

APPENDICES



Photo A-1: Good quality streams are health and economic assets for rural communities.

APPENDIX A:
MASTER PLAN AND ZONING ORDINANCE
SAMPLE LANGUAGE

ESSENTIAL ELEMENTS

Low Impact Development – Master Plan

Good Approach

Insert language as a goal within the Master Plan.

Goal: New development and redevelopment projects should incorporate low impact development (LID) approaches. These approaches include the reduction of hard or impervious surfaces, the use of vegetation to filter runoff from developed or cleared areas, and the use of natural swales to convey and filter stormwater.

Better Approach

Include the goal in the “Good” approach, but also insert language below within the environmental/natural resources section of the Master Plan.

- One of the most cost-effective ways to accommodate new development and redevelopment projects with the least impact on the environment is by means of LID approaches. Low impact development is a set of approaches to stormwater management that are designed more like how nature handles stormwater than highly engineered and constructed systems. The LID approaches tend to be much less expensive for developers and public agencies, do more to purify stormwater, protect groundwater and surface sources of water for domestic use, reduce the temperature

of stormwater to protect fisheries, and contribute to a natural or rural scenic quality than conventionally engineered stormwater systems.

The LID approaches include the reduction of hard or impervious surfaces, the use of vegetation to filter runoff from developed or cleared areas, and the use of natural swales to convey and filter stormwater and simultaneously allow it to soak into the ground.

Best Approach

The language in the “Better” approach may be the highest needed for this element of the Master Plan.

Environmental Inventory – Master Plan

Good Approach

The environmental inventory should, at a minimum, identify existing conditions and issues for major water courses, minor and major drains, hydrologic soils, and other significant natural features.

Better Approach

Insert language as a goal within the Master Plan.

Goal: Consider natural features maps and maps of existing natural resources when planning areas for future land uses or public infrastructure, when considering proposed amendments to the Master Plan or Zoning Ordinance, and when considering application for any new public or private uses of land or public buildings.

Best Approach

Insert the “Better” approach, plus the following:

Objectives:

The Planning Commission will:

- Use natural features maps, and maps of existing natural resources to plan for future land use, infrastructure, and economic development.
- Update the Zoning Ordinance to include further consideration of natural features and natural resources on amendments and Site Plan Review decisions.

Water Quality – Master Plan

Good Approach

Insert language as a goal within the Master Plan.

Goal: Preserve and enhance [or protect from contamination and restore where polluted] natural and environmental resources and the quality of surface and ground water of (NAME OF JURISDICTION) for all current and future residents.

Better Approach

Include the goal in the “Good” approach, but also insert language that follows within the environmental/natural resources section. (The following example is from a specific community. In your community’s Master Plan, refer to water quality issues specific to your community and/or regional watershed.)

- The Saginaw Bay is a federal-designated Area of Concern, because degraded water quality conditions have impaired a number of beneficial uses. It is up to the community and all other jurisdictions within the 22 counties that are a part of the Saginaw Bay Watershed, to protect its water courses from nonpoint source pollution, and, hence, help reduce sediment and soil erosion from further contaminating the Bay.

Best Approach

Same as the “Better” approach, plus indicate what measures should be taken to accomplish this goal, such as referring to the proposed zoning measures outlined in the Zoning Plan section of the Master Plan or including objectives, such as those below

Objectives:

- Our Community will ensure that as future development occurs, LID approaches for managing stormwater will be encouraged/required to be used where feasible.
- Our Community will provide guidelines for the safe and responsible storage and use of hazardous chemicals and waste products in the community.

Water Quality – Zoning Ordinance

Good Approach

Insert language into the Purpose section of the Zoning Ordinance.

SECTION 102: PURPOSE

- A. Protect the character of the community and enhance the social and economic stability of the Township and individual zoning districts as herein set forth.
 - 1. Protect natural features, ground, and surface waters from pollution.

Better Approach

The “Good” approach may be the highest needed for this element.

Best Approach

The “Good” approach may be the highest needed for this element.

Coordinated Permitting – Master Plan

Good Approach

Insert language as a goal within the Master Plan.

Goal: The Zoning Administrator will not issue Zoning/Land Use permits nor shall the Building Administrator issue building permits until evidence that all other permits required from other agencies have been received.

Better Approach

Insert the “Good” approach, plus the following:

Objective: Obtain the current MDEQ Environmental Permits Checklist and insert all the local agency contacts information and place on the counter of the offices of the Zoning Administrator and Building Inspector.

Best Approach

Insert language as a goal within the Master Plan.

Goal: The Planning Commission will help establish a coordinated permit system among local, county, and state government, including a Site Plan Review, to ensure water quality protection standards are met and development activities proceed without unnecessary burden on private interests.

