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Are We Planning for Equity?
Equity Goals and Recommendations in Local Comprehensive Plans

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Abstract:

Problem, Research Strategy, and Findings: Social equity goals are supposed to be prioritized in planning along with economic and environmental goals, yet in practice they are often de-emphasized. We develop a publicly available plan equity evaluation tool to investigate to what extent and in what ways local governments include goals and recommendations that would advance equitable outcomes in their comprehensive plans. Using plan content analysis, we find that most plans do not talk about equity, nor do they include many goals and recommendations that would advance equity. More recent plans, plans in communities with more planning capacity, plans in coastal communities, and plans with strong public participation processes have stronger equity orientations. Limitations of our study include that we had a small sample size of 48 plans in a single state, our coding was partly conducted by volunteers, and that our study is limited to plan content so did not investigate existing conditions or equitable outcomes.

Takeaway for Practice: Plans should make equity a guiding principle. Planning processes need to be multi-faceted. Plans should identify vulnerable people and geographic areas and ensure equitable protection from hazards and equitable distribution of amenities. Future land use changes should be more transparent.

Keywords: equity, plan evaluation, capacity, vulnerability, sustainability

Introduction

In Campbell's (1996) foundational Planner's Triangle, social equity is one of three main planning goals, along with environmental protection and economic development. The AICP Code of Ethics says that planners should aspire to "seek social justice by working to expand choice and opportunity for all persons, recognizing a special responsibility to plan for the needs of the disadvantaged and to promote racial and economic integration" (American Planning Association, 2016). Local comprehensive plans, then, should emphasize equity goals to a similar extent as they emphasize environmental and economic goals. Yet, in practice, plans often de-emphasize equity goals or disguise them as an efficiency or economic benefit (Berke & Godschalk, 2009; Campbell, 2016; Fainstein, 2010; Liao et al., 2019; Moore, 2016).

This study, conducted in partnership with the Michigan Association of Planning (MAP) Social Equity Committee, investigated to what extent and in what ways local governments include goals and recommendations (including plan processes, information, and strategies) that would advance equitable outcomes in their comprehensive plans, and what community characteristics and plan and planning process characteristics can help explain differences in plan equity orientation. The authors developed a publicly available comprehensive plan equity evaluation tool that covers many aspects of equity, including the planning process, housing, environmental justice, transportation access, and economic development. Given that planners pledge to make equity a central part of their practice, plans should include equity-related goals or strategies in all of these areas. However, based on a dual-coded content analysis of 48 local comprehensive plans, we conclude that equity is not a main focus of most plans. We find that fewer than half of our sample plans mentioned equity at all. Many plans did not include race and income in their

demographic analyses. Only 42% of plans included a goal that mentioned affordable, work force, or fair share housing and less than a quarter mentioned equitable environmental protection. If planners are supposed to emphasize equity to the extent that it is one of three pillars of planning, plans are not yet living up to that expectation. We find that newer plans, plans with more multi-pronged public participation processes, and plans in coastal communities and those with more planners on staff have a stronger equity focus.

In this paper, we present an analysis of our results and offer a set of good practices to increase emphasis on equity in local comprehensive plans, many of which would be simple to implement. Land use planning is redistributive by nature, both because it allocates public resources and facilities and because it arranges land uses in ways which may have costs and benefits, winners and losers (Harvey, 1973; Talen, 1998). The planner's task, then, is to make that redistribution more transparent so that participants must ask and answer the question, "Does this goal/policy/decision make the most vulnerable people in our community better off or worse off?" While this study indicates that many communities are not asking themselves such questions, we are optimistic that this situation can change for the better (Campbell et al., 2014).

In the next section, we explore the body of research on planning equity. We then explain our methodology, including the development of the equity evaluation tool, intercoder agreement, and our analytical approach. Next, we present and discuss the major findings about how the communities in our study dealt with equity issues in their plans. Finally, we offer good practice suggestions for how planners may improve the equity focus of future comprehensive planning efforts.

Equity as a Planning Goal

Planning involves redistribution by allocating public resources and facilities, including those that have negative externalities (Talen, 2008). Thus, the issue of equity is not a special case where restribution matters, but an inescapable fact of planning. Everyday planning practice, such as zoning, has over the last century commonly been used to advance a discriminatory agenda, with varying degrees of intentionality. These practices persist (American Planning Association, 2019; Pendall, 2000). Equity has also been a tenet of planning practice for many years, although it has nearly always been positioned in opposition to traditional downtown-oriented planning (Davidoff, 1965; Metzger, 1996). Beginning in the 1960s, some planners, especially those in the administrations of progressive Black mayors, began explicitly to advocate for policies that would direct resources toward the poor and disadvantaged. In response to racial injustices and urban renewal, the theory of advocacy planning and more bottom-up approaches to planning gained traction, challenging planning professionals to represent the interests of low-income and working-class neighborhoods (Davidoff, 1965; Gans, 1969; Hartman, 1964). These efforts were exemplified by Norm Krumholz and his staff in Cleveland over the decade of the 1970s (Krumholz, 1982). By the 1990s, the AICP Code of Ethics included a section that stated, "A planner must strive to expand choice and opportunity for all persons, recognizing a special responsibility to plan for the needs of disadvantaged groups and persons, (American Planning Association, 1991).

In Campbell's 1996 article, "Green Cities, Growing Cities, Just Cities," he elevated social equity to equal status in the Planner's Triangle with economic development and environmental protection. Yet, in practice, it seems to be the most neglected of the three (Campbell, 2016; Moore, 2016). Campbell identifies two conflicts related to equity within the Planner's Triangle.

The property conflict, between equity and economic growth, encompasses issues such as gentrification and affordable housing (Campbell, 1996). The development conflict, between social equity and environmental preservation, has to do with making decisions that involve tradeoffs between protecting the environment (perhaps in a way that reduces economic opportunity) and materially improving the lives of the most vulnerable. In our opinion, Campbell overstates the conflict because activities that are environmentally harmful often disproportionately harm disadvantaged people.

The era of the equity planner has come and gone, and although, in theory, the ideas of that era have been absorbed into mainstream planning thought, it often seems as though efforts to promote equity must be disguised as or ancillary to efficiency goals (Bollens, 2002; Fainstein, 2010; Provo, 2009). Recently, there has been renewed interest in equity at the national level and as a component of sustainability, although there is some evidence that local government planning processes do not reflect this emphasis (American Planning Association, 2019; Lens & Monkkonen, 2016; Liao et al., 2019; Oden, 2010).

What does equity mean in planning?

Equity in planning is broadly concerned with access to resources and opportunities for those who are disadvantaged (Talen, 1998). Equity seeks to expand choices and increase agency (American Planning Association, 2016; Israel & Frenkel, 2018). Fundamentally, equity is about distributing public resources in favor of those who are less well off (Fainstein, 2010, p. 36). Those who need additional resources include "groups most lacking in political and financial power and most subject to disrespect," which, in the United States, have included people of color, people with

disabilities, low income people, women, children, and the elderly (Fainstein, 2010, p. 56; Warner & Zhang, 2019). However, equity may look different in different types of communities and people in different places "hold different ideas of what constitutes well-being and a good life" (Israel & Frenkel, 2018, p. 648).

What does equitable planning look like?

Different planning subfields emphasize different aspects of equity, but all find that equity concerns are at the center of planning decisions and debates. In public participation, the expectation is for an inclusive planning process in which residents, stakeholders, and experts come together to engage in shared plan- and decision-making where at least some power is transferred to non-experts (Innes & Booher, 2000, 2004; Lane, 2005). However, planners must be careful, as communicative planning may disadvantage already disadvantaged groups, who as part of the process are expected to work toward a solution that benefits everyone, rather than advocating for their own needs (Brownill & Parker, 2010; Purcell, 2009; Vigar et al., 2017).

