

CHAPTER 5

PLANNING AND ZONING ASSESSMENT



5. AN ANALYSIS OF LOCAL PLANNING AND ZONING FOR THE NORTHEAST MICHIGAN INTEGRATED ASSESSMENT

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5.1 INTRODUCTION

5.1.1 Purpose of this Chapter

As discussed in Chapter 1, an integrated assessment brings together scientists with policy makers and other key stakeholders to address a common issue or concern through collaboration and a formal analysis process. The purpose of this IA is to help the Northeast Michigan region promote more ecotourism-based economic development in a way that provides the benefits of a vital economy without promoting overdevelopment or the destruction of the region's natural resource base. The key policy question addressed is: How can coastal access be designed, in a regional context, for sustainable tourism that stimulates economic development while maintaining the integrity of natural and cultural resources and quality of life?

Natural coastal resources, especially resources near the land-water interface like coastal wetlands and fish habitat, are influenced greatly by the kinds of land development patterns occurring within the coastal region (see generally Beatley, Brower, and Schwab 2002; Cicin-Sain and Knecht 1998; Randolph 2004). Most importantly, near-shore and regional land development can result in the destruction of these resources directly, such as through land clearing, or indirectly, such as through increases in impervious surfaces that yield increases in polluted stormwater runoff into coastal waterways. Given state-local institutional structures in the U.S., where states have delegated much of their land management authorities to local governments, coastal localities play a vital role in shaping land development patterns within their coastal regions over time (e.g., Burby 1998; Brody 2003; Norton 2005b, 2005a). The question of how to promote ecotourism-based development within the Northeast Michigan region without degrading coastal resources at the same time thus necessarily implicates the public management of both public and private land use, which in turn necessarily implicates local planning and development management.

The environmental, social, and ecological outcomes from local land management efforts have garnered substantial attention from both academics and advocates for the last several decades. Often these topics are discussed in terms of "sustainable development" or sometimes "smart growth" or, more broadly, "growth management," all concepts presented as an alternative to conventional land management practices. At the broadest level, the concept of sustainable development is used to focus policy-making simultaneously on environmental and social concerns as well as more conventional economic development goals, transforming our collective approach from worrying about the economy first and foremost (and mitigating any resulting environmental and social harms later, if at all) to promoting economic development within the constraints of safeguarding natural and social resources now and into the future (see, e.g., World

Commission on Environment and Development 1987; Beatley 1995; Berke 2002; Wheeler 2001; Wheeler and Beatley 2004; American Planning Association 2000). The rapid Sustainable Development Assessment Team (SDAT) study prepared for this IA and presented in Chapter 6 of this report is based upon these concepts of sustainability.

The concept of “smart growth” (or more generally “growth management”) addresses more traditional land use planning and development management concerns, with a particular focus on the topics of urban revitalization, rural area conservation, and the efficient use of infrastructure, such as roads, water systems, and wastewater systems (Freilich 1999; National Association of Home Builders 2000; Pollard 2000; American Planning Association 2002; Johnson et al. 2002; Local Government Commission 2004; Smart Growth Network 2002, 2003). Debates around the idea of smart growth have thus focused specifically on land development and use, particularly in terms of central city decline and so-called “urban sprawl,” more so than debates around sustainable development, which generally extend more broadly to other social issues (e.g., the effects of modern consumer lifestyles in general). Nonetheless, the concepts of sustainable development and smart growth encompass the related ideas of promoting ecotourism-based economic development within the larger goals of safeguarding the regions’ natural resources and social well-being. Governments might advance these goals, for example, by adopting coastal resource protection policies (e.g., shoreline setbacks), promoting the development of compact and mixed used urban centers, and protecting productive rural agricultural and natural areas. Given their similarities in the context of land use, the terms “sustainable development” and “smart growth” are thus used interchangeably throughout this chapter.

The purpose of this chapter is to present findings from the study of local officials’ and other stakeholders’ policy concerns within the NEMIA region, the analysis of selected local master plans within the region, and the results from a forward-looking analysis of potential build-out scenarios illustrating the various land development patterns the region might experience in the foreseeable future based on current zoning. These research findings, while not exhaustive, provide a backdrop picture of current conditions in two respects. They suggest, first, the extent to which NEMIA participants are concerned about a variety of land management goals related to sustainable development and, second, the extent to which local governments in particular appear to be taking steps to advance sustainability goals through their current planning and development management efforts. These findings set the stage for the analysis and recommendations made by the SDAT team as reported in Chapter 6.

Finally, it is important to note that this research was focused specifically on the NEMIA region itself for the purposes of the IA only; it was not meant to yield generalizable findings in terms of the larger region or in terms of the planning and development management processes described. Accordingly, stakeholder participants surveyed for this work were identified through the IA process (i.e., not randomly selected from among residents or public officials in the region). Similarly, the plans and zoning codes evaluated were selected by the research team as reasonably representative of the localities in the region, not through a random-selection process. Also, because of limited resources, local master plans were evaluated systematically to provide some indication of the extent to which localities are addressing resource management through their planning efforts, but it was not possible to prepare a similarly detailed zoning code content evaluation (i.e., beyond the buildout assessments provided below) or analyze the links between

plans, policies, and regulations in the region, or to collect data and evaluate systematically other plan implementation mechanisms (e.g., capital improvement programs).

5.1.2 Local Planning and Land Management in Coastal Michigan

In 1992, a blue-ribbon commission of scientists, private citizens, and state officials issued a report entitled *Michigan's Environment and Relative Risk*. The report concluded “to the surprise of many...that an ‘*absence of land use planning that considers resources and the integrity of ecosystems*’ was among the most critical environmental problems facing Michigan” (Smyth, 1995, pg. 1, emphasis in original, citing to the Relative Risk Report). In 2001, the Michigan Department of Environmental Quality concluded that cumulative and secondary impacts from coastal development constituted the highest priority issue in coastal Michigan, and that “fragmentation of coastal habitats, loss of agricultural and forestlands, increased impervious surfaces and resulting stormwater runoff, and the increased development in coastal hazard areas, wetlands, and Great Lakes Islands, could be improved through better coastal land use planning” (Klepinger, 2002, pg. 7).

In 2002, the Michigan State Senate’s Great Lakes Conservation Task Force concluded that the “quality of the Great Lakes is strongly impacted by activities that occur on the land” and that one aspect of land use not sufficiently integrated with water impact is land use planning and zoning (Great Lakes Conservation Task Force, 2002, pg. 64). In 2003, Governor Granholm appointed a blue-ribbon commission on land use in response to growing concerns about the environmental, social, and fiscal impacts resulting from suburbanization occurring throughout the state. This ad-hoc commission produced a report premised on the tenets of smart growth and sustainable development. It incorporated a wide array of recommendations designed to improve and re-focus local planning and policy-making efforts to achieve more sustainable landscapes and communities state-wide (Michigan Land Use Leadership Council, 2003).

All of these studies and events point to two key conclusions: first, that local planning, zoning, and other development management activities substantially influence efforts to protect the state’s natural resources, including especially its coastal area resources; and second, that communities across Michigan—and especially within its coastal region—do not appear to be using their planning and land management authorities to provide the protections needed. Despite widespread consensus on these conclusions, however, there remains much we do not know about current local planning and land management efforts throughout Michigan, including its Northeast Michigan coastal region.

5.1.3 Northeast Michigan

Northeastern Michigan is currently the least populous area in the Lower Peninsula. The eight counties that make up Northeastern Michigan total 2.8 million acres of land. The area contains approximately 524 inland lakes, 2,311 miles of streams, eight major watersheds and 190 miles of Lake Huron shoreline (Northeast Michigan Council of Governments, 1996). The rich and diverse extent of natural resources in this region coupled with the presence of the numerous cultural resources, the Thunder Bay National Marine Sanctuary and its associated marine resources,

makes this area a ripe environment for tensions relating to growth, land development, and resource protection.

As noted, this Northeast Michigan Integrated Assessment (NEMIA), through which participants hope to promote greater ecotourism-oriented development, provides a platform for examining these tensions in three of the eight counties comprising the Northeast Michigan region. Of particular interest to us was the role local planning and development management could play in striking a balance between the economic needs and desires of the Northeast Michigan communities, on the one hand, and their desire to protect the cultural and natural resources and the corresponding “sense of place” they highly value, on the other.

Through the NEMIA process we hoped to explore three key aspects relating to resource management and sustainable development in this three-county NEMIA region: 1) which issues the stakeholders viewed as the most important resource issues in their jurisdictions and in the larger region, and their vision for the future of the three-county area; 2) the role local master plans could play in achieving this vision and alleviating resource problems (as indicated by stakeholders and as indicated in the goals and policies of the master plans themselves); and 3) the impact of current plan policies on future development patterns, including whether policies could be shaped to result in development patterns that incorporate stakeholders concerns about sensitive resources, community character and a sense of place.

5.2 RESOURCE ASSESSMENT SURVEY

5.2.1 Introduction and Methods

A resource assessment survey was administered to NEMIA stakeholders during May 2006. The purpose of the survey was to better understand how the NEMIA stakeholders view a variety of issues related to the use, development, and conservation of land within the Northeast Michigan region. In the survey we asked several questions on the respondent’s general sense of the importance of a number of issues related to coastal area management. Then we asked a series of more specific questions about the respondents’ understanding and opinions regarding selected coastal area management issues, including (in no particular order of importance) socio-economic conditions, cultural-historic conditions, environmental conditions, and local planning and development management efforts. Finally, we concluded with several questions about the respondents and about the agency or organization they represented.

The survey was disseminated to the 81 NEMIA stakeholders identified through the NEMIA process itself. These stakeholders represented a variety of organizations, including local governments; regional governments; non-governmental organizations (NGOs) like watershed groups, land conservancies, and chambers of commerce; area businesses; state agencies; and federal agencies and legislative offices. We received 31 completed surveys providing a response rate of 38%. Table 1 shows the distribution of surveys by group, including the numbers of NEMIA participants initially surveyed and corresponding response rates. As this table illustrates, participation in the NEMIA (and the corresponding survey distribution) favored federal and state representatives (including MSU extension), county and regional representatives, and then NGO representatives, with less direct participation by local officials. This same general pattern was

reflected in the response rates as well, both in terms of respondents for a given category and across the several categories. The important thing to note in terms of the response rate distribution, therefore, is that the policy concerns and assessments expressed by the NEMIA stakeholders represent the views more of non-local governmental actors than local officials, in some cases evaluating the *apparent* policy preferences of local government officials rather than the reported views of the local officials themselves.

Table 5.1. Survey Distribution and Responses by Participant Category

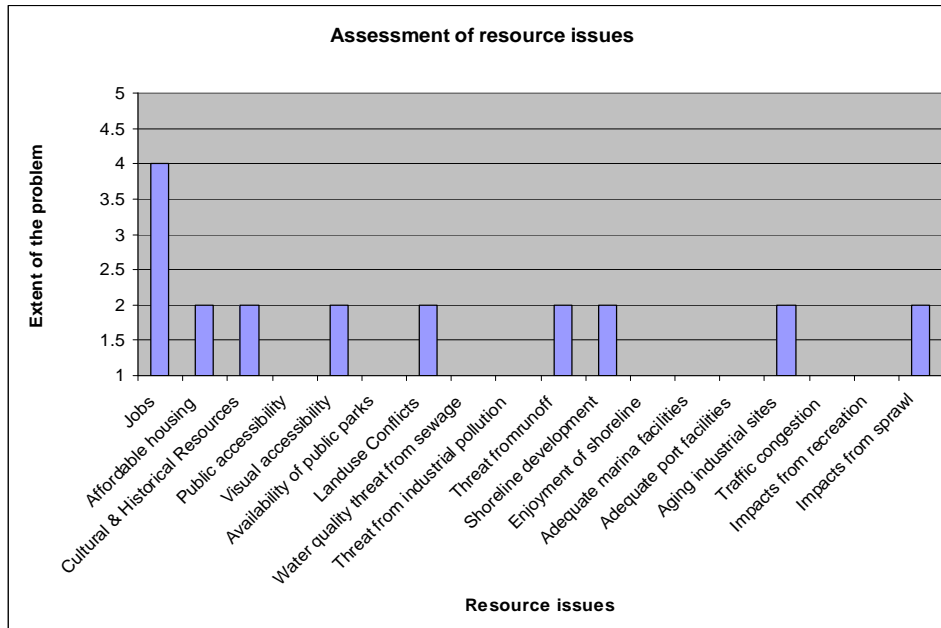
Category	Number Surveyed	Category as % of Total Surveyed	Number of Responses	Responses as % of Category Surveyed	Responses by Category as % of Total Responses
Township Official	6	7%	1	17%	3%
City Official	7	9	1	14	3
County Official	12	15	5	42	16
Regional Agency	4	5	3	75	10
NGO Representative	9	11	5	56	16
State / Federal Official	28	35	12	43	39
Other	<u>15</u>	<u>19</u>	<u>4</u>	27	<u>13</u>
Total	81	100	31		100

Given that caveat, the returned surveys were analyzed and the data were presented to stakeholders at an initial meeting of the process to initiate discussions on the perceived resource problems in the region and the goals and policies that needed to be prioritized through the NEMIA process, as well as the role planning and development management efforts might play in fostering social, environmental and economic sustainability in the Northeast Michigan region. The remainder of this section presents a summary of the survey data results and analysis presented to the NEMIA stakeholders.

5.2.2 Assessment of resource issues

As anticipated, when asked about the resource issues deserving public attention within stakeholders' jurisdiction's or service areas, jobs emerged as the most important issue of concern. More than 60% of respondents identified the lack of local jobs in the Northeast area as deserving immediate attention. On a 5 point scale of the extent to which the lack of jobs presented a problem, ranging from 1 (Not a problem) to 5 (Serious problem), the median value was 4. This is notable compared to the median values of the other resource issues presented to respondents for evaluation, all of which had median values of only 2 or less, indicating that respondents generally did not view these issues as serious problems in their jurisdictions (see Figure 5.1).