Objectives:

- Amend the Zoning Ordinance to provide that no zoning/land use permit, special use permit, or any other permit authorized under the Zoning Ordinance will be issued by the Zoning Administrator for a project until all other required agency approvals have been granted, or that any zoning or other permit under the Zoning Ordinance shall only be issued conditioned on the receipt of valid permits from certain specified agencies within a specified time.
- The coordinated permit system will involve staff of the following agencies, depending on the jurisdiction: county zoning, county building, county soil erosion and sedimentation control,

county drains, the County Road Commission, the Michigan Department of Transportation (MDOT), the U.S. Army Corps of Engineers (USACOE), the Michigan Department of Environmental Quality (MDEQ), and any other pertinent local authority.

- The coordinated permit system will include the following elements: 1) a quick determination that all required information has been received from the applicant for all the agencies involved; 2) a commitment from each agency to review permits within a reasonable, specified period of time; 3) a commitment by each agency to share review comments and where feasible work out differences; 4) a commitment by all agencies to coordinate responses back to the applicant (usually through conditional approvals); 5) a commitment by all agencies to make final decisions in timely fashion (usually after an applicant submits revised documents that meet ordinance/code requirements); and 6) a Zoning Ordinance provision that provides no zoning/land use permit, special use permit, or any other permit authorized under the Ordinance will be issued by the Zoning Administrator for a project until all other required agency approvals have been granted, or that any zoning or other permit under the Ordinance shall only be issued conditioned on the receipt of valid

permits from certain specified agencies within a specified time.

- A lead agency will be designated and that agency will coordinate joint meetings to consider project requests involving many county permits.
- The lead agency will also coordinate review with other agencies that might be involved, such as agencies within the MDEQ, the MDOT, USACOE, and others as appropriate.

Coordinated Permitting – Zoning Ordinance

Good Approach

Insert into General Provisions section, or where applicable.

SECTION ___. PERMIT COORDINATION
All land uses and construction activities shall conform with the provisions of this Ordinance, and all applicable local, county, state, and federal regulations, including, but not limited to, those listed below. Prior to the issuance of a Building Permit, Zoning/Land Use Permit, Special Approval Use Permit, or other permit required under this Ordinance, there shall be submitted to the Zoning Administrator the following approved permits in all cases where such permits are required, or applicable:

- Driveway permit, including approved culverts, where necessary, as approved by the County Road Commission or the MDOT, as applicable.

- Septic system permit approved by the [county or district] Health Department.
- Soil erosion and sedimentation control permit from the local SESC permitting agency.
- Floodplain permit from the Zoning Administrator.
- Wetland permit from the MDEQ.
- Erection of towers or communication equipment from the Federal Communications Commission.
- Other permits from local, county, state, or federal authorities as pertinent, such as transport, storage, use, and/or disposal of hazardous substances, waste, or other materials.
- Any other permits except a Building Permit, which cannot be obtained until a Zoning/Land Use Permit is obtained from the Zoning Administrator.

Better Approach

Insert into the General Provisions section, or where applicable.

SECTION __. DRIVEWAY, SEPTIC, SOIL EROSION, FLOODPLAIN, AND OTHER PERMITS

All land uses and construction activities shall conform with the provisions of this ordinance and all applicable local, county, state, and federal regulations, including, but not limited, to those listed below. Prior to

the issuance of a Building Permit, Zoning/Land Use Permit, Special Use Permit, or other permit required under this Ordinance, there shall be submitted to the Zoning Administrator the following approved permits in all cases where such permits are required, or applicable:

- A. Driveway permit, including approved culverts, where necessary, as approved by the County Road Commission or the MDOT, as applicable.
- B. Septic system permit approved by the [county or district] Health Department.
- C. Soil erosion and sedimentation control permit from the local SESC permitting agency.
- D. Floodplain permit from the County Building and Zoning Department.
- E. Wetland permit from the MDEQ.
- F. High-risk erosion area permit from the MDEQ.
- G. Designated environmental area permit from the MDEQ.
- H. Bottomlands, shorelines or coastal wetlands permits from the USACOE.
- I. Erection of towers or communication equipment from the Federal Communications Commission.

- J. Erection of tall buildings or structures within an airport approach zone, from the airport authority.
- K. Other permits from local, county, state, or federal authorities as pertinent, such as transport, storage, use, and/or disposal of hazardous substances, waste, or other materials.
- L. Building Permit addressing requirements of the State Construction Code from the County Building and Zoning Department.