Planners who study hazards are concerned about social vulnerability because disadvantaged people are more likely to live in lower quality housing in areas more affected by storms and less likely to hear and believe warnings, have the means to evacuate, and eventually recover (Van Zandt et al., 2012; Zahran et al., 2008). Disadvantaged people are also more likely to be affected by exposure to natural and human-caused environmental hazards, many of which are becoming more extreme as the climate becomes warmer (Heckert & Rosan, 2016; Osland, 2011). And, as the world has recently seen, disadvantaged people may suffer disproportionately in pandemic events (APM Research Lab Staff, 2020). More nuanced characterizations of equity have

emerged, especially as cities incorporate social equity and environmental justice into urban resilience planning, distinguishing between dimensions like distribution, participation, recognition, and context (McDermott et al., 2013; Schlosberg, 2004). Yet in general sustainability and resilience planning has been criticized for doing little more than mentioning equity, without which true sustainability cannot be achieved (Burton, 2003; Meerow et al., 2019; Oden, 2010). And even a commitment to addressing inequities in sustainability at the regional level does not yet indicate successful integration of equity into actions for improved outcomes (Arias et al., 2017; Finio et al., 2019; Zapata & Bates, 2017).

Those who look at the distribution of community facilities highlight equity concerns in many areas. Park planners find that cities tend to site and invest in parks in areas with higher incomes that already have good access to amenities, even though the quality of life of the whole city could be raised by making the distribution of amenities more equitable (Brambilla et al., 2013; Rigolon & Németh, 2018; Talen, 1998). Talen (2001) found no apparent effort to minimize commutes and maximize access in school siting, even though longer bus rides for elementary school students were associated with lower test scores. With rising interest in green infrastructure, planners are watchful about how equitably those investments are allocated (Heckert & Rosan, 2016). Transportation planners and activists see equity issues in terms of spatially consistent access to transportation, the provision of alternatives to private car use, financing, and funding allocations to different modes (such as between road-building and transit investment) or different routes (Delbosc & Currie, 2011; Grengs, 2002; Lowe, 2014; Martens, 2016). But social equity objectives are not as well-integrated into urban transportation plans as environmental and congestion reduction goals (Manaugh et al., 2015).

Equity issues remain at the forefront of housing policy research, as planners continue to find challenges in creating enough density and mix of housing types to accommodate lower income households (Szibbo, 2016). It is difficult to achieve an equitable housing mix when many communities continue to oppose housing for middle and low income residents and local land use regulations add obstacles and expense to building such housing (Goetz, 2008; Lens & Monkkonen, 2016; Scally & Tighe, 2015). Planners have responded through innovative planning and regulatory approaches such as inclusionary zoning, accessory dwelling units, and the promotion of missing middle housing (Mukhija et al., 2010; Schuetz et al., 2009).

High levels of inequality have become a problem in cities and metropolitan areas (Piketty, 2014). Economic development planners recognize that economic development need not be in opposition to environmental sustainability and equity; rather, economic development that also helps further those goals is more effective and long-lasting than traditional business incentives (Zhang et al., 2017). The concept of a triple bottom line, which compels companies to consider society and the environment along with economy, has gained prominence in the last 25 years and has consequently shaped how frameworks for sustainability assessments have developed (Mori & Christodoulou, 2012; Pope et al., 2004). But as in planning, assessing how effectively organizations address sustainability, especially social criteria, is lacking (Labuschagne et al., 2005; Shen et al., 2011).

Taking all of these facets of equity into consideration, an equitable comprehensive plan would be created through an inclusive public participation process. It would recommend an arrangement

and mix of land uses that provides enough housing for all income levels with access to multiple transportation modes. It would identify vulnerable populations and neighborhoods and plan for their protection from natural and human-caused hazards, including those likely to be exacerbated by climate change. The plan would identify and seek to correct inequities in the provision of community facilities. The plan would recommend economic development strategies that benefited the community as a whole, including its most vulnerable members.

Are planners looking for equity in comprehensive plans?

Equity has not been a traditional focus of literature evaluating comprehensive plans. The model plan quality evaluation checklist, from *Urban Land Use Planning*, a widely used planning textbook, does not mention equity, although it does ask about gathering the views of a broad spectrum of stakeholders (Berke & Kaiser, 2006; Stevens, 2013). Baer (1997) considers equity alongside a long list of other considerations under the concept of "adequacy of scope," but does not give it the third point of the triangle status as Campbell conceptualizes it. Berke and Manta Conroy (2000) include equity as one of the six principles of sustainability and find that plans generally promoted affordable housing programs but included little else that would advance equity. Berke and Godschalk suggest that plan quality evaluation efforts could expand to include additional topics, including equity, but we are unaware of any efforts that comprehensively focus on equity (Berke & Godschalk, 2009, p. 238).

Michigan Planning Context

Michigan is one of the US's most politically fragmented states, with 1856 units of local government. The state is divided into counties. Counties are further divided into cities,

townships, and villages. Most of these local governments conduct their own zoning and many conduct their own long-range planning. Governments that do their own planning are required to update the plan every five years, but this may simply mean making a determination that conditions in the community have not materially changed and the plan does not need to be significantly updated. Plans form a legal backbone for zoning, but they are not required to be implemented and are not legally binding (Loh, 2012). The local comprehensive plan (referred to in Michigan as a master plan), epitomizes "ordinary" planning practice (Campbell et al., 2014, p. 49).

How Do Plans Incorporate Equity Goals and Recommendations?

In this study, we asked to what extent and in what ways local governments (cities, townships, and counties) include goals and recommendations that would advance equitable outcomes in their comprehensive plans. To investigate this question, we gathered data from 48 Michigan comprehensive plans using a publicly available equity evaluation tool, then reconciled coders' answers to ensure reliability. We tabulated descriptive results from the evaluations and developed three models using negative binomial regression analysis to test what kinds of communities include different types of recommendations in their plans. We identified and collected exemplars of good equity planning practice from the cases in our study.

The equity evaluation tool

The equity evaluation tool is a publicly accessible checklist (available at https://clasprofiles.wayne.edu/profile/cm9329) meant for planners, local government officials, or any other interested stakeholder to evaluate how well their local comprehensive plan meets a set

of equity criteria. The MAP Social Equity Committee had been working for several years to develop a set of criteria to evaluate social equity in planning practice. The committee worked together to think about what an equitable plan would look like, what elements it should include, and what it should emphasize. The committee chose to focus the evaluation tool on the comprehensive plan because it is a publicly available document which anyone could evaluate without any additional specialized knowledge about the community; and because the plan is supposed to set goals and objectives that drive subsequent policy choices (Loh, 2011). This means, however, that the tool does not ask about existing conditions or zoning and therefore cannot make any inferences about the relationship between plans and current levels of equity in these communities.

The authors based the equity evaluation tool, detailed in Table 3, on best practices compiled by the committee, planning literature on equity, and the APA Planning for Equity Policy Guide (American Planning Association, 2019). We pilot-tested the tool with ten local governments selected for geographic and demographic diversity. We launched the tool publicly in fall 2019 through an email from MAP's executive director to the entire MAP membership list. We ended up with 24 volunteer participants. We suspected that volunteer participants might be more likely to care about equity issues or to think their plans did a relatively good job on equity, so we also chose a random sample of an additional 24 local governments to add to the volunteer group for a total of 48 plans.[i] We asked planners in those local governments if they would be interested in evaluating their plans and five did so. One of the authors evaluated every volunteer plan in both the original volunteer group and the random sample volunteers as a second coder. The two authors each independently evaluated the remaining random sample plans.

