** The ground condition including roads, parking lots, sidewalks other paved areas, and rooftops, which do not allow percolation or infiltration of precipitation and causes water to accumulate on the surface resulting in increased runoff.
- W. **Infiltration:** The percolation and movement of water downward into and through the soil column, the rate of which is expressed in inches per hour.
- X. **National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit:** A permit issued by EPA (or by a State under authority delegated pursuant to 33 USC § 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.
- Y. **Non-Storm Water Discharge.** Any discharge to the storm drain system that is not composed entirely of storm water.
- Z. **Non-Point Source:** Sources of pollution which enter surface or groundwaters through widely diffused small increments. This type of pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into streams, rivers and wetlands.
- AA. **100-Year Flood:** That water occupation adjacent to a waterbody which results from a storm event having a 1% probability of occurrence in any given year. Thus, a 50-year storm has a 2% probability, a ten-year storm a 10% probability, etc.
- BB. **Overland Flow-Way:** Surface area that conveys a concentrated flow of storm water runoff.



- CC. **Peak Discharge Rate:** The maximum rate of storm water flow from within a drainage area expressed as cubic feet per second.
- DD. **Point Source:** A discharge that is released to the surface waters of the state by a discernible, confined and discrete conveyance, including, but not limited to, a pipe, ditch, channel, tunnel or conduit.
- EE. **Pollutant:** Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.
- FF. **Property Owner:** Any person, firm, or corporation having legal or equitable title to property or any person having or exercising care, custody, or control over any property.
- GG. **Retention Basin:** A storm water management facility, either natural or manmade, which does not have an outlet, which captures and holds runoff until it infiltrates the soil or evaporates.
- HH. **Runoff:** The portion of precipitation which does not infiltrate or percolate into the ground, but rather moves over the land, eventually reaching a waterbody, wetland, or low area.
- II. **Runoff Coefficient:** The ratio of the volume of runoff from a given drainage area over a given time period, to the total volume of precipitation that falls on the same drainage area over the same time period.
- JJ. **Sediment:** Any solid particulate matter which has been moved from the site of origin by erosion, is being transported by water, is in suspension in water, or has been deposited in a water body, wetland, or floodplain.
- KK. **Sheetflow:** Overland runoff which moves relatively uniformly over the ground surface rather than being concentrated in a conveyance channel.
- LL. **Site:** Any tract, lot, or parcel of land or combination of tracts, lots, or parcels, which compose an area proposed for development or earth change.
- MM. **Soil Erosion:** The stripping of soil and weathered rock from land creating sediment for transportation by water, wind or ice, and enabling formation of new sedimentary deposits.
- NN. **Soil Erosion Control:** Structures, facilities, barriers, berms, vegetative cover, basins, or any other installation, temporary or permanent, which are designed to minimize and prevent erosion.
- OO. **Storm Drain:** A system of open or enclosed conduits and appurtenant structures intended to convey or manage storm water runoff, ground water, and drainage.
- PP. **Storm Water Facility:** Methods, structures, BMP's, areas, or related items, which are used to control, store, receive, infiltrate, or convey runoff.
- QQ. **Storm Water Runoff:** The excess portion of precipitation that does not infiltrate the ground, but “runs off” and reaches a conveyance, surface water, or watercourse.



RR. **Time of Concentration:** The time duration (typically in minutes) that is required for runoff from the most remote area of the watershed to reach a given location in a storm water management system..

### Section 3. APPLICABILITY

A storm water management plan approved in accordance with this chapter shall be required for any earth change or development subject to the following:

- A. Site plan under the Zoning Ordinance.
- B. Subdivision subject to approval under the Subdivision Ordinance.
- C. Condominium subject to approval under the Condominium Ordinance.
- D. Land division that will create additional building sites.
- E. Any earth changes for an area of 43,560 square feet or more.

### Section 4. EXCEPTIONS

A storm water management plan shall not be required for:

- A. Additions or modifications to any existing single family structure, including accessory structures.
- B. Landscaping or gardening involving less than 43,560 square feet of land.
- C. Construction of a dwelling on a legal lot of record in existence at the effective date of this chapter; provided that less than 43,560 square feet of land is cleared or graded for such construction.

- D. Construction of a dwelling on a lot created after the effective date of this chapter that is within a subdivision or condominium that itself previously received approval under this chapter; provided that less than 43,560 square feet of land is cleared or graded for such construction.

### Section 5. STORM WATER MANAGEMENT PLAN REVIEW PROCEDURE

- A. **Process:** Fifteen (15) copies of the proposed storm water management plan for each development and earth change project shall be submitted to the COMMUNITY at the same time a site plan or subdivision final preliminary plat is submitted.

For any development other than a platted subdivision, the storm water management plan shall be received at least thirty (30) days prior to a Planning Commission meeting in order to be reviewed at that meeting. In the case of a platted subdivision, it shall be submitted at least fifteen (15) days prior to a Planning Commission meeting.

- B. **Agency Review**

Upon receipt of a completed application for approval of a storm water management plan, the COMMUNITY shall transmit copies of the plan to the St. Clair County Drain Commissioner and the COMMUNITY engineer for review and comment.

- C. **Planning Commission Review**

- 1. If the Planning Commission determines that all required information has not been received, the applicant may request that the matter be tabled, and the Planning Commission may, at its discretion, with or without such a request, table the matter to allow for the submittal of the required information.



2. The Planning Commission shall review the storm water management plan to determine compliance with the conditions contained in section 5.D.
3. The Planning Commission may add conditions for approval of the plan.
4. The Planning Commission shall consider the comments made by the agencies listed in this chapter in making its determination.
5. The authority to grant final approval for a storm water management plan shall be vested with the Planning Commission for all types of projects except for subdivisions and condominiums. In the case of a subdivision or condominium, final authority for approval of the plan shall be vested with the COMMUNITY Council/Board. Action of the COMMUNITY Council/Board shall occur after the Planning Commission has provided a recommendation on the plan.
4. The applicant provides all easements necessary to implement the approved storm water management plan and to otherwise comply with this chapter in form and substance acceptable to the COMMUNITY, and to be recorded with the St. Clair County Register of Deeds.
5. The storm water management plan conforms to all applicable design and performance standards for drains and storm water management systems, pursuant to section 7.
6. All storm water facilities are designed in accordance with current St. Clair County BMP's.
7. The applicant provides the required maintenance plan for routine, emergency, and long-term maintenance of all storm water facilities and in compliance with the approved storm water management plan and this chapter. The maintenance plan shall be in form and substance acceptable to the COMMUNITY and shall be recorded with the St. Clair County Register of Deeds.

**D. Conditions of Approval:** The COMMUNITY shall grant approval of a storm water management plan, which may impose terms and conditions in accordance with section 13, and which shall be granted only upon compliance with each of the requirements stated below.

1. The applicant has submitted a storm water management plan complying with this chapter.
2. The applicant has paid or deposited the management plan review fee pursuant to section 13.
3. The applicant has paid or posted the applicable financial guarantee pursuant to section 13.

## **Section 6. STORM WATER MANAGEMENT PLAN REQUIREMENTS**

**A. General Plan Requirements:** Through maps, illustrations, reports, and calculations, the storm water management plan shall display the required information in a clear and logical sequence. The storm water management plan shall be sufficiently detailed to specify the type, location, and size of soil erosion control measures and storm water facilities, including calculations. The storm water management plan shall be drawn to a scale of at least one inch equal to 50 feet (1 inch = 50 feet) for property less than three (3) acres and one inch equal to one hundred feet (1 inch = 100 feet) for property three (3) acres or more in size.



- B. **Plan Submittal Requirements:** The following plan requirements are in addition to other requirements specified in sections 7 and 8 of this chapter and other applicable chapters of the Code. The applicant shall provide a storm water management plan to the COMMUNITY for review and approval. Upon request by the applicant, or at its own initiative, the Planning Commission may determine that one (1) or more requirements may not be applicable and may be waived. Applicant shall submit fifteen (15) copies of the storm water management plan, which shall identify and contain all of the following information:
1. **Contact Information:** The name, address, and telephone number of all persons having a legal interest in the property and the tax reference number and parcel number of the property or properties affected. Include information on the zoning classification of the applicant's parcel and all adjacent parcels.
  2. **Location Map:** A map depicting the location of the development site and all water bodies that will ultimately receive storm water runoff.
  3. **Topographic Base Map:** The existing and proposed topography of the development site, including the alignment and boundary of the natural drainage courses, with contours having a maximum interval of not greater than two (2) feet. The map shall also show existing surface water drainage (permanent and intermittent) and flow direction, including streams, ponds, culverts, ditches, and wetlands; location of 100-year floodplain, if applicable to the site; current land use including all existing structures; locations of utilities, roads, and easements; and significant natural and manmade features not otherwise shown.
  4. **Soils Information:** The site soil information from the St. Clair County Soil Map Survey.
  5. **Watershed:** A map showing the drainage boundary of the proposed development and earth change, each point of discharge from the development and earth change, and the drainage relationship with existing watershed patterns.
  6. **Calculations:** Storm water calculations shall be provided in accordance with the St. Clair County design standards referenced in section 7.
  7. **Site Plan Drawing:** A drawing showing all proposed storm water facilities with existing and final grades. This map shall also show existing and proposed lot lines, property lines, and structures, parking areas, etc. on the parcel and within 100 feet of the site.
  8. **Outlet and Culvert Information:** The sizes and locations of upstream and downstream culverts serving the major drainage routes flowing into and out of the development site, with arrows indicating the direction of flow to the ultimate receiving water body. Any significant offsite and onsite drainage outlet restrictions other than culverts should be noted on the drainage map. Storm sewer calculations indicating the number of acres, calculated to the nearest tenth of an acre, contributing to each specific inlet/outlet and maximum flow in cubic feet per second shall be stated on the plan. The applicant shall demonstrate that suitable conveyance exists downstream of the development site to receive the storm water, including easements, if necessary, for such conveyance. If easements do not exist, and cannot be acquired, the applicant shall demonstrate the means of



- volume controls. Any areas of offsite sheet flow shall be identified.
9. **Construction Plan:** An implementation and sequencing plan for construction and inspection of all storm water facilities, including a schedule of the estimated dates of completing construction of the storm water facilities shown on the plan and an identification of the proposed inspection procedures to ensure that the storm water facilities are constructed in accordance with the approved storm water management plan.
  10. **Sedimentation and Erosion Control Plan:** A soil erosion and sedimentation plan for all construction activities related to implementing any onsite storm water management practices. This plan shall provide the effective control of construction site storm water runoff and sediment track-out onto roadways.
  11. **Construction Specifications:** All construction specifications for the storm water facilities and a single sheet showing all proposed storm water facilities, including vegetative BMP's, with drainage easements overlaid onto the overall road and utility plan and drawn to the same scale.
  12. **Additional Drawings:** Drawings, profiles, and specifications for the construction of the storm water facilities reasonably necessary to ensure that storm water runoff will be drained, stored, or otherwise controlled in accordance with this chapter. All drawings will include the date (month, day and year), including dates of any revisions, a title block, scale, and north point.
  13. **Maintenance Plan:** A document in form and substance acceptable to the COMMUNITY for ensuring maintenance of any privately owned storm water facilities. The maintenance plan shall include a mandatory association or other enforceable commitment to provide routine, emergency, and long-term maintenance of the facilities and, in the event that the facilities are not maintained in accordance with the approved storm water management plan, the maintenance plan shall authorize the COMMUNITY to maintain any onsite storm water facility as reasonably necessary, at the owner's expense.
  14. **Firm Contact Information:** Name and signature of planner, architect, engineer, surveyor, wetland specialist, landscape architect, and other technical experts who have assisted in the preparation of the storm water management plan, designed the storm water facilities, and will inspect the final construction of the storm water facilities. The submitted plan shall be stamped and signed by the licensed engineer.
  15. **Vegetation/Landscape Plan:** A drawing that details the existing vegetation to remain, with woodland protective measures to be undertaken during construction, and new landscaping to the provided.
  16. **Other Environmental Permits:** All other applicable environmental permits shall be acquired for the site prior to construction.
  17. **Additional Information:** Any other information necessary for the COMMUNITY to verify that the storm water management plan complies with the COMMUNITY's design and performance standards for drains and storm water facilities.