Best Approach

Insert the “Better” approach, plus the following:

SECTION __ COORDINATED PERMITTING

On any application requiring review and/or approval of another agency in addition to the approving entities authorized by this Ordinance, the Zoning Administrator shall do the following:

- A. Coordinate permit review with the County Building Permit staff, the County Soil Erosion and Sedimentation Control staff, the County Drain Commissioner, the County Road Commission staff, the County Health Department staff, and any pertinent local authority, or any pertinent state or federal agency, including, but not limited to, the Michigan Department of Natural Resources (MDNR), the MDEQ, the MDOT, the U.S.

Environmental Protection Agency (USEPA), or the USACOE.

- B. Ensure that the above named or other pertinent agencies have a copy of the application and site plan, if any, within one week of a determination that it meets all the submittal requirements of the Zoning Ordinance. If one of the agencies indicates the application does not meet the submittal requirements of the rules or regulations of that agency, ask the applicant to submit an updated copy of the application and any site plan to all the agencies involved at the same time it is provided to an agency requesting updated or supplementary information.
- C. Request review comments of each agency by the time specified in the ordinance for the nature of the request, or within two weeks of receipt of the application and any site plan from the Zoning Administrator, whichever comes first.
- D. Schedule a meeting with the pertinent review agencies to go over comments received and determine what if any conditions are necessary under each set of rules or regulations in order to receive approval of the request. This shall include any conditions by one agency of approval of another agency.
- E. Take action to approve, disapprove, or approve with conditions the application within the time specified

in the ordinance, or within the time specified in the agreement with the cooperating agencies. Such action may include conditional approval of a Zoning/Land Use Permit, Special Use Permit, or other permit under this Ordinance upon evidence that all other required permits have been received by the other pertinent agencies.

Earth Change Activity per SESCA – Master Plan

Good Approach

There is nothing to add as long as the “Good” language for Coordinated Permitting has been added.

Better Approach

Insert language as a goal within the Master Plan.

Goal: Zoning regulations ensure new development and redevelopment protects water bodies and water quality by proceeding according to an approved Soil Erosion and Sedimentation Control Permit.

Best Approach

Insert the “Better” approach, plus the following:

- Zoning regulations ensure all new development projects are required to provide for on-site stormwater retention and use LID techniques where reasonable and feasible.

- Zoning regulations reflect that existing vegetation that is healthy and suitable for landscaping objectives and that reduces soil erosion and sedimentation, will remain undisturbed as new development occurs.
- Zoning regulations reflect that existing topography be respected and utilized to the advantage of proposed development, without resorting to massive excavation and drastic alteration. Zoning regulations should restrict uses permitted in steeply sloped areas to those which the existing terrain can accommodate without unreasonably presenting future threats of soil erosion, or unnecessary risks of new buildings cracking or slumping.

Earth Change Activity per SESCA – Zoning Ordinance

Good Approach

Insert into Site Plan Review section:

SECTION __. SOIL EROSION AND SEDIMENTATION

The proposed development shall include measures to prevent soil erosion and sedimentation during and after construction. All development within 500 feet of an inland lake or stream, or that proposes to expose more than an acre of soil shall obtain a Soil Erosion

and Sedimentation Control Permit before undertaking land clearing, top soil removal, tree cutting or development unless the activity is exempt under the Natural Resources and Environmental Protection Act, as it is for bonafide agricultural activities.

Better Approach

In addition to the “Good” approach, insert the following language into General Provisions or where applicable.

SECTION __. RESPECT EXISTING TOPOGRAPHY AND NATURAL VEGETATION

- All development within 500 feet of an inland lake or stream, or which proposes to expose more than an acre of soil shall obtain a Soil Erosion and Sedimentation Control Permit before undertaking land clearing, top soil removal, tree cutting, or development unless the activity is exempt under the Natural Resources and Environmental Protection Act, as it is with agricultural activities.
- All land development for which a Zoning/Land Use Permit is required shall attempt to incorporate low impact development solutions before employing more aggressive engineering solutions, including, but not limited to, the following:

1. All development applications shall demonstrate respect for existing topography and utilize it to the advantage of the proposed development, without resorting to massive excavation and drastic alteration except where lot characteristics and the characteristics of abutting land make such limited topographic change unreasonable. Steep slopes should be avoided for alteration or new building construction to prevent soil erosion and unnecessary risk of new buildings cracking or slumping.

2. Existing vegetation that is healthy and suitable for landscaping objectives and that would reduce soil erosion and sedimentation, should remain undisturbed as new development occurs to the extent that is reasonable under the circumstances.

- C. The Zoning Administrator shall determine whether the requirements of sub-section (B) above have been met after consulting with the Soil Erosion and Sedimentation Control officer.

Best Approach

All of the “Better” approach, plus cross-reference section with regulation on setbacks from sensitive natural features.

Accumulation and Disposal of Waste – Master Plan

Good Approach

Insert a goal within the Master Plan.

