



Land trusts' relationship to local public planning in metropolitan US counties

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In the US, environmental governance has devolved from a government-led process to one that empowers participation by environmental non-governmental organizations, such as land trusts (LTs). While public participation in US public land-use planning has been largely institutionalized, LTs and their use of conservation land acquisitions (both fee-simple and conservation easements (CEs)) do not have similar public input requirements. Some scholars have questioned whether CEs are in the public interest or represent more narrow interests. To explore how LTs interact with public planning processes and their role, we utilized semi-structured interviews with county government planners and LTs. Most LTs align their acquisitions with local comprehensive plan priorities. LTs are vital in fundraising and acquiring lands quickly, but most are apolitical. Devolving environmental governance to include LTs in the US may increase governmental influence in the land market compared to local governments' capabilities alone.

Keywords: private land conservation; public planning; land trusts; conservation easements; environmental governance

1. Introduction

With the introduction of state and federal enabling and tax legislation from the 1950s and 1980s, respectively, perpetual conservation easements (CEs) have proliferated in use in the United States (US) (Fairfax *et al.* 2005). These developments supported the rise of a new form of organization, land trusts (LTs), which are generally non-profit corporations registered under Section 501(c)(3) of the US Internal Revenue Code. LTs conserve land through direct land transactions, including fee-simple land acquisition for conservation purposes and partial-title land acquisition for conservation purposes (e.g. CEs) (Logan and Wekerle 2008). One of the most meaningful outcomes of the rise of LTs in the US is that, even while governments provide much of the funding for land conservation through tax policy and direct governmental appropriations, they have conveyed to LTs within their jurisdiction – whether through intentional action or inaction – significant control over the kinds of lands conserved and the terms associated with their management (Raymond and Fairfax 2002).

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This devolution (i.e. a shift in power from governmental to non-governmental organizations) in land conservation stands in contrast to the public planning authority granted to the states (and delegated to local governments) through the Tenth Amendment in the US Constitution (Randolph 2012). States and local governments plan for future land use and have various abilities to influence land use through land-use controls (both regulatory and incentive-based), depending upon how states delegate power to local governments for the protection of public health, safety, and welfare (Randolph 2012). However, the relationship and influence between these two land-use control endeavors – public land-use planning by local governments and LT land acquisition for conservation purposes – is unclear and understudied (Gerber 2012; Gerber and Rissman 2012).

The degree of public input in implementation is a notable difference between these land conservation approaches. A participatory public process is a cornerstone of effective and equitable planning, institutionalized over the past forty years in the US (Lane 2005). LTs' use of land acquisition for conservation largely lacks similar codified public input processes (Morris 2008; Shipley and Utz 2012), inciting criticism for their influence over private land-use decisions that may subvert the public interest and bolster inequities (Lane 2003; Van Sant, Hardy, and Nuse 2021). Their conserved lands have been labeled an "invisible forest" with the potential to interfere in public land-use planning (Olmsted 2011, 52). Alternatively, LTs and their use of CEs could be viewed as a parallel institution supporting the goals of a community, helping communities to realize land conservation goals when they would otherwise be unable to do so through the public planning approach (Daniels and Lapping 2005).

In this article, we seek to understand how a conservation land acquisition strategy devolved to LTs and their use of fee-simple and CE acquisitions – complements, obstructs, or is unrelated to local public comprehensive planning and land-use regulation. This article contributes to the literature on the devolution of environmental governance by: (1) addressing whether and how LTs interact with local public planning processes; (2) evaluating the levels of familiarity and interactions between local public planners and LTs, including use of the CE; and (3) revealing local public planners' views of LTs' roles in shaping future land use in high growth, metropolitan US counties.

2. Theoretical framework

2.1. Public planning, conservation easements, and land trusts

Local government land-use decisions are subject to defined processes requiring public input and are overseen by quasi-judicial citizen advisory boards and democratically elected local officials (Shipley and Utz 2012). These processes have evolved from rational, utilitarian approaches to increasingly invoke pluralistic, equitable, communicative, and humanist theories of public inclusion, such as Advocacy Planning (Davidoff 1965) and Communicative Planning (Innes 1995). Newer planning theories recognize the plurality of public interest and see the planner as a facilitator of a transparent and inclusive process rather than the expert technician dictating the solution (Harper and Stein 2006). In this sense, public planning has become more egalitarian by elevating the interests and knowledge of all stakeholders affected by planning decisions. Despite these inclusionary efforts, public planning in the US is an evolving field that has been subject to critical scholarship for its overly deferential nature towards powerful interests, such as economic development drivers and affluent and influential groups (Jacobs and Paulsen 2009).