18. **Fees:** Payment of applicable review fees is required before any review will commence.
19. **Phased Development Plans:** Should the applicant plan to subdivide or develop a given area but wishes to begin with only a portion of the total area, the original preliminary plan will include the proposed general layout for the entire area. The first phase of the subdivision will be clearly superimposed upon the overall plan in order to illustrate clearly the method of development and earth change that the applicant intends to follow. However, the storm water management plan shall be submitted for the entire development, with calculations and devices designed for buildout sufficient to demonstrate to the Planning Commission the feasibility of future phases complying with the standards of this chapter.
20. **Site Features:** The location and description of onsite and adjacent offsite features that may be relevant in determining the overall requirements for storm water management. These features may include, but are not limited to, the following:
  - a. Adjoining roads, subdivisions, and other developments and earth change activities;
  - b. Schools, parks, and cemeteries;
  - c. Drains, sewers and water mains;
  - d. Overhead power lines, underground transmission lines, gas mains, pipelines or other utilities;
  - e. Existing and proposed easements;
  - f. Natural and artificial watercourses, wetlands and wetland boundaries, floodplains, bays and lagoons;
  - g. Designated natural areas; and
  - h. Any proposed environmental mitigation features.
21. **Soil Borings:** Soil borings shall be required at various locations including the sites of proposed retention/detention/infiltration facilities.
22. **Weekly Construction Reports:** As required by section 11.A., construction reports shall be submitted weekly, unless some other period of time is approved by the Planning Commission.
23. **Previously Developed Sites.** For earth changes, development or redevelopment occurring on a previously developed site, an applicant shall be required to include within the storm water management plan measures for controlling existing storm water runoff discharges from the site in accordance with the standards of the chapter, or to match existing discharge rates, whichever is less.

### Section 7. ST. CLAIR COUNTY STORM WATER MANAGEMENT STANDARDS

The COMMUNITY Council/Board by resolution adopted the storm water management standards of the St. Clair County Drain Commissioner, which establish the minimum design standards for calculating runoff, storm water discharge release rates, and requirements for dischargers to implement on-site detention, detention, infiltration, or other methods necessary to control the rate and volume of surface water runoff discharged into the storm water drainage system. In instances



where this ordinance requires a higher standard than the county, the requirements of this ordinance shall be met.

### **Section 8. PERFORMANCE/GENERAL STANDARDS**

The COMMUNITY is not responsible for providing drainage facilities on private property for the management of storm water on the private property. It shall be the responsibility of the property owner to maintain private storm water facilities serving the property and to prevent or correct the accumulation of debris, which interferes with the drainage or storm water management function of the system.

All developments and earth changes subject to review under the requirements of this chapter shall be designed, constructed, and maintained to control runoff, prevent flooding and protect water quality. The particular facilities and measures required onsite shall reflect the natural features, wetland, and watercourses on the site; the potential for onsite and offsite flooding, water pollution, and erosion; and the size of the site.

#### **A. Onsite and Offsite Storm Water Management**

1. Storm water facilities shall be designed to prevent flood hazards and water pollution related to storm water runoff, soil erosion, and channel erosion from the proposed earth change.
2. Existing storm water from upstream and offsite locations shall be conveyed around or through the site, or stored onsite.
3. Every storm water facility shall control the release of storm water in accordance with the St. Clair County design standards.
4. Unless otherwise approved, storm water runoff shall be conveyed through swales and vegetated buffer strips so as to decrease runoff velocity, allow for natural infiltration and passive storage, allow suspended sediment particles to settle, and to remove pollutants.
5. Alterations to natural drainage patterns shall not increase runoff, create flooding or water pollution for adjacent or downstream property owners.
6. Cutting, filling, and grading shall be minimized and the natural topography of the site shall be preserved to the maximum extent practicable, except where specific findings demonstrate that major alterations will still meet the purposes and requirements of this chapter.
7. Grading of lands at locations that are adjacent to or near lands, streets, alleys, sidewalks, or other public or private property shall be done in a manner to protect the property from settling, cracking or sustaining other damage.
8. All development and other earth changes shall be designed, constructed, and completed so that the exposed area of any disturbed land is limited to the shortest possible period of time.
9. Damage to public utilities or services and damage to or impairment of any water body on or near the location of any water body shall be prevented.
10. Natural wetlands shall be maintained to the maximum extent practicable.
11. Increased offsite release of storm water shall be minimized to the maximum extent practicable. The



volume of storm water shall be managed and stored to the maximum extent practicable.

12. The increased volume of water discharged due to earth changes and development of the site shall not create adverse impacts to property owners and watercourses. These adverse impacts may include, but are not limited to flooding, excessive soil saturation, crop damage, erosion, and degradation in water quality or habitat.

## B. Storm Water Facilities

1. **Infiltration Facilities:** This chapter encourages the use of infiltration systems as a part of storm water management plan design. Storm water storage and infiltration facilities, which protect water quality and minimize flooding, shall be designed to meet the standards of this chapter. Storage facilities may include, but are not limited to, detention basins, retention basins, infiltration trenches, swales with check dams, bioretention structures and other facilities and BMP's proposed by the applicant. It shall be the responsibility of the applicant to demonstrate that all proposed facilities meet the intent, goals, and standards of this chapter.

As the rate of percolation/infiltration of water into the soil column varies depending on the soil type, the type of infiltration system used may be site specific. Storm water management plan designers shall consider soil permeability when designing storm water infiltration components of a management system. The site developer shall attempt to minimize compaction of soil, which decreases infiltration and groundwater recharge and contributes to increased storm water runoff.

2. **Storm Water Storage Facilities:** All detention or retention basins shall be designed to meet the standards of this chapter.
  - a. Wet basins, or detention basins with a fixed minimum water elevation between runoff events. Wet basins, which serve to trap soil particles onsite, are preferable to dry basins.
  - b. Detention basins, which detain the first flush of an event and attenuate its release over an extended period.
  - c. Extended detention basins, which hold storm water from a less frequent storm event over an extended period before completely draining to become a dry basin. Dry basins without extended detention shall not be permitted.
  - d. Manufactured detention systems consisting of underground pipes designed to provide the required storage volume for a development project and a restricted outlet will only be allowed when a wet extended detention basin or constructed wetland are not feasible for a given site.
3. Detention and retention basins shall be designed to hold runoff from a 100-year frequency storm event. Basins shall be permanently stabilized to minimize erosion.
4. Detention and retention basins shall have an overflow system. If the overflow system cannot discharge to a creek, lake, or wetland without causing flooding on adjacent or downstream properties, then the basin shall



be designed to hold storm water runoff from back-to-back 100-year storm events.

5. Detention and retention basins and associated berms and landscaping shall be designed to protect public safety and to be visually attractive. Detention and retention basins shall be "free form" following the natural shape of the land to the greatest practical extent. Wherever possible, detention and retention basins shall be designed with shallow depth and gradual side slopes that do not require security fencing based upon St. Clair County standards.
6. For residential subdivisions or condominiums, detention and retention basins shall be provided in common areas or open space areas and not located within individual residential lots.

#### **Section 9. SOIL EROSION AND SEDIMENTATION CONTROL**

- A. All persons who cause, in whole or in part, any earth change to occur shall provide soil erosion and sedimentation control to adequately prevent soils from being eroded and discharged or deposited onto adjacent properties or into a storm water drainage system, a public street or right of way, wetland, creek, stream, water body, or floodplain. All earth changes shall be in accordance with all applicable federal and state laws, and local ordinances and applicable rules, regulations, and standards. The strictest of such requirements shall apply. The applicant shall obtain and comply with the terms of a soil erosion and sedimentation control permit if required by law.
- B. No grading, site preparation, or removal of vegetative cover shall take place prior to obtaining a soil erosion and sedimentation control permit from St. Clair County Drain Commissioner and the installation of erosion control facilities.

#### **Section 10. LANDSCAPING/REVEGETATION**

An applicant shall address the following guiding principles and standards:

- A. Native, natural existing vegetation shall be retained to the maximum extent practicable, recognizing earth changes will occur and it is not possible to retain much of what exists and still accomplish the basic project purpose.
- B. Native species shall be used for revegetation and landscaping. One (1) deciduous shade or evergreen tree and ten (10) shrubs shall be planted for every fifty (50) lineal feet of pond perimeter as measured along the top of the bank elevation. The required trees and shrubs shall be planted in a random pattern or in groupings. The placement of required landscaping is not limited to the top of the pond bank, where the plant species is adapted to saturated soil conditions.
- C. The flood tolerance of proposed species shall be considered, particularly in storm water management areas and components.
- D. Water requirements of species proposed in areas other than storm water management facilities shall be considered, with the goal of reducing their water demand and nutrient requirements to the maximum extent practicable.
- E. The storm water management components shall be chemical-free zones within the development, with the exception of accepted management techniques for the establishment and maintenance of native landscapes.
- F. Bio-retention areas shall be vegetated with species, which maximize the infiltration, uptake and evapotranspiration of water.



## Section 11. MAINTENANCE AND INSPECTION

- A. **Construction Maintenance Requirements:** The applicant shall be responsible for maintenance and inspection of storm water BMP's and management components on a regular basis during construction.

Authorized representatives of the COMMUNITY may enter the project site to conduct onsite inspections at any time during construction, and is by reference a condition of any approval, and may review any log the applicant maintains pursuant to Subsection B.

- B. **Inspection:** The applicant shall notify the COMMUNITY in advance before the commencement of construction. A licensed professional engineer shall conduct regular observations of the storm water facilities construction. All observations shall be documented with brief, written reports prepared, and submitted to the COMMUNITY, the frequency of which shall be determined at the time the plan is approved. The report shall contain the following information:

1. The date and location of the site visit;
2. Recent precipitation events;
3. Copies from the NPDES construction site logbook, if applicable;
4. Whether construction is in general compliance with the approved storm water management plan;
5. Variations from the approved construction specifications; and

6. Any violations that exist with a timetable for completing corrective actions or a brief description of corrective actions completed.

If any violations are found, the property owner shall be notified by the COMMUNITY in writing of the nature of the violation and the corrective actions necessary. No additional work shall proceed until all violations are corrected by the applicant and approved by the COMMUNITY.

Should a COMMUNITY observation reveal noncompliance with the approved storm water management plan, a violation and stop work order may be issued in accordance with section 18.

- C. Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

## Section 12. APPROVED PLANS AND AMENDMENTS

### A. Approved Plans

1. Approval of final development plans, site plans, and final preliminary subdivision plats shall not be granted prior to approval of the storm water management plan.
2. Upon approval of the storm water management plan, the Planning Commission chair, or the chair's designee, shall sign three (3) copies thereof. One (1) signed copy shall be made a part of the COMMUNITY's files; one (1) copy



shall be forwarded to the COMMUNITY engineer; and, one (1) copy shall be returned to the applicant.