Goal: Prevent the accumulation of junk or other waste materials in ways or places that present actual or potential hazards to human health, pets or livestock, or to ground or surface water.

Better Approach

Insert the goal in the “Good” category into the Master Plan, plus add the following objectives.

Objectives:

- The Zoning Ordinance should be amended, or local Junk and Blight Control Ordinances should be adopted and updated as needed to prevent blight and prohibit the storage of waste and other materials that are not in approved buildings, containers or other places authorized by law.
- Add a standard to the Site Plan Review section of the Zoning Ordinance, which requires new businesses storing hazardous materials, waste, fuels, salt, or chemicals to be designed to prevent spills and discharges of polluting materials to the surface of the ground, groundwater, lakes, streams, or wetlands.

Best Approach

The “Better” approach may be the highest level needed for this element.

Accumulation and Disposal of Waste – Zoning Ordinance

Good Approach

Insert language into General Provisions or where applicable.

SECTION __. ACCUMULATION OF JUNK OR OTHER WASTE
 No junk or other waste shall be accumulated, stored, or placed outside of a building of any property except as specifically permitted under this Ordinance, or by any local ordinance.

Better Approach

Same as “Good” approach but specifically cross-reference the other ordinance(s) and other entities with regulatory authority (such as Public Health Department). Also, add language in the Site Plan Review section of the Zoning Ordinance shown under the Groundwater Protection – Zoning Ordinance in this Appendix, on page A-13.

Best Approach

The “Better” approach may be the highest level needed for this element.

BEST MANAGEMENT PRACTICES

Parcel Splits for Buildable Area – Master Plan

Good Approach

Insert a goal within the Master Plan.

Goal: Prevent the creation of unbuildable lots on vacant land, as part of a lot split, subdivision, site condominium project, or planned unit development (PUD).

Or,

Goal: Review proposed lot splits for “buildability” to ensure that all new parcels and lots that are proposed to be created, meet the requirements of the Land Division Act, and minimum Zoning Ordinance requirements not only for lot frontage, depth and area, but also have enough buildable area for erection of a structure, plus well and on-site septic system if needed outside of a floodplain, wetland, or sensitive groundwater recharge area.

Better Approach

Insert the “Good” approach, plus the following objective:

Objective: Include in the Zoning Ordinance and local lot split ordinances a provision requiring review of proposed lot splits for “buildability” to ensure that all new parcels and lots that are proposed to be created, meet the requirements of the Land Division Act, and minimum Zoning Ordinance requirements not only for lot frontage, depth, and area, but also have

enough buildable area for erection of a structure, plus a well and on-site septic system if required outside of a floodplain, wetland, high-risk erosion area, designated sand dune, designated environmental area, and/or sensitive groundwater recharge area.

Best Approach

The “Better” approach may be the highest level needed for this element.

Parcel Splits for Buildable Area – Zoning Ordinance

Good Approach

Insert language into the General Provisions or where applicable

SECTION __ LAND DIVISIONS AND ACCESS REQUIREMENTS

A. All divisions/splits of land shall comply with the provisions of P.A. 288 of 1967 as amended by P.A. 591 of 1996, and P.A. 87 of 1997, being the Land Division Act, State of Michigan. Where land does not abut an existing public or private road or private easement, and a new access route is proposed, standards for the new access route(s) are noted below:

1. The legal description of the access route shall be recorded with the description of the new parcel(s); and,
2. Where new access roads cross a watercourse, drainage way, channel, or stream, bridge(s), or other structures providing access

over such watercourse(s) they shall be designed and constructed so as to permit use and provide access to emergency vehicles, i.e., fire trucks, ambulances, tow trucks, road maintenance equipment, etc.

Better Approach

Insert the “Good” approach, plus the following addition:

3. There is adequate buildable area for erection of a structure, plus a well and on-site septic system if required if the land is within a State-regulated floodplain, wetland, high-risk erosion area, or designated environmental area; unless the parcel is being split for purposes other than building development, in which case the same shall be indicated on a notice filed with the deed also indicating the parcel did not have adequate area for a building under applicable regulations at the time it was approved.

Best Approach

Insert the “Better” approach and add the following language to the Site Plan Review section, within the Submittal Requirements sub-section:

- B. Any use that requires Authorization by Special Approval, including PUDs and condominium subdivisions.
- C. Identification and location of all existing watercourses and ponds, vegetation,

concentrations of trees, steep slopes, wetlands, floodplains, very porous soils, and any state- or federal-designated natural features for which a permit from a state or federal agency is required.

- D. The natural features and character of lands shall be preserved wherever possible. Due regard shall be shown for all natural features, such as large trees, natural groves, water courses, and similar community assets that will add attractiveness and value to the property, if preserved. The preservation of drainage and natural stream channels must be considered by the land owner or developer, and the provision of adequate barriers, where appropriate, shall be required.