Inter-coder reliability

The data for this project were generated in part through community science or "research that engages non-professionals in the process of creating new scientific knowledge" (Kosmala et al., 2016, p. 551).[ii] This approach has become widespread in fields such as ecology and astronomy to extend resources, democratize science, and help disseminate knowledge (Burgess et al., 2017). In our case, the volunteers were planners, who, although they were professionals in their own field and were given detailed instructions with examples of how they were to answer the questions, were not trained researchers. In this project, we did not have the opportunity to conduct training for volunteers, aside from written instructions at the beginning of the tool, since participation was anonymous, nor did volunteers use the tool more than once. These limitations on the front end are reflected in the level of agreement between coders: the overall percentage agreement (including open-ended questions) when the two authors were the two coders was 78%, versus 63% when a volunteer was one of the coders. The initial percentage agreement ranged from 94% (Brooks Township) to 41% (Livingston County). Shorter, simpler plans in general had higher percentage agreement.

We therefore engaged in extensive data validation on the back end (Freitag et al., 2016). We tested for inter-coder reliability by calculating percentage agreement and Krippendorff's alpha for questions on which we could expect agreement (Stevens et al., 2014). Consistent with Stevens and colleagues' work on inter-coder reliability in plan content analysis, we found that the more dispersed and the greater number the relevant items in a particular category, generally the lower the *kalpha* statistic. We found low or even negative *kalpha* values for some questions with highly skewed distributions (Feng, 2015) and suspect that some other low values may be the

result of systematic disagreement between the two coders (Krippendorff, 2004). Overall, we found *kalpha* useful to flag questions to which we needed to pay particular attention during our validation process, but because of the nature of the data and the involvement of volunteers we did not impose cutoffs below which we would not use the data. See Table 2 for percent agreement and Krippendorff's alpha calculations for the questions.

We flagged every instance of disagreement between coders, whether volunteers or researchers. The authors then together re-evaluated and reconciled every discrepancy. Most were instances where one of the original coders had simply missed something rather than being areas of genuine disagreement or ambiguity (Norton, 2008); the percentage of plans reporting each element usually went up when we went back to reconcile the answers. This trend suggests that it was often difficult for any single coder to find every element requested in such long and complex documents. It also suggests that as a result of our extensive validation process our revised data likely captures most occurrences of a particular plan element.

Data and analysis

In this study, we asked to what extent and in what ways local governments include goals and recommendations that would advance equitable outcomes in their comprehensive plans. To help answer this question, we created three models to help us explain why communities might make different types of recommendations. As suggested in the literature, goals, objectives, and policies that would advance equity are often promoted for their ability to advance other goals, particularly economic ones. In our equity evaluation tool, we asked about a long list of possible recommendations that would advance equity goals that might appear in a plan. Some

recommendations are explicitly equity-focused, while others would likely have the effect of improving equity but could also fall into the category of generally accepted good planning practice. For example, adopting inclusionary zoning is a policy recommendation whose primary purpose is to increase the availability of affordable housing. We would categorize this as an equity-focused recommendation. On the other hand, many plans promote walkability. While walkability can improve equity by making it easier for people who don't or can't travel by car to get around, it is part of a generally accepted set of good planning practices that are promoted for many other reasons, including economic development. There were 21 equity-focused and 21 general recommendations. Our three models, then, help explain which types of communities include these different types of recommendations in their plans. Model 1 uses a count of equity-focused recommendations as its dependent variable, Model 2 uses general recommendations as its dependent variable, and Model 3 uses the combined recommendations as its dependent variable. See Table 3 for list of recommendations and their categories.

Community characteristics

We hypothesized that certain community characteristics would influence the equity focus of the plans. We describe these independent variables in Table 1. The communities in our sample ranged from small rural townships to medium-sized cities and two counties with very low income residents to very high income residents. The most diverse community was 46% white and the least 99%. First, we expected that more racially diverse communities would have a stronger emphasis on equity. We thought these communities would have been more likely to have conversations about how to distribute community resources in an equitable way and how to mitigate the effects of negative externalities, whereas more homogenous communities might

avoid such conversations (Osland, 2011). At a regional level, more heterogeneity can lead to less intergovernmental cooperation (Gerber & Gibson, 2005), but we thought that at the local level, heterogeneity might lead to a planning process that didn't evade equity issues. We thought that communities with lower median household income would have plans with a stronger emphasis on equity. We also thought that equity issues would be at the forefront in communities with larger population sizes because people living in densely populated urban areas might be more vulnerable than those in suburban or rural areas (Flanagan et al., 2011). Finally, we thought that coastal communities might be more inclined to focus on equity in the sense of climate vulnerability given their exposure to coastal flooding, although evidence for this is mixed (Norton, 2005; Norton et al., 2018).

Plan and planning process characteristics

We expected that newer plans would have a stronger focus on equity. Given conversations in our state in the past few years about inequality, we thought perhaps those ideas would influence newer plans more than older ones. We thought that higher capacity communities, measured by number of planners on staff, would have a stronger emphasis on equity. Communities that have invested in a planning department with credentialed planners would benefit from that expertise and be more likely to have plans influenced by the AICP Code of Ethics (Loh, 2011, 2012; Loh & Arroyo, 2017). We also tested whether or not the involvement of planning consultants in writing the plan might increase its equity focus. Previous research has shown that the involvement of planning consultants can orient the plan toward smart growth principles (Loh & Norton, 2015), so we thought their involvement might also orient the plan toward equity. Finally, based on our review of the literature, we thought that communities with more robust, multi-

modal public participation processes would exhibit a stronger commitment to equity (Innes & Booher, 2004).

Table 1: Independent variables

Variable	Measured by	Expected effect on equity	Range	Mean	Standard Deviation
Homogeneity	% white*	-	46%-99.8%	89%	0.12
Plan year	Year plan adopted	+	1990-2019	2012	6.34
Capacity	Number of planners on staff	+	0-3	0.82	0.88
Median household income	Median household income in 2018 dollars*	-	$31,037-117,670	$58,468	18,220
Total public participation	Count of different public participation modes used	+	0-8	2.1	2.1

*US Census ACS 2018

To test these hypotheses, we used negative binomial regression as our dependent variables are count variables which are overdispersed and do not contain excess zeros. We discuss the results of that analysis in the next section.

Equity Recommendations in Comprehensive Plans

We first look at descriptive results from the equity evaluation tool, then discuss the results of the negative binomial regression models.

Table 2: Characteristics of Equity, General, and Total recommendations

	Equity	General	Total
Average inclusion rate	24%	54%	40%
Range	0-18	4-19	4-36
Count	21	21	42

Descriptive results

Table 2 describes the differences between equity, general, and total recommendations. General recommendations appear with much greater frequency in the plans. The range of recommendations between the strongest and weakest plans is quite large. As shown in Table 3, only 46% of plans contained the words equity, equality, fairness, or justice, indicating that these concepts were not a significant influence on a majority of the plans. Moreover, of the 22 plans that did include these words, six only included standard language on mobility equity copied from Complete Streets documentation, with no other mention of equity in the plan. So only one third of the plans independently mentioned equity outside of Complete Streets. The proportion of plans that included equity-oriented goals was generally low. Housing was the highest, but fewer than half the plans included it.