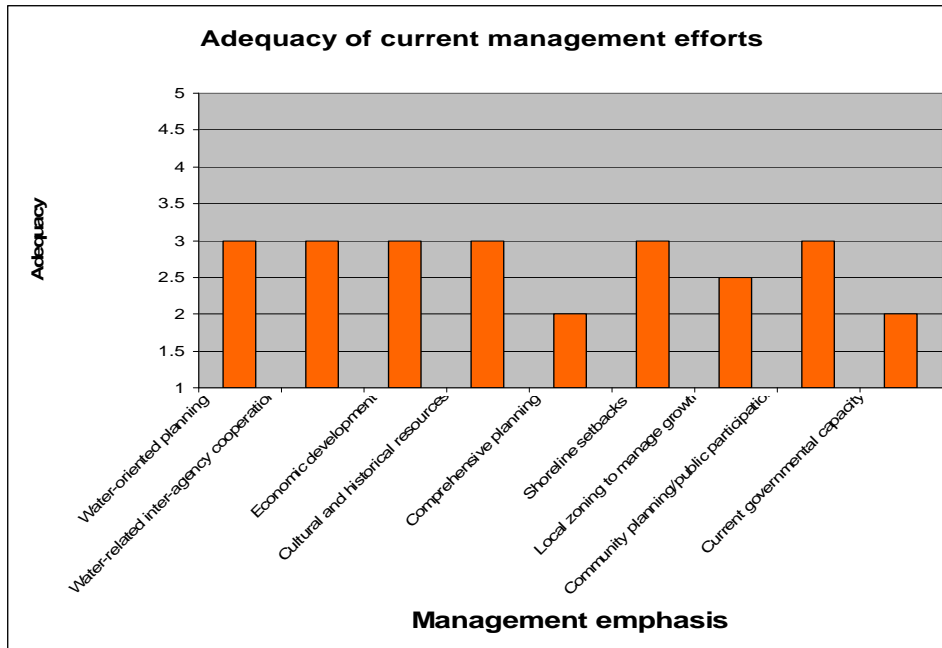
Figure 5.1. Assessment of resource issues



5.2.3 Assessment of management efforts to address resource problems

Given the extent of resource management problems present throughout the state’s coastal regions, as described in the background section of this chapter, stakeholders were then asked to evaluate the extent to which management efforts in their jurisdictions addressed several resource problems. On a scale of 1 (inadequate) to 5 (very adequate) representing the adequacy of current management efforts, all efforts to address resource issues listed in the survey received a median value of 3 or less, indicating that stakeholders in general identified resource management efforts as being only moderately adequate to inadequate. The perceived inadequacy of current management efforts with regard to land use planning and zoning should be noted (see Figure 5.2).

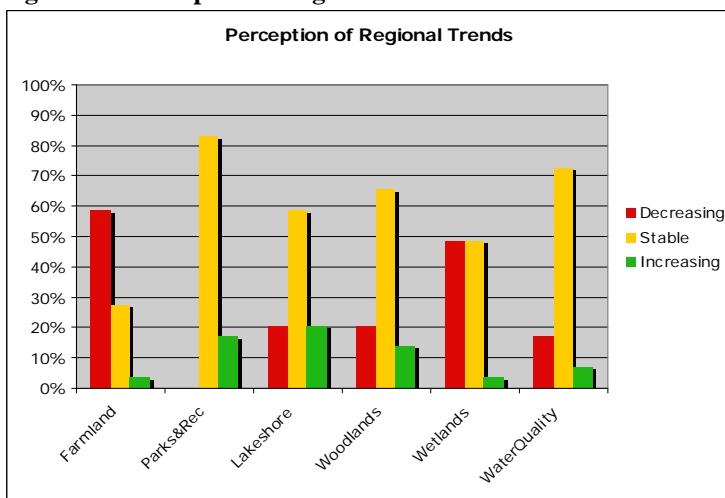
Figure 5.2. Adequacy of current management efforts



5.2.4 Assessment of regional resource trends

Stakeholders were also asked to evaluate the 5-year regional trend for a number of resources. They were asked to indicate whether the listed resource bases were increasing, decreasing or stable. As anticipated, 59% of respondents listed decreasing farmland in their jurisdictions, while 48% of respondents also indicated loss of wetlands. Most respondents listed all other resources as being stable (see Figure 5.3).

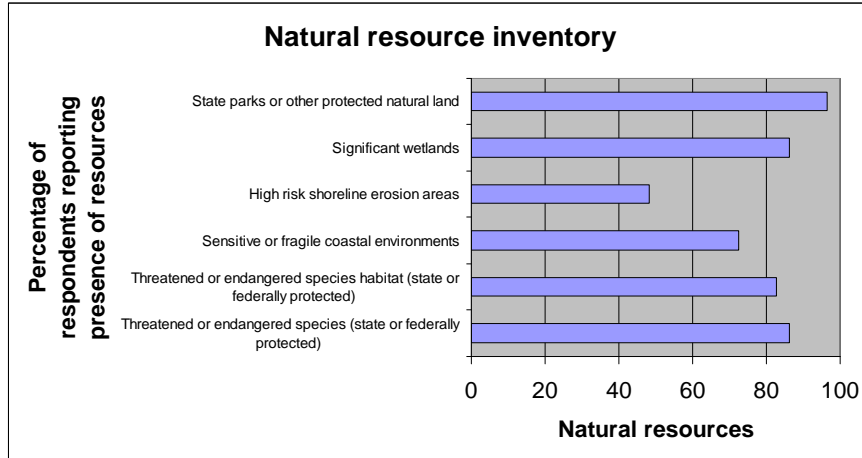
Figure 5.3. Perception of regional resource trends



5.2.5 Natural resource inventory

To inventory the extent of natural resources in the Northeast Michigan region, stakeholders were asked to indicate whether one or several natural resources were present in their jurisdictions. The richness of natural features in the Northeast is apparent in Figure 5.4.

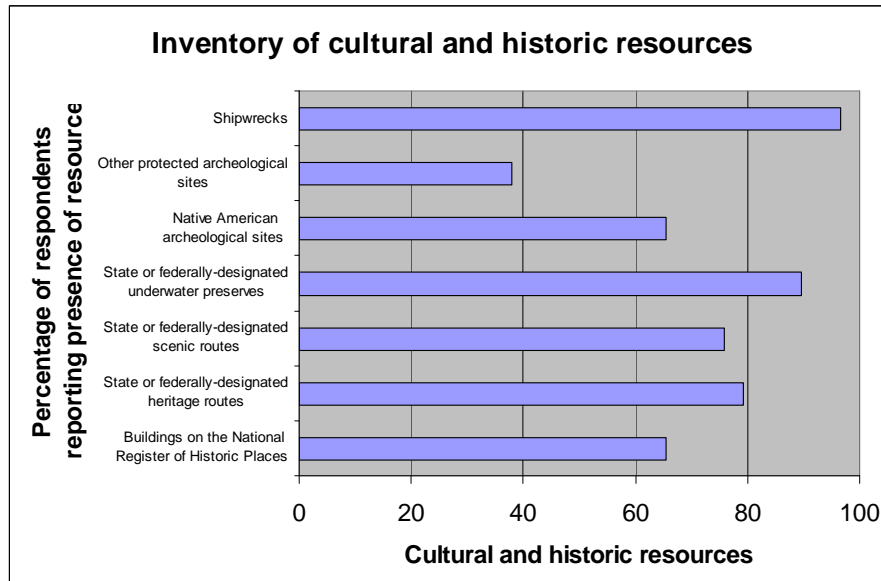
Figure 5.4. Natural Resource Inventory



5.2.6 Cultural and historic resource inventory

Similar to the natural resource inventory, stakeholders were asked to report the presence of a number of regionally significant cultural and historic resources in their jurisdictions. Figure 5.5 shows that more than 60% of respondents indicated that most of the resources listed in the survey were present within their jurisdictions.

Figure 5.5. Cultural and historic resource inventory



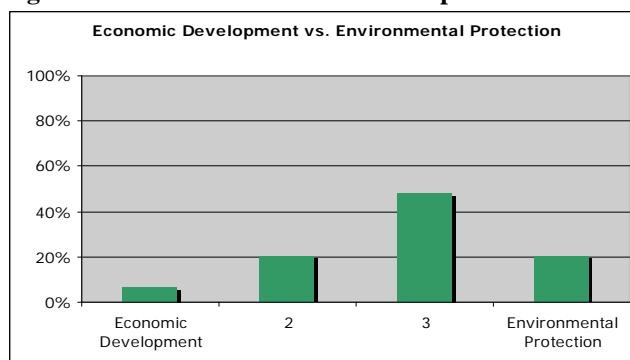
The analysis presented so far depicts one of the most fundamental tensions that planners encounter while planning for the local and regional sustainable development. As indicated by stakeholders, economic development that fosters a good supply of local jobs is much needed in the Northeast Michigan region. At the same time, most respondents indicated the presence of a diverse and rich range of natural and cultural resources in their jurisdictions. Ideally, economic development can be accommodated while protecting natural and cultural resources to yield a balanced and comprehensive land use strategy. Indeed, many proponents of sustainable development today argue that the dichotomy between economy and environment is a false one—that it is possible to promote ecologically sound economic development—and in many ways it is. Nonetheless, land management issues are often framed by local officials in a way that pits one against the other, or they are presented to local officials in such a way that they cannot avoid contemplating that trade-off. Moreover, if there is any place where the potential tradeoff between environmental integrity and land-based economic development is real, it is in places like highly dynamic and ecologically sensitive Great Lakes shoreline settings.

Thus recognizing that policy tradeoffs—in one sense or another—are sometimes unavoidable, stakeholders were presented with a series of questions on resource tradeoffs that local officials might have to face (or have already faced) in order to better understand how stakeholders in this region viewed the relative importance of jobs, natural resources, and cultural resources relative to one another. Specifically, they were asked to indicate, on a scale of 1 to 4, which goal they would be primarily concerned about pursuing if a tradeoff had to be made in two different contexts.

- a. *Economic development versus environmental protection*, “where 1 indicates a primary interest in economic development, even though it could necessitate some environmental degradation, and 4 indicates a primary interest in environmental protection, even though it might cause some limitations on economic development.”

More than 70% of respondents indicate a preference of environmental protection over economic development when faced with a tradeoff (Figure 5.6).

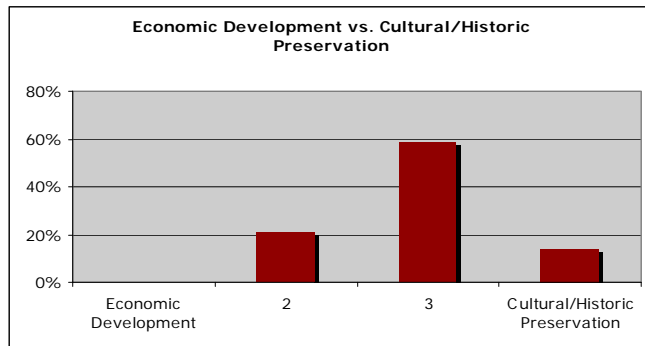
Figure 5.6. Tradeoff: Economic development vs. Environmental protection



- b. *Economic development versus cultural and historic resource protection*, “where 1 indicates a primary interest in economic development, even though it could necessitate the loss of some cultural and historic resources, and 4 indicates a primary interest in cultural and historic protection, even though it might cause some limitations on economic development.”

Again, more than 70% of respondents indicated a tradeoff preference of protecting cultural and historic resources over economic development when confronted with such a choice (Figure 5.7).

Figure 5.7. Tradeoff: Economic development vs. Cultural and historic protection

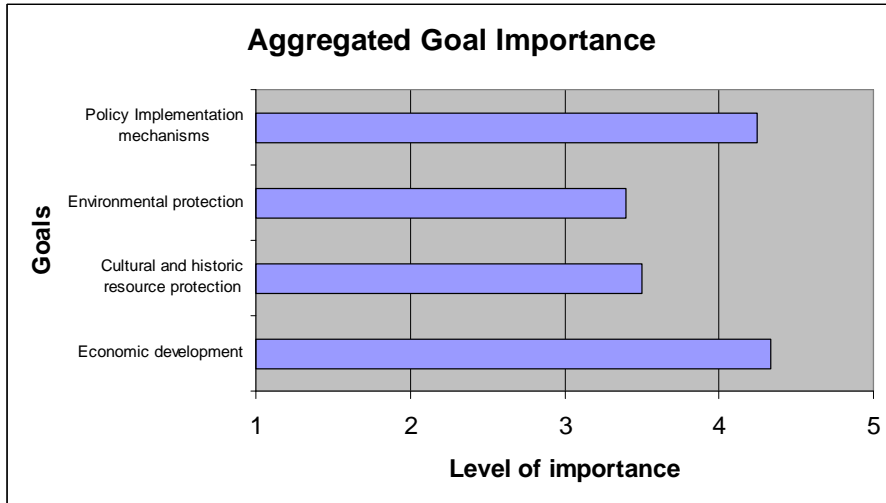


Given the resource concerns listed by respondents, the presence of natural, cultural and historic resources in respondents' jurisdictions, and their stated policy tradeoff preferences, the final section of the survey asked stakeholders to evaluate the importance of several goals and policies to the future development of their respective jurisdictions.

5.2.7 Policy importance

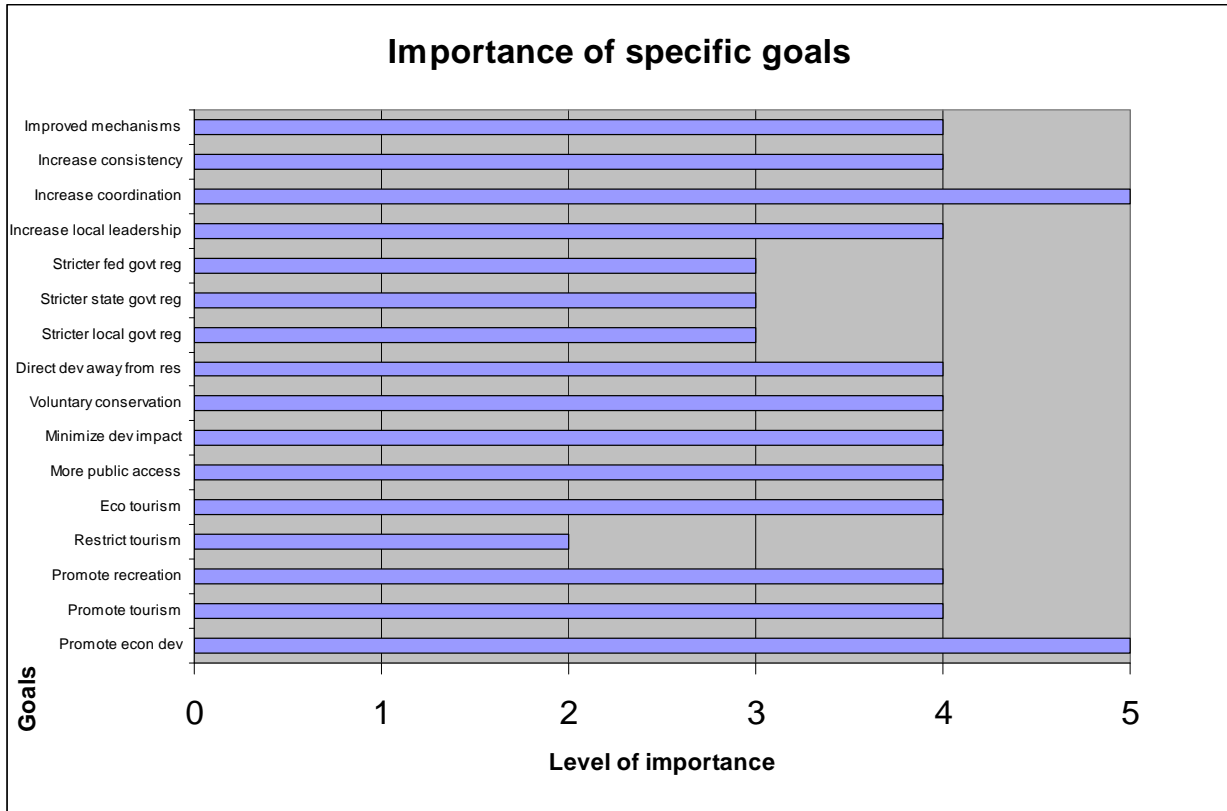
Stakeholders evaluated the importance of a number of specific goals in four categories: economic development, environmental protection, cultural and historic resource protection, and policy implementation. Figure 5.8 shows median levels of importance of the aggregated goal categories. Figure 5.9 shows the median level of importance of the specific goals included in the aggregated categories. Despite tradeoff questions indicating a preference for natural and cultural resource protection when set against economic development, Figures 5.8 and 5.9 show the importance of economic development to most respondents in the abstract, or when tradeoffs are not suggested (or required). These figures also illustrate the importance that stakeholders attribute to regional governance through voluntary regionalism and cooperation.