Land Division Alternatives – Master Plan

Good Approach

Insert language as a goal within the Master Plan.

Goal: The Zoning Administrator and the Planning Commission should encourage landowners with significant natural features to utilize Site Plan Review, open space provisions, and PUD options so as to minimize negative impacts on identified natural features.

Better Approach

Insert the “Good” approach, plus the following objective:

Objective: Ensure Site Plan Review and planned unit development provisions of the Zoning Ordinance require identification of natural features on required submittal documents, and are structured to encourage landowners to avoid negative impacts on these natural features as part of an effort to in essence “build with nature.”

Best Approach

The “Better” approach may be the highest needed for this practice.

Land Division Alternatives – Zoning Ordinance

Good Approach

Insert language into Site Plan Review submittal requirements sub-section:

- A. Identification and location of all existing watercourses and ponds, vegetation, concentrations of trees, steep slopes, wetlands, floodplains, very porous soils, and any state- or federal-designated natural features for which a permit from a state or federal agency is required.

Better Approach

Insert the “Good” approach, plus the following language in the Site Plan Review criteria/standards:

- B. The natural features and character of lands shall be preserved wherever possible. Due regard shall be shown for all natural features, such as large trees, natural groves, water courses,

and similar community assets that will add attractiveness and value to the property, if preserved. The preservation of drainage and natural stream channels must be considered by the proprietor and the provision of adequate barriers, where appropriate, shall be required.

Best Approach

Insert the “Better” approach, plus add the following language to PUDs and condominium subdivisions:

- C. The natural features and character of land within the proposed PUD shall be preserved wherever possible. Due regard shall be shown for all natural features, such as large trees, natural groves, water courses, and similar community assets that will add attractiveness and value to the property, if preserved. The preservation of drainage and natural stream channels must be considered by the proprietor and the provision of adequate barriers, where appropriate, shall be required.

Stormwater Management – Master Plan

Good Approach

Insert language as a goal within the Master Plan.

Goal: Educate land owners and developers on the importance of environmental conservation practices, such as low impact development, and conservation easements that contribute to preservation of natural systems.

Or,

Goal: Monitor water quality, establish minimum stormwater management standards and incorporate low impact development standards in the Zoning Ordinance.

Better Approach

Insert the “Good” approach, plus add the following objectives:

Objectives:

The Planning Commission will:

- Every five years update the water quality data of each of the water bodies in the community.
- Take action to protect wetlands for their ability to store and filter stormwater before releasing into watercourses.
- Propose amendments to the Zoning Ordinance to include stormwater management standards that protect adjacent waters from runoff from developed areas as the result of 50-year storm events.
- Include LID standards in the zoning plan element of the Master Plan and in the Zoning Ordinance.
- Initiate efforts and support efforts of others to education citizens and stakeholders about water quality trends, threats from poorly managed stormwater runoff and other threats to

water quality, and actions that can be taken by individuals and businesses to protect water quality.

Best Approach

Insert the “Better” approach, plus add the following objective:

- Initiate efforts in cooperation with the Drain Commissioner and conservation organizations to educate landowners and stakeholders about the potential benefits of various LID techniques and other stormwater management BMPs, including, but not limited to:
 - Rain gardens;
 - Bioretention;
 - Constructed surface or subsurface filters;
 - Wet ponds, retention basins;
 - Dry retention basins;
 - Two-stage ditches/channels or naturalized ditches;
 - Infiltration basins;
 - Level spreaders;
 - Pervious pavement;
 - Stormwater planters;
 - Vegetated buffer strips;

- Water quality devices (hydrodynamic separators and baffle boxes);
- Wind barriers and shelters;
- Vegetative cover;
- Steep slope protections; and
- Natural feature setbacks.

Stormwater Management – Zoning Ordinance

Good Approach

Insert in Site Plan Review section:

Surface Water Drainage

Attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Stormwater shall be removed from all roofs, canopies and paved areas, and carried away in such a manner that it will not obstruct the flow of vehicular or pedestrian traffic, and will not puddle or freeze in paved areas. Run-off waters shall be detained or retained to remove sediments and to prevent erosion. Design of stormwater management measures should protect adjacent waters from runoff from developed areas as the result of 10-year storm events, unless the Drain Commissioner indicates a higher standard is necessary based on the characteristics of site and

surrounding property. Low impact development standards shall be applied wherever and feasible.

Better Approach

Insert into General Provisions or where applicable.