Table 3: Plan equity evaluation tool plan elements and questions

Plan Element	% Included (Reconciled)	Initial % Agreement	kalpha	Count	Equity vs general
Overall plan organization					
What year was the plan adopted?	n/a	n/a	n/a	n/a	
Did consultants write or assist with writing the plan?	85%	79%	0.404	82	
How many pages long is the plan?	n/a	n/a	n/a	n/a	
Does the plan include any provisions for monitoring implementation progress?	92%	38%	0.151	44	G
Does the plan include a demographic analysis?	92%	45%	0.183	44	G
Overall equity orientation					
Do the words equity/equality/fairness/justice appear anywhere in the plan?	46%	60%	0.216	22	E
Does the plan mention any obstacles (technical, political, legal, etc.) to implementing equitable policies?	18%	77%	-0.028	9	E
Does the plan identify geographic areas that are underserved or that have particular social needs to be addressed?	42%	51%	0.263	20	E
Does the plan identify groups of residents who are underserved or who have particular social needs?	65%	38%	0.307	31	E
Planning process					
Does the plan describe the public participation process for this plan?	79%	53%	0.614	38	G
Did the plan include:					
In-person visioning session(s)	46%	77%	0.627	22	
Survey	54%	70%	0.751	26	

Focus group(s)	27%	83%	0.67	13	
Charette(s)	13%	89%	0.558	6	
Scenario planning	2%	91%	*	1	
Neighborhood workshop(s)	10%	85%	0.238	5	
Educational presentation(s)	17%	83%	0.246	8	
Other	21%	72%	0.3	10	
Does the plan mention how officials and/or staff incorporated that community feedback?	65%	34%	0.411	31	G
Does the plan mention efforts to engage historically marginalized groups?	2%	70%	0.03	1	E
Housing and land use					
Does the plan include a housing goal that includes affordable housing, workforce housing, and/or fair share housing?	42%	45%	-0.166	20	E
Does the plan define affordability anywhere?	19%	79%	0.356	9	E
Does the plan recommend the adoption of inclusionary zoning regulations of any kind?	6%	92%	0.539	3	E
Does the plan recommend increasing allowable residential densities in single family neighborhoods?	38%	55%	0.175	18	E
Does the plan recommend increasing the amount of land planned for multi-family housing?	60%	43%	0.067	29	E
Does the plan address housing options for seniors?	77%	47%	0.361	37	G
Does the plan promote mixed income neighborhoods?	33%	57%	0.035	16	E
Does the plan promote mixed use developments?	79%	47%	0.476	38	G
Does the plan promote walkability?	73%	51%	0.571	35	G
Does the plan recommend density bonuses or other incentives for affordable housing in new developments?	6%	89%	0.605	3	E
Does the plan recommend accessory dwelling units?	29%	81%	0.811	14	E
Does the plan address supportive/transitional housing?	8%	89%	0.422	4	E
Transportation					
Does the transportation plan include public transit?	60%	72%	0.461	29	G
Does the transportation plan include Safe Routes to Schools?	29%	68%	0.49	14	G
Does the transportation plan include complete streets?	58%	62%	0.6	28	G
Does the transportation plan mention improving transportation access for low income residents?	21%	77%	0.402	10	E
Does the transportation plan include multi-mobility options for first and last mile connections to transit?	22%	62%	0.196	15	G
Does the transportation plan require sidewalks for new development?	48%	51%	0.065	23	G
Does the transportation plan recommend connecting existing neighborhoods with sidewalks or paths?	69%	45%	0.477	33	G
Environment, hazards, and safety					
Does the plan mention environmental justice?	6%	85%	-0.04	3	E
Does the plan mention environmental protection, (air quality, noise mitigation, surface and stormwater quality) in geographic areas that are underserved, or that have particular needs?	17%	49%	0.071	8	E
Does the plan identify natural hazards?	63%	53%	0.535	30	G
Does the plan talk about ensuring equitable protection from those hazards?	4%	66%	0.472	2	E
Does the plan identify human-caused hazards, such as industrial pollution, nuclear radiation, toxic wastes, dam failures, and transportation or industrial accidents that result in explosions, fires, or chemical spills?	60%	47%	0.21	29	G
Does the plan talk about ensuring equitable protection from those hazards?	2%	23%	0.511	1	E

Does the plan talk about the impact of climate change?	15%	92%	0.607	7	G
Does the plan make recommendations about providing residents or businesses with options for renewable energy?	56%	68%	0.44	27	G
Does the plan mention objectives related to crime or crime prevention techniques?	27%	79%	0.395	13	G
Community facilities					
Does the plan identify any groups of people who are underserved by community facilities?	13%	81%	-0.114	6	E
Does the plan identify any geographic areas underserved by community facilities?	21%	77%	0.453	10	G
Does the plan include at least one descriptive statement about future needs for pre-K-12 school facilities?	42%	70%	0.563	20	G
Food					
Does the plan contain a goal related to food security/access?	15%	85%	0.354	7	E
Economic development					
Does the plan contain a goal that suggests that economic development be equitable, or benefit the entire community, or something to that effect?	25%	66%	0.078	12	E
Does the plan recommend a community benefits agreement ordinance or similar?	0%	0%	*	0	G
Future land use plan**					
Does the future land use plan recommend an increase in multi-family housing compared to existing land use?	54%	49%	0.257	52	
To what extent are planned areas of multi-family housing adjacent to transit?	n/a	51%	0.521	n/a	
To what extent are planned areas of multi-family housing adjacent to potentially hazardous or noxious uses	n/a	34%	-0.06	n/a	
Does the plan contain a zoning plan?	75%	38%	-0.02	72	

* kalpha could not be calculated because one or both of the coders returned only zeros

**The future land use questions were difficult to answer both because the range of answers was a poor fit for the actual circumstances and because most plans were silent on whether or not they recommended an increase in multi-family housing and whether or not planned multi-family housing was adjacent to transit or hazards, leading coders to guess based on maps. Even when we went back to validate the answers, we could not be very sure we were characterizing the plans correctly—a problem we did not experience with any other part of the evaluation tool. We therefore report this data but do not feel it was of sufficient quality to include in the model.

Forty-two percent of the plans identified geographic areas that were underserved or with particular social needs, but 65% of the plans identified groups of people who were underserved or had particular social needs. This number included age groups. While 90% of the plans included some kind of demographic analysis, many plans only included age demographics, not race. Only Kalamazoo's plan mentioned efforts to include historically marginalized groups in the planning process.

Factors influencing the equity orientation of plans

Next we report the results of our models, testing which factors influence the inclusion of equity-oriented recommendations in plans. We hypothesized that more heterogeneous communities and those with lower median household incomes would show a stronger equity focus in their plans. We also thought that newer plans and plans in coastal communities and those with more planning staff would show a stronger equity focus. Table 4 shows the results of the negative binomial regression analysis.