Figure 5.8. Aggregated goal importance



The idea of voluntary regionalism is also apparent in stakeholders' assessment of the extent to which they anticipate cooperating with a number of agencies in the future. Through a specific survey question that evaluated current and future levels of cooperation among a number of listed agencies, we found that most respondents expect cooperation to increase significantly from current levels.

Figure 5.9 Specific goal importance



This survey, along with the policy question and goals identified by stakeholders at the outset of the NEMIA process, the natural resource prioritization exercise conducted by the environmental team, and the policy action prioritization and voting exercise conducted by Michigan State Extension staff, provides a comprehensive understanding of the stakeholders' collective vision and goals for the NEMIA effort.

Given this vision, the next step undertaken by the planning and zoning team was to evaluate the extent to which current planning and development management efforts in NEMIA communities appear to help further sustainable development and growth management goals. Current planning policies were analyzed by primarily focusing on the local master plans of 8 local jurisdictions distributed across the three NEMIA counties. Building on recent scholarship in the land use planning literature, the local master plans were evaluated based on the extent to which the policies of local plans supported a movement toward “smart growth” or the “sustainable” development and use of land.

5.3 EVALUATING LOCAL MASTER PLANNING FOR DEVELOPMENT MANAGEMENT

One of the principal aims of the planning and zoning study was to develop an understanding of how local plans and regulations in NEMIA communities appeared to be shaping land development patterns, and more specifically the extent to which these plans and regulations advanced growth management principles. In order to do so, we developed a framework for evaluating the content of local master plans that is drawn conceptually from the planning and development management literature (Baer, 1997; Berke & French, 1994; Berke & Manta Conroy, 2000; Brody, 2003a; Burby & May, 1997; Norton, 2005a, 2008). Our starting premise was that a fundamental purpose of a local master plan is to inform and guide local officials' decision making as they adopt various infrastructure policies and local regulations pertaining to land use and development management. A fundamental component of the plan, accordingly, is the set of goals and policy recommendations that it makes. These goals and policies do not exist in a vacuum, however, and are often subjected to political and legal scrutiny. To stand up to this scrutiny, a plan and its policy recommendations should be well supported and justified. Evaluating local planning efforts, therefore, requires focusing on three concepts: policy focus, plan quality, and consistency, with the latter two collectively describing “plan quality.”

5.3.1 Conceptual Framework

Policy Focus

A single vision statement provided in a plan—if one is provided at all—is usually so abstract that it does not provide a good metric of the overall policy vision actually embodied by the plan in its entirety. Moreover, a comprehensive local plan will articulate a large number of goals and policies through a number of distinct plan elements, such as housing, transportation, parks and recreation, land use, and so on. To the extent they are not well supported or articulated, or are not consistent with one another, it may not be possible to characterize the plan as having a clear policy focus in a very precise way. But it should be possible to at least characterize the overall policy focus of that plan more generally. The collection of a given plan's goal and policy

statements, or a code's requirements, can be grouped into several separate categories such as those relating to land use management, development management, economic development, housing, community character, environmental quality, natural area conservation, and resource production. These statements can then be grouped and considered collectively to characterize the policy content of a plan or code along two distinct dimensions of policy focus, including its growth management approach and its landscape approach.

1. Growth management approach. The first dimension speaks to the growth management approach of the plan as evident through the plan's goal and policy statements. The question here is whether the "procedural" policies of a given plan (i.e., policies establishing analysis and/or decision-making procedures), taken altogether, appear to be designed to promote two distinct ideas: a focus on providing public services efficiently, or a focus on promoting a quality of life consistent with smart growth principles like urban revitalization, rural conservation, and attention to social equity concerns (see Table 5.2 at the end of this report for representative criteria used to measure these principles).

2. Landscape approach. The second dimension of policy focus speaks to the landscape approach apparent in the plan. The focus here is on whether the "substantive" policies of the plan (i.e., policies focused on promoting a particular landscape type), taken altogether, appear to be designed to facilitate and support the kinds of landscapes themselves that define a sustainable community.¹ For purposes here, this approach can focus on two different forms: a focus on vital urban centers (see Table 5.3 for representative criteria used to measure this focus), and a focus on conserved rural areas i.e., working farmland, working forestland, ecologically viable natural areas (see Table 5.4 for representative criteria used to measure this focus). A given plan or code may show a landscape focus that emphasizes both urban revitalization and rural conservation at the same time, especially if the jurisdiction encompasses both urban and rural areas, or it may emphasize one but not the other.

Plan Quality

Advancing sustainable development through local planning requires attending to the policy focus of a plan. But addressing the plan's policies alone is not sufficient. It is equally important to consider the *quality* of the planning effort used to inform and justify those plan policies. To see why this is so, consider the role played by local planning in Michigan, along with most U.S. states. Local master planning—by itself—is not a legally enforceable means to manage land use. Rather, local governments manage the development and use of public and private lands within their jurisdictions through the zoning, subdivision, and other regulations they adopt, along with the roadway, water, wastewater, and other infrastructure services they provide. (These various regulatory and infrastructure decisions taken together comprise a community's "development management" program, as distinct from its master plan.)

The master plan—and specifically its policies—provide guidance to local officials on how best to make those regulatory and infrastructure decisions. In order to ensure that the plan policies—and ultimately the development management decisions made to implement them—are effective

¹ The measures described for these different landscape types incorporate primarily substantive policies, but also include a limited number of procedural policies that are addressed specifically to the given landscape type.

and reasonable, the plan should ideally provide a coherent vision of how the community wants to develop along with compelling arguments that demonstrate why the plan's various policies are necessary and how they will achieve that vision. The concept of plan quality speaks to how well the plan does just that. For evaluation purposes, the concept of overall plan quality can be divided into two important components: the analytical quality of the plan and plan consistency. Each of these attributes of overall plan quality is discussed in more detail next.

Analytical Quality

The analytical quality of the plan is based in part on the process that was used to develop the plan, as can be discerned from the plan itself, and the comprehensiveness and coherence of the various analyses presented in the plan. Building on scholarship on the planning and development management process (Kaiser, Godschalk, and Chapin 1995; Randolph, 2004) and on plan evaluation (Baer, 1997; Burby & May, 1997; Norton, 2005a), six distinct attributes of plan quality can be identified (see Table 5.5 for representative criteria used to measure these attributes). All of these attributes are premised on the idea that a plan both documents the plan-making process employed and provides the background analysis and justifications used to support the plan's policy recommendations.

- **General Presentation:** Extent to which the plan is readable and well-organized, provides references to information sources, clearly articulates goals and policies, and employs tables, maps, and figures that are informative and easy to interpret.
- **Public Participation:** The extent to which multiple and meaningful avenues for public participation were provided in the plan-making process in order to leverage local citizen knowledge, leverage the “social learning” function of planning, and increase the legitimacy of the plan.
- **Fact Base:** The overall thoroughness and clarity of the descriptive information about the community presented in the plan, provided to describe where the community is now, where it appears to be headed, and what the status is of past planning efforts.
- **Infrastructure Capacity Analysis:** The identification of services currently available and analysis of both the likely impacts from infrastructure decisions on population and land development trends and the reciprocal impacts from those trends on long-term capacities.
- **Land Suitability Analysis:** The analysis of inherent land attributes to identify areas both *most* suitable and *least* suitable for both urbanized land development and for rural area conservation.
- **Implementation:** The extent to which the plan identifies the timeframes, mechanisms, and responsible parties for implementing the plan policies.

Consistency

Like policy focus and analytical quality, plan consistency has several dimensions, including the consistent deployment of a plan and the inherent consistency of the plan (or overall planning effort) itself. The need for consistency in the use of a plan to justify development management decisions has been recognized for a very long time. Indeed, the Michigan Zoning Enabling Act ((2006 PA 110 §203(1)), like the zoning enabling laws of most states, requires that the “zoning ordinance shall be based upon a plan....” (see also Meck, 1996; Crawford, 1998; Juergensmeyer & Roberts, 2003. From a planning-as-policymaking perspective, this requirement makes good sense. To the extent that a zoning code is used to implement the policies articulated in a local master plan, the plan serves little purpose if the code is not consistent with those policies, and the code itself arguably exceeds the boundaries of reasonable governmental regulation if it is inconsistent with the underlying rationale provided by the plan. The idea that reasonable policy decisions and regulations require adequate justification in fact implicates several dimensions of consistency, beyond the consistent use of a plan for making decisions and its consistent application across similarly situated cases. For this study, six different types of consistency—all related specifically to the quality of a plan as a basis for decision making—can be distinguished. These include vertical, horizontal, internal, and implementation consistency, as defined below (see Table 5.6 for representative criteria used to measure these types of consistency).

- ***Vertical Mandate Consistency (All):*** Presence of plan elements mandated of all local units of government in the state’s planning enabling laws.²
- ***Vertical Mandate Consistency (Cities / Villages):*** Presence of plan elements mandated only for cities and villages in the state’s planning enabling laws for cities and villages.
- ***Vertical Coordination:*** Extent to which the plan demonstrates consultation and/or coordination between the community and “higher” units of government.
- ***Horizontal Consultation and Coordination:*** Extent to which the plan appears to be compatible with the policies and spatial characteristics of neighboring jurisdictions and extent to which the community is consulting and/or coordinating with neighboring jurisdictions or other “horizontal” units of government.
- ***Internal Policy, Spatial & Implementation Consistency:*** Degree of internal coherence between the plan’s facts, goals, and policies and between multiple plan documents in a jurisdiction with multiple plans (e.g., subarea plans). Several attributes of internal consistency include inter-goal, inter-policy, goal-policy, inter-plan, and spatial consistency (i.e., degree to which the stated goals and policies of the plan are consistent with the limitations on and opportunities for development based on the infrastructure

² Local governments in Michigan are not required to plan, but when they do plan, the state’s planning enabling acts mandate that they incorporate a number of planning elements. See 1945 PA 282, Sec.4(2) (County Planning); 1959 PA 168, Sec. 7 (Township Planning); 1931 PA 285, Sec. 6 (Municipal Planning). Note that all of these acts were recently repealed by the Michigan Legislature and consolidated into a single Michigan Zoning Enabling Act, 2006 PA 110 (as amended).

capacity and land suitability analyses). Also, the extent to which the implementation steps identified in the plan are consistent with (or are reasonably designed to advance) the plan's articulated goals and policies.

5.3.2 Evaluation Methodology

Following the development of the conceptual framework just described, our next task was to operationalize that framework through a set of content evaluation protocols and an evaluation methodology. A primary goal was to develop protocols that would allow for relatively straightforward analysis and relatively easy interpretation of analytical results. Our content evaluation protocols and methodology build directly from the methodological approach employed for planning and plan implementation analyses in the current literature (see generally Berke et al. 1999; Brody 2003; Burby and May 1997; Norton 2005a, 2005c, 2008; Talen 1996), except that the specific protocol items and concept measurements have been tailored to reflect the various attributes of our conceptual framework described above. Given our focus on growth management principles, the evaluation criteria for the "policy focus" category of the plans and codes in particular were derived from smart growth and watershed protection principles drawn from a variety of academic and professional sources, as well as selected state and local government publications (American Planning Association 2000, 2002; Arendt 1994; Juergensmeyer and Roberts 2003; Meck 2002; National Association of Home Builders 2004; Nelson and Duncan 1995; Oregon Department of Land Conservation and Development 2004). For the goal and policy statements, we identified a range of goals and policies that a community might have adopted to advance a given growth management objective, such as urban revitalization or open space preservation, and then looked for the presence of those goal and policy statements in the plans and codes.

Following the development of the plan protocol, each plan was coded twice so as to reduce subjectivity in the interpretation of evaluation criteria. The coders were asked to work separately and then to compare their completed protocols to reconcile differences in their assessments of the assigned plans.

Following the methodology commonly employed for the evaluation of local master plans, the plan policy focus, analytical quality, and consistency components of each plan for this study were evaluated by looking for the presence of each of the various items illustrated by the "measurement" column of tables at the end of this section of this report. When present, each of these items was assessed in terms of its level of detail. Policies were also evaluated in terms of their level of prescriptiveness. "Prescriptiveness" refers to the whether the policy was prescriptive (e.g., "the community shall take the following steps...") rather than merely exhortative (e.g., "the community should consider taking the following steps...").

For example, in assessing the land suitability analysis of a plan, the prime farmland item was scored as "0" if absent, "1" if present but not detailed, "2" if present and detailed, or "3" if present, detailed, and mapped. For the policy focus component, a given evaluation item such as a policy of establishing an urban services boundary was scored for level of detail as "0" if absent, "1" if present but not detailed, or "2" if present and detailed, and for level of prescriptiveness as "0" if low, "1" if moderate, or "2" if high. These scores were then summed according to the

groupings of analysis categories corresponding to each of the separate criteria to create separate measures, and then standardized by dividing the actual score by the maximum possible score and multiplying by 100. The standardized score for each evaluation criterion thus indicates the degree to which a plan meets the given criterion relative to the total score that could be achieved, measured as the “percent of the possible score.”

One of the reasons for using a simple “percent of possible score” measure for plan components or attributes is that it is both easy to calculate and easy to interpret. In addition, the evaluation criteria were developed so that each has a comparable total raw score, making comparisons of relative scores across criteria reasonable. The findings from this type of plan evaluation study are presented most readily using bar graphs. For this study, the plan scores were averaged by jurisdiction type—county, township, city and village—to facilitate analysis and comparison at an aggregated level rather than for a given community.