3. Planning Commission approval shall expire two (2) years from the date of such approval, unless construction has commenced and proceeds satisfactorily. An applicant may request from the Planning Commission unlimited one (1) year extensions of the plan approval, provided such request is applied for in writing prior to the date of expiration of plan approval. The Planning Commission shall grant the request if plan requirements and standards, including those of this chapter that are reasonably related to the earth change, have not changed.

**B. Amendments.** Amendments to an approved storm water management plan may occur only under the following circumstances:

1. The holder of an approved plan shall notify the COMMUNITY of any proposed amendment to such approved plan.
2. Minor changes may be approved by the COMMUNITY upon certification in writing to the Planning Commission that the proposed revision does not alter the basic design nor any specified conditions of the plan as agreed upon by the COMMUNITY. The COMMUNITY shall have the authority to administratively approve minor changes for the following:
  - a. Any change that does not decrease the effectiveness of approved storm water facilities.
  - b. Any change that does not cause an increase in runoff rate or volume.

c. Any change deemed to be minor as determined by the Planning Commission from time to time.

3. Should the COMMUNITY determine that the requested modification to the approved plan is not minor, then the applicant shall submit a new plan for review as required by this chapter.

### Section 13. FEES AND PERFORMANCE GUARANTEES

**A. Review Fees:** Fees and escrow account payments shall be sufficient to cover administrative and technical review costs anticipated to be incurred by the COMMUNITY.

1. All expenses and costs incurred by the COMMUNITY directly associated with processing, reviewing and approving or denying storm water management plan application shall be paid to the COMMUNITY from the funds in an escrow account established by the applicant and held by the COMMUNITY.
2. The COMMUNITY may draw funds from an applicant's escrow account to reimburse the COMMUNITY for out-of-pocket expenses incurred by the COMMUNITY relating to the application. Such reimbursable expenses include, but are not limited to, expenses related to the following:
  - a. Services of the COMMUNITY attorney directly related to the application.
  - b. Services of the COMMUNITY engineer directly related to the application.



- c. Services of other independent contractors or consultants working for the COMMUNITY, which are directly related to the application.
  - d. Any additional public hearings, required mailings and legal notice requirements necessitated by the application.
3. At the time an applicant applies for approval of a storm water management plan, the applicant shall deposit with the COMMUNITY Clerk, as an escrow deposit, an initial amount equal to six percent (6%) of the estimated cost of constructing the proposed storm water management plan improvements as submitted by the applicant and reviewed and approved by the COMMUNITY engineer unless the COMMUNITY determines that a greater amount is appropriate, in which case the basis for such determination shall be provided to the applicant in writing. Any excess funds remaining in the escrow account after the application has been fully processed, reviewed, and the final COMMUNITY approval and acceptance of the earth change has occurred will be refunded to the applicant with no interest to be paid on those funds. Additional amounts may be required to be placed in the escrow account by the applicant, at the discretion of the COMMUNITY.
4. Construction observation fees shall be equal to two percent (2%) of the cost estimate, which shall be submitted prior to the start of construction and approved by the COMMUNITY as noted above. Any excess funds remaining in the escrow account after the application has been fully processed, reviewed, and the final COMMUNITY approval and acceptance of the earth change has occurred will be refunded to the applicant with no interest to be paid on those funds. Additional

amounts may be required to be placed in the escrow account by the applicant, at the discretion of the COMMUNITY.

### **B. Performance Guarantees**

1. The COMMUNITY shall not approve a storm water management plan until the applicant submits to the COMMUNITY, in a form and amount satisfactory to the COMMUNITY, an irrevocable letter of credit or other similar financial guarantee for the timely and satisfactory construction of all storm water facilities in accordance with the approved storm water management plan. Performance bonds are not acceptable. The amount of the financial guarantee shall be equal to the estimated cost of constructing the improvements, approved by the COMMUNITY as noted above.
2. Upon designation by the COMMUNITY engineer that the storm water facilities appear to have been completed in general accordance with the approved storm water management plan, the COMMUNITY may release the irrevocable letter of credit, subject to final COMMUNITY acceptance and approval. The COMMUNITY shall retain not less than ten percent (10%) of the original face value of the irrevocable letter of credit for a period of one year and one day after the COMMUNITY engineer's designation noted above. The purpose of this retainage is to guarantee that the storm water facilities perform as designed.
3. This chapter shall not be construed or interpreted as relieving an applicant of its obligation to pay all costs associated with onsite private storm water facilities as well as those costs arising from the need to make other



drainage improvements in order to reduce an earth change's impact to property owners and watercourses.

#### **Section 14. PROHIBITION OF ILLEGAL DISCHARGES.**

- A. No person shall discharge or cause to be discharged into the storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited, except as described below.
1. The following discharges are permitted: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, swimming pools (if dechlorinated - typically less than one (1) PPM chlorine), fire fighting activities, and any other water source not containing pollutants.
  2. Non-storm water discharge may be permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

- B. Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the storm drain system, or water of the U.S. said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the COMMUNITY no later than the next business day. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three (3) years.

#### **Section 15. VARIANCES AND APPEALS**

- A. The COMMUNITY Council/Board shall have the authority to interpret this chapter and may grant waivers to these requirements provided such waiver is not contrary with achieving the general purpose and intent of the requirements. When waivers are requested from the chapter, the applicant shall show that storm water management systems have been provided to the maximum extent feasible with the requirements of this chapter. Waivers shall not be granted to permit pollutants to be discharged into a storm drain or watercourse.
- B. An applicant who is aggrieved by a decision of the COMMUNITY in enforcing the provisions of this Ordinance may appeal such decision to the COMMUNITY Council/Board.



- C. All appeals must be filed, in writing, within seven (7) days following the decision.
- D. Adjacent property owners within three hundred (300) feet of the subject site shall be notified of the appeal and the date, time and place at which the appeal will be considered.

### Section 16. VIOLATIONS

A person who violates any provision of this chapter is responsible for a municipal civil infraction, subject to payment of a civil fine. If a person has violated or continues to violate the provisions of this ordinance, the COMMUNITY may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

### Section 17. STOP WORK ORDER

- A. **Stop Work Order:** Where there is work in progress that causes a violation of any provision of this chapter, the COMMUNITY is authorized to issue a stop work order to prevent further or continuing violations. All persons to whom the stop work order is directed, or who are involved in any way with the work or matter described in the stop work order shall fully and promptly comply with the order. The COMMUNITY may also undertake or cause to be undertaken any necessary measures to prevent violations of this chapter or to avoid or reduce the effects of noncompliance. The cost of any such protective measures shall be the responsibility of the owner of the property upon which the work is being done and the responsibility of any person carrying out or participating in the work, and such cost shall be a lien upon the property until paid.
- B. **Emergency Measures:** When emergency measures are necessary to moderate a nuisance, to protect public safety, health

and welfare, or to prevent loss of life, injury or damage to property, the COMMUNITY is authorized to carry out or arrange for all such emergency measures. Property owners shall be responsible for the cost of such measures made necessary as a result of a violation of this chapter, and shall promptly reimburse the COMMUNITY for all of such costs. Such costs shall be a lien upon the property until paid.

### Section 18. RESTORATION

Any violator of this chapter may be required to restore land to its undisturbed condition and repair and stabilize damaged areas. In the event that restoration or repairs are not undertaken within a reasonable time after notice, the COMMUNITY may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

### Section 19. MAINTENANCE

- A. **Responsibility:** Maintenance of storm water facilities shall be the responsibility of the person or persons holding title to the property. These persons are responsible for the continual operation, maintenance, and repair of storm water facilities and BMPs in accordance with the provisions of this chapter. A maintenance agreement shall be recorded with the County Register of Deeds and, in the case of a condominium, be included in the master deed.

For privately maintained storm water facilities, the maintenance requirements specified in this chapter shall be enforced by the COMMUNITY against the owner(s) of the property served by the storm water facilities.

- B. **Maintenance Plan:** A maintenance plan, as specified in section 7, shall include specific maintenance activities for each storm water facility and any other elements of the approved storm water management plan. The maintenance plan shall be



submitted simultaneously for municipal review with all other required elements of the storm water management plan.

The person(s) or organization(s) responsible for maintenance shall be designated in the plan. Options include:

1. Property owner's association provided that provisions for financing necessary maintenance are included in deed restrictions or other contractual agreements.
2. Means of permanent maintenance through agreement with the St. Clair County Drain Commissioner, or other appropriate governmental agency.

- C. **Record Keeping:** Parties responsible for the operation and maintenance of storm water facilities shall make records of the installation and of all maintenance and repairs, and shall retain the records for at least five (5) years. These records shall be made available to the COMMUNITY during inspection of the facility and at other reasonable times upon request.

## Section 20. ACCESS

When any new storm water facilities are installed on private property, or when any new connection is made between private property and a public drainage control system, the property owner shall grant to the COMMUNITY through an easement the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This access includes the right to enter a property when the COMMUNITY has reason to believe that a violation of this chapter is occurring or has occurred, and to enter when necessary for the abatement of a public nuisance or correction of a violation of this chapter.

## Section 21. EASEMENTS

The owner shall provide all easements necessary to implement the approved storm water management plan and maintenance plan and to

otherwise comply with this chapter in form and substance required by the COMMUNITY and St. Clair County Drain Commissioner, and shall record such easements as directed by the COMMUNITY. The easements shall assure access for proper inspection and maintenance of storm water facilities in perpetuity and shall provide adequate emergency overland flow-ways. The maintenance plan shall, among other matters, assure access for proper inspection and maintenance of storm water facilities and adequate emergency overland flow-ways.

Easement widths will be determined by the COMMUNITY and be situated in such a way as to allow maximum maintenance access. In general, easement widths shall conform to the following:

- A. **Open Channels And Watercourses:** A minimum of fifty (50) feet total width. Additional width may be required in some cases, including but not limited to: watercourses with floodplains delineated by FEMA; steep slopes and at access points from road crossings.
- B. **Open Swales (Cross Lot Drainage):** A minimum of thirty (30) feet total width.
- C. **Enclosed Storm Drains:** A minimum of twenty (20) feet will be required, situated in such a way as to allow maximum maintenance access. Additional width will be required in some cases including but not limited to, pipe depths exceeding four (4) feet from the top of pipe, sandy soils, and steep slopes.



## PRIVATE COMMUNITY WASTEWATER SYSTEMS

### Section 1. PURPOSE

Pursuant to Act No. 451 of the Public Acts of 1994, as amended, the Michigan Department of Environmental Quality (MDEQ) is authorized to issue permits for private community on-site wastewater disposal systems that serve more than one (1) property (referred to as a "private community wastewater system" or "PCWS"). While the [Community] recognizes that a private community wastewater system may be preferred over individual septic systems in some limited circumstances, the [Community] requires assurance that, should an Act 451 permit be issued, the [Community] shall be indemnified from any costs or liability in connection with the design, construction, operation, maintenance, repair and/or replacement of that PCWS. The [Community] also recognizes that should the services of a PCWS fail or improperly function, an adequate replacement reserve for the PCWS is essential. For these purposes, this section is intended to regulate PCWS within the [Community].

### Section 2. DEFINITION

A Private Community Wastewater System (PCWS) shall mean a facility for the transportation, collection, processing or treatment of sanitary sewage, which is owned by a non-governmental entity and which is proposed to service more than one structure. The PCWS shall include any individual septic tanks, pumps, lines and appurtenances serving each residence, in addition to the community drainfield and treatment system.

### Section 3. APPLICABILITY

A. Prior to the construction or expansion of a PCWS, the plans for the system design and installation shall be approved by the [Community] Legislative Body, St. Clair County Health Department, the Michigan Department of Public Health, the

MDEQ, the Michigan Public Service Commission and any other governmental authority having jurisdiction.