Additionally, public planners face obstacles in enacting and implementing land-use regulations when proponents of private property rights voice objections (Jacobs 1995). Local governments' regulatory tools are also constrained by the extent of the state's land-use authority delegation (Platt 2014). Concerns about the increasingly contentious nature of land-use regulations, combined with philosophical ideologies about the role of government, have spurred the use of voluntary, incentive-based conservation land acquisition approaches, such as CEs (Daniels and Lapping 2005; Merenlender *et al.* 2004). If CEs comply with designated federal tax law and state enabling legislation, they act as a payment to landowners who voluntarily manage their property to align with the wider society's goals, as designated by these laws (Narloch, Pascual, and Drucker 2013). CEs rely upon the bundle-of-sticks metaphor in that land ownership can be split into various rights owned by separate entities (Lindstrom 2008). CEs are partial title acquisitions, meaning the private landowner retains most of the rights and responsibilities of land ownership, and the CE holder buys or accepts the donation of the rights related to development, subdivision, and land use. The CE holder is responsible for enforcing the easement restrictions in perpetuity, depending on the enabling legislation. In order to qualify for a tax deduction in the US, CEs must be held by federal, state, and local governments or authorized non-profit organizations (most often, LTs). LTs can operate at multiple scales, from local to international (Brewer 2003), and may accept donations of CEs, purchase CEs as bargain sales, purchase CEs outright, or work with governments to accept exacted CEs (i.e. CEs required through governmental permitting). In the US, CE use grew 58% between 2010 and 2020, from 12,837,451 acres to 20,236,888 acres, and local and state LTs contributed to 70% of the growth of all protected lands between 2015 and 2020 (Land Trust Alliance 2020).

Daniels and Lapping (2005) contend that the LT movement grew out of concerns that local government planning approaches were ineffectively protecting critical landscapes from development. Fairfax and Guenzler (2001) described a new era in land and resource conservation, in which conservation organizations work in partnership or in place of government agencies to preserve land. This devolution of authority is highlighted by the sharing of discretion over government funds with civic organizations (Fairfax and Guenzler 2001). Public policy decision making in which public, private, and civic entities engage across boundaries are broadly defined as collaborative governance regimes (Emerson, Nabatchi, and Balogh 2012). The devolution of planning authority to non-governmental actors has been labeled institutional blending, which is the interchange between market interactions and government-brokered policy and planning integral to LTs' operations (Hodge and Adams 2012). It has also been termed hybrid environmental governance, which is an approach that embraces the use of diverse institutions (markets, rights, norms) and incentives (economic, social) to generate the collective action needed to respond to environmental problems (Armitage, de Loë, and Plummer 2012). Ostrom (1999) contends that the likelihood of failure in environmental governance can be reduced by distributing capabilities and duties among parallel, redundant, and complementary back-up institutions/components in a system (Walker and Salt 2012).

2.2. Public oversight of LTs: does their work represent the public's interest?

LTs' conservation land acquisition is not subject to the traditional forms of public oversight associated with public planning processes. In most US states, the only public

notice of an LT holding a CE is the registration of the CE document with the local register of deeds (Olmsted 2011). Critics contend that there is a lack of formalized public input and tracking of CE placement, resulting in: unknown efficacy of CEs; piecemeal conservation rather than systematic conservation; equity concerns; and interference with public planning priorities (Flynn 2021; Merenlender *et al.* 2004; Olmsted 2011; Pidot 2011; Van Sant, Hardy, and Nuse 2021).

However, gradations of LT oversight do exist. States authorize LTs to preserve land using CEs through state-enabling CE laws that contain preservation criteria (Levin 2014). LTs are publicly supported charitable organizations, subject to regulation by state attorneys general and the Internal Revenue Service (IRS) (McLaughlin and Machlis 2008). To qualify for the federal income tax deduction and estate tax benefits of a donated CE, instruments must comply with the US Internal Revenue Code (IRC) and the Code of Federal Regulations governing deductions for qualified conservation contributions (Lindstrom 2008). If state tax credits or deductions exist for donated CEs, landowners and LTs must comply with those regulations to be eligible. Recently, many US LTs have self-selected into the Land Trust Alliance's (LTA) systematic and rigorous land trust accreditation standards initiated in 2005.