Table 4: Negative binomial regression models predicting inclusion of general and equity-focused plan recommendations

	EQUITY-FOCUSED RECOMMENDATIONS			GENERAL RECOMMENDATIONS			TOTAL RECOMMENDATIONS		
Independent Variables	IRR	Std. Err.	z	IRR	Std. Err.	z	IRR	Std. Err.	z
Population	1.00	2.03e-06	0.32	1.00	1.16e-06	0.48	1.00	1.18e-06	0.45
Racial homogeneity	1.95	1.38	0.94	1.83	0.78	1.43	1.87	0.78	1.52
Coastal	1.49	0.32	1.91*	1.04	0.12	0.30	1.17	0.14	1.26
Median household income	1.00	5.57e-06	-0.85	1.00	3.09e-06	-1.08	1.00	3.11e-06	-1.24
Capacity	1.31	0.13	2.7***	1.21	0.06	2.07**	1.18	0.07	2.93***
Plan year	1.03	0.02	1.79*	1.02	0.01	2.11**	1.02	0.01	2.49**
Consultant involvement	1.02	0.24	0.07	1.04	0.14	0.26	1.04	0.14	0.27
Public participation	1.14	0.05	2.95***	1.05	0.03	1.97**	1.08	0.03	2.97***
	*p < 0.1; **p < 0.05; ***p < 0.01.								
Summary Statistics									
Number of observations	48			48			48		
LR statistic	35.01			29.45			38.81		
Prob > chi2	0.0000			0.0003			0.0000		
Pseudo R2	0.1392			0.1097			0.1198		

These models generally do not support the hypotheses that more diverse and lower income communities are more likely to have plans with a stronger equity focus. Homogeneity and median household income are not significant in any of the models. Capacity, plan year, and public participation, however, are highly significant in all of the models. A plan that is one year

newer would be expected to include 3% more equity-focused recommendations, 2% more general recommendations, and 2% more total recommendations, while holding all other variables constant. Therefore, newer plans are "better": they include a more comprehensive list of policy recommendations. Even more than that, though, they are slightly more likely to be more equitable in those recommendations. For every additional public participation mode used, a plan would have 14% more equity-focused recommendations, 5% more general recommendations, and 8% total recommendations. Capacity shows the greatest influence on plan equity. For every additional planner on staff, all other variables being constant, a community's plan would be expected to include 31% more equity-focused recommendations, 21% more general recommendations, and 18% more total recommendations. According to our models, having more planning staff makes plans better and more comprehensive; it also makes them much more likely to include equity-focused recommendations. Coastal communities have 49% more equity-focused recommendations than non-coastal communities, but there are no significant differences between coastal and non-coastal communities in either general or total recommendations. We speculate that coastal communities focus more on climate vulnerability than inland communities.

Are We Planning for Equity?

We find that the third corner of the planner's triangle is indeed neglected in local comprehensive plans. Partly this is because it can be genuinely hard, politically and fiscally, to recommend redistribution away from the status quo, although plans in Michigan are advisory and commit no resources by their recommendations. We argue that this neglect is also partly because planners have not been looking for and testing for equity in these plans. Compared to Berke and colleagues' model plan quality evaluation tool our plan equity evaluation tool focuses much

more explicitly on particular plan content rather than plan structure. The model tool would allow for a high score for a plan that paid little attention to equity if it were well structured, written, and reasoned, while our tool gives much more weight to equity-related content. The equity evaluation tool allows us to see that many plans give the impression that local government officials are not aware of nor interested in identifying vulnerable populations, even though they exist in even generally affluent areas. The plan equity evaluation tool used in this study is one attempt to put forward a set of expectations about what equity-related recommendations plans could include. The involvement of volunteers was meant to help disseminate the ideas contained in the evaluation tool and spur communities to have conversations about equity.

We found that plans in communities with more planners on staff had more equity-focused recommendations. Additional capacity has been associated with many positive planning outcomes; it is not surprising that it also influences equity. If most planners care about equity, as we suspect they do, having more planners around allows them to nudge plans toward an equity focus. This finding is especially poignant because the typical Michigan local government has no full-time planner on staff. Consultants were involved in writing 85% of the plans, so most of the plans were written by experienced, trained planners, yet having more planners on staff still seems to matter. Planners who work full time in a community develop independent knowledge of that place's social landscape, whereas consultants may only know what local officials tell them about community needs, but our study does not fully explain this finding. In any case, there is a clear role for planners to share ideas about equitable planning and lead discussions about what equitable planning would look like in a particular community.

We also found that newer plans had more equity-focused recommendations. We consider this good news, as it suggests that the idea that equity is important, advanced by both national APA and MAP, is percolating through local governments over time. However, we cannot be sure that a community's interest in equity, as expressed through the plan, will have staying power. Liao et al. (2020) found that the presence of a citizen task force is associated with more sustainability actions in following the adoption of a sustainability plan. While our study does not measure the presence of equity-oriented citizen task forces in the local governments, the MAP Social Equity Committee has a strong and ongoing commitment to identifying and disseminating equity best practices throughout the state. The existence and efforts of this group may help keep up interest in planning for equity.

Finally, plans with robust public participation processes that involved multiple modes of gathering public input were significantly more equity focused. It is possible that participants in the process brought up equity issues and those priorities guided the plan. It is also possible that a community that invests resources in an extensive public participation process is one that is already committed to equity and the plan reflects that commitment.

Ways to Increase the Equity Focus of Plans

In this section, we highlight some of the major plan elements and provide some examples of good planning equity practices from our study. Table 5 presents a starting place for good equity practices and ways to incorporate those practices into plans (see the Appendix for an expanded version of Table 5 that includes more detailed action steps). Communities should be able to implement most of these changes in their next planning cycle. Many of them require only better mapping and analysis or putting existing maps together in new ways. Some of these practices do

require more effort, but especially in the current climate of increased awareness about racial inequality, continuing to marginalize equity in plans should no longer be acceptable.

Overall, plans need to make equity an organizing principle of the plan. Livingston County's plan, winner of national and state APA awards, serves as a model for other communities to establish equity within the framework of their plans. It has a 10-page "Social Equity" section which includes issues of aging, access to core services, and mobility. It includes examples of best practices in local governments within the county, which helps its constituent communities see local exemplars that they can emulate (Livingston County, 2018). Communities also need do a much better job of identifying vulnerable people and areas of the community and explicitly linking people to place. Plans should have a demographic analysis and explicitly identify socially vulnerable groups and underserved areas in the community. For example, as part of its extensive demographic section, Fenton Charter Township has a "Families in Poverty" map that shows that, although the overall poverty rate is low, families living in poverty are concentrated in one corner of the township with rates as high as 33% in one block group (Fenton Township, 2018, p. 47). This approach makes visible an issue and a group of people who might otherwise have been invisible.

Table 5: Good equity practices for local comprehensive plans

Plan element	Good equity practice
Overall plan organization	Ensure the plan reflects community conditions and good planning practice. Make sure the planning committee leadership represents the community's diversity. Make plan accessible to all users. Make sure plan data and maps comprehensively describe the community.
Overall equity orientation	Make equity an organizing principle for the plan. Include a detailed demographic analysis that identifies socially vulnerable populations. Identify neighborhoods where there are concentrations of socially vulnerable people.
Forms of public participation	Make sure the community's full range of diversity is represented in the planning process. Incorporate feedback into the plan.
Housing and land use	Include housing goals and objectives that provide for housing for all ages and income levels.
Transportation	Make sure there are transportation options for all residents. Plan for non-motorized options.
Environment, hazards, and safety	Identify natural and human caused hazards. Identify areas of high crime and/or areas where residents do not feel safe.
Community facilities	Take inventory of and map community facilities.
Food	Include goals and objectives about food security and food access.
Economic development	Make equitable economic development an explicit goal in the plan.
Future land use plan	Make future land use choices transparent.

Planning processes must do a better job of representing the community's diversity. Planners are already aware of this, but in many cases need to work harder and more creatively. We found that increasing the number of types of public participation approaches was strongly correlated with a more equity focused plan. In a large, diverse city, this might mean a multi-faceted approach like Kalamazoo's:

> Meetings were held throughout the City at community-wide events and in neighborhoods. The City partnered with neighborhood leaders, local businesses, nonprofits, religious institutions, and residents to spread the word about [Imagine Kalamazoo 2025] events. Outreach tools were wide-ranging: City staff knocked on doors, left flyers in little free libraries, published notes in neighborhood newsletters, and engaged through social media (City of Kalamazoo, 2017, p. 6).

In a smaller, less diverse community with fewer resources, this might mean conducting an inexpensive online survey in addition to in-person meetings. Presque Isle Township created an online survey which received responses from over 1/3 of residents, which they analyzed and found generally represented overall population characteristics (Presque Isle Township, 2014).