B. A PCWS may only be permitted with approval from the [Community] Legislative Body, subject to all of the requirements of this Ordinance. The [Community] Legislative Body shall not consider an application for a PCWS until all necessary approval have been obtained for the PCWS from the St. Clair County Health Department, the Michigan Department of Public Health, the MDEQ and any other governmental authority having jurisdiction.

### Section 4. DESIGN STANDARDS

Any PCWS shall comply with the terms of this Ordinance and applicable requirements of [Community] engineering standards, the Michigan Department of Environmental Quality, the Michigan Department of Public Health, the St. Clair County Health Department, the Michigan Public Service Commission, the Michigan Occupational Safety and Health Administration, and any other applicable laws and regulations of the federal government, State of Michigan, St. Clair County, and the [Community].

### Section 5. APPLICATION

The applicant shall provide the following to the [Community] before approval of a PCWS may be granted:

- A. PCWS construction plans for review and approval by the [Community] engineer.
- B. A valid permit for installation of a PCWS issued by the applicable regulatory agency.
- C. A certification from the PCWS design engineer indicating that the PCWS as designed and constructed will adequately process



sanitary sewage and waste as required by applicable laws and regulations of the federal government, State of Michigan, St. Clair County and the [Community]. The [Community] engineer shall review and make a recommendation regarding the adequacy of such certification. The [Community] engineer's review shall include review of plans and documents for compliance with [Community] ordinances, engineering standards, general engineering practices and best management practices.

- D. A draft PCWS maintenance agreement for review and approval by the [Community] attorney.

#### **Section 6. MAINTENANCE AGREEMENT**

- A. A PCWS maintenance agreement among the applicant, owner, the homeowners association and the [Community] shall be approved and recorded in a form acceptable to the [Community] specifying:
1. The party or parties responsible for inspection, monitoring, repairing, replacing, operating and maintaining the PCWS.
  2. Standards for inspection, monitoring, operation, maintenance, repair and replacement of the PCWS in accordance with guidelines recommended by the design engineer, PCWS equipment manufacturer, the certified operator, the MDEQ, and the [Community] engineer. Standards shall include periodic reports to the [Community] and the right of the [Community] to inspect and compel remediation if these standards are not met.
  3. Indemnification of the [Community] by the applicant, owners and association, jointly and severally, from any

and all loss, liability, costs and expense incurred by the [Community] with respect to inspection, monitoring, operation, maintenance, repair and replacement of the PCWS.

4. A statement that the applicant, owner and association shall maintain a policy of casualty insurance for the replacement value of the insurable components of the PCWS and a policy of comprehensive general liability insurance with limits acceptable to the [Community], naming the [Community] as an additional insured. The [Community] shall be provided with certificates of insurance on an annual basis.
  5. A statement that the [Community] shall have the option in its sole discretion to require that PCWS be abandoned and all properties in the development be connected to any public sanitary sewer system or publicly-owned community sewer system that may be constructed in the future and accessible to the development at the expense of the owners. If a PCWS is required to be abandoned, the costs of environmental remediation are to be borne by the owner or homeowners association.
- B. The PCWS maintenance agreement and the development documents shall be recorded at the office of the St. Clair County Register of Deeds after approval by the [Community]. The development documents, as they pertain to the PCWS, shall not be changed without [Community] approval and shall contain language to that effect.

#### **Section 7. SPECIAL ASSESSMENT DISTRICT**

Prior to recording the PCWS maintenance agreement and sale of any unit, lot or parcel served by a PCWS, applicant and owner shall establish a special assessment district for the development, the purpose of which



shall be to provide for assessment of the units, lots or parcels in each development by the [Community] for the costs of inspection, monitoring, maintenance, repair, operation or replacement of the PCWS in the event the association shall fail to properly perform such work. The [Community] may elect to collect all costs it may incur in connection with the PCWS through the special assessment.

### **Section 8. DISCLOSURE DOCUMENT**

The provisions of the PCWS maintenance agreement described above and other obligations of the association set forth in this section shall be included in a separate disclosure document and the development documents in the form approved by the [Community] attorney and shall be delivered to the prospective purchaser of a unit, lot or parcel served by a PCWS prior to the execution of a purchase agreement.

### **Section 9. COMMON AREA**

Each PCWS shall be included in the general common elements of a condominium or a commonly owned “park” of a subdivision in which it is located, and included in the common areas of any other development.

### **Section 10. BUFFERING**

- A. Adequate buffering, as determined by the [Community] Legislative Body based upon the recommendation of the Planning Commission, shall be provided from residential uses and adjacent properties to minimize process machinery noise level, minimize light intrusion, maximize odor dispersal and to ensure adequate isolation distances so that drinking water wells are not adversely affected by the PCWS.
- B. The PCWS shall provide a minimum 500 foot buffer from any off-site dwelling and 100 feet from any on-site dwelling, or such distance as required by the appropriate regulatory agency. The

PCWS shall provide a minimum 100 foot buffer from any surface water, wetlands, or floodplain.

### **Section 11. EASEMENT TO [COMMUNITY]**

A permanent and irrevocable easement shall be granted by the applicant, owner and association to the [Community] and its employees, agents, and assigns authorizing the [Community] to enter on the development upon which the PCWS is located for the purpose of inspections.

### **Section 12. INSPECTION DURING CONSTRUCTION**

The PCWS shall be inspected during construction by the [Community] engineer at the applicant's expense to ensure proper system construction and installation, and after construction to certify annually system capacity and function.

### **Section 13. AS-BUILTS**

A complete copy of the as-built prints, including electric, water, chemical, and physical systems, drain fields and final topography, shall be provided to the [Community] upon completion of the PCWS, and before it is approved for operation. As-builts shall be provided in both print form and digital files in either CAD or shape file format, along with survey control points.

### **Section 14. INSPECTION AND MONITORING**

- A. The PCWS shall be inspected, monitored, operated, maintained, repaired and replaced by the association with the right of the association to assess owners for all such costs. Each Association shall hire a certified operator approved by the MDEQ, the St. Clair County Health Department, the [Community] and other applicable governmental authorities to perform such inspection, monitoring, operation, maintenance, repair and replacement at the expense of the association, and the association shall provide



the [Community] annually with copies of the signed agreements with the certified operators.

- B. Each association shall maintain a financial reserve sufficient for five (5) years of monitoring, inspection, operation, maintenance and repair of the PCWS and an adequate replacement reserve in the amounts certified by a design engineer or the certified operator and required by applicable governmental authorities and shall be subject to [Community] review and approval.

#### **Section 15. RESPONSIBILITY OF COSTS**

- A. The operator, the applicant, the association and the individual owners and users of the PCWS shall be responsible for all costs associated with the installation, operation, monitoring, inspection, maintenance, repair, replacement of the PCWS and all liability associated with the PCWS.
- B. The [Community] shall not be responsible for or obligated to perform any needed or desired repairs, maintenance, improvement, and/or replacement of the PCWS or any portion thereof.



**TRANSFER OF DEVELOPMENT RIGHTS**

**Section 1. Intent and Scope**

- A. Transfer of development rights is intended as one method of implementing the [Community] Master Plan, permitting the transfer of development rights from a location that is intended to be preserved for agriculture or open space to another location where the associated development can be more appropriately accommodated by the natural environment, surrounding land uses and infrastructure.
- B. The purpose of this Article is to achieve economy and efficiency in the use of land, energy, and the provision of public services and utilities; to encourage useful open space and the conservation of natural resources, and to support adequate infrastructure, consistent with the provisions of the Zoning Enabling Act and the Township/Municipal Planning Act, and, particularly, to advance the goals set in the [Community] Master Plan related to the preservation of valuable agricultural land and the promotion of efficient use of land and public resources in designated areas where further residential development is feasible and desirable. In order to accomplish these objectives, this Section:
  - 1. Designates *Agricultural Preserve Sending Areas* as a zone overlaying the lands designated as Rural Reserve in the [Community] Master Plan. At the same time that the development rights are transferred from sending area, a development limitation is placed on the sending area to control the nature and extent of its subsequent use and development.
  - 2. Designates *Development Receiving Areas* as a zone overlaying lands designated as Urban Services Area in the [Community] Master Plan and meeting certain

conditions of this Article. The receiving area shall only be developed as an open space cluster development meeting the requirements of this Ordinance.

- C. Development rights may be transferred through approval of both the Agricultural Preserve Sending Area and Development Receiving Area as a TDR/PUD through the use of Planned Unit Development legislation, as authorized by Section 16c of the Zoning Enabling Act subject to the requirements of this Article.

**Section 2. Definitions**

- A. **Agricultural Conservation Easement:** A grant, by an instrument, by which the owner relinquishes in perpetuity the right to use and subdivide the land for any residential or other development which is not incidental to agriculture and open space. It contains a covenant running with the land which defines the limitation on the development on a Sending Area site, including the number of Development Rights severed from the site upon the sale of Development Rights.
- E. **Agricultural Preserve Sending Area:** A parcel or parcels eligible for selling Development Rights and to transfer them in the form of Development Credits to a Development Receiving Area site.
- C. **Development Credit:** A measure of the amount of the residential development allowed on a Receiving Area site which comes in addition to the number of development units otherwise permitted in the Development Receiving Area as a result of purchasing Development Rights from a Sending Area. One (1) Development Credit equals one (1) dwelling unit.
- D. **Development Receiving Area:** A parcel or parcels eligible for utilizing the Development Rights, purchased from an eligible Sending Area site, to use them as Development Credits in order



to increase the density permitted under the provisions of the zoning district in which the site is located.

- E. **Development Right, or Transferrable Development Right:** An interest in and the right to use and subdivide land for any residential or other purposes and activities which are not incidental to agriculture and open space.
- F. **Transferor:** A landowner of an approved site within a Sending Area, who sells Development Rights which are to be transferred as Development Credits to an eligible site within the Development Receiving Area.
- G. **Transferee:** A person or entity who purchases Development Rights from a Transferor as to use them as Development Credits in the development of a site within a Development Receiving Area.

### Section 3. Agricultural Preserve Sending Areas

Development rights may be transferred from an Agricultural Preserve Sending Area to a Development Receiving Area, subject to all of the following provisions:

- A. **Qualifying Conditions.**
  - 1. Eligible parcels must be located within a Sending Area as depicted as Agricultural in the [Community] Master Plan.
  - 2. The combined acreage of all parcels must be at least forty (40) acres in area, unless the parcel is adjacent to another approved Sending Area site so that the total land area that is to be committed for agricultural preservation is at least forty (40) acres.

- 3. A Sending Area parcels may not include any lots within an approved subdivision lots in existence as of the date of the adoption of this Section.
- 4. The developed acreage of a Sending Area site shall not be included in the calculations of Development Credit.
- 5. The transferor of the Sending Area site must own or have an interest either through a purchase agreement or other similar legal instrument, in the property included in the site.