SECTION __ DRAINAGE

All lots and parcels shall retain stormwater runoff on-site from a 10-year storm event, or detain it so as to allow discharge without negative impact on adjacent lands, watercourses or water bodies above the run-off impact when the application was made. No request for land use approval shall be permitted that will increase the rate of run-off discharge from a lot or parcel or otherwise cause erosion or direct sedimentation upon adjacent properties, including an adjacent street. No request for land use approval shall be permitted that will reduce the level of service currently being provided by existing stormwater management infrastructure or existing drainage patterns unless necessary improvements to such infrastructure or natural drainage pattern are first made according to the terms of permits issued by the proper authorities.

Best Approach

The “Better” approach may be the highest needed for this practice.

Impervious Surface Reduction – Master Plan

Good Approach

There is nothing to add, as long as the “Good” language for Natural Feature and Drain Setbacks has been added.

Better Approach

Insert a goal within the Master Plan.

Goal: Keep the amount of new impervious surfaces low and reduce impervious surface area or impact where the opportunity presents itself. Impervious surfaces include parking lots, roads, building rooftops, and walkways.

Best Approach

Insert the “Better” approach, plus the following objectives:

Objectives:

- Zoning Ordinance standards will be used over time to keep the amount of impervious surface inside the community below 20 percent in developed areas, and below 10 percent in rural areas. Limited residential lots in the township and clustering of buildings in PUDs and condominium developments would all help to reduce the amount of impervious surface.
- The Planning Commission will encourage that public facilities consider the installation of pervious pavement

on walks, drives, and parking lots when designing new or replacement facilities. Private parties shall be encouraged to consider those options as well.

- The Planning Commission will encourage the use of green roofs on the construction of new public buildings.

Impervious Surface Reduction – Zoning Ordinance

Good Approach

Insert in Parking Lot Requirement sub-section.

- A. An applicant shall use LID techniques when designing and constructing the parking and loading areas on a site.

Better Approach

In addition to the language in the “Good” approach, insert in Parking Lot Requirement sub-section.

- B. Pervious pavement options shall be considered by the applicant on walks, drives, and parking lots when designing new facilities or replacing existing ones.

Best Approach

The “Better” approach may be the highest needed for this practice.

Natural Feature and Drain Setbacks – Master Plan

Good Approach

Insert a goal within the Master Plan.

Goal: Search out and/or devise techniques and programs to protect and improve the natural resources of the township, including, but not limited to, incorporating into the Zoning Ordinance adequate natural feature setbacks of buildings and impervious surfaces from watercourses, drains, and sensitive natural features.

Or,

Goal: Implement land use patterns, search out and/or devise techniques and programs to protect and improve the natural resources of the township, including, but not limited to, incorporating adequate LID setbacks into the Zoning Ordinance of buildings and impervious surfaces from natural features, such as shorelines, woodlands, wetlands, steep slopes, and areas subject to flooding.

Better Approach

Insert the “Good” approach, plus the following objectives:

Objectives:

The Planning Commission will:

- Propose incorporating natural feature setbacks into the standards in the Zoning Ordinance.

- Encourage growth of native vegetation along all watercourses and drains as a natural buffer strip.

Best Approach

Same as “Better” approach, plus outline specific elements of natural feature setbacks in the Zoning Plan section of the Master Plan. The Zoning Plan section of the Master Plan identifies all of the following:

- A proposed schedule of regulations by district that includes at least building height, lot area, bulk, and setbacks.

(Note: this is intended to lay the groundwork for a schedule of regulations in the Zoning Ordinance.)

- Standards or criteria to be used when considering rezonings consistent with the Master Plan.
- Suggested boundaries of zoning districts.
- An explanation of how the land use categories on the future land use map relate to the districts on the zoning map.

Natural Feature and Drain Setbacks – Zoning Ordinance

Good Approach

Insert into the General Provisions or where applicable.

SECTION __ SETBACKS FROM SIGNIFICANT NATURAL FEATURES

- A building setback of at least 25 feet with the setback area planted with sod-forming vegetation or covered by retaining naturally occurring vegetation, including shrubs and trees, is encouraged to be maintained along all watercourses, drains, water bodies, and wetlands.
- The building setback standard in sub-section (A) above is required to be maintained by any land use receiving site plan approval pursuant to Section 1601. Vegetation within the buffer strip may not be clear cut, plowed or graded, except as part of an official drain cleaning project.

Better Approach

Insert into the General Provisions or where applicable.

SECTION __ VEGETATED BUFFER STRIPS

- Buffer strips of at least 25 feet in width and planted with sod-forming vegetation or by retaining naturally occurring vegetation, including shrubs and trees, are encouraged to be maintained along all watercourses, drains, and water bodies to filter stormwater.
- The buffer strip standard in sub-section (A) above is required to be maintained by any land use receiving site plan approval pursuant to Section 14.28. Vegetation

within the buffer strip may not be clear cut, plowed, or graded, except as part of an official drain cleaning project.