Regardless of the type and size of the place, planners should know whose voices need to be heard and keep working until they have reached and included them.

Every plan can be expected to have a goal about providing a variety of housing types to accommodate all ages and income levels. We were surprised at how many plans did not have a goal related to housing affordability and how many did not explain what affordability looked like in the local context. The plan should identify any demographic groups underserved by the community's current housing stock and plan to accommodate them, as the City of Richmond does in its "Housing Needs Assessment" (i.e., young families, seniors) in the context of providing affordable housing alternatives (City of Richmond, 2002).

Communities should plan for equitable transportation access. Cities with transit should conduct analysis to see if some neighborhoods have less access to transit (and to find out who lives in those neighborhoods). Rural communities may not have any transit, but they do have the ability to do non-motorized planning. For example, Benton Charter Township's plan included Rural Complete Streets, with wide, paved shoulders or accompanying bike paths (Benton Charter Township, 2019).

Plans should identify natural and human-caused hazards in the community and explain whether or not climate change is likely to exacerbate them. The plan should explain whether or not some people or areas are more likely to be affected by hazards and work to ensure equitable protection. Many coastal communities in Michigan are already paying attention to these issues, but other communities must also do so. Bridgman is one such coastal community that conducted hazard-

specific vulnerability assessments in order to build community resilience (City of Bridgman, 2019). These assessments describe current hazards such as lakeshore flooding, windstorms, and extreme heat, how they are likely to change as the climate warms, and how they are likely to affect vulnerable populations, such as those living in poverty and those with disabilities, which helps the community focus resources on those most in need.

Finally, we urge planners to make land use changes much more transparent. Plans should include tables that show changes in amount of acreage and percent changes in land use categories. They should provide maps that highlight major land use changes. And they should explicitly link land use decisions to the information in the plan's fact base. GIS allows us to easily overlay future land use with information like hazards, transit routes, and community facilities. These maps should be included to show how decision-makers have considered both hazards and amenities when planning future land uses. These three recommendations make it much more difficult to hide future land use planning that puts people in harm's way or distributes amenities inequitably.

Conclusion

Planners hold equity to be one of the most important principles of planning practice, yet it is often subsumed by other goals. We evaluated local comprehensive plans to see how and in what ways local governments incorporate equity recommendations into their plans and found, in general, a very low orientation toward equity. Newer plans, plans in places with higher planning capacity, plans in coastal communities, and plans with multi-modal public participation have a higher equity orientation. We provide a set of good equity practices for plans that we assert could mostly be implemented within any community's next comprehensive planning cycle. We

challenge planners to overhaul their next plan to make equity on par with environmental and economic concerns, completing the Planner's Triangle.

Although our study did not directly investigate implementation, we hope that more equity-focused goals and recommendations will ultimately lead to more equitable outcomes, as Liao et al. (2020) have found. In addition, our study did not investigate the influence of existing equity conditions (such as in the index created by Heckert and Rosan (2016)) on plan documents. We hope that future research will investigate the links between plan equity focus, regulation (including zoning) and equity outcomes such as measures of inequality.

Works Cited

American Planning Association. (1991). *AICP code of ethics and professional conduct.*

American Planning Association. (2016). *AICP Code of Ethics and Professional Conduct*. https://www.planning.org/ethics/ethicscode/

American Planning Association. (2019). *Planning for Equity Policy Guide*. https://www.planning.org/publications/document/9178541/

APM Research Lab Staff. (2020, May 12, 2020). The Color of Coronavirus: Covid-19 Deaths by Race and Ethnicity in the US. *APM Research Lab*. https://www.apmresearchlab.org/covid/deaths-by-race

Arias, J. S., Draper-Zivetz, S., & Martin, A. (2017). The impacts of the sustainable communities initiative regional planning grants on planning and equity in three metropolitan regions. *Cityscape, 19*(3), 93-114. https://doi.org/http://www.jstor.org/stable/26328354

Baer, W. C. (1997). General plan evaluation criteria: An approach to making better plans. *Journal of the American Planning Association, 63*(3), 329-344. https://doi.org/10.1080/01944369708975926

Benton Charter Township. (2019). *Master plan 2019, Benton Charter Township*. Benton Charter Township, MI.

Berke, P., & Godschalk, D. (2009). Searching for the good plan: A meta-analysis of plan quality studies. *Journal of Planning Literature, 23*(3), 227-240. https://doi.org/10.1177/0885412208327014

Berke, P., & Kaiser, E. J. (2006). *Urban land use planning*. University of Illinois Press.

Berke, P. R., & Conroy, M. M. (2000). Are we planning for sustainable development? An evaluation of 30 comprehensive plans. *Journal of the American Planning Association, 66*(1), 21-33. https://doi.org/10.1080/01944360008976081

Bollens, S. A. (2002). In through the back door: Social equity and regional governance. *Housing Policy Debate, 13*(4), 631-657. https://doi.org/10.1080/10511482.2002.9521458

Bonney, R., Phillips, T. B., Ballard, H. L., & Enck, J. W. (2016). Can citizen science enhance public understanding of science? *Public Understanding of Science, 25*(1), 2-16. https://doi.org/10.1177/0963662515607406

Brambilla, M., Michelangeli, A., & Peluso, E. (2013). Equity in the city: On measuring urban (ine) quality of life. *Urban Studies, 50*(16), 3205-3224. https://doi.org/10.1177/0042098013484539

Brownill, S., & Parker, G. (2010). Why bother with good works? The relevance of public participation (s) in planning in a post-collaborative era. *Planning Practice & Research, 25*(3), 275-282. https://doi.org/10.1080/02697459.2010.503407

Burgess, H. K., DeBey, L., Froehlich, H., Schmidt, N., Theobald, E. J., Ettinger, A. K., HilleRisLambers, J., Tewksbury, J., & Parrish, J. K. (2017). The science of citizen science: exploring barriers to use as a primary research tool. *Biological Conservation, 208*, 113-120. https://doi.org/10.1016/j.biocon.2016.05.014

Burton, E. (2003). Housing for an urban renaissance: implications for social equity. *Housing Studies, 18*(4), 537-562. https://doi.org/10.1080/02673030304249

Campbell, H., Tait, M., & Watkins, C. (2014). Is there space for better planning in a neoliberal world? Implications for planning practice and theory. *Journal of Planning Education and Research, 34*(1), 45-59. https://doi.org/10.1177/0739456X13514614

Campbell, S. (1996). Green cities, growing cities, just cities?: Urban planning and the contradictions of sustainable development. *Journal of the American Planning Association, 62*(3), 296-312. https://doi.org/10.1080/01944369608975696

Campbell, S. D. (2016). The planner's triangle revisited: sustainability and the evolution of a planning ideal that can't stand still. *Journal of the American Planning Association, 82*(4), 388-397. https://doi.org/10.1080/01944363.2016.1214080

City of Bridgman (2019). City of Bridgman Master Plan. Bridgman, Michigan.

City of Kalamazoo (2017). City of Kalamazoo Master Plan 2025. Kalamazoo, Michigan.

City of Richmond (2002). City of Richmond Master Plan. Richmond, Michigan.

Davidoff, P. (1965). Advocacy and pluralism in planning. *Journal of the American Institute of planners, 31*(4), 331-338. https://doi.org/10.1080/01944366508978187

Delbosc, A., & Currie, G. (2011). Using Lorenz curves to assess public transport equity. *Journal of Transport Geography, 19*(6), 1252-1259. https://doi.org/10.1016/j.jtrangeo.2011.02.008

Fainstein, S. S. (2010). *The just city*. Cornell University Press.