- B. **Development Credit.** The amount of development credit that can be transferred from the Agricultural Preserve Sending Area shall be number of dwelling units normally permitted.
- C. **Agricultural Conservation Easement.** Prior to the transfer of development rights, the property owner shall grant an agricultural conservation easement to [Community] or other conservation organization found acceptable to the [Community]. Such easement shall limit use of the transferring property to agricultural, conservation or recreation, use only, excluding golf courses, and shall prohibit all other uses of the land in perpetuity. The easement may provide, however, upon [Community] Legislative Body approval, for existing uses to continue and for limited development of new uses based upon any residual development rights remaining after the development rights have been transferred. Upon the establishment of conservation easements pursuant to this section, the [Community] shall not authorize their release. The conservation easement shall assure that the land will be protected from all forms of development, except as specified in the easement and permitted by this Article, and shall never be changed to another use.
- D. **Obligation of Landowner to Convey Development Rights.** The sale and conveyance of Development Rights occurs solely



on a voluntary basis. Landowners of eligible Sending Areas may not be compelled to sell and convey their transferable Development Rights. Unconveyed Development Rights may be transferred with land sold, donated or bequeathed. Owners of eligible Sending Area sites who choose not to convey their Development Rights may develop their land as permitted by the Zoning District in which the site is located.

- E. **Value of Development Rights.** The monetary value of Development Rights is solely determined between Transferor and Transferee.

### Section 4. Development Receiving Areas

Development rights may be transferred to a Development Receiving Area, subject to all of the following provisions:

- A. **Qualifying Conditions.**
1. Eligible parcels must be located within a Sending Area as depicted as Urban Services Area in the [Community] Master Plan.
  2. Parcels must be not less than ten (10) acres total area.
  3. Development Receiving Areas must be served by adequate facilities and services such as public water and sewer.
  4. The proposed densities of the Receiving Area site must be consistent with the [Community] Master Plan and existing uses and densities of surrounding properties.
  5. The Receiving Area site must be owned by the Transferee.

- B. **Development.** The Development Receiving Area may only be developed as a PUD under this Chapter at a density which combines that permitted by the underlying zoning, as determined by Section \_\_\_ and that allowed by any development credit transferable to the land in the Development Receiving Area.
- C. **Density Limit.** It is not intended that by designating land in a Development Receiving Area that rezoning to higher density is appropriate for the land generally or its surrounding area. The residential density of permitted uses shall not exceed one hundred and fifty percent (150%) of the maximum residential density that would otherwise be permitted by Section \_\_\_\_, without the transferred development rights.
- D. **Permitted Uses.** Any use permitted by right or special land use approval in the underlying zoning district shall be permitted in the Receiving Area site, subject to compliance with the applicable regulations of this Ordinance.

### Section 5. TDR/PUD Application

The TDR/PUD consists of two (2) parts a Sending Area site part and a Receiving Area site part. The owner of the Sending Area site part, that is the Transferor, and the owner of the Receiving Area site part, that is the Transferee, shall submit a joint application and a preliminary development plan, covering both parts of the TDR/PUD. The application shall be submitted to the [Community] who shall schedule a date and time for public hearing and Planning Commission review. Such application shall include the following:

- A. A completed TDR/PUD application form, which includes a request for granting Development Rights to the Sending Area site and a request for transferring these rights as Development Credits to the Receiving Area site. The application shall be provided by the [Community].



- B. Payment of a fee, as established by the [Community] Legislative Body.
- C. A narrative statement of how the proposed TDR/PUD meets the goals of the [Community] Master Plan and the purposes of this Ordinance.
- D. Documents and narrative statements regarding the Sending Area site:
1. A metes and bounds description of the property from which Development Rights are to be transferred; a plot plan or survey showing total acreage of the property; easements in favor of governmental agencies, utilities, and non-profit organizations; land already restricted from development, easement or deed; location of existing dwellings on the property; and two (2) acres of the curtilage around existing dwelling(s).
  2. Evidence as to how the Sending Area site part of the TDR/PUD meets the qualifying conditions as described in Section 3A.
  3. A parallel plan indicating the number of dwelling units normally permitted if the property was to be developed under existing zoning requirements. The parallel plan shall exclude areas subject to easements, restrictions and existing dwellings, which shall be indicated on lots meeting the minimum lot area requirements of the underlying zoning district.
  4. If a transfer of Development Rights involves less than the entire number of development credits that may be attributed to a Sending Area site, the portion of the parcel from which the development rights are transferred shall be clearly identified on a plan showing the whole parcel. Such plan shall also include a notation of the number of Development Rights that are to be transferred and the number of Development Rights which will remain available with the Sending Area site after the proposed transfer.
5. A copy of a proposed Deed of Transferable Development Rights and a copy of the proposed Agricultural Conservation Easement to be placed on the Sending Area site upon approval of the TDR/PUD. The Agricultural Conservation easement shall comply with the following conditions:
- a. Transferor shall perpetually restrict the use of the parcel or portion thereof, from which Development Rights are conveyed by an Agricultural Conservation Easement.
  - b. The Agricultural Conservation Easement shall restrict the future land use of the property to agricultural uses, any accessory agricultural uses and open space uses.
  - c. The Agricultural Conservation Easement shall designate the [Community] as a third party beneficiary of the restrictions imposed upon the Transferor and his/her property. Such restrictions shall be made enforceable by the [Community] as such third party beneficiary.
  - d. Land from which Development Rights are severed and conveyed shall continue to be owned, subject to said restrictions, by the Transferor, his/her heirs, executors, administrators, successors and assigns.



- E. Documents and statements regarding the Receiving Area site
1. Evidence as to how the Receiving Area site part of the TDR/PUD meets the qualifying conditions as described in Section 3B.
  2. A narrative describing anticipated impact of development on surrounding properties and neighborhood and proposed methods of mitigating any negative impacts, if such are expected.
  3. An open space cluster development preliminary site plan. In addition the requirements of Section \_\_\_\_, the preliminary plan must indicate:
    - a. That Development Credits are to be used as to increase density permitted by the regulations applicable to the underlying zone.
    - b. A parallel plan indicating the number of dwelling units normally permitted by the underlying zoning.
    - c. The number of Development Credits that the Transferee requests to use in the development and the total number of dwellings proposed to be built.
  4. A title search of previously severed Development Rights, if the Transferee proposes to use such rights previously severed from the Sending Area site.
  5. An agreement for the transfer of Development Rights between Transferor and Transferee.

### **Section 6. [Community] Determination of Development Rights and Credits**

- A. Upon receiving a complete application package, as required above, the [Community] shall determine the number of transferable Development Rights attributed to the Sending Area site and the number of Development Credits to be used in the Receiving Area site. The [Community] shall also determine with the advice of the [Community]'s Attorney or Engineer, the sufficiency of:
1. The plan indicating the portion of the Sending Area site parcel to be restricted from future development if the Development Rights from less than the entire parcel are transferred.
  2. The Deed for Transferable Development Rights.
  3. The Agricultural Conservation Easement.
- B. The [Community] shall inform the Transferor and the Transferee of their findings written form within sixty (60) day of receipt of the TDR/PUD application. Findings shall include the number of dwelling units that Transferee may construct on Receiving Area site after applying Development Credits to the base density of the underlying zoning district.
- C. Any appeals of the determinations of the [Community] shall be made in accordance with the provisions of Chapter 16, Zoning Board of Appeals.
- D. Upon final determination by the [Community] or the Zoning Board Appeals, the [Community] shall cause notice to be given in accordance with the provisions of the Zoning Enabling Act.

### **Section 7. Notice and Public Hearing for TDR/PUD**



Notification of the public hearing shall be as that required in Section \_\_\_\_.

### **Section 8. Planning Commission Recommendation and Legislative Body Action**

The application shall be reviewed following the procedures for preliminary and final approval under Section \_\_\_\_. In addition, the [Community] Legislative Body shall endorse the Deed for Transferable Development Rights and the Agricultural Conservation Easement with the preliminary site plan. Upon approval of the final TDR/PUD application, the Agricultural Conservation Easement and the Deed for Transfer of Development Rights shall be duly signed by all relevant parties and recorded with the Recorder of Deeds.

### **Section 9. Standards for Approval**

A TDR/PUD shall be approved only if it complies with each of the following standards:

- A. The proposed TDR/PUD complies with all qualifying conditions noted above.
- B. The uses and densities to be conducted within the proposed TDR/PUD are consistent with the [Community] Master Plan.
- C. The proposed Receiving Area site part of the TDR/PUD is compatible with surrounding uses of land, the natural environment, and the capacities of public services and facilities affected by the development. The proposed Receiving Area site part of the TDR/PUD will not negatively affect surrounding uses of land and/or the natural environment. If any negative impacts related are anticipated, appropriate mitigating measures shall be proposed and taken.

- D. The proposed Receiving Area site part of the TDR/PUD will not contain uses or conditions of use that would be injurious to the public health, safety, or welfare of the community.
- E. The proposed project is consistent with the spirit and intent of the TDR/PUD District.
- F. The Planning Commission may require evidence that groundwater sources at the Receiving Area site will be protected and that environmental, traffic, or other concerns are met. Approval of the County Health Department, County Road Commission, or other agencies, while required to develop the site, shall not be the sole determining factor in this regard.
- G. The Planning Commission may require any additional information it deems necessary to ensure compliance with the review standards and other requirements of this Ordinance, including additional soil borings, soil reports, hydrological tests, traffic studies, or other such evidence which shall be submitted by the applicant prior to approval.

### **Section 10. TDR/PUD Agreement**

Prior to issuance of any building permits or commencement of construction on any portion of the TDR/PUD, the Transferee shall enter into an Agreement with the [Community] in recordable form, setting forth his/her obligations with respect to the TDR/PUD. The Agreement shall meet all requirements of this Ordinance, and shall incorporate, by reference, the final development plan with all required revisions, and all conditions attached to the approval by the [Community] Legislative Body. The Agreement shall also establish the remedies of the [Community] in the event of default by the Transferee in carrying out the TDR/PUD, and shall be binding on all successors in interest to the Transferee. All documents shall be executed and recorded in the office of the Register of Deeds.



### NATURAL FEATURES SETBACK

A minimum twenty five (25) foot natural feature setback shall be maintained in relation to the ordinary high water mark of any pond, river or channel, and to the edge of any drainageway or wetland. Only waterfront structures and appurtenances may be located within the natural feature setback. This setback may be reduced by the Planning Commission upon a determination that it is clearly in the public interest. In determining whether the setback reduction is in the public interest, the benefit which would reasonably be expected to accrue from the proposed development shall be balanced against the reasonably foreseeable detriments to the natural feature. The following general criteria shall be applied in undertaking this balancing test:

- A. The relative extent of the public and private need for the proposed activity.
- B. The availability of feasible and prudent alternative locations and methods to accomplish the expected benefits from the activity, including alternatives which are off-site or on other commercially available properties.
- C. The extent and permanence of the beneficial or detrimental effects which the proposed activity may have on the public and private use to which the area is suited, including the benefits the wetland provides.
- D. The probable impact of the proposal in relation to the cumulative effect created by other existing and anticipated activities in the watershed.
- E. The probable impact on recognized historic, cultural, scenic, ecological, or recreational values and on the public health or fish or wildlife.
- F. The size and quality of the wetland.
- G. Proximity to any waterway.
- H. Extent to which upland soil erosion adjacent to protected wetlands or drainageways is controlled.
- I. Economic value, both public and private, of the proposed land change to the general area.
- J. Findings of necessity for the proposed project which have been made by other state or local agencies.



## SHORELINE PROTECTION OVERLAY ZONE

### SECTION 1. INTENT

Those remaining natural areas along the [River] play a critical role in habitat for fish and wildlife, maintaining the water quality, and maintaining the aesthetic quality of the [River]. Because these natural areas are limited and adjacent development has the potential to adversely impact these areas, natural buffers must be maintained along these natural shoreline areas. Protecting natural buffers adjacent to the shoreline of the [River] provide numerous benefits including:

- A. Protecting, restoring and maintaining the chemical, physical and biological integrity of streams and their water resources;
- B. Removing pollutants delivered in stormwater runoff;
- C. Reducing erosion and controlling sedimentation;
- D. Protecting and stabilizing stream banks;
- E. Providing for infiltration of stormwater runoff;
- F. Contributing organic matter that is a source of food and energy for the aquatic ecosystem;
- G. Providing tree canopy to shade emergent shoreline and promote desirable aquatic habitat;
- H. Providing riparian wildlife habitat;
- I. Furnishing scenic value and recreational opportunity; and,
- J. Providing opportunities for the protection and restoration of green space.