Best Approach

Same basic language as the “Better” approach, but the ordinance requires more than 25 feet setback from natural features wherever feasible. So 25 feet is enlarged to 40 feet or 50 feet or more depending on local circumstances. It could be a sliding scale in some cases. Language must be developed locally.

Groundwater Protection – Master Plan

Good Approach

Insert language as a goal within the Master Plan.

Goal: Encourage the use of land and construction of new buildings in ways that protect groundwater from contamination by ensuring storage and use of hazardous substances occurs only in places with adequate secondary containment, separation from wells, and away from drains that discharge into soil.

Better Approach

Insert these objectives within the Master Plan.

Objectives:

- Site Plan Review standards are included in the Zoning Ordinance to protect groundwater from pollution by addressing secondary containment, drain discharge location, and setback from wells.

- The Planning Commission and Zoning Administrator will provide educational materials to citizens and stakeholders on protecting groundwater and on the outcome of groundwater monitoring.
- The Planning Commission and the Zoning Administrator will coordinate the Site Plan Review, and coordinate compliance inspections with the Health Department and Drain Commissioner.

Best Approach

The “Better” approach may be the highest needed for this practice.

Groundwater Protection – Zoning Ordinance

Good Approach

Insert language into Site Plan Review criteria/standards:

- A. Whether the sewage disposal and water supply will be safe and adequate.

Better Approach

Insert the following language to the Site Plan Review section of the Zoning Ordinance:

SECTION __ GROUNDWATER PROTECTION STANDARDS

- A. The project and related improvements shall be designed to protect the natural environment, including lakes, ponds, streams, wetlands, floodplains, groundwater, and steep slopes. For facilities that use, store or generate hazardous substances in quantities

greater than 100 kilograms per month (equal to about 25 gallons or 220 pounds), the following additional Site Plan Review information is required:

1. Location and size of interior and exterior areas and structures to be used for storage, use, loading/unloading, recycling, or disposal of hazardous substances.
 2. Location of all underground and above ground storage tanks for such uses as fuel storage, waste oil holding tanks, chemical storage, hazardous waste storage, collection of contaminated storm water, or wash water, and all similar uses.
 3. Location of exterior drains, dry wells, catch basins, retention/detention areas, sumps, and other facilities designed to collect, store or transport stormwater or wastewater. The point of discharge for all drains and pipes shall be specified on the site plan.
 4. Delineation of areas on the site, which are known or suspected to be contaminated, together with a report on the status of site cleanup.
- B. Site Plan Review standards for facilities that use, store, or generate hazardous substances:

1. Sites at which hazardous substances are stored, used or generated shall be designed to prevent spills and discharges to the air, surface of the ground, groundwater, lakes, streams, rivers, or wetlands.
2. Secondary containment for above ground areas where hazardous substances are stored or used shall be provided. Secondary containment shall be sufficient to store the substance for the maximum anticipated period of time necessary for the recovery of any released substance.
3. General purpose floor drains shall only be allowed if they are approved by the responsible agency for connection to a public sewer system, an on-site closed holding tank (not a septic system), or regulated through a State of Michigan groundwater discharge permit.
4. State and federal agency requirements for storage, spill prevention, record keeping, emergency response, transport, and disposal of hazardous substances shall be met. No discharges, shall be allowed without required permits and approvals.

Best Approach

The “Better” approach may be the highest needed for this practice.

RESOURCE PROTECTION TECHNIQUES

Resource Protection Overlay District – Master Plan

Good Approach

Insert a goal within the Master Plan.

Goal: Create overlay zone provisions in the Zoning Ordinance where necessary to protect identified natural features that are valuable in protecting water quality and local quality of life.

Better Approach

Insert the “Good” approach, plus the following objectives:

Objectives:

The Planning Commission will:

1. Consider creation of overlay protection districts in Zoning Ordinance for waterbodies, wetlands, floodplains, steep slopes, and soils with high permeability.
2. Encourage the Federal Emergency Management Agency (FEMA) to use not larger than two-foot contours when doing all future floodplain mapping in the community.

3. Prepare and support adoption of Site Plan Review regulations for protection of sensitive natural features.

Best Approach

Only after conducting a full natural features inventory, and including appropriate maps in the Master Plan, the Planning Commission may find it desirable to create a new Natural Features Protection Overlay District, similar to the existing Floodplain Overlay District. It could be targeted to protecting existing wetlands and/or woodlands.

Floodplains – Master Plan

Good Approach

A floodplain map is included in the environmental inventory.

Better Approach

A FEMA-approved 100-year flood map is available either in the Master Plan or at the Community Hall.

Best Approach

The “Better” approach may be the highest needed for this technique.