An important aspect of this type of analysis is worth noting here. The comparison method, criteria, and calculations employed effectively amount to “benchmarking” an actual plan against a fully comprehensive plan in an abstract sense. Yet plans are always tailored to the unique situations of a given community, including its development trends, landscape conditions, and fiscal capacity. Thus even the best plan would not encompass all of the evaluation criteria used for this study. Working through this analysis for a given community could help that community assess its own planning efforts, but it is not so useful for a generalized research study to focus too much on the findings for one particular locality (i.e., without a more detailed assessment of conditions unique to that community and the appropriateness of the plan’s analyses and policies within that context). Moreover, given these considerations, it would not be appropriate to use the methods employed here to pronounce that the average overall quality or the policy focus of the local master plans evaluated here are, for example, “A” or “B” or “C” plans in a standard-based sense.

Nonetheless, this method does provide a good general sense of policy focus and overall plan quality of plans evaluated taken as a whole. It also provides useful information for understanding the relationships between those local planning efforts generally and ongoing resource management efforts more broadly. Finally, it points to areas for improving local planning and development management efforts accordingly.

With these caveats, the following discussion presents the findings from the evaluation of the 8 local master plans (2 county plans, 2 city plans and 4 township plans) from the NEMIA region.

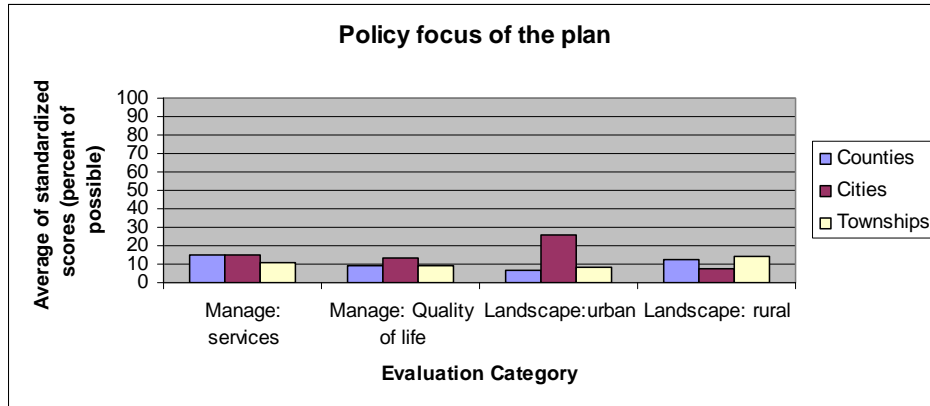
5.3.3 Findings

Plan Policy Focus

The policy focus of plans was evaluated along two aspects: growth management and landscape focus. Growth management was further divided into two categories: growth management for effective service provision and growth management for quality of life. Similarly the landscape focus of plans was divided into two categories: urban landscape focus and rural landscape focus. The scores of the NEMIA plans along these categories are evaluated in this section (see Figure

5.10). In general, except for cities’ policies supporting vital urban centers, all other jurisdiction types scored less than 20% of the ideal (or total points possible) on all policy evaluation categories. Also, it should be noted that while cities scored better than counties and townships in terms of planning for vital urban centers, townships scored better than cities and counties in terms of planning for rural preservation. This would be expected especially in the case of cities with little rural undeveloped land, and predominantly rural townships. Further, the findings also indicate that cities and counties are engaging in somewhat better growth management for service provision than townships.

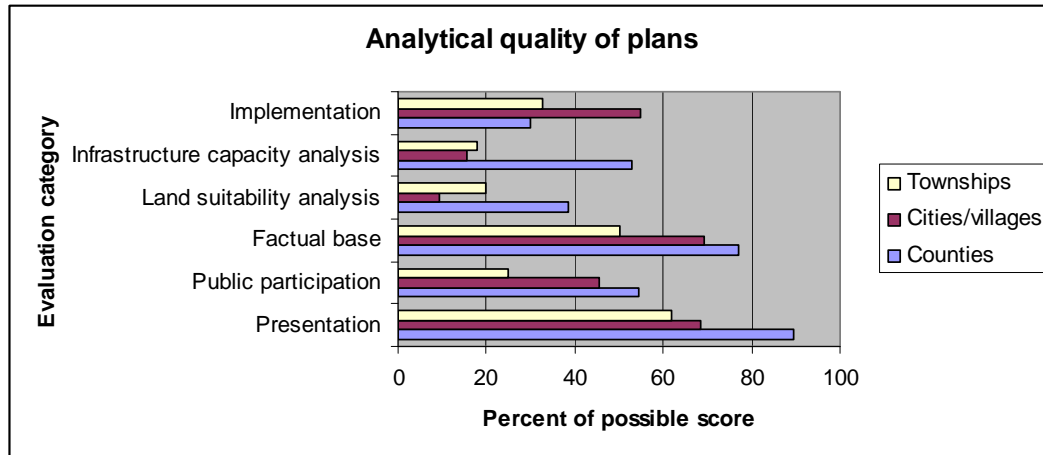
Figure 5.10. Plan Policy focus



Plan Quality: Analytical quality

Several notable observations can be drawn from Figure 5.11, which reports the results from the analysis of plan analytical quality. The first is that the county plans score better than city and township plans across all categories except “implementation.” This might be expected considering that counties in Michigan do not have power over local land use and therefore no implementing ability. The fact that county plans scored higher than other local government plans in all other categories could be potentially explained by capacity and resource related problems of local governments in the Northeast Michigan region. Second, both cities and townships have notably low scores in both the infrastructure capacity analysis and land suitability analysis categories. Third, all jurisdiction types scored over 50% of the ideal in terms of documenting the fact base of the jurisdiction and plan presentation.

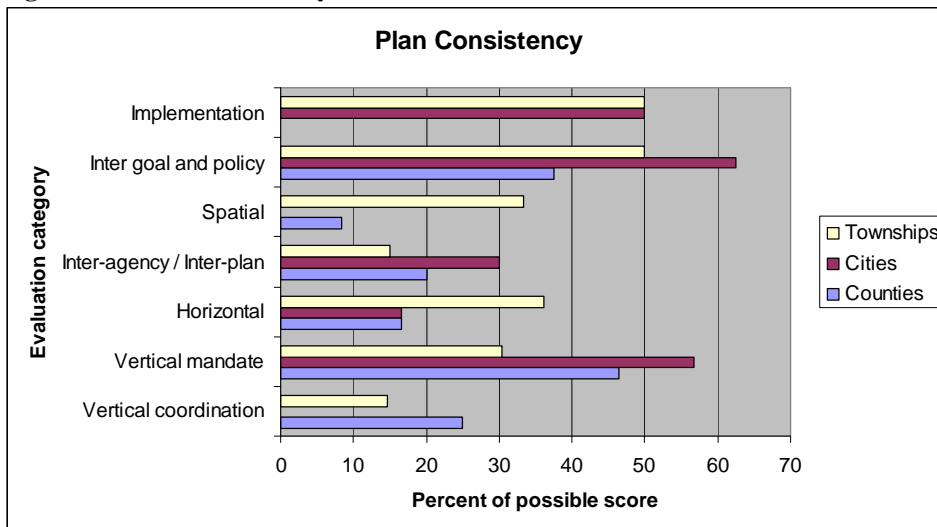
Figure 5.11. Analytical quality of plans



Plan Quality: Plan Consistency

Again as anticipated, and as illustrated by Figure 5.12, county plans have the lowest score for the implementation consistency category. Also, it should be noted that cities scored more than 50% of the ideal in the vertical mandate category. This is also not surprising as the elements in this evaluation category are mandated only for municipalities. Another observation to note is that cities have a very low score for both vertical coordination and spatial consistency. The highest scores are observed for the implementation and inter-goal and policy consistency categories. In other words, plans are generally consistent internally.

Figure 5.12. Plan consistency



Discussion

Taken altogether, the plan content analyses conducted for this study reveal that counties in general do not have plans that have strong provisions related to implementation. This can be expected as Michigan counties do not have implementation powers. In addition, cities in the NEMIA region appear more focused on promoting vital urban centers while townships appear more focused on conserving rural landscapes. Cities and counties also scored higher on policies relating to the efficient management of services. These findings tend to validate the methodology employed for this study.

Although all jurisdiction types seem to score high on plan quality measures, they score relatively low in all of the plan policy focus measures. Benchmarking the plans against a fully comprehensive plan for promoting sustainable development, most of the plans evaluated, on average, scored less than 20% of the possible score in terms of their policy content for virtually all of the attributes evaluated. Most importantly, the land suitability analysis scores and the infrastructure capacity analysis scores are among the lowest of the plan quality categories. This is of special concern considering that these two aspects of plans are especially important for ensuring the protection of natural resources (especially coastal resources) and cultural resources. Incidentally, these two areas also emerged (through survey results presented at the outset) as particularly important areas of concern to the stakeholder respondents, and consequently important policy emphasis areas for the NEMIA process.

In sum, the findings from this study highlight the ways in which selected NEMIA communities are currently *not* planning for sustainable development through their master plans. In so doing, the study also provides a road map that communities can use to effect such a transition toward sustainability through their planning and development management efforts. Most important—and currently most lacking—will be the need to undertake high quality planning efforts—especially through the use of rigorous land suitability analysis—to inform and justify that transition.

5.4 ZONING AND BUILDOUT ANALYSIS

Having completed our plan content evaluation, the next step of our study was to map buildout scenarios using the current zoning policies of selected jurisdictions in the region. Once buildout scenarios based on current development densities were established, alternative scenarios were also constructed. These alternative scenarios show how altering existing densities can result in substantial changes to future development patterns while still accommodating a considerable amount of growth and development. The buildout assessment that follows was primarily conducted by Denise Cline of NEMCOG, with conceptual and analytical assistance provided by Norton, David, and other members of the NEMIA research team.

Buildout scenarios were developed for 3 selected areas in the NEMIA region: Alpena City and Alpena Township; Alcona Township; and Rogers City and Rogers Township. Three development scenarios were developed to apply to these areas. The first scenario is a total level of buildout based on current allowable zoning densities in each of these jurisdictions. In order to illustrate the potential impacts of buildout based on more reasonable growth levels (i.e., using

levels that are less than “total” buildout but greater than current growth trends in Northeast Michigan and that might be expected should the goal of promoting greater economic development succeed), the second scenario is a level of buildout based on *current* allowable zoning densities but using growth rates borrowed from comparable jurisdictions in Northwest Michigan, an area of the state with similar coastal resources but that has experienced substantial economic growth and development over the past several decades. Finally, the third scenario is buildout based on *alternative* development densities and current growth rates drawn from Northeast Michigan. All three development scenarios were applied to Alpena City and Alpena Township and Alcona Township, however only the first and third (current zoning and current growth rate, reduced density zoning and current growth) scenarios were used for Rogers City and Township. The following discussion briefly describes the methods and assumptions used for each of these scenarios.

5.4.1 Buildout scenario 1 – Current zoning, current growth rate

To complete the buildout analysis, zoning layers were obtained from each of the communities. Public lands and lands that were already highly developed were clipped out of the zoning layer. To calculate buildout numbers, current density allowances in each residential district were first added to the attribute table. Total acreage in each zoning district was calculated and then multiplied by 0.9 to take into account roadways and other land areas which are not able to be developed. This amended acreage was then multiplied by the density allowances in each district to obtain the total number of dwelling units that would be allowed in a total buildout scenario. The same procedure was also used to demonstrate the two alternate scenarios.

5.4.2 Buildout scenario 2 – Current zoning, higher growth rate

In order to look at development patterns using an increased rate of development, each community was compared to a similar community in Northwest Michigan where development rates currently exceed the Northeast Michigan area. Each community was analyzed to determine the number of dwelling units that would occur if these development rates occurred in Northeast Michigan. These dwelling units were distributed on the map according to the currently allowable densities in each district to show the development patterns that would likely occur if development rates increase.

5.4.3 Buildout scenario 3 – Reduced density zoning, current growth rate

Lastly, density allowances in most districts were significantly reduced in order to show an altered development pattern that would still accommodate the current growth rates that the Northeast Michigan area is currently experiencing.

For all three buildout scenarios, dwelling units are shown two different ways, first in conjunction with infrastructure and then in conjunction with significant natural features. These maps visually demonstrate the stresses that would occur to roadways, water systems, septic systems, and the environment if development were to occur as per the scenarios outlined. Maps are organized in three sets by geographic area. Due to large file size, these maps are available as separate files through the following weblinks:

City of Alpena and Alpena Township Buildout Maps

<http://www.miseagrant.umich.edu/downloads/nemia/Alpena-City-and-Alpena-Township-Buildout-Maps.pdf>

Alcona Township Buildout Maps

<http://www.miseagrant.umich.edu/downloads/nemia/Alcona-Township-Buildout-Maps.pdf>

Rogers City and Rogers Township Buildout Maps

<http://www.miseagrant.umich.edu/downloads/nemia/Rogers-City-and-Rogers-Township-Buildout-Maps.pdf>

5.5 CONCLUSIONS

This chapter summarized the NEMIA stakeholders' policy concerns and their perspectives on current land management activities within the region, presented findings from the analysis of selected local master plans within the region, and presented the results from a forward-looking analysis of potential build-out scenarios. Those scenarios illustrate the various land development patterns the region might experience in the foreseeable future based on current zoning. In brief, these findings suggest that the NEMIA stakeholders taken together are primarily concerned about unemployment in the region first, followed by a range of secondary concerns such as land use conflicts and natural and cultural resource protection. The stakeholders also expressed concerns about a lack of sufficient local government capacity and a corresponding lack of local attention to comprehensive planning. Despite these concerns, the stakeholders also sensed that, in general, if local officials were faced with the need to make a tradeoff between economic development and either natural resource or cultural resource protection, those officials would favor protecting their natural and cultural resources.

This latter finding notwithstanding, the results from the analysis of local master plans evaluated for this study are largely consistent with the stakeholders' sense of current local policy goals and planning efforts in the region. That is, taken as a whole, the local master plans are generally weak analytically, not providing the foundations necessary to adequately address complex land management challenges such as promoting economic development in ecologically and socially sustainable ways. Moreover, the plans evaluated contain few if any of the policies that advocates for sustainable development and smart growth prescribe, including especially policies vital for protecting ecologically valuable settings like coastal regions. Similarly, a buildout analysis using current zoning code districts and corresponding requirements suggest that the several subregions studied are taking few if any steps to promote the development of a sustainable landscape, one characterized especially by compact urban centers, conserved rural areas, and protected natural areas. Even short of the level of urban development that would be permitted by right under current codes, a substantial amount of moderate to low density development could occur under those current regulations, yielding exactly the same kinds of ecological and cultural resource harms of greatest concern to the authors of the various studies cited at the front of this chapter.