### SECTION 2. APPLICABILITY

This ordinance shall apply to all land development activity, including the subdividing of land, creation of a condominium, erection of structures, grading or clearing of vegetation on property that has a shoreline on the [River]. This ordinance shall not apply to the following lots, uses or activities:

- A. Work consisting of the repair or maintenance of any lawful use of land that is zoned and approved for such use on or before the effective date of this ordinance.
- B. Existing development, uses and on-going land disturbance activities including but not limited to existing waterfront residential uses, permitted waterfront accessory structures, landscaping, gardening and lawn maintenance, that was in existence on or before the effective date of this ordinance, including any maintenance, improvement or expansion of such uses.
- C. Any land development activity that is under construction, or has received a building, or grading permit from the [community] or an approved permit from the US Army Corps of Engineers or the Michigan Department of Environmental Quality as of the effective date of this ordinance.
- D. Any platted lot, developed or vacant, that has an existing seawall or riprap along at least seventy five percent (75%) of the lot's shoreline.
- E. Construction or maintenance of public bridges or utility structures.
- F. Activities to restore and enhance stream bank stability, vegetation, water quality and/or aquatic habitat, so long as native vegetation and bioengineering techniques are used.



**SECTION 3. BUFFER DELINEATION**

A shoreline buffer shall be required along the shoreline comprised of the following three (3) separate Buffer Zones for land subject to this ordinance under section 2 above. Any application for site plan, condominium or subdivision plat submitted for development along the regulated shoreline shall indicate the following zones.

- A. **Buffer Zone 1:** The landward area located between the shoreline’s ordinary high water mark and the largest combined width of all of the following:
  - 1. Twenty-five (25) feet, as measured directly perpendicular from the shoreline; and,
  - 2. Any adjoining regulated wetlands.
  
- B. **Buffer Zone 2:** The area beginning at the inland edge of the above-described Buffer Zone 1 and extending the largest combined width of all of the following:
  - 1. Fifty (50) feet, as measured directly perpendicular from the inland edge of the above-described Buffer Zone 1;
  - 2. Any land area located within the 100-year floodplain; and,
  - 3. Where there is any land within Buffer Zone 2 that exceeds slopes exceeding eighteen percent (18%), to the top any bluff being defined as the point at which the slope drops below eighteen percent (18%) for a distance of at least twenty (20) feet.

- C. **Buffer Zone 3:** The area beginning at the inland edge of the above-described Buffer Zone 2 and extending at least twenty-five (25) feet inland therefrom.

**SECTION 4. BUFFER USE AND MAINTENANCE**

Shoreline buffers must be generally undisturbed, except as provided for in this section. Buildings are not permitted in the buffer zones. The following lists permitted uses and requirements for preserving existing vegetation within each buffer zone must be complied with for any shoreline subject to the regulations of this Ordinance:

	<b>Preservation of existing vegetation</b>	<b>Permitted structures and improvements</b>
<b>Buffer Zone 1</b>	Existing natural vegetation shall remain as far as practical and when disturbance is necessary, it shall be replaced with native vegetation. Selective removal of up to 25% of the vegetation for access and views to water shall be permitted.	Man-made activities shall be limited to permitted waterfront structures and perpendicular walkways from Zone 2 to the shoreline. An access pathway or boardwalk up to 10-foot wide shall be allowed to access the shoreline. Waterfront structures such as docks are permitted as provided for in the Zoning Ordinance. Grading is not permitted.
<b>Buffer Zone 2</b>	Existing natural vegetation shall remain as far as practical. Landscaping improvements may be allowed to enhance the area, provided it is landscaping native to Michigan, including trees, shrubs, natural ground cover, but not including manicured grass lawns, provided native wild grass is permitted. Selective removal of up to 50% of the vegetation for access and views to water shall be permitted.	Unpaved pedestrian pathways are permitted. Grading is not permitted.



<b>Buffer Zone 3</b>	Ground must be covered with living plant material, which may include manicured lawns.	Decks are permitted. Grading is permitted, provided existing grade do not change by more than 2 feet. Architectural features are allowed to project in to Buffer Zone 3 in accordance with the Zoning Ordinance General Provisions.
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**SECTION 5 ADDITIONAL INFORMATION REQUIREMENTS FOR DEVELOPMENT ON BUFFER ZONE PROPERTIES**

Any site plan, condominium or subdivision plat application for property requiring a shoreline protection buffer zone must include the following information:

- A. The location of the shoreline;
- B. Limits of required shoreline protection buffer zones and setbacks on the property;
- C. Buffer zone topography with contour lines at no greater than two (2)-foot contour intervals;
- D. Delineation of forested and open areas in the buffer zone; and,
- E. Detailed plans of all proposed improvements within the buffer zones.

**SECTION 14.6 APPEAL PROCEDURES**

The shoreline buffer zone requirements of this Ordinance may be modified by the Planning Commission upon a determination that the need for the modification outweighs any adverse impact. The following general criteria shall be applied in undertaking this balancing test:

- A. Whether a property's shape, topography or other physical conditions prevents any reasonable use of the land unless a buffer modification is granted;
- B. Unusual circumstances where strict adherence to the minimal buffer requirements in the ordinance would create an extreme hardship;
- C. The location and extent of the proposed buffer or setback intrusion relative to the impact;
- D. Whether alternative designs are possible that would require less intrusion or no intrusion;
- E. The water-quality impacts, both long-term and as a result of construction;
- F. The impacts to the natural aesthetic quality of the waterfront; and
- G. Whether negative impacts of the modification can be mitigated.



**WOODLANDS PROTECTION ORDINANCE**

**SECTION 1. PURPOSE**

The [community] finds that rapid growth, the spread of development, and increasing impacts upon natural resources have had the effect of encroaching upon, despoiling, or eliminating many of the trees and other forms of vegetation and natural resources and processes associated therewith which if preserved, managed and maintained in a natural condition, constitutes important physical, aesthetic, recreational, and economic assets to existing and future residents of the [community].

This ordinance is intended to protect woodlands and significant individual indigenous trees, including trees and associated forms of vegetation, located on sites subject to development during the course of construction of improvements to benefit the development site and buildings on the site and the community through the following:

- A. Protection of woodlands as natural resources that contain elements of natural beauty, animal habitat and geological, hydrological, ecological and historical characteristics significant to the citizens of the [community].
- B. Protection, conservation, replacement, proper maintenance, management and use of woodlands in order to minimize disturbance and structural changes to the vegetative community, prevent damage from erosion, siltation, windthrow, disease, limit loss of animal habitat and vegetative cover, all of which, in the aggregate, result in the destruction of the woodland character.
- C. Protection of woodlands for their economic support of local property values, not only for residential areas and home sites, but also as settings for development in all zoning districts.
- D. Protection of the reproductive and regenerative capabilities of woodland areas; to maintain plant and tree diversity, to protect

groundwater recharge areas; to maintain visual screening, windbreak, dust collection and noise barrier characteristics exhibited by woodlands.

- E. Protection of woodlands (including trees and other forms of vegetation) for their significance as large specimens of their species and/or rare and endangered species.
- F. Protection of functional strips of vegetation (including fencerows, hedgerows, shrubby borders of streams and road rights-of-way) for their significance as travel lanes for animal-life, noise barrier, visual screens, aesthetically pleasing enclosures and vistas for pedestrian and vehicular traffic.
- G. Prohibiting the unregulated cutting of trees or harvesting of forest products within a woodland; to establishing a permit process which will regulate the manner and extent of tree cutting and harvesting of forest products from within these unique and valuable natural resources area; and to prescribing the review process for the issuance of tree cutting and harvesting permits.

**SECTION 2. DEFINITION**

Words and phrases used in this Ordinance shall have their usual and customary meaning, provided:

- A. **Canopy.** The outermost spreading vegetative layer of any woody plant(s) delineated by the drip-line.
- B. **Clearing.** The severing of woody plants (herein defined) above ground level leaving root system and stumps intact.
- C. **Commercial nursery or tree farm.** A licensed plant or tree nursery or farm in relation to those trees planted and growing on the premises of the licensee, which are planted and growing for



sale or intended sale to the general public in the ordinary course of said licensee's business.

- D. **Critical Root Zone.** The circular area surrounding a tree which is considered to contain tree roots within 18 inches of the ground surface. The radius of the critical root zone is, in feet, the same numerical value as the tree's diameter at breast height (DBH) in inches, and is measured outward from the center of the tree. For example, the critical root zone of a 12 inch DBH tree has a radius of 12 feet.
- E. **Diameter at Breast Height (DBH).** The diameter of a tree measured four (4) feet above the existing grade.
- F. **Drip Line.** An imaginary vertical line that extends downward from the outermost tips of the tree branches to the ground.
- G. **Grubbing.** The effective removal of understory vegetation from a site which does not include the removal of any tree with a DBH of greater than three (3) inches.
- H. **Historic/Landmark Tree.** A tree which, pursuant to this ordinance, has been designated by the [community] Planning Commission to be of notable historic interest to the [community] because of age, type, size, or historic association.
- I. **Land Clearing.** Those operations where trees and vegetation are removed and which occur previous to construction of building (e.g. road right of way excavation, utility excavation, grubbing, and any other necessary clearing operation).
- J. **Linkage Vegetation.** Strips of vegetation including fencerows, hedgerows, shrubby stream banks, road edge, railroad edge, and public rights-of-way that function as travel lanes for animal-life, pedestrian and vehicular traffic, as passive and recreational green belts, and as visual screens, noise buffers, and weather control vegetation.
- K. **No tree Affidavit.** A signed, notarized statement by owner or agent stating that no tree exists upon the site of eight inch DBH or greater, or no linkage vegetation of significant value.
- L. **Protective Barrier.** A physical structure limiting access to a protected area, composed of wood high contrasting fencing or other suitable materials, which assures compliance with the intent of this ordinance. Variations of these methods may be permitted upon written request if they satisfy the intent of this ordinance.
- M. **Remove and Removal.** The cutting of trees and the injury and/or destruction of any form of vegetation, by whatever method, on any lands subject to this ordinance.
- N. **Significant Individual Trees.** Deciduous hardwood or evergreen trees existing in a healthful condition with DBH in excess of eight (8) inches.
- O. **Specimen Tree.** Any tree of twenty four (24) inch DBH or greater, or that is of a type and DBH equal to or greater than shown on the Specimen Tree List, and that has a health and condition standard factor of over fifty percent (50%) based on the Standards established by the International Society of Arboriculture. These standards consider the soundness of the trunk, the growth rate, the structure of the tree, the presence of insects or disease, the crown development, and the life expectancy. The definition of a specimen tree does not include any tree identified as an invasive species on the [community]'s Invasive Species List.



- P. **Transplant.** The digging up by a property owner of a tree from one place on a property and the planting of the same tree in another place on the same property.
- Q. **Tree.** A woody plant with an erect perennial, which at maturity is thirteen (13) feet or more in height, which has a more or less definite crown of foliage.
- R. **Woodland.** A forested area of one-half (2) acre or more with a gross basal area (GBA) of thirty (30) square feet per one-half (2) acre, containing twenty (20) trees per one-half (2) acre greater than eight (8) inches in diameter at breast height (DBH), or a plantation of one-half (2) acre or more with a minimum average DBH of ten (10) inches. The critical root zone of all trees on the perimeter of the forested area or plantation defines the area of a woodland.
- S. **Woody Plants.** Trees two (2) inches or greater in diameter measured four (4) feet above the existing grade, shrubs two (2) inches or greater in diameter measured at the existing grade (ground level), or trees and shrubs ten (10) feet or greater in height.