Woodland Protection and Reforestation – Master Plan

Good Approach

Insert a goal within the Master Plan.

Goal: Identify places to expand woodlands and develop measures to encourage reforestation.

Better Approach

Insert the “Good” approach, plus the following objectives:

Objectives:

The Planning Commission will:

- Encourage communities and landowners to engage in the reforestation of undeveloped lands, and to engage in tree planting on publicly owned lands in partnerships with conservancies, habitat improvement organizations and other organizations.
- Encourage public road authorities to plant trees on public right-of-way to expand and re-establish forest cover where they would help reduce soil erosion on abutting farmland.
- Encourage use of native species with all tree planting.

Best Approach

The “Better” approach may be the highest needed for this technique.

Woodland Protection and Reforestation – Zoning Ordinance

Good Approach

Insert language into Site Plan Review criteria/standards:

- A. The cutting of more than (X) trees and the removal of soil without an approved

site plan is prohibited. (X = Community decides how many trees.)

Better Approach

Insert the “Good” approach, plus the following language within the Site Plan Review section:

Woodland Protection: as new residential subdivisions are developed, and as property along waterways are developed, trees in clusters shall be protected, wherever feasible, as a part of the Site Plan Review process.

Best Approach

The “Better” approach may be the highest needed for this technique.

Wetland Protection/Restoration/Creation

Wetlands are defined as sensitive natural features; therefore, the approaches used in the Natural Feature and Drain Setback are sufficient to protect, restore, and create wetlands (see page A-12).

Conservation Easements – Master Plan

Good Approach

Insert a goal in the Master Plan.

Goal: Encourage landowners and businesses to use land donation, conservation easements, deed restrictions, and targeted land purchases to protect sensitive natural features and other natural resources.

Better Approach

Insert the “Good” approach, plus the following objective:

Objective: The Planning Commission will work with a local land conservancy and conservation organizations, as well as private landowners to protect sensitive natural features and certain natural resources through the donation of land, conservation easements, deed restrictions, or targeted land purchases.

Best Approach

Insert the “Better” approach, plus the following objective:

Objective: The Planning Commission, local land conservancy and local conservation organizations will periodically mutually co-sponsor educational workshops on a variety of conservation techniques.

PUBLIC EDUCATION – MASTER PLAN

The following elements would be added to the Master Plan. There are no corresponding zoning elements.

Agricultural Best Management Practices

Goal: Support and encourage best management practices for agriculture, which respect the environment and protect water quality.

Objective: Provide information on the Right-to-Farm Act and the following agricultural BMPs to farmers and other rural residents.

- Generally Accepted Agricultural and Management Practices from the

Michigan Department of Agriculture and Rural Development;

- Michigan Agriculture Environmental Assurance Program;
- Conservation tillage (no-till/strip till, mulch till, ridge till);
- Nutrient and pest management;
- Conservation buffers (field borders, filter strips, wind barriers and breaks, contour strips, grassed waterways, riparian woodlands, etc.);
- Animal feeding operation management (placement and land application potential); and
- Conservation Reserve land.

Open Space Preservation

Goal: The preservation or provision of open space and native vegetation helps retain the natural character of the community and reduces negative impacts of development on water quality. Vegetated open space should be encouraged on every site.

Objective: The Planning commission and the Zoning Administrator should provide published information on the water quality benefits of different open space vegetation type and management regimes to all applicants for zoning approval.

Water Quality Monitoring

Goal: The Planning Commission and Zoning Administrator will take advantage of opportunities to educate citizens, property owners, and other local government officials on the status of water quality and the values and benefits of water quality protection.

Objectives:

- The Planning Commission will provide pamphlets and links to websites with information on low impact development and other BMPs for water quality.
- Initiate efforts and support of others to educate citizens and stakeholders about water quality trends, threats from poorly managed stormwater runoff and other threats to water quality, and actions that can be taken by individuals and businesses to protect water quality.

Drain Clearing

Goal: Promote education about, and the coordination of, drain maintenance activities with public and private landowners for the implementation of BMPs to reduce soil erosion and sedimentation of drains and other water bodies.

Objective: Work with local conservation organizations to educate landowners about

drainage methods that clear fields without causing sediment loads that close and dam; and encourage local schools to host experts in water quality protection and involve K–12 students in dissemination of information.

Road and Bridge Repair, and Stream Crossings

Goal: Promote education about, and the coordination of road and bridge repair and stream crossing construction activities with public and private landowners for the implementation of BMPs to reduce soil erosion and sedimentation of drains and other water bodies.

Objective: Work with local conservation organizations to educate landowners about road and bridge repair, and stream crossing; and encourage local schools to host experts in water quality protection and involve K–12 students in dissemination of information.