In sum, the NEMIA stakeholders seek to promote ecotourism-based economic development while safeguarding the natural and cultural resources that make the NEMIA region unique and

special, but the results of the analyses presented here suggest that the local land use planning and development manage system as it is currently configured within the region appears to be inadequate for that task. Thus in addition to providing a backdrop picture of current conditions and local land management efforts, the findings presented here also emphasize the need for and set the stage to consider the analyses and recommendations prepared by the SDAT team as part of the NEMIA process, reported next in Chapter 6.

Table 5.2. Plan Policy Emphasis – Growth Management Policies (Efficient services and Quality of life)

<u>Criterion</u>	<u>Concept Description</u>	Growth Management – Efficient Services <u>Measurement</u>	Growth Management – Quality of life <u>Measurement</u>
<i>Development Management</i>	Procedural policies addressing how land development or redevelopment will be shaped or managed (e.g., through tax policies, regulations, reliance on the market, etc.).	Urban Growth Boundaries; growth controlled by infrastructure placement, regional collaboration; downtown development authorities; brownfield redevelopment authorities; urban service boundary.	Regional or multi-jurisdictional collaboration; urban growth or services boundary; mapping of conservation and development zones; manage growth by infrastructure carrying capacity and land suitability.
<i>Land Use Management</i>	Procedural policies establishing the various land uses or land use forms that the community will ultimately take (e.g., urban, rural, suburban).	Planned Unit Development, density bonuses; infill Development	Promote compact development; recreational uses within walking and biking distances; use of planned unit developments, density bonuses; remediation and reuse of brownfield sites; site plan review for regulations; design boards and aesthetic guidelines.
<i>Infrastructure Management</i>	Procedural policies addressing the range of infrastructure services under the control of the local government (e.g., roads, water, wastewater), including “green” infrastructure (e.g., parks and trails).	Traffic management plans; transit oriented development; coordination of local transportation to regional network; waste-water conservation and treatment; conversion of septic to sewer where necessary; recycle / reduce / reuse programs.	Variety of transportation options, performance monitoring; public transportation and concomitant infrastructure; transit oriented development; traffic calming techniques
<i>Housing</i>	Procedural policies allowing for the efficient coordination of housing with other infrastructure and the provision of a variety of housing types	Housing located close to employment centers	Affordable housing, mixed income housing, variety of housing options, manufactured housing
<i>Community Character</i>	Procedural policies relating to the preservation and enhancement of sense of place and community		Historic preservation, cultural resource preservation
<i>General Environmental Quality</i>	Procedural policies on the control of environmental pollutants (e.g., control of contaminated stormwater runoff).		Use of watershed-based planning; environmental quality public education; parking lot run-off controls; native landscaping; pesticide and fertilizer controls; controls on new septic installation.
<i>Natural resource preservation</i>	Procedural policies for the preservation of open space and the development of contiguous natural environments		Conservation easements; fee simple acquisition; landscaping standards; buffering standards; greenway and trail connectivity requirements; conservation planning and design
<i>Resource production</i>	Procedural policies for the protection of productive lands		Right to farm ordinances; Purchase and Transfer of Development Rights; Exclusive agricultural zoning; cluster development

Table 5.3. Plan Policy Emphasis – Urban Landscapes

<u>Criterion</u>	<u>Concept Description</u>	<u>Measurement</u>
<i>Development and Redevelopment</i>	Procedural policies promoting the development and redevelopment of compact, mixed-use urban centers.	Mixed use and compact development and retrofiting; traditional neighborhoods; tax increment financing; downtown development authorities; brownfield redevelopment authorities; urban growth/services boundary.
<i>Land Use Management</i>	Substantive policies promoting attractive, viable, and compatible urban land uses and forms.	Form-based zoning; mixed-use zoning; design standards and review board; locally and regionally-appropriate facades, etc.; pedestrian amenities in commercial centers; auto-dependent retail design discouraged.
<i>Transportation & Connectivity</i>	Substantive policies promoting multiple and connected transportation systems between residential, commercial and business, and recreational centers.	Siting and connectivity of recreational, commercial, residential, and institutional centers to facilitate walking and biking; development of public transportation; traffic-calming in residential neighborhoods; connectivity in roadways between existing and new developments; transit-oriented development.
<i>Housing Variety</i>	Substantive policies promoting a variety of housing types across price range and location.	Variety of housing types provided for; housing located near employment centers; affordable, manufactured, and mixed-income housing provided for.
<i>Urban Environmental Quality & Community Character</i>	Substantive policies promoting environmentally and culturally healthy and desirable urban forms.	Environmental overlay districts; landscaping standards, setbacks, buffers; on-site stormwater management systems; management districts for important cultural and historic resources.

Table 5.4. Plan Policy Emphasis – Rural Landscapes

<u>Criterion</u>	<u>Description</u>	<u>Measurement</u>
<i>Development Management</i>	Procedural policies promoting the development of compact urban areas and the conservation of rural areas.	Compact development encouraged; auto-oriented retail discouraged; natural resource protection coordinated with rural area economic activity; mapping of conservation and development zones; growth managed by infrastructure carrying capacity and land suitability.
<i>Land Use & Environmental Quality</i>	Substantive policies promoting access to rural and natural areas and the protection of those areas from environmental degradation.	Access to natural areas provided; standards for preservation of natural terrain, drainage, vegetation; environmental overlay districts; landscaping and vegetative standards, setbacks, buffers; on-site stormwater management; standards for vegetated open channels.
<i>Resource Production Area Protection</i>	Substantive policies promoting the identification and conservation of contiguous and economically viable resource production areas.	Easement acquisition; cluster zoning; buffer zones for agricultural lands; purchase and / or transfer of development rights programs; exclusive agricultural zoning; right to farm ordinance.
<i>Open Space / Natural Area Protection</i>	Substantive policies promoting the identification and conservation of contiguous and ecologically viable natural areas.	Conservation planning; property acquisition; buffer zones to protect sensitive and unique natural areas; connectivity between natural areas, wildlife corridors, connecting park trails, greenway systems.

Table 5.5. Plan Analytical Quality

<u>Criterion</u>	<u>Concept Description</u>	<u>Measurement</u>
<i>General Presentation</i>	The comprehensibility and completeness of the plan as an informational document. The clarity and thoroughness of the plan's statements about the role of planning and the plan itself.	Readability of text; use and quality of maps; provision of table of contents; executive summary; data and information sources. Also, Discussion of the planning process and plan's purpose; clear statements of goals, objectives, and policies; land classification with clear description of land use classifications.
<i>Public Participation</i>	Extent to which multiple and meaningful avenues for public participation were provided in the plan-making process in order to leverage local citizen knowledge, leverage the "social learning" function of planning, and increase the legitimacy of the plan.	Description of public participation process; use of public participation techniques (e.g., public education campaigns, workshops, surveys, etc.).
<i>Fact Base</i>	The overall thoroughness and clarity of the descriptive information about the community presented in the plan, provided to describe where the community is now, where it appears to be headed, and what the status is of past planning efforts.	Discussion of data collection and analysis process used; assessment of past plan implementation efforts and effectiveness; discussion of current plans, policies and regulations; discussion of current conditions (land use, economic base, etc.); trends assessment (economic activity, land development, environmental trends).
<i>Infrastructure Capacity Analysis (Average)</i>	Identification of services currently available and analysis of both the likely impacts from infrastructure decisions on population and land development trends and the reciprocal impacts from those trends on long-term capacities.	Average score of infrastructure analysis criteria (see table below).
<i>Land Suitability Analysis (Average)</i>	Analysis of inherent land attributes to identify areas both most suitable and least suitable for urbanized land development and for rural area conservation.	Average score of land suitability analysis criteria (see table below).
<i>Implementation</i>	Extent to which the plan identifies the timeframes, mechanisms, and responsible parties for implementing the plan policies.	Provision of timetable, responsibilities, and mechanisms to be used to implement the plan; discussion of monitoring system, benchmarks and dates, updating process and timeframe.

Table 5.6. Plan Consistency

<u>Criterion</u>	<u>Concept Description</u>	<u>Measurement</u>
<i>Vertical Mandate Consistency (All)</i>	Presence of plan elements mandated of all local units of government in state planning enabling laws.	Plan elements for, e.g., a land classification program, transportation infrastructure, water quality and quantity, public utilities.
<i>Vertical Mandate Consistency (Cities / Villages)</i>	Presence of plan elements mandated only for cities and villages in state planning enabling laws for cities and villages.	Plan elements for, e.g., community centers, playgrounds and open spaces.
<i>Vertical Coordination</i>	Extent to which the plan demonstrates consultation and/or coordination between the locality and “higher” units of government (e.g., state coastal area management programs).	Discussion of vertical plan policy consistency and planning coordination efforts with federal and state agencies; coordination by cities, townships and villages with county government.
<i>Horizontal Consultation and Coordination</i>	Extent to which the plan appears to be compatible with the policies and spatial characteristics of neighboring jurisdictions and extent to which the locality is consulting and/or coordinating with neighboring jurisdictions or other “horizontal” units of government.	Discussion of plan policy consistency with neighboring jurisdictions, inter-governmental consultation and coordination efforts.
<i>Internal Policy, Spatial & Implementation Consistency</i>	Degree of internal coherence between the plan’s facts, goals, and policies and between multiple plan documents in a jurisdiction with multiple plans (e.g., subarea plans). Several attributes of internal consistency include inter-goal, inter-policy, goal-policy, inter-plan, and spatial consistency (i.e., degree to which the stated goals and policies of the plan are consistent with the limitations on and opportunities for development based on the infrastructure capacity and land suitability analyses). Also, extent to which the implementation steps identified in the plan are consistent with (or are reasonably designed to advance) the plan’s articulated goals and policies.	Discussion of internal policy within the plan itself, inter-plan/program consistency, and inter-agency coordination; discussion of consistency between land suitability analysis, constraints/land classification maps, and plan policies; analyst’s assessment of consistency between plan goals, objectives, and policies; discussion of consistency between plan policies and implementation mechanisms.

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Appendix B: Zoning Code Audit Protocol - Coastal MI Communities - Winter 2007

Name of Community:
 Site ID:
 Date of Review:
 Document(s) Reviewed:
 Reviewer Name:

Evaluation Criterion	Items	Raw Score	% Score	Corresponding Districts
Innovative / flexible process and design	5, 6, 13, 14, 47, 48	0	0	
Compact development	1-5,37,41-43,45, 48, 51	0	0	
Mixed used (residential / commercial / small business)	6-13, 49-50	0	0	
Mixed / affordable residential	17-20	0	0	
Urban revitalization	1,2,10-13,23,50	0	0	
Non-auto oriented transportation (pedestrian / transit friendly; minimized parking)	22-29	0	0	
Water quality/quantity protection and management	30-36	0	0	
Historic / scenic / cultural preservation	15,16	0	0	
Natural area open space preservation	37-40, 51	0	0	
Working agricultural area preservation	41-46, 51	0	0	

Category	Item	Policy	Value Key	Value	Page	Comment
Land Supply, Land Use, and	1	Urban growth boundary used to prevent outward development.	0= No 2= Yes			
	2	Urban service boundary (water, sewer and roads) used to manage and direct growth.	0= No 2= Yes			
	3	High density (8-15 units per acre) allowed in at least 1 district.	0= No 2= Yes If yes, which districts?			
	4	Minimum densities specified in at least 1 district.	0= No 2= Yes If yes, which districts?			
	5	Density bonus and/or incentive zoning permitted in non-PUD districts. See Note 1	0= No 2= Yes If yes, which districts?			
	6	Areas zoned by building type, not by use, to allow for a mix of land uses (also "form-based zoning").	0= No 2= Yes If yes, which districts?			
	7	Mixed use zoning via a non-PUD district: Specific "mixed used district" with different uses in separate structures (whether by this name or some other name). See Note 2	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	8	Mixed use zoning via a non-PUD district: Residential permitted in commercial / business (may be same structure, e.g., 2nd story apartments). NOTE: This may overlap with the above item.	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			

Urban Form	9	"Live/work" zoning via conventional "home occupation" provision.	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	10	Non-traditional live/work zoning (e.g., studio lofts) via a non-PUD district.	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	11	Small-scale neighborhood commercial uses adjacent to or within residential neighborhoods via a non-PUD district?	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	12	"Traditional Neighborhood Ordinance" (TND) and/or provisions. See Note 3	0= No 2= Yes			
	13	"Flexible zoning" via a non-PUD district (e.g., permitting multiple uses in transitional zones without requiring a variance or rezoning). See Note 4	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	14	"Conditional zoning" authorized.	0= No 2= Yes			
Character	15	Scenic preservation districts and/or provisions. See Note 5	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	16	Historic preservation districts and/or provisions.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
Housing	17	"Accessory apartments" permitted within single-family residential zoning districts (separate or connected structures from residence). See Note 6	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	18	Muti-family residential units (e.g., townhomes, condos, duplexes, apartments) allowed within Single Family (detached) Residential districts. (Specify type allowed.)	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			

	19	Mobile homes / manufactured housing permitted in a least one residential zoning district as individual units (e.g., with special provisions for foundations, etc.) (specify which).	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	20	Mobile homes permitted in a separate mobile home park / zoning district.	0= No 2= Yes			
Transportation/ Parking	21	Sidewalks encouraged or required.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	22	Bike lanes encouraged or required.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	23	" Pedestrian walkability " or " transit friendly " orientation used as a review standard.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	24	Reductions in off-site parking requirements if within specified districts (e.g., TND neighborhood districts).	0=not present; 1=permitted as of right; 2=permitted by conditional use. If yes, which districts?			
	25	Reductions in off-site parking requirements if within a specified distance of a municipal garage or other parking opportunity (specify other).	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	26	Reductions in parking ratios for shared parking .	0=not present; 1=permitted by conditional use; 2=permitted as of right. If yes, which districts?			
	27	Maximum parking ratios defined (cap on the number of parking spaces that can be built in a particular development).	0= No 2= Yes If yes, which districts?			
	28	On-street parking specifically allowed in places where it can be safely provided (downtown areas and pedestrian-retail districts).	0= No 2= Yes If yes, which districts?			
	29	On-street parking specifically prohibited. See Note 7	0= No -2= Yes If yes, which districts?			