More fundamentally, however, there is a tension between these scholarly calls for increased centralized oversight and regulation of CEs (Flynn 2021), and the growing scholarly and conservation practice rejections of rational-comprehensive planning paradigms in favor of localized and collaborative planning processes (Lachapelle, McCool, and Patterson 2003). While Ostrom (2001) notes that decentralization is not a panacea, she acknowledges its advantages through the use of local and disaggregated knowledge, inclusion of trustworthy participants, use of locally adapted rules, lower enforcement costs, and redundancy. LTs may decide what land to protect based partially on the accumulated wisdom of local inhabitants and their connections to the land. This source of disaggregated knowledge can offer unique insights into the most critical lands to protect (McLaughlin 2002).

Finally, LTs may argue that private CE transactions allow them to be completed without the roadblocks potentially inherent in governmental processes. They may be incentivized to separate the CE process by their governmental distrust and perception of governmental prioritization of economic development over conservation (Owley 2011).

2.3. Current evidence on the relationship between LTs and government planning processes

Nonetheless, with the rise in the number of non-profit LTs in the US acquiring land for conservation, researchers can attempt to systematically and empirically assess whether their work supports the larger public interest by determining whether LT land acquisitions align with county comprehensive plans developed through public planning processes. While imperfect, local public planners in the US attempt to thoughtfully guide the future development pattern of jurisdictions through the comprehensive planning process, which recognizes the plurality of the public interest (Brooks 2002).

Brewer (2003) describes LTs as non-confrontational and apolitical. However, some research has demonstrated that LT personnel participate in government land-use planning (Gerber 2012; Gerber and Rissman 2012). Gerber (2012) examined several environmental non-governmental organizations' (ENGOS) attitudes toward government land-use planning in Southern Quebec and found evidence of a cooperative relationship

between the ENGOs and the government planners. Among the 16 organizations in the case study, most (≥ 9) of the ENGOs had board members on local land-use planning committees. Furthermore, many ENGOs (≥ 9) commented on the revision of local land-use plans. One of the ENGOs created spatial data shared with local governments to prevent building permits from being issued in wetlands. The most significant barrier to further ENGO participation in government land-use planning was the extensive involvement that exceeded their means. ENGOs operate on small budgets and often with volunteers; continuous political involvement requires more time than the ENGO volunteers could invest. Accordingly, ENGOs that did not have time to participate in public planning coordinated their efforts through a partnership, which represented their work in the political arena. This partnership also connected the ENGO's efforts to a broader conservation framework, bolstering what would otherwise be more isolated, unilateral decisions.

In a study of the international LT, The Nature Conservancy (TNC), Gerber and Rissman (2012) found that TNC's acquisition strategy did not involve direct coordination with county planners in one branch but did so in another. In the Lassen Foothills of California's Central Valley, TNC staff's perception that approved zoning variances were exceeding the development standards in the land-use plan meant that they did not coordinate their acquisition strategy with the plan. Their primary reasons for not engaging in the county's land-use planning process were 1) a victory for conservation could be overturned in a subsequent revision of the land-use plan; 2) entering the political arena implied choosing a side, which contradicted TNC's non-confrontational philosophy; and 3) partisan debates could result in a loss of landowners' trust. Alternatively, TNC staff in Monterey, California, were involved in revising the Monterey County general plan, citing a belief that strong zoning could offer efficient protection, especially in buffer zones or corridors. TNC staff felt that the political debates around land-use planning offered them opportunities to raise awareness among county authorities and the public and to share their scientific expertise. TNC staff did not consider government growth management strategies and conservation acquisitions as closely related instruments (Gerber and Rissman 2012). Both studies found that LTs viewed involvement in government land-use planning as requiring a significant investment of time and money. Additionally, the political costs of engaging in a contentious local planning process were a significant concern. As an international LT, albeit with local offices, TNC found itself portrayed as an "outsider" with a global agenda attempting to interfere with local decisions.

Given the criticisms of LTs in their role in acquiring land for conservation, more information is needed about how they interact with local government planning processes in additional locales. In this article, we conducted in-depth interviews with career planners from government planning departments and LT personnel within rapidly growing US metropolitan counties to describe how non-profit LT CE acquisition complemented, obstructed, or was unrelated to local public comprehensive planning.