Feng, G. C. (2015). Mistakes and how to avoid mistakes in using intercoder reliability indices. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences, 11*(1), 13. https://doi.org/10.1027/1614-2241/a000086

Fenton Township (2018). Fenton Township Community Master Plan 2018. Fenton Township, MI.

Finio, N., Lung-Amam, W., Knaap, G.-J., Dawkins, C., & Knaap, E. (2019). Metropolitan planning in a vacuum: Lessons on regional equity planning from Baltimore's Sustainable Communities Initiative. *Journal of Urban Affairs*, 1-19. https://doi.org/10.1080/07352166.2019.1565822

Flanagan, B. E., Gregory, E. W., Hallisey, E. J., Heitgerd, J. L., & Lewis, B. (2011). A social vulnerability index for disaster management. *Journal of homeland security and emergency management, 8*(1). https://doi.org/10.2202/1547-7355.1792

Freitag, A., Meyer, R., & Whiteman, L. (2016). Strategies employed by citizen science programs to increase the credibility of their data. *Citizen Science: Theory and Practice, 1*(1). https://doi.org/10.5334/cstp.91

Gans, H. J. (1969). Planning for people, not buildings. *Environment and Planning A, 1*(1), 33-46. https://doi.org/10.1068/a010033

Gerber, E. R., & Gibson, C. C. (2005). Cooperative municipal service provision: a political-economy framework for understanding intergovernmental cooperation. http://digitalcommons.wayne.edu/interlocal_coop/11

Goetz, E. G. (2008). Words matter: The importance of issue framing and the case of affordable housing. *Journal of the American Planning Association, 74*(2), 222-229. https://doi.org/10.1080/01944360802010251

Grengs, J. (2002, 2002/06/30). Community-Based Planning as a Source of Political Change: The Transit Equity Movement of Los Angeles' Bus Riders Union. *Journal of the American Planning Association, 68*(2), 165-178. https://doi.org/10.1080/01944360208976263

Hartman, C. (1964). The housing of relocated families. *Journal of the American Institute of planners, 30*(4), 266-286. https://doi.org/10.1080/01944366408978135

Harvey, D. (1973). *Social Justice and the City*. Johns Hopkins University Press.

Heckert, M., & Rosan, C. D. (2016). Developing a green infrastructure equity index to promote equity planning. *Urban Forestry & Urban Greening, 19*, 263-270. https://doi.org/10.1016/j.ufug.2015.12.011\

Innes, J. E., & Booher, D. E. (2000). Public participation in planning: new strategies for the 21st century. *UC Berkeley IURD Working Paper Series*. https://escholarship.org/uc/item/3r34r38h

Innes, J. E., & Booher, D. E. (2004). Reframing public participation: strategies for the 21st century. *Planning theory & practice, 5*(4), 419-436. https://doi.org/10.1080/1464935042000293170

Israel, E., & Frenkel, A. (2018). Social justice and spatial inequality: Toward a conceptual framework. *Progress in Human Geography, 42*(5), 647-665. https://doi.org/10.1177/0309132517702969

Kosmala, M., Wiggins, A., Swanson, A., & Simmons, B. (2016). Assessing data quality in citizen science. *Frontiers in Ecology and the Environment, 14*(10), 551-560. https://doi.org/10.1002/fee.1436

Krippendorff, K. (2004). Reliability in content analysis: Some common misconceptions and recommendations. *Human communication research, 30*(3), 411-433. https://doi.org/10.1111/j.1468-2958.2004.tb00738.x

Krumholz, N. (1982). A retrospective view of equity planning Cleveland 1969–1979. *Journal of the American Planning Association, 48*(2), 163-174. https://doi.org/10.1080/01944368208976535

Labuschagne, C., Brent, A. C., & Van Erck, R. P. (2005). Assessing the sustainability performances of industries. *Journal of cleaner production, 13*(4), 373-385. https://doi.org/10.1016/j.jclepro.2003.10.007

Lane, M. B. (2005). Public participation in planning: an intellectual history. *Australian Geographer, 36*(3), 283-299. https://doi.org/10.1080/00049180500325694

Lens, M. C., & Monkkonen, P. (2016). Do strict land use regulations make metropolitan areas more segregated by income? *Journal of the American Planning Association, 82*(1), 6-21. https://doi.org/10.1080/01944363.2015.1111163

Liao, L., Warner, M. E., & Homsy, G. C. (2019). Sustainability's forgotten third E: what influences local government actions on social equity? *Local Environment, 24*(12), 1197-1208. https://doi.org/10.1080/13549839.2019.1683725

Liao, L., Warner, M. E., & Homsy, G. C. (2020). When Do Plans Matter? Tracking Changes in Local Government Sustainability Actions from 2010 to 2015. *Journal of the American Planning Association, 86*(1), 60-74. https://doi.org/10.1080/01944363.2019.1667262

Livingston County (2018). Livingston County Master Plan. Livingston County, Michigan.

Loh, C. G. (2011, 2011/06/01). Assessing and Interpreting Non-conformance in Land-use Planning Implementation. *Planning Practice & Research, 26*(3), 271-287. https://doi.org/10.1080/02697459.2011.580111

Loh, C. G. (2012). Four Potential Disconnects in the Community Planning Process. *Journal of Planning Education and Research, 32*(1), 33-47. https://doi.org/10.1177/0739456x11424161

Loh, C. G., & Arroyo, R. L. (2017). Special ethical considerations for planners in private practice. *Journal of the American Planning Association, 83*(2), 168-179. https://doi.org/10.1080/01944363.2017.1286945

Loh, C. G., & Norton, R. K. (2015). Planning consultants' influence on local comprehensive plans. *Journal of Planning Education and Research, 35*(2), 199-208. https://doi.org/10.1177/0739456X14566868

Lowe, K. (2014). Bypassing equity? Transit investment and regional transportation planning. *Journal of Planning Education and Research, 34*(1), 30-44. https://doi.org/10.1177/0739456X13519474

Manaugh, K., Badami, M. G., & El-Geneidy, A. M. (2015). Integrating social equity into urban transportation planning: A critical evaluation of equity objectives and measures in transportation plans in North America. *Transport policy, 37*, 167-176. https://doi.org/10.1016/j.tranpol.2014.09.013

Martens, K. (2016). *Transport justice: Designing fair transportation systems*. Routledge.

McDermott, M., Mahanty, S., & Schreckenberg, K. (2013). Examining equity: a multidimensional framework for assessing equity in payments for ecosystem services. *Environmental Science & Policy, 33*, 416-427. https://doi.org/10.1016/j.envsci.2012.10.006

Meerow, S., Pajouhesh, P., & Miller, T. R. (2019). Social equity in urban resilience planning. *Local Environment, 24*(9), 793-808. https://doi.org/10.1080/13549839.2019.1645103

Metzger, J. T. (1996, 1996/08/01). The Theory and Practice of Equity Planning: An Annotated Bibliography. *Journal of Planning Literature, 11*(1), 112-126. https://doi.org/10.1177/088541229601100106

Moore, S. A. (2016). Testing a Mature Hypothesis: Reflection on "Green Cities, Growing Cities, Just Cities: Urban Planning and the Contradiction of Sustainable Development". *Journal of the American Planning Association, 82*(4), 385-388. https://doi.org/10.1080/01944363.2016.1213655

Mori, K., & Christodoulou, A. (2012). Review of sustainability indices and indicators: Towards a new City Sustainability Index (CSI). *Environmental impact assessment review, 32*(1), 94-106. https://doi.org/10.1016/j.eiar.2011.06.001

Mukhija, V., Regus, L., Slovin, S., & Das, A. (2010). Can inclusionary zoning be an effective and efficient housing policy? Evidence from Los Angeles and Orange Counties. *Journal of Urban Affairs, 32*(2), 229-252. https://doi.org/10.1111/j.1467-9906.2010.00495.x

Norton, R. K. (2005). Local commitment to state-mandated planning in coastal North Carolina. *Journal of Planning Education and Research, 25*(2), 149-171. https://doi.org/10.1177/0739456X05278984

Norton, R. K. (2008). Using content analysis to evaluate local master plans and zoning codes. *Land Use Policy, 25*(3), 432-454.