Water Quality and Quantity	30	Wetland protection ordinance/provisions for wetlands < 5 acres. See Note 8	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	31	Swales allowed in place of curbs and gutters (for water management purposes) in one or more districts.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	32	Standards provide for limited chemical use for lawn maintenace in one or more districts.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	33	Development setbacks / buffers required adjacent to water bodies in one or more districts.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	34	Standards provide for control of runoff from parking lots/drives/streets in one or more districts.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	35	Floodplain management district and/or provisions in at least 1 district.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	36	Other water quality/quantity standards provided for one or more districts (specify).	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
Natural Resource Area Preservation	37	Cluster/Open Space Ordinance or provisions via a non-PUD district.	0=not present; 1=present but not detailed; 2=present and detailed. If yes, which districts?			
	38	Standards provide for ensuring connectivity of open space / natural areas.	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	39	Standards provide for flexible/peformance zoning and/or flexible site design specifically for open space / natural area preservation (specify).	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	40	Environmental overlay districts and/or provisions (e.g., tree, habitat, other; specify). See Note 9	0= No 2= Yes			

Agriculture/ Open space Preservation	41	Exclusive agricultural zoning districts provided. <i>See Note 10</i>	0=not present; 1=present but not detailed; 2=present and detailed			
	42	Purchase of Development Rights (PDR/PACE) provided.	0=not present; 1=present but not detailed; 2=present and detailed			
	43	Transfer of Development Rights (TDR) provided.	0=not present; 1=present but not detailed; 2=present and detailed			
	44	Buffer zones for agricultural lands required (i.e., in non-agricultural districts).	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
	45	Right to farm ordinance / provisions. <i>See Note 11</i>	0= No 2= Yes			
	46	Other innovative agricultural area preservation provisions (e.g., sliding scale zoning, area based allocation, quarter-quarter zoning; specify). <i>See Note 12</i>	0=not present; 1=suggested; 2=mandatory. If mentioned, which districts?			
Planned Unit Developments	47	Planned Unit Development (PUD) authorized.	0= No 2= Yes			
	48	Density bonus and/or incentive zoning permitted via PUD.	0= No 2= Yes			
	49	Mixed use zoning via PUD.	0= No 2= Yes			
	50	Live/work zoning via PUD.	0= No 2= Yes			
	51	Cluster/open space provisions via PUD.	0= No 2= Yes			

NOTE 1: Bonus and incentive zoning allows local government to grant a bonus, usually in the form of density or the size of the development, in exchange for amenities (such as increased open space, pedestrian paths, etc.) or a higher quality of required provisions (enhanced stormwater management facilities, landscaping, etc.) provided by the developer not required by traditional zoning. Density bonuses may be offered to encourage cluster development. In many instances, the use of bonus and incentive zoning is tied to a site plan approval process. Communities often provide density bonuses to entice developers into providing public amenities such as parks, plazas or structured parking.

NOTE 2: In general, mixed use districts are characterized by multi-story construction that uses the ground floor for retail, service or office space, while upper floors are usually residential; mixed use zoning typically allows for higher density development than single use zoning. Mixed use zoning also helps to provide a transition from one single-use zone to another. Some mixed use codes attempt to protect an existing mixed-use area from incompatible auto-oriented development. Mixed use zoning can also serve to intensify and diversify uses in an already developed area, for example, transforming a conventional, suburban, single-use commercial environment to a more walkable, 24-hour district with both commercial and residential uses. Source: http://www.lgc.org/freepub/PDF/Land_Use/sg_code_exec_summary.pdf

NOTE: Do not include "mixed use" provisions that allow only mixed residential (e.g., SFR with MFR) but not residential / commercial / business. ALSO: Do not include "mixed use" provisions achieved via a cumulative zoning scheme alone.

NOTE 3: Traditional neighborhood design ordinances generally require new development to meet specific characteristics that result in a higher density, mixed-use, pedestrian oriented community to emulate the characteristics of neighborhoods developed during the 18th through 20th century. Traditional neighborhood design elements include but are not limited to: connectedness of the street and alleyway networks walkability, i.e. short blocks (under 500 ft. long), street landscaping, and human scale, street-oriented storefronts and residential centers; diversity of housing types and a mix of commercial and residential land uses; minimal parking requirements and transit-oriented design; usable public space such as civic and community centers. Source: Overcoming Obstacles to Smart Growth through Code Reform, Retrieved May 19, 2004, from http://www.lgc.org/freepub/PDF/Land_Use/sg_code_exec_summary.pdf.

NOTE 4: Flexible zoning allows developers to respond to market demands. Flexible zoning is often used in areas of transition between commercial and residential streets in response to market fluctuations to accommodate retail, office or residential space needs. Owners of properties within the zone are able to change the use of the building (in compliance with local building codes) without going through a lengthy variance or approval process.

NOTE 5: Scenic preservation is intended to enhance the appearance of a municipality in order to make it a better place to live and work as well as improve its economic vitality by enhancing its attractiveness to both citizens and to visitors. Scenic preservation is often achieved by establishing height limits to protect significant views and by establishing landscaping and screening standards to preserve and enhance identified scenic resources. Source: http://www.planning.ci.portland.or.us/zoning/ZCTest/400/480_Scenic.pdf.

NOTE: Record this only if required for unique or special natural/scenic features (i.e., not for landscaping requirements alone).

NOTE 6: Accessory dwelling units are either detached or internal residential living units that provide complete independent living facilities for one or more persons. They include permanent provisions for living, sleeping, eating, cooking, and sanitation on the same parcel as the single-family dwelling they accompany. When permitted, accessory dwelling units or apartments are allowed in single-family residential districts.

NOTE: Do not include "accessory units" for home occupations or room rental/boarding house provisions.

NOTE 7: Be careful to reverse value on this measure.

NOTE 8: State law (Natural Resources and Environmental Protection Act, Part 303, Wetlands Protection) mandates the protection of wetlands over 5 acres in size and requires development activities to be approved by permit from the State (requiring landowners to secure a wetland permit before receiving other local permits mandates a review of wetlands at the beginning of the development process and helps to avoid expensive delays and ensures that landowners are fully aware of development restrictions before making a significant investment). Local programs can fill in areas not covered by state and federal laws, such as regulating small wetlands and exempt activities.

NOTE 9: Environmental overlay districts protect resources and functional values that have been identified as providing benefits to the public. Environmental regulations encourage flexibility and innovation in site planning and provide for development that is carefully designed to be sensitive to the site's protected resources. Environmental overlay zone conserves important resources and functional values in areas where the resources and functional values can be protected while allowing environmentally sensitive development. In general, environmental overlay districts are intended to: encourage sensitive development while minimizing impact on resources; provide clear limitations on disturbance within resource areas; ensure that new development and alterations to existing development are compatible with and preserve natural resources; provide clear planting and erosion control requirements within natural resource areas; buffer the natural resource area from the noise, fumes, lights, and motion of vehicular traffic associated with industrial, commercial, and multi-dwelling residential uses. Source: http://www.planning.ci.portland.or.us/zoning/ZCTest/400/430_Envir.pdf.

NOTE 10: Exclusive agricultural zoning seeks to promote and protect the practice of farming through the preservation of lands on which agriculture is most viable by making agriculture the primary permitted use. Effective agricultural zoning ordinances seek to protect prime agricultural soils and to preserve the culture and landscape of farming. Conditional uses or special exceptions should be limited to ag-related, religious, utility, institutional or governmental uses. Site development standards within the exclusive agricultural zoning district may include: a maximum lot area for non-farm, residential uses; a large minimum lot area for a farm dwelling unit; a maximum lot to depth ration of 1:3; large minimum lot widths and setbacks.

NOTE 11: Michigan Right to Farm Act (5.7.2s) (Act 93 of 1981): An Act to define certain farm uses, operations, practices, and products; to provide certain disclosures; to provide for circumstances under which a farm shall not be found to be a public or private nuisance; to provide for certain powers and duties for certain state agencies and departments; and to provide for certain remedies for certain persons.

NOTE 12: Sliding scale zoning limits the number of times that a parent parcel (a parcel existing on the date of ordinance adoption) can be split based on its size. More splits are allowed on larger parcels. A minimum parcel size and a maximum number of splits are established.

Quarter/quarter zoning refers to a quarter of a quarter section of land (1/16 of 640 acres, or 40 acres) where a limited number of non-farm homes are allowed for every 40-acres of land.

Area based allocation zoning requires homes to be on smaller parcels to avoid fragmentation of the resource base into “farmettes.” The number of house lots allowed is directly proportional to the farmer’s total acreage (e.g., one lot for every 20 acres), but these lots are subject to maximum size restrictions (often two acres), and are sometimes further required to be located on the parts of a property that are least suitable for farming. By requiring small lots for the non-farm dwelling units, large areas are left intact for agricultural uses. (Rural by Design, Randall Arendt, et al., p. 296).

Lot Size/Setback Requirements

	Optimal	Page	Regulation (Note District Name and Appropriate Standard)
Minimum pavement width	18-24 ft.*		
Minimum ROW	35-45 ft.**		
Minimum Lot Size, Lowest-Density SF/Duplex Residential**	5,000 sq. ft.** (8 units/a)		
Minimum Lot Size, Next Lowest Density Residential**	4,000 sq. ft.** (10 units/a)		
Minimum Lot Size, Next Lowest Density Residential**	3,000 sq. ft.** (14.5 units/a)		
Minimum Lot Size, Multi-Family Residential**			
Minimum Lot Size, other Res. Districts (add more lines as needed)			
Maximum density, SF Residential			
Maximum density, Commercial			
Land occupancy / site foot print limits (percent) for Residential			
Land occupancy / site foot print limits (percent) for Commercial			
Land occupancy / site foot print limits (percent) for Business			
Minimum Front Setback, Lowest-Density Residential	20 ft.		
Minimum Front Setback, Next Lowest Density Residential			
Minimum Front Setback, Next Lowest Density Residential			
Minimum Front Setback, other Res. Districts (add more lines as needed)			
Minimum Setback, Commercial District (add more lines as needed)	0 ft.		
Parking Requirement, SF Residential	2 per DU#		
Parking Requirement, Commercial	3-8 per 1,000 ft. #		
Parking Requirement, Industrial	1 per every 2-5 employ		
Maximum Block Length	500 ft. ^		

FINAL QUESTIONS:

Is there a separate ZBA? (Or does the legislative body serve as the ZBA)? **value** **page** 1 = separate, 0 = legislative body sits as ZBA
 Does the code using MF housing to "buffer" SFR from other uses? 1 = yes, 0 = no

Which entity makes the following recommended and final decisions on the following actions (leave blank if not specified):

NOTE: LB=legislative body; PC=planning commission; ZC=zoning commission; ZA=zoning administrator/staff; ZBA=zoning board of appeals; O=other (specify)

	Rec'd	Final	Page / comments
Site plan review / permits			
Special use permits			
PUDs			
Surety bonds/performance guarantees			
Dimensional variances			
Use variances			

Plan Evaluation Coding Form: Michigan Coastal Communities

County / Community:

Purpose of the master plan:

	Variable Description	Variable Key	Code	Pg	Comments
1.0 General Information					
1.0a	Place type	1 = county; 2 = municipality; 3 = township			
1.0b	Place type for townships	1= urban township (> ~ ½ developed); 2 = rural township (< ~ ½ developed); 3 = urbanizing township (rural twp ~ ½ developed and urbanizing)			
1.0c	Date of evaluation / Evaluated by		Date:	Evaluator:	
1.0d	Plan title				
1.0e	Plan type	e.g., master, parks & rec, etc.			
1.0f	Type of copy	1= hard copy; 2 = electronic copy			
1.0g	Plan update	1 = yes; 0 = no (i.e., first plan)			
1.0h	Date adopted by locality	NA = Not formally adopted			
1.0i	Adopted by	Name of entity			
1.0j	Endorsed by	Name of entity			
1.0k	Approximate page length				
1.0l	Consultant used for plan preparation	1 = yes; 0 = no			
1.0m	Consultant used for plan compilation	1 = yes; 0 = no			
1.0n	Consultant's name				
1.0o	Other / comments				
2. Plan Presentation					

2.1 Supporting Components					
2.1a	Table of contents	Provided? 1 = yes; 0 = no			
2.1b	Glossary of terms	Provided? 1 = yes; 0 = no			
2.1c	Index	Provided? 1 = yes; 0 = no			
2.1d	Executive summary	Provided? 1 = yes; 0 = no			
2.1e	Sources in text/tables	Provided? 1 = yes; 0 = no			
2.1f	Source list provided	Provided? 1 = yes; 0 = no			
2.1g	Use / quality of maps[1]	0 = none; 1 = limited or poor; 2 = standard; 3 = extensive, clear and usable			
2.1h	Use / quality of tables / figures (readability, clarity of purpose, etc.)	0 = none; 1 = limited or poor; 2 = standard; 3 = extensive, clear and usable			
2.1i	Readability of text[2]	0 = poor; 1 = average; 2 = high			
2.2 Statement of goals, objectives and policies					
2.2a	Clear statement of goals, policies, and objectives	Provided? 1 = yes; 0 = no			
2.2b	Emphasis of values/goals/policies[3] Please check the appropriate boxes. Check as many as you see appropriate.	Rural Residential Character			
		Single Family Residential Character			
		Agricultural and Farmland Preservation			
		Natural Resource Protection			
		Urban Revitalization			
		Historic and Cultural Preservation			
		Economic Development			
		Other			
2.2c	Other / comments				
3. Planning Process					
3.0a	Explanation of planning process provided	0 = not present; 1 = present but not detailed; 2 = present and detailed			
3.0b	Discussion of planning, plan's purpose	0 = not present; 1 = present but not detailed; 2 = present and detailed			
3.0c	Other / comments				

3.1 Public Participation					
3.1a	Description of public participation process	0 = not present; 1 = present but not detailed; 2 = present and detailed			
3.1b	Stakeholder involvement	Discussed? 1 = yes; 0 = no			
3.1c	Public education and information	Discussed? 1 = yes; 0 = no			
3.1d	Community visioning session, design charette, etc.	Discussed? 1 = yes; 0 = no			
3.1e	Planning or steering committee	Discussed? 1 = yes; 0 = no			
3.1f	Focus groups	Discussed? 1 = yes; 0 = no			
3.1g	Survey of public opinion conducted	Discussed? 1 = yes; 0 = no			
3.1h	If yes, results tabulated or summarized in the plan itself	Provided? 1 = yes; 0 = no			
3.1i	Preliminary drafts circulated for public comment	Discussed? 1 = yes; 0 = no			
3.1j	Other public participation mechanisms	Discussed? 1 = yes; 0 = no			
3.1k	Other / comments				
4. Data Collection and Analysis					
4.0a	Summary of data collection and analysis process	Provided? 1 = yes; 0 = no			
4.1 Existing Local Policies, Plans and Background Studies					
4.1a	Past plan implementation status	Discussed? 1 = yes; 0 = no			
4.1b	Assessment of past plan implementation effectiveness	Discussed? 1 = yes; 0 = no			
4.1c	Current plans, policies, regulations	Discussed? 1 = yes; 0 = no			
4.1d	Assessment of consistency between plans and ordinances	Discussed? 1 = yes; 0 = no			
4.1e	Background studies / reports	Discussed? 1 = yes; 0 = no			
		Attached? 1 = yes; 0 = no			
4.2 Present Conditions					