3. Methods

3.1. Study design and case study selection

This article reports on the in-depth interview portion of a twelve-case study convergent mixed-method design (Creswell and Plano Clark 2018). US county boundaries defined the case studies; counties are political subdivisions of a state with defined boundaries

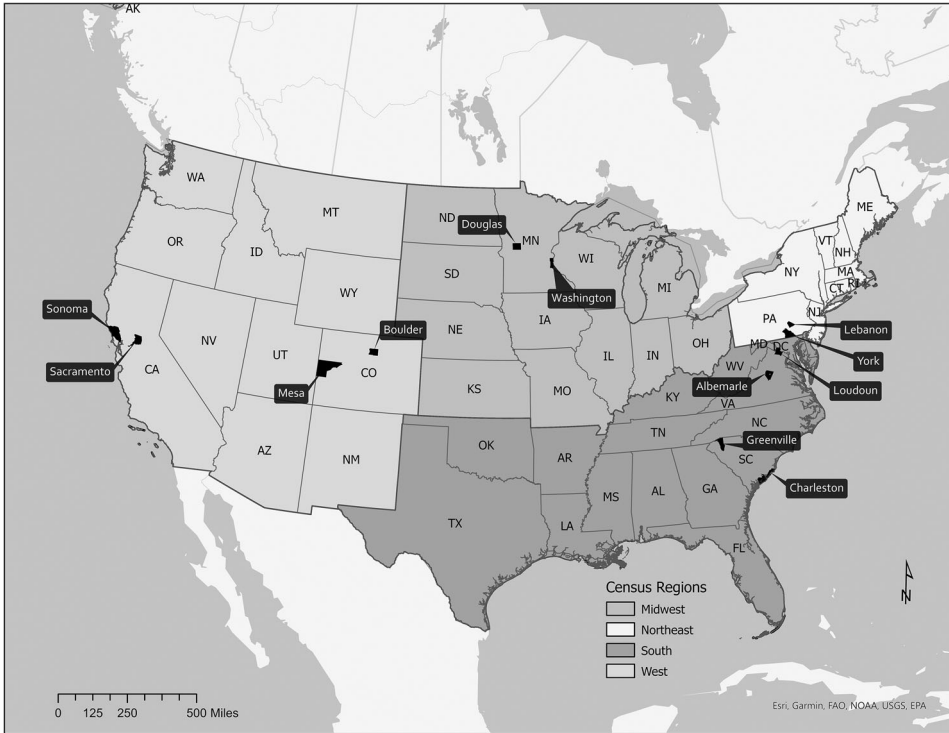


Figure 1. Study counties, USA.

that operate under a common administrative code. When selecting counties for the case studies, the overarching goal was to choose high-growth counties that presumably contained areas with trade-offs between land uses (i.e. residential, natural resource, and conservation). We purposefully sampled to have representation from each US census region and Level I ecoregions (USDA Forest Service 1995). The most significant factor in county selection was population growth between the years 2000 to 2010. We included two counties for each state in the study ($n=6$) to pinpoint any state-level influences on our study questions. Our study counties are not entirely homogeneous but represent a variety of geographic, demographic, political, and economic conditions of high-growth counties in the US. The final counties of interest ($n=12$) included four in the South census region: Charleston and Greenville Counties in South Carolina and Albemarle and Loudoun Counties in Virginia; two in the Northeast census region: Lebanon and York Counties in Pennsylvania; two in the Midwest census region: Douglas and Washington Counties in Minnesota; and four in the West census region: Boulder and Mesa Counties in Colorado, and Sacramento and Sonoma Counties in California (Figure 1). The study counties can typically be described as high-growth, metropolitan counties. The summarizing characteristics of the study counties can be found in Table 1.

3.2. Interviews, qualitative analysis and reporting

For the LT interviews, we identified 49 LTs holding CEs in the study counties. After removing duplicate LTs, and with merging, the final contact list had 41 LTs.

Table 1. Characteristics that can be used to define our typical study county and that can be used to describe the types of counties to which generalizing study results may be most appropriate. $n = 12$ study counties.

Characteristic	Summarizing quality	Details	Data source and year
Population size	Population size higher than the US median	-All study counties have a population greater than the US median. -11 of the 12 having greater than the US