Norton, R. K., David, N. P., Buckman, S., & Koman, P. D. (2018). Overlooking the coast: Limited local planning for coastal area management along Michigan's Great Lakes. *Land use policy, 71*, 183-203. https://doi.org/10.1016/j.landusepol.2017.11.049

Oden, M. D. (2010). Equity: the forgotten E in sustainable development. *Pragmatic sustainability: Theoretical and practical tools, 41*, 30-49.

Osland, A. C. (2011). An analysis of land use planning and equity issues surrounding hazardous liquid and natural gas transmission pipelines in North Carolina. Unpublished dissertation.

Pendall, R. (2000). Local land use regulation and the chain of exclusion. *Journal of the American Planning Association, 66*(2), 125-142. https://doi.org/10.1080/01944360008976094

Piketty, T. (2014). *Capital in the 21st Century*. Belknap Press, an imprint of Harvard University Press.

Pope, J., Annandale, D., & Morrison-Saunders, A. (2004). Conceptualising sustainability assessment. *Environmental impact assessment review, 24*(6), 595-616. https://doi.org/10.1016/j.eiar.2004.03.001

Presque Isle Township (2014). Presque Isle Township Master Plan. Presque Isle Township, Michigan.

Provo, J. (2009). Risk-averse Regionalism:The Cautionary Tale of Portland, Oregon, and Affordable Housing. *Journal of Planning Education and Research, 28*(3), 368-381. https://doi.org/10.1177/0739456x08319202

Purcell, M. (2009). Resisting neoliberalization: communicative planning or counter-hegemonic movements? *Planning Theory, 8*(2), 140-165. https://doi.org/10.1177/1473095209102232

Rigolon, A., & Németh, J. (2018). What shapes uneven access to urban amenities? Thick injustice and the legacy of racial discrimination in Denver's parks. *Journal of Planning Education and Research*, 0739456X18789251. https://doi.org/10.1177/0739456X18789251

Scally, C. P., & Tighe, J. R. (2015). Democracy in action?: NIMBY as impediment to equitable affordable housing siting. *Housing Studies, 30*(5), 749-769. https://doi.org/10.1080/02673037.2015.1013093

Schlosberg, D. (2004). Reconceiving environmental justice: global movements and political theories. *Environmental politics, 13*(3), 517-540. https://doi.org/10.1080/0964401042000229025

Schuetz, J., Meltzer, R., & Been, V. (2009). 31 Flavors of inclusionary zoning: Comparing policies from San Francisco, Washington, DC, and suburban Boston. *Journal of the American Planning Association, 75*(4), 441-456. https://doi.org/10.1080/01944360903146806

Shen, L.-Y., Ochoa, J. J., Shah, M. N., & Zhang, X. (2011). The application of urban sustainability indicators–A comparison between various practices. *Habitat international, 35*(1), 17-29. https://doi.org/10.1016/j.habitatint.2010.03.006

Stevens, M. R. (2013). Evaluating the quality of official community plans in Southern British Columbia. *Journal of Planning Education and Research, 33*(4), 471-490. https://doi.org/10.1177/0739456X13505649

Stevens, M. R., Lyles, W., & Berke, P. R. (2014). Measuring and reporting intercoder reliability in plan quality evaluation research. *Journal of planning education and research, 34*(1), 77-93. https://doi.org/10.1177/0739456X13513614

Szibbo, N. (2016). Lessons for LEED® for neighborhood development, social equity, and affordable housing. *Journal of the American Planning Association, 82*(1), 37-49. https://doi.org/10.1080/01944363.2015.1110709

Talen, E. (1998). Visualizing fairness: Equity maps for planners. *Journal of the American Planning Association, 64*(1), 22-38. https://doi.org/10.1080/01944369808975954

Talen, E. (2001). School, community, and spatial equity: An empirical investigation of access to elementary schools in West Virginia. *Annals of the Association of American Geographers, 91*(3), 465-486. https://doi.org/10.1111/0004-5608.00254

Talen, E. (2008). New Urbanism, Social Equity, and the Challenge of Post-Katrina Rebuilding in Mississippi. *Journal of Planning Education and Research, 27*(3), 277-293. https://doi.org/10.1177/0739456x07301468

Van Zandt, S., Peacock, W. G., Henry, D. W., Grover, H., Highfield, W. E., & Brody, S. D. (2012, 2012/01/01). Mapping social vulnerability to enhance housing and neighborhood resilience. *Housing Policy Debate, 22*(1), 29-55. https://doi.org/10.1080/10511482.2011.624528

Vigar, G., Gunn, S., & Brooks, E. (2017). Governing our neighbours: participation and conflict in neighbourhood planning. *Town Planning Review, 88*(4), 423-442. https://doi.org/10.3828/tpr.2017.27

Warner, M. E., & Zhang, X. (2019). Planning communities for all ages. *Journal of Planning Education and Research*. https://doi.org/10.1177/0739456X19828058

Wilderman, C. C., McEver, C., Bonney, R., Dickinson, J., Kelling, S., & Rosenberg, K. (2007). Models of community science: design lessons from the field. Citizen Science Toolkit Conference, C. McEver, R. Bonney, J. Dickinson, S. Kelling, K. Rosenberg, and JL Shirk, Eds., Cornell Laboratory of Ornithology, Ithaca, NY,

Zahran, S., Brody, S. D., Peacock, W. G., Vedlitz, A., & Grover, H. (2008). Social vulnerability and the natural and built environment: a model of flood casualties in Texas. *Disasters, 32*(4), 537-560. https://doi.org/10.1111/j.1467-7717.2008.01054.x

Zapata, M. A., & Bates, L. K. (2017). Equity planning or equitable opportunities? The construction of equity in the HUD sustainable communities regional planning grants. *Journal of Planning Education and Research, 37*(4), 411-424. https://doi.org/10.1177/0739456X16657874

Zhang, X., Warner, M. E., & Homsy, G. C. (2017). Environment, equity, and economic development goals: Understanding differences in local economic development strategies. *Economic Development Quarterly, 31*(3), 196-209. https://doi.org/10.1177/0891242417712003

[i] We conducted independent t-tests for the volunteer and random groups for the variables total population, median household income, and percent white, which we felt covered the most important potential differences between the two groups of local governments. There were no significant differences between the groups' mean percent white and median household income. The mean population size between the two groups was significantly different as the volunteer group contained more mid-sized cities and two counties. However, as we discuss, population size was not a significant explanatory factor in any of our models.

[ii] "Citizen science" is the original term for this type of research but "community science" is becoming more widely used Bonney, R., Phillips, T. B., Ballard, H. L., & Enck, J. W. (2016). Can citizen science enhance public understanding of science? *Public Understanding of Science, 25*(1), 2-16. https://doi.org/10.1177/0963662515607406 , Wilderman, C. C., McEver, C., Bonney, R., Dickinson, J., Kelling, S., & Rosenberg, K. (2007). Models of community science: design lessons from the field. Citizen Science Toolkit Conference, C. McEver, R. Bonney, J. Dickinson, S. Kelling, K. Rosenberg, and JL Shirk, Eds., Cornell Laboratory of Ornithology, Ithaca, NY, .