4.2a	Present problems/threats identified in the jurisdiction	Provided? 1 = yes; 0 = no			
4.2b	Trends re: development and/or land use change	Discussed? 1 = yes; 0 = no			
4.2c	Trends/problems re: environment	Discussed? 1 = yes; 0 = no			
4.2d	Population trend	0 = not provided, 1 = declining; 2 = stable; 3 = increasing			
4.2e	Existing land uses	Provided? 0 = no; 1 = discussed; 2 = discussed and mapped			
4.2f	Future land uses	Provided? 0 = no; 1 = discussed; 2 = discussed and mapped			
4.2g	Zoning	Provided? 0 = no; 1 = discussed; 2 = discussed and mapped			
4.2h	Build-out capacity	Discussed? 1 = yes; 0 = no			
4.2i	Time to reach build out	Provided? 1=yes; 0 = no			
4.2j	Population to reach build out	Provided? 1=yes; 0 = no			
4.2k	Regional context (relative to jurisdiction type)	Discussed? 1 = yes; 0 = no			
5. INFRASTRUCTURE, FACILITIES AND SERVICES					
5A ASSESSMENT					
5A.1 Existing Infrastructure, Facilities and Services					
5A.1.1 Transportation		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried	Code	Pg	Comments
5A.1.1a	Transit (availability of and access to)				
5A.1.1b	Auto / Roadway system quality				
5A.1.1c	Non motorized Transportation (availability of and access to)				
5A.1.1d	Regional, State and Interstate Roads				

5A.1.1 e	Traffic Demand Management	Discussed? 0 = no; 1 = discussed generally; 2 = discussed specifically with respect to the community			
5A.1.2 Drinking water supply		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.2 a	Wellhead protection (if groundwater DW source)				
5A.1.2 b	Sources Identified?				
5A.1.2 c	Stormwater management (quantity / system capacity)				
5A.1.3 Wastewater management		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.4 Solid waste management		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.5 Schools		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.6 Police and fire protection		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.7 Recreational infrastructure and parks		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.7 a	Greenways / green spaces (trails)				
5A.1.7 b	Active recreation facilities (soccer fields)				
5A.1.8 Housing stock (present condition, supply, and future need)		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.9 Community Facilities		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.10 Historic and cultural resources		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.11 Brownfield Properties		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.12 Existing commercial, industrial, retail areas		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5A.1.13 Analysis of potential infrastructure related impacts on					

5A.1.1 3a	Transportation	Discussed/Analyzed? 0 = no; 1 = discussed generally; 2 = discussed specifically with regard to the community			
5A.1.1 3b	Water / wastewater	Discussed/Analyzed? 0 = no; 1 = discussed generally; 2 = discussed specifically with regard to the community			
5A.1.1 3c	Solidwaste	Discussed/Analyzed? 0 = no; 1 = discussed generally; 2 = discussed specifically with regard to the community			
5A.1.1 3d	Parks / recreation	Discussed/Analyzed? 0 = no; 1 = discussed generally; 2 = discussed specifically with regard to the community			
5A.1.1 3e	Schools	Discussed/Analyzed? 0 = no; 1 = discussed generally; 2 = discussed specifically with regard to the community			
5A.1.14 Analysis of the connection between population projections and infrastructure related concerns		Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
5A.1.15 Other facilities / services		Discussed/Identified? 0 = no; 1 = yes; 2 = inventoried			
5B. INFRASTRUCTURE: GOALS, OBJECTIVES, AND POLICIES					
5B.1 Goals, Objectives and Policies – Infrastructure: Transportation and Access					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail 0=not present; 1=present but not detailed; 2=present and detailed</i>	<i>Level of prescriptiveness 0 = Low; 1= Moderate; 2=High</i>	<i>Pg</i>	<i>Comments</i>
5B.1a	Transit-oriented development				
5B.1b	Public transportation and concomitant infrastructure (bus centers, park & ride lots, etc.)				
5B.1c	Transportation/Roads				

5B.1d	Employer and/or government-sponsored commute reduction programs				
5B.1e	Traffic management plans to reduce peak period congestion				
5B.1f	Traffic calming techniques implemented in neighborhoods				
5B.1g	Traffic Impact Analysis				
5B.1h	New neighborhood streets that connect to existing stub streets				
5B.1i	Regular performance monitoring of transportation modes				
5B.1j	A variety of transportation options				
5B.1k	Access to parks, trails, open space (including greenways) and infrastructure (including bike racks)				
5B.1l	Walkable communities				
5B.1m	Recreational opportunities within walking/biking distance				
5B.1n	Office, research, industrial, and commercial areas with direct multimodal links to surrounding areas				
5B.1o	Commercial centers provide pedestrian amenities (transit stops, awnings, landscaping, minimal setbacks, etc.)				
5B.1p	Automobile-oriented retail development discouraged				

5B.1q	Improve the connectivity of local transportation systems to regional networks				
5B.2 Goals, Objectives and Polices – Infrastructure: Wastewater, solid waste and other services					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail</i> 0=not present; 1=present but not detailed; 2=present and	<i>Level of prescriptiveness</i> 0 = Low; 1= Moderate; 2=High	<i>Pg</i>	<i>Comments</i>
5B.2a	On-site wastewater conservation, treatment, and/or re-use				
5B.2a b	Conversion from septic/well to public sewer and water				
5B.2c	Pricing mechanisms and/or demand management used to control water use				
5B.2d	Sustainable water resource and waste water management				
5B.2e	Sustainable solid waste management				
5B.2f	Centralized sewage disposal facilities				
5B.2g	Recycle/Reduce/Reuse programs				
5B.2h	Composting programs				
5B.2i	Coordinated infrastructure planning (local, regional and state) Water and Sewer				
5B.2j	Coordinated infrastructure planning (local, regional and state) Schools				
5B.2k	Existing infrastructure upgraded and maintained first				
5B.2l	Infrastructure concurrency				

5B.2m	Investments in new infrastructure that promote smart growth				
5B.2n	Efficient use of land and infrastructure				
5B.2o	Higher density development concentrated in areas with urban services and infrastructure (also infill dev't)				
5B.2p	Growth inducement by expanded infrastructure capacity				
5B.2q	Control growth by controlling infrastructure placement				
5B.2r	Centralized water recreation facilities / accessory structures				
5B.2s	Provision of passive recreational facilities such as parks				
5B.2t	Provision of active recreational facilities				
5.3 Goals, Objectives and Policies – Infrastructure: Housing					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail 0=not present; 1=present but not detailed; 2=present and detailed</i>	<i>Level of prescriptiveness 0 = Low; 1= Moderate; 2=High</i>	<i>Pg</i>	<i>Comments</i>
5B.3a	Variety of housing options (size, density, income levels, design, accessibility, affordability, location, housing types)				
5B.3b	Manufactured housing				
5B.3c	Mixed income development				

5B.3d	Housing located near employment centers				
5B.3e	Affordable housing				
5B. 4 Goals, Objectives and Policies – Infrastructure: Neighborhoods, and Local Character					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail</i> 0=not present; 1=present but not detailed; 2=present and detailed	<i>Level of prescriptiveness</i> 0 = Low; 1= Moderate; 2=High	<i>Pg</i>	<i>Comments</i>
5B.4a	High quality of life for residents				
5B.4b	Local character preservation (except historic preservation)				
5B.4c	Historic preservation				
5B.4d	Cultural resources				
5B.4e	Racial equity				
5B.4f	Reclamation of brownfield sites				
5B.4g	Urban revitalization				
5B.4h	Renovation and reuse of existing buildings				
5B.4i	Maintain existing commercial, residential and industrial areas				
5B.4j	Design standards and design review board				
5B.4k	Locally and regionally-appropriate façades, landscaping and site designs,				
5B.4l	Preserve existing rural residential character				
6. ECONOMIC DEVELOPMENT					
6A ASSESSMENT					
6A.1	Primary economic base(s)	Noted? 1 = yes; 0 = no Specified as _____			
6A.2	Economic trend	0 = not provided, 1 = declining; 2 = stable; 3 = increasing			

6A.3	Poverty levels	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
6A.4	Unemployment levels	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
6A.5	Employment analysis by sector	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
6A.6	Retail and market analysis	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
6A.7	Labor Force analysis	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
6A.8	Education analysis	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
6A.9	Infrastructure capacity analysis tied to economic growth projections	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
6A.10	Population projections linked to economic projections	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
6B ECONOMIC DEVELOPMENT: GOALS, OBJECTIVES, AND POLICIES					
6B.1 Goals, Objectives and Policies - Conventional Economic Development					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail 0=not present; 1=present but not detailed; 2=present and</i>	<i>Level of prescriptiveness 0 = Low; 1= Moderate; 2=High</i>	<i>Pg</i>	<i>Comments</i>
6B.1a	Inventory of economic assets				
6B.1b	Develop a strategic economic development plan				
6B.1c	Education (Public sector, public and private sector)				
6B.1d	Regional collaboration for economic development				

6B.1e	Collaboration for economic development with Downtown Development Authorities				
6B.1f	Collaboration for economic development with other economic development agencies				
6B.1g	Collaboration for economic development with citizens groups				
6B.1h	Collaboration for economic development with businesses, trade organizations and other groups				
6B.2 Goals, Objectives and Policies - Sustainable Economic Development					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail 0=not present; 1=present but not detailed; 2=present and</i>	<i>Level of prescriptiveness 0 = Low; 1 = Moderate; 2=High</i>	<i>Pg</i>	<i>Comments</i>
6B.2a	New investment and reinvestment in already developed areas				
6B.2b	Socially and environmentally responsible business and industry				
6B.2c	Retention of existing businesses				
6B.2d	Collaboration - Tax increment financing				
6B.2e	Collaboration - Brownfield Redevelopment Authorities				
6B.2f	Natural resource protection in conjunction with economic activity				
6B.2g	Regional or multi-jurisdictional collaboration				

6B.2h	Stable employment and revenues				
6B.3 Goals, Objectives and Policies - Emphasis of Economic Development					
No	Goals, Objectives and Policies	Description	Code	Pg	Comments
6B.3a	Economic development emphasis of goals and policies	0 = limit ED; 1 = accommodate ED; 2 = seek ED			
6B.3b	Infrastructure for ED / growth accommodation	1 = yes; 0 = no			
6B.3c	Promotion of private economic / commercial activities	1 = yes; 0 = no			
6B.3d	Recruitment of industry	1 = yes; 0 = no			
6B.3e	Other/Comment				
7. RESOURCE PROTECTION					
7A ASSESSMENT					
	Assessment Variable	Description	Code	Pg	Comments
7A.1	Land cover	Identified? 0 = no; 1 = yes, but not detailed; 2 = yes detailed; 3 = mapped			
7A.2	Land use incompatibilities	Identified? 0 = no; 1 = yes, but not detailed; 2 = yes detailed; 3 = mapped			
7A.3	Population projection linked to natural resources	Provided? 0 = no; 1 = present but not detailed; 2 = present and detailed			
7A.4	Constraints on development and land related impacts	Identified? 0 = no; 1 = yes, but not detailed; 2 = yes detailed; 3 = mapped	Code	Pg	Comments
7A.4a	Physical limitations for development				
7A.4b	Manmade hazards and hazardous activities				
7A.4c	Natural hazards				
7A.4d	Floodplains				

7A.4e	Soil Analysis and limitations to development				
7A.4f	Water supply				
7A.4g	Coastal zones				
7A.4h	Steep slopes				
7A.4i	Erosion				
7A.4j	Other physical limitations				
7A.4k	Impacts from impervious surfaces				
7A.4l	Cumulative impacts of development				
7A.4m	Sprawl	Discussed? 0 = no; 1 = discussed generally; 2 = discussed soecifically with respect to the community			
7A.5	Natural areas	Identified? 0 = no; 1 = yes, but not detailed; 2 = yes detailed; 3 = mapped	Code	Pg	Comments
7A.5a	Impaired quality watersheds				
7A.5b	High quality waters				
7A.5c	Other waters identified				
7A.5d	Coastal resources and zones				
7A.5e	Fragile natural areas[4]				
7A.5f	High quality natural areas[5]				
7A.5g	Regionally critical or unique natural resources				
7A.6	Resource production Lands	Identified? 0 = no; 1 = yes, but not detailed; 2 = yes detailed; 3 = mapped	Code	Pg	Comments
7A.6a	Existing farmland and agricultural areas				
7A.6b	Soil analysis for agricultural areas				
7A.6b	Prime farmland				
7A.6c	Agricultural and vacant land combined in one category				

7A.6d	Agricultural and rural residential combined in one category				
7A.6e	Woodlots/forest production lands[6]				
7A.6f	Mineral/other production lands				
7A.6g	Micro-agriculture lands[7]				
7A.6h	Coastal resource production aquaculture				
7B.1 Goals, Objectives and Polices – Development					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail 0=not present; 1=present but not detailed; 2=present and detailed</i>	<i>Level of prescriptiveness 0 = Low; 1= Moderate; 2=High</i>	<i>Pg</i>	<i>Comments</i>
7B.1a	Growth limited by carrying capacity				
7B.1b	New growth directed to existing urban areas				
7B.1c	Low density outward expansion controlled or limited				
7B.1d	Growth directed away from important resource areas[8]				
7B.1e	Discourage “sprawl”				
7B.1f					
7B.1g	Mapping of conservation zones				
7B.1h	Urban growth boundary				
7B.1i	Public education efforts				
7B.1j	Development tools/incentives for natural resource protection				
7B.1k	Compact development				

7B.1l	Innovative zoning tools to encourage compact and mixed use developments including:				
7B.1m	Areas zoned by building type, not by use				
7B.1n	Planned Unit Development				
7B.1o	Density bonuses[9]				
7B.1p	Mixed use zoning				
7B.1q	Traditional neighborhood ordinance				
7B.1r	Opportunities to retrofit single use buildings to mixed use				
7B.1s	Limits on development because of impacts				
7B.2 Goals and Objectives - Natural Resources					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail 0=not present; 1=present but not detailed; 2=present and</i>	<i>Level of prescriptiveness 0 = Low; 1= Moderate; 2=High</i>	<i>Pg</i>	<i>Comments</i>
7B.2a	Protection of natural areas, and open spaces				
7B.2b	Parks and recreational areas				
7B.2c	Biodiversity				
7B.2d	Important resources identified (ag, forestry, mining, fishing, recreation)				
7B.2e	Important resources	List resources identified _____			
7B.2f	Sustainable use of natural resources				
7B.2g	Preservation of natural resources				
7B.2h	Maintain natural terrain, drainage, and vegetation				