### SECTION 3. APPLICABILITY

- A. **Woodland Use Permit Required.** Except for those activities expressly permitted by subsection B. below, it is unlawful for any person to conduct any activity within a regulated woodlands area without first obtaining a woodland use permit upon proper application, including but not limited to the following:
  - 1. Remove, damage, or destroy any tree with a DBH of eight (8) inches or more;
  - 2. Remove, damage or destroy any tree or similar woody vegetation of any DBH in a woodlands area that is also

within a wetland or watercourse regulated by the wetlands protection act MCL 324.30301 et seq.;

- 3. Remove, damage, or destroy any historic or specimen tree;
- 4. Remove, damage, or destroy any vegetation within a linkage strip designated by the Planning Commission;
- 5. Land clearing or grubbing; and,
- 6. The cutting of trees or harvesting of forest products within a woodland.

- B. **Activities Not Requiring a Permit.** Notwithstanding the prohibition of subsection A., the following activities are permitted within woodlands areas without a woodlands use permit:

- 1. The removal of trees on a single family residential lot where a valid building permit has been issued for a single family residence and the trees are within fifteen (15) feet of the building footprint, driveway or other construction shown on the approved plan;
- 2. The removal or trimming of dead, diseased, or damaged trees or other woody vegetation provided that the damage resulted from an accident or nonhuman cause and provided further that the removal is accomplished through the use of standard forestry practices and techniques;
- 3. The regular trimming, pruning and maintenance of trees, or the trimming trees which might reasonably be expected to cause injury to persons or property or cause damage to an essential service utility if left unattended;



4. Farming, gardening, raising of small animals, harvesting of crops and nursery practices, where otherwise legally permitted, and where compatible with the individual woodland ecology, provided that a forest management use permit is obtained pursuant to section 7 for forestry activities within a woodlands area; and
5. Actions which are made necessary by an emergency, such as tornado, windstorm, flood, freeze, dangerous and infectious insect infestation or disease, or other disaster, in order to prevent injury or damage to persons or property, and where deferring such action in order to obtain authorization under this section would jeopardize persons or property, such actions may be taken without authorization under this section to the limited degree necessary. A person taking such emergency action shall, within fourteen (14) days of such action, provide a report to the [community], describing the actions taken, the nature of the emergency necessitating the action, and the extent of the cutting or removal of, or damage to, any trees or area protected by this section. Such report shall be reviewed by the [community] to determine whether the action taken was reasonably necessitated by an emergency situation as described above. To the extent actions were taken that exceeded those reasonably necessitated by the emergency, the person in question shall be required to provide replacement trees and take other restorative action as determined necessary by the Planning Commission under all of the circumstances.

D. **Development Proposal.** Prior to the approval of any site plan or tentative preliminary plat, approval shall be obtained under the provisions of this ordinance for any site determined to be a regulated woodland or contain regulated

historic/landmark/specimen trees or linkage strips, as provided for herein.

- E. **No Tree Affidavit.** Where the proposed activity is located on a site with no trees of eight (8) inch DBH, or greater, and no linkage strips, the applicant shall so indicate on the application, and submit a no tree affidavit. In such case, the [community] shall conduct an inspection of the site. If the site inspection confirms the applicant's documentation, the applicant shall be relieved of the necessity of providing unnecessary information. However, where these are trees less than eight (8) inches DBH that are otherwise potentially good specimens of that particular woodlot or linkage strip, additional information will be required, such as quality, size species, health, and such additional information as the [community] request.
- F. **Areas Not To Be Disturbed.** In those instances where areas of woodlands or linkage strips on a site are not to be disturbed, the site plan shall designate such areas as "not to be disturbed" and shall not be required to identify, except for general information as to species, number and size of protected trees and shall further be required to protect such areas from encroachment during construction activities.

#### SECTION 4. DETERMINATION OF REGULATORY STATUS.

This Ordinance shall apply to the following:

- A. **Regulated Woodland.** A regulated woodland shall constitute a forested area of one-half (½) acre or more with one or more of the following:
  1. A gross basal area of thirty (30) square feet per one-half (2) acre, or



2. Containing twenty (20) trees per one half (½) acre greater than eight (8) inches DBH
- B. **Linkage Strips.** All vegetation within a linkage strips.
- C. **Along Roads.** All trees, eight (8) inch DBH or greater, within twenty (20) feet of a county primary road right-of-way.
- D. **Individual Landmark Trees.** Any significant individual tree with DBH of twenty four (24) inches or greater.
- E. **Historic or Specimen Tree.** A person may nominate a tree within the [community] for designation as a historic tree, or specimen tree based upon its age, type, size, historic, or cultural associations. Such a nomination shall be made upon that form provided by the Planning Commission. Where the nomination is not made by the owner of the property where the tree is located, the owner shall be notified in writing at least fifteen (15) days in advance of the time, date, and place that the Planning Commission will consider the designation. The notice shall advise the owner that the designation of the tree as a linkage strip or historic or specimen tree will make it unlawful to remove, damage, or destroy the vegetation absent the granting of a woodlands use permit by the [community].
1. The Planning Commission may designate a tree upon finding that, because of one or more of the following unique characteristics, the tree should be preserved as a historic tree:
    - a. The tree is associated with a notable person or historic figure;
    - b. The tree is associated with the history or development of the nation, the state, or the [community];
    - c. The tree is associated with an outstanding person or institution;
    - d. The tree is associated with early forestry or conservation; or
    - e. The tree is associated with American Indian history, legend or lore.
  2. The Planning Commission may designate a tree as a specimen tree upon a finding that, because of one or more of the following unique characteristics, the tree should be preserved as a specimen tree:
    - a. The tree is the predominant tree within a distinct, scenic or aesthetically valued setting;
    - b. The tree is of unusual age or size for that species and this climatic and geographic location. Examples include trees listed on the American Associate Social Register of Big Trees or the Michigan Botanical Club as a large tree; or
    - c. The tree has gained prominence due to unusual form or botanical characteristics.

### SECTION 5. APPLICATION AND WOODLAND INVENTORY.

- A. A woodland permit applicant shall submit the following materials to the Community and Economic Development Department:
1. A completed use permit application which includes the following:



- a. The name, address, and telephone number of the owner of the property, the applicant and of the applicant's agent. Where the applicant is not the owner of the property, a written authorization from the owner permitting the proposed activity;
  - b. The project location, including, as applicable, the street, road, or highway, section number, name of subdivision, and name of any watercourse which will or may be impacted; and
  - c. A detailed description and statement of purpose of the proposed activity.
2. A use permit application fee in an amount as set by resolution of the [community]; and,
  3. A site plan or survey that includes the following information:
    - a. The shape and dimensions of the lot or parcel, together with the existing and proposed locations of structure and improvements, if any;
    - b. Locations, based upon actual field survey, identifying by number all existing trees of eight (8) inch DBH or greater and all other trees to be protected. All such trees proposed to remain, to be transplanted or to be removed shall be so designated. The plan shall be accompanied by a separate key identifying the trees numbered by size, common and genus name, (e.g.: maple/acer) condition, density and spacing. All such trees shall be tagged in the field with their identification numbers. A tree survey shall not be required for a woodland area to be left undisturbed by development activity, provided the site plan clearly indicates the area to be left in a natural state and the protection measures of Section 8 are completed.
    - c. Location, based upon actual field survey, of all linkage strips on the site as well as descriptions of the dominant shrubs and, if present, trees within the association;
    - d. A statement showing how trees not proposed for removal are to be protected during land clearing, construction, and on a permanent basis, including the proposed use of protective barriers, tree wells, tunneling or retaining walls (see section 8, Tree Protection During Construction);
    - e. Location and dimensions of all setbacks, easements, and existing and proposed public and private utilities;
    - f. Statements as to grade changes proposed and proposed drainage pattern changes for the lot or parcel and how such changes will affect regulated trees;
    - g. The number of trees to be cut which have a DBH of eight (8) inches or more or the number of shrubs to be cut in a linkage strip, with a plan and cost estimate for their replacement.
- B. **Land clearing or grubbing.** Where the proposed activity is land clearing or grubbing only (no tree equal to or over eight (8) inch caliper being removed) the preparation of a site plan which depicts the location of all trees shall not be required. However, the applicant shall provide the limits of activity and general



information as to the number, species, and size of the protected trees on the property before a use permit for the clearing or grubbing may be granted.

**SECTION 6. WOODLAND PERMITS FOR SITE PLANS AND SUBDIVISION PLATS.**

A. **Woodland permit required.** There shall be no cutting of trees or harvesting of forest products within a woodland for the purpose of developing a site plan, condominium or subdivision plat without first obtaining a woodland permit by the [community]. It shall be the responsibility of the developer to notify the individual builders or owners of all restrictions pertaining to the preservation of woodlands pursuant to the approved woodland permit.

B. **Parcels containing woodlands.** Development of platted or unplatted parcels containing woodlands shall be subject to the woodland review and approval procedures if the site plan proposes encroachment into the woodland. This woodland acreage is independent of property lines and may incorporate contiguous woodlands on adjacent property.

C. **Maximum woodland disturbance.**

1. The site plan or plat shall identify the boundary of the woodland as it exists, and a proposed woodland disturbance configuration which shall delineate the specific boundary of the area of the woodland requested to be disturbed. The woodland disturbance configuration shall be determined based upon the following:

a. Conservation of the separate identified tree stands within the woodland;

- b. Soil type (permeability, fertility, structure), considering the likelihood of survival following development;
- c. Reproductive capacity;
- d. Vegetative species diversity;
- e. Vegetative density;
- f. Basal area;
- g. Animal habitat; and
- h. Other factors deemed relevant to preservation of the woodland based upon particular characteristics.

2. There shall be an entitlement to a woodland disturbance in connection with the development and use of a site plan or plat equal to fifty percent (50%) of each tree stand within the woodland area on the property in question, with the specific disturbance area to be determined as provided in this ordinance. The balance, or fifty percent (50%) of the area of each tree stand on the property, shall be preserved from disturbance.

3. Based upon a review of the particular woodland, the Planning Commission may establish an adjustment maintaining the overall woodland disturbance at fifty percent (50%), but specifying greater disturbance than fifty percent (50%) of one (1) tree stand coupled with a corresponding decrease in disturbance of one (1) or more other tree stands on the property in question. Such adjustment shall be established based upon a consideration of the relative quality rating of the



respective tree stand, using the following quality rating criteria: species; likelihood of survival following development; tree stand size tree stand density; habitat potential; animal-life observation; scenic quality; and general health of tree stand.

4. The Planning Commission shall permit a disturbance level greater than fifty percent (50%) where more than fifty percent (50%) of the site to be developed consists of woodlands. The extent of greater disturbance permitted shall be the minimum necessary, as determined by the Planning Commission, and based upon the analysis of alternative development plans.
5. The site plan or plat shall reflect the conservation of the woodland by either:
  - a. Selective clearing within the woodland to create wooded sites; or
  - b. Creation of private woodland park areas within which no development or clearing shall take place. Utilities, roads or similar infrastructure may be permitted within such woodland park areas if and to the extent the disturbance of such improvements would not result in the maximum disturbance area being exceeded.
  - c. Siting requirements for woodland construction envelopes and other disturbances within the property under review shall take into consideration the following criteria: maintenance of proper distance between disturbances to sustain shade tolerant species, prevent windthrow, reduce soil erosion,

preservation of water infiltration rates to sustain soil moisture regimes and localized groundwater flow, preservation of sensitive or critical plant species, and preservation of animal habitat.