7B.2i	Environmentally-conscious production techniques and materials				
7B.2j	Minimize impact to natural systems				
7B.2k	Connectivity between natural areas				
7B.2l	Wildlife corridors				
7B.2m	Trails connecting parks				
7B.2n	Greenway system				
7B.2o	Night sky safeguards / light pollution controls[10]				
7B.2p	Fee simple property acquisition				
7B.2q	Easement acquisition				
7B.2r	Buffer zones near sensitive/unique natural areas				
7B.2s	Cluster zoning (open space development)				
7B.2t	Conservation planning and design				
7B.2u	Site plan review regulations				
7B.2v	Landscaping standards				
7B.2w	Incentives for native landscaping				
7B.2x	Development standards to encourage contiguous open space				
7B.2y	Environmental overlay districts				
7B.2z	Watershed-based planning				
7B.3 Goals, Objectives and Policies – Resource production					
		<i>Degree of specificity and detail</i> 0=not present; 1=present but not	<i>Level of prescriptiveness</i> 0 = Low; 1= Moderate; 2=High	<i>Pg</i>	<i>Comments</i>

No	<i>Goals, Objectives and Policies</i>	<i>detailed;2=present and</i>			
7B.3a	Tools to promote sustainable agriculture				
7B.3b	Best Management Practices				
7B.3c	Tools for Ag and open space preservation including:				
7B.3c.1	Purchase of development rights[11] (PDR/PACE)				
7B.3c.2	Transfer of development rights[12]				
7B.3c.3	Exclusive agricultural zoning				
7B.3c.4	Cluster development[13]				
7B.3c.5	Right to farm ordinances[14]				
7B.3c.6	Buffer zones for Ag land[15]				
7B.3c.7	Other incentives for Ag land protection				
7B.4 Goals, Objectives and Policies – Water Quality					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail 0=not present; 1=present but not detailed; 2=present and detailed</i>	<i>Level of prescriptiveness 0 = Low; 1= Moderate; 2=High</i>	<i>Pg</i>	<i>Comments</i>
7B.4a	Water quality/pollution prevention				
7B.4a.1	Surface water protection (including wetlands)				
7B.4a.2	Groundwater protection				
7B.4b	Water quality management tools (non-ag)				
7B.4b.1	Flood plain development restrictions				
7B.4b.2	Acquire wetland permit before other permits[16]				
7B.4b.3	Public acquisition of floodplain lands				

7B.4b.4	Flood management overlay zoning district in place				
7B.4b.5	Development setbacks and vegetative buffers				
7B.4c	On-site storm water management systems				
7B.4c.1	Design criteria for vegetated open channels				
7B.4c.2	Parking lot runoff controls				
7B.4c.3	Parking lot vegetation				
7B.4c.4	Pesticide controls				
7B.4c.5	Fertilizer controls				
7B.4c.6	Controls on new septic installation				
7B.4c.7	Conservative use and proper storage of de-icing agents for roads				
7B.5 Goals, Objectives and Policies - Coastal resources					
No	Goals, Objectives and Policies	<i>Degree of specificity and detail</i> 0=not present; 1=present but not detailed; 2=present and	<i>Level of prescriptiveness</i> 0 = Low; 1= Moderate; 2=High	<i>Pg</i>	<i>Comments</i>
7B.5a	Coastal resource protection				
7B.5a.1	Dune protection overlay zoning districts				
7B.5a.2	Dune management				
7B.5a.3	Coastal wetlands protection				
7B.5a.4	Coastal setbacks				
7B.5a.5	Shoreline protection overlay district				
7B.5a.6	Shoreline erosion BMPs				

7B.5b	Adoption of state dune and wetland protection permit provisions[17]				
7B.5c	Public education on coastal management				
7B.5d	Public access/use restrictions				
7B.5e	Preserve existing vegetation, rocks and berms along shoreline				
7B.5f	Critical coastal habitat protection[18]				
8. Consistency					
8A Vertical Consistency- Interagency coordination					
No	<i>Goals, Objectives and Policies</i>	<i>Degree of specificity and detail</i> 0=not present; 1=present but not detailed;2=present and	<i>Level of prescriptiveness</i> 0 = Low; 1= Moderate; 2=High	<i>Pg</i>	<i>Comments</i>
8A.1	Vertical consistency				
8A.2	Coordination with federal agencies				
8A.3	Coordination with state agencies				
8B Consistency with State-mandated plan components					
	<i>For all plans</i>	0 = not present; 1 = present but not detailed; 2 = present and detailed	<i>Code</i>	<i>Pg</i>	<i>Comments</i>
8B.1	A land use plan and program with land classification and allocation				
8B.2	Recommendations for general location, character, and extent of:				
8B.2.a	Transportation infrastructure (roads, bridges, etc.)				
8B.2.b	Waterways and waterfront development				

8B.2.c	Water quality and quantity infrastructure				
8B.2.d	Public utilities and structures				
8B.3	Recommendations for the redevelopment of blighted areas				
8B.4	Recommendations for implementation				
	<i>For municipal plans, recommendations for:</i>	0 = not present; 1 = present but not detailed; 2 = present and detailed	<i>Code</i>	<i>Pg</i>	<i>Comments</i>
8B.9	Playgrounds and open spaces				
8B.10	Community centers				
8B.11	Neighborhood units				
8B.12	Zoning for building controls (bulk, location, etc.)				
8B.13	Other/Comment				
8C Horizontal Consistency					
<i>No</i>	<i>Variable description</i>	<i>Variable measurement</i>	<i>Code</i>	<i>Pg</i>	<i>Comments</i>
8C.1	Horizontal consistency (local/regional jurisdictions)	Discussed / analyzed? 1= yes; 0 = no			
8C.2	Discussion of intergovernmental coordination	0 = not present; 1 = present but not detailed; 2 = present and detailed			
8C.3	Neighboring jurisdiction's plans	0 = not present; 1 = present but not detailed; 2 = present and detailed			
8C.4	Other local jurisdictions identified (county to county, locality to locality)	0 = not present; 1 = present but not detailed; 2 = present and detailed			
8C.5	Other local jurisdictions consulted (county to county, locality to locality)	0 = not present; 1 = present but not detailed; 2 = present and detailed			
8D Internal Consistency					

8D.1	Internal consistency (within jurisdiction)	Discussed / analyzed? 1= yes; 0 = no			
8D.2	Discussion of interagency / interdepartmental coordination	0 = not present; 1 = present but not detailed; 2 = present and detailed			
8D.3	Consistency with other plans, policies and ordinances	0 = not present; 1 = present but not detailed; 2 = present and detailed			
8D.4	Intergoal, policy and objective consistency				
8D.4a	Consistency between goals, policies and objectives in the plan	Discussed / analyzed? 1 = yes; 0 = no			
8D.4b	Consistency between goals, policies and objectives in the plan - Analyst's assessment	1 = objectives and policies are internally inconsistent 2 = Goals, objectives and policies are not internally inconsistent 3 = Goals, objectives and policies are consistent and mutually supporting			
8D.5	Spatial Consistency - Land Classification Consistent with Policies / Goals				
8D.5a	Land classification map	Provided? 1 = yes; 0 = no			
8D.5b	Types of land use classifications	Discussed? 1 = yes; 0 = no			
8D.5c	Discussion of link to land suitability analysis	0 = not present; 1 = present but not detailed; 2 = present and detailed			
8D.5d	Discussion of link to policies	0 = not present; 1 = present but not detailed; 2 = present and detailed			
8D.5e	Discussion of link between constraints and classification map	0 = not present; 1 = present but not detailed; 2 = present and detailed			

8D.5e	Consistency between the map, policies, and analyses Analyst's assessment	1 = Map, analyses and policies are inconsistent 2 = Map, analyses and policies are not inconsistent 3 = Map, analyses and policies are consistent and mutually supporting			
9. Implementation Procedures					
9.1	Timetable for implementation	Provided? 1 = yes; 0 = no			
9.2	Implementation responsibilities	Provided? 1 = yes; 0 = no			
9.3	Implementation mechanisms	Discussed generally? 1 = yes; 0 = no			
9.3a	Land use regulations, subdivision ordinances, and/or zoning	Discussed? 1 = yes; 0 = no			
9.3b	Capital improvement plans (CIPs) and/or facilities plans	Discussed? 1 = yes; 0 = no			
9.3c	Education	Discussed? 1 = yes; 0 = no			
9.3d	Consistency between plan and implementation mechanisms	Discussed? 1 = yes; 0 = no			
9.8	Monitoring / evaluation process	Discussed? 1 = yes; 0 = no			
9.9	Achievement benchmarks	Established? 1 = yes; 0 = no			
9.1	Specific benchmark dates	Established? 1 = yes; 0 = no			
9.11	Updating process / plan	Discussed? 1 = yes; 0 = no			
9.12	Other / comments				

^[1] Map quality can be coded based on the following criteria:

Use of color (yes/no and simplicity of coloration)

Readability in black and white

Basic information (scale bar, legend, north arrow)

Scale of map appropriate for information conveyed

Similar maps of consistent scale throughout plan

Does the point of the map come across clearly, or is there so much extraneous information that the reader gets lost?

Do maps use GIS technology, or are they crudely drawn?

Is source information identified?

Context provided (e.g., inset map with location in county/state)

A plan that, in an overall view, meets less than 25% of these criteria should be scored as a 1; 25-75% should be scored as a 2; and greater than 75% should be scored as a 3.

^[2] Readability of text refers to the general flow of the plan document. Subjective factors include the type of language used, the intended audience of the plan, technical aspects of the writing, etc.

^[3] ‘Emphasis of values/goals’ is a qualitative field to be completed by the protocol user after reading the entire plan. . Generally, the protocol user should comment on the apparent priority or overall ‘slant’ of the plan, noting whether goal statements and policy statements generally agree.

^[4] Fragile natural areas include wetlands, ground water recharge areas, surface water, steep slopes, erodible soils, floodplains, and woodlands.

^[5] High quality natural areas are those areas which may not be directly threatened but that are desirable for conservation and/or protection.

^[6] Including Christmas tree farms

^[7] Including cherry farming

^[8] ‘Important resource areas’ include productive farmland, fragile and high quality natural areas, etc.

^[9] Density bonuses involve granting developers the opportunity to increase building density beyond that which is allowed under existing zoning codes, in exchange for meeting additional requirements. Communities often provide density bonuses to entice developers into providing public amenities such as parks, plazas or structured parking.

^[10] Night sky controls seek to limit light pollution, which affects habitat and wildlife

^[11] PDR enables communities to permanently preserve farmland by purchasing the rights to develop land without purchasing the land outright. In addition to receiving payment for the PDR, landowners may also be eligible for property tax or income tax benefits.

^[12] TDR permanently preserves farmland by compensating landowners in designated areas for voluntarily surrendering their development rights. TDR is distinct from PDR in that it aims to “send” new development to “receiving areas” that can better accommodate growth.

^[13] The State of Michigan recently passed legislation requiring local governments to provide developers with the option of using

cluster development zoning (5.7.20) as an alternative to traditional zoning in order to maximize the amount of open space preserved. To encourage the use of cluster developments, local governments should develop design guidelines for cluster developments.

^[14] Michigan Right to Farm Act (Act 93 of 1981): An Act to define certain farm uses, operations, practices, and products; to provide certain disclosures; to provide for circumstances under which a farm shall not be found to be a public or private nuisance; to provide for certain powers and duties for certain state agencies and departments; and to provide for certain remedies for certain persons.

^[15] Open space buffers can help reduce residential and agricultural land use conflicts. They should be sufficiently wide to protect the farming operation from lawn fertilizers, playing children, and other conflicts. At the same time, they cannot be so burdensome as to require excessive land commitments from residential property owners.

^[16] Wetland permits should be issued before other permits so as to make people aware of their limitations and prevent investment in a project that harms wetlands.

[17] The MI Sand Dune Protection and Management Act allows local officials to take action on non-compliance.

^[18] Critical coastal habitat protection includes endangered species protection from pets, off-road vehicles, bonfires, etc., as well as protecting tall structures/perches for birds of prey.

Appendix C: BMPs and Resource Guide

Organization / Resource Type	Website / Link
APA Smart Growth Policy Guide	http://www.crcmich.org/PUBLICAT/1990s/1997/rpt323.pdf
National Trust for Historic Preservation - Smart Growth Toolkit	http://www.nationaltrust.org/smartgrowth/
Environmental Protection and Land use Planning - Best Management Practices from Florida	http://www.dca.state.fl.us/fdcp/DCP/publications/springsmanual.pdf
APA Growing Smart Legislative Guidebook	http://www.planning.org/growingsmart/
HUD – Smart Codes for Building Rehabilitation	http://www.huduser.org/publications/destech/smartcodes.html
Smart Codes – Andres Duany	http://www.smartcodecomplete.com/learn/downloads.html
Field Guide to New Urbanism	http://www.realtor.org/libweb.nsf/pages/fg314#topicb
Promoting active communities – Design Guidebook	http://www.mihealthtools.org/Communities/default.asp?tab=about
EPA – Model Ordinance – Open Space Preservation	http://www.epa.gov/owow/nps/ordinance/openspace.htm
EPA – Model Ordinance – Storm water Control	http://www.epa.gov/owow/nps/ordinance/stormwater.htm
EPA – Model Ordinance – Erosion and Sedimentation Control	http://www.epa.gov/owow/nps/ordinance/erosion.htm
EPA – Model Ordinance – Aquatic Buffers	http://www.epa.gov/owow/nps/ordinance/buffers.htm
Model Traditional Neighborhood Design (TND) Ordinances	http://www.co.dane.wi.us/plandev/community/build/tndordinance.asp http://www.wisc.edu/urpl/people/ohm/projects/tndord.pdf http://www.mass.gov/envir/smart_growth_toolkit/bylaws/TND-Bylaw.pdf http://www.dca.state.ga.us/intra_nonpub/Toolkit/ModelOrdinances/TND_ModOrd.pdf

Smart Growth Online – Land Development Ordinances	http://www.smartgrowth.org/library/byldrtype.asp?typ=1
Transit Villages	http://www.transitvillages.org/
Minnesota Planning and Environmental Quality Board – Ordinances for Sustainable Planning	http://www.mnplan.state.mn.us/pdf/2000/eqb/ModelOrdWhole.pdf
Conservation subdivisions – Model Ordinances	http://www.doa.state.wi.us/dhir/documents/conserv_subdiv_Model_ordinance_Feb2001.pdf
Land Preservation Model Ordinances – e.g. farmland Preservation	http://www.cals.ncsu.edu/wq/lpn/modelordinances.htm
Smart Communities Net – Land Development Codes	http://www.smartcommunities.ncat.org/landuse/lucodtoc.shtml
MI Specific Planning Resources	http://www.landpolicy.msu.edu/sgrat/ http://www.landpolicy.msu.edu/summit/presentations/SGRAT_7_min_intro.pdf