- d. The removal or relocation of trees shall be limited to those instances when necessary for the location of structures or site improvements and when no feasible and prudent alternative location for the structures or improvements can be accomplished without causing undue hardship.

**D. Replacement Trees.** A replacement tree or a combination of trees of a species native to Michigan shall be provided to equal a minimum of fifty percent (50%) of the original DBH for each historic/landmark/specimen tree, or woodland tree eight (8) inches or larger, that is removed. Replacement trees shall be non-sterile varieties. A range of size for replacement trees shall be provided with the minimum size of a deciduous replacement tree being one (1) inch caliper and the average size two (2) inch caliper. The minimum size of an evergreen replacement tree shall be five (5) feet in height. If more than twenty (20) replacement trees are required, a mixture of three (3) or more species must be used.

**E. Woodland permit for site plan or plat.**

1. For those developments and operations where the Planning Commission is the final approval authorized as defined in this ordinance, the Planning Commission may authorize the issuance or denial of a woodland development permit.
2. For those plats, condominiums and uses where the [community legislative body] is the final approval



authority, the recommendation of the Planning Commission shall be referred to the [community legislative body] along with a separate recommendation for the disposition of the plat, condominium or use. The [community legislative body] may authorize the issuance of a woodland development permit with or without specific conditions attached or deny the issuance of the woodland development permit.

3. Upon approval of a woodland permit, a letter of credit or escrow account shall be posted with the [community] as a condition of site plan approval by the petitioner to guarantee compliance with the disturbance conditions stipulated in the site plan. The amount of the financial instrument shall be no less than ten (10) percent of the total inventory of median size trees and larger to be preserved on the site as calculated by the total undisturbed land area times the field tree density times six hundred dollars (\$600.00). A financial instrument shall be structured in such a manner that if the total disturbed land area, either directly or indirectly, exceeds the number allowed on the approved site plan, this account shall provide for replacement landscaping at the rate of six hundred dollars (\$600.00) per removed tree in excess of approved allowance. The [community] shall authorize such replacement landscaping as soon as practical. The letter of credit or escrow account shall be maintained until the development is completed or final certificates of occupancy are issued, although reductions in the amount of the instrument are allowed as portions of the site are completed and final certificates of occupancy are issued.
4. The issuance of building permits shall be contingent upon compliance with the approved clearing schedule and inspections by the [community]. Through the

process of periodic site inspections by the [community] a tally of both direct and indirect tree removal will be maintained by the [community]. There shall be a final inspection made by the [community] for compliance with these woodland provisions or respective lots upon completion of the development and prior to release of final certificates of occupancy and letters of credit or escrow accounts on deposit with the [community].

5. On single family lots within a woodland, the application for a building permit shall be accompanied by a grading plan. In addition to the minimum requirements, the grading plan shall include the size, location and species of all trees six (6) inches and larger on the subject property, and specify which trees are proposed to be removed.
6. The petitioner shall stake, paint or otherwise delineate the location of all disturbances proposed in the woodland, including roadways, structures, utilities, storm water retention basins, etc., prior to the issuance of the building permit for any construction. The [community] shall inspect the site for compliance with the approved plan. Protective fencing may be required around any trees to be preserved. Unless otherwise specified, all trees within the woodland preservation area, regardless of size, shall be protected during construction.
7. The [community] may approve minor adjustments to the location of a building, road, drive, utility or other improvement where it can be shown that additional trees, healthier trees or trees with a higher value rating will be preserved as a result of the adjustment, provided the total percentage of trees six (6) inches and larger to be removed and the area of land to be disturbed is not



increased and all other codes and ordinances are met. Such changes shall be verified in the field and documented with revised site plans.

## SECTION 7. WOODLAND PERMIT FOR HARVESTING.

- A. There shall be no cutting of trees or harvesting of forest products lying either wholly or partially within a woodland without first obtaining a woodland permit from the [community].
- B. A harvest plan for the woodland shall be prepared and signed by a forester licensed and registered in the state and submitted with the application. The harvest plan shall incorporate the following information and standards in addition to a complete description of the products to be harvested:
1. A present description of the woodland specifying basal area, tree species mixture, a sampling of tree size and the notation of unusual, scarce or endangered trees.
  2. A tally of trees to be harvested stating the species, size and quantity. This tally shall include those trees removed which are diseased, damaged or in an otherwise unhealthy condition.
  3. A general description of the woodland after the proposed harvest specifying basal area and tree species mixture. A basal area which provides canopy cover, reproductive capacity, understory structure, and animal habitat sufficient to maintain the function performed by the particular forested area disturbed shall be maintained within the woodland after harvesting. This basal area will be determined based upon the application of principles of forestry science, as proposed by the applicant and approved in the reasonable discretion of the [community] forester.
4. A list of equipment to be used in the harvest process in order to estimate the amount of damage which can be expected to nonharvested trees within the woodland.
  5. The diversity of tree species shall be maintained within the woodland at generally the same ratio both before and after the harvest, except to the extent the applicant demonstrates and the [community]'s forester reasonably finds and explains that maintenance of such diversity will serve no purpose, or is inconsistent with standards customarily applied in the forestry industry.
  6. The perimeter of the woodland shall not be disturbed and shall be maintained at a width of at least one hundred (100) feet, except for ingress and egress points as indicated on the approved woodland permit. If a petitioner demonstrates unnecessary hardship as a result of this requirement, the [community] shall grant relief to the extent necessary to remove the unnecessary hardship.
  7. A time schedule for the start and completion of all work within the woodland.
  8. The estimated value of the harvest based on the sale of the forest products, not the fee paid to the landowner, shall be included as part of the harvest plan.
- C. A restoration program and time schedule shall be included and provide for the following:
1. Grading and seeding all areas disturbed as a result of the harvest activity, including wheel ruts, log yards, aprons and concentrated work areas.
  2. Tree stumps shall be cut flush with the ground.



3. For all trunks and branches four (4) inches or greater in diameter, crowns of fallen trees shall be reduced to firewood length and stacked unless they are to be removed from the site as they are cut. Trunks and branches less than four (4) inches in diameter shall be reduced to woodchips and left on the site.

D. The [community] shall review the woodland permit application for both completeness and adherence to ordinance standards. A site inspection of the subject woodland shall be made by the [community].

E. **Woodland permit for harvesting.**

1. Upon approval of a woodland permit, the petitioner shall be required to post a letter of credit or establish an escrow account with the [community] in the amount of at least ten (10) percent of the estimated value of the proposed harvest. The permit shall only be issued following the posting of the required assurances. The escrow amount shall be returned to the petitioner upon completion and inspection by the [community] of the restoration work required by the approved woodland permit.
2. In the event of nonperformance of work required as part of the permit within the time limit established by the woodland permit, the escrow account shall be forfeited to the [community].
3. A woodland permit, having been approved, shall be valid for a period not exceeding one (1) year from the date of issuance. All restoration work prescribed as part of the woodland permit must be completed within six (6) months from the start of work within the woodland.

Extension of the six (6) month limit may be granted by the [community] up to an additional six (6) months, providing it is requested in writing by the permit holder(s), the conditions which existed at the date the permit was granted remain unchanged, and the reasons necessitating the extension are provided.

F. **Creation of new unregulated woodland.**

1. Subject to the conditions set forth below, a person may plant trees so as to create a new area which would otherwise be or become a woodland, as defined in this section, but which shall not be considered a regulated woodland.
2. An area of newly planted trees shall not be considered a regulated woodland if all of the following conditions are met prior to the planting of any new trees:
  - a. No part of the area on which the trees are to be planted shall be within an existing woodland.
  - b. The owner of the property shall submit to the [Community] a plan prepared by a State of Michigan registered forester, outlining and describing the plan for the planting, maintenance and removal of the new trees. The plan shall be subject to approval by the [community]'s forester for the purpose of confirming that the plan is designed to achieve sound forestry management objectives.
3. There shall be ongoing conformance with the approved forestry management plan.



3. The [Community] shall maintain the forestry management plan on file at the [community] unless and until the plan has been carried out to completion.

#### **SECTION 8. TREE PROTECTION DURING CONSTRUCTION.**

- A. Before development, land clearing, grading or land alteration for which a use permit is required by this ordinance commences, the developer shall be required to erect for the protection of remaining plants, barriers as approved by the [community]. Barrier fencing shall be installed at the limits of soil disturbance adjacent to any woodlands to be protected and at the perimeter of the critical root zone of historic/landmark/specimen trees which are located within a disturbance area. No filling, excavating or storage of materials, debris or equipment shall take place within the fenced area.
- B. Barrier fencing shall be a minimum of four (4) feet in height and shall remain in place in good condition. Protection shall remain in its approved location until such time as it is authorized to be removed by the [community], or issuance of a final certificate of occupancy. During construction, no attachments or wires shall be attached to any protected trees. Wood, metal, or other substantial material shall be utilized in the construction of barriers.

#### **SECTION 9. APPEAL OF WOODLAND PERMIT DECISION.**

- A. An appeal may be made by any person from a decision of the [community]. Such an appeal shall be made to the [community legislative body] which shall have the authority to approve, reverse or modify any such recommendation.
- B. Any appeal to the [community legislative body] must be received in writing by the [community] clerk within twenty one (21) days of the woodland permit decision.

- C. A public hearing shall be held by the [community legislative body] to consider the appeal. Notice of the public hearing shall be sent not less than fifteen (15) nor more than thirty (30) days prior to the hearing date by first class mail to the property owners and occupants within three hundred (300) feet of the subject property. The notice shall indicate that an appeal has been requested, the nature of the appeal, the petitioner's name and address, and the time, date and location of the hearing. The notice shall also be published in one (1) of the legally approved newspapers of general circulation in the [community].
- D. The [community legislative body] shall be the only body empowered to reverse or modify a decision under the woodlands regulations.

#### **SECTION 10. ENFORCEMENT AND PENALTIES.**

- A. **Civil Infraction.** Any person violating any of the provisions of this ordinance shall be guilty of a municipal civil infraction, and upon conviction thereof shall be fined not more than \$500.00 for each such violation. Each day upon which such violation occurs shall constitute a separate offense.
- B. **Nuisance.** Any use or activity in violation of the terms of this ordinance is declared to be a nuisance per se, and may be abated by order of any court of competent jurisdiction. The [community] in addition to other remedies, may institute any appropriate action or proceeding to prevent, abate, or restrain the violation. All cost, fees, and expenses in connection with such action shall be assessed as damages against the violator(s).
- C. **Woodland Replacement.** In addition to the penalties provided in this Ordinance, any person who violates any provision of the woodlands protection provisions of this Ordinance shall forfeit and pay to the [community] a civil penalty equal to the total



value of those trees illegally removed or damaged, as computed from the International Society of Arboriculture shade tree value formula. Such fines shall accrue to the [community] and may be recovered in a civil action brought by the [community]. Said fines so collected shall be placed in the [community] tree fund. Replacement of illegally removed trees may be required as restoration in lieu of money. This replacement will be computed on an inch for inch ratio based on the total diameter measured at DBH in inches of the illegally removed trees. If, because of destruction of the removed trees, exact inch to inch measurements cannot be obtained, the [community] may use other means to estimate the tree loss. A combination of money and tree replacement may be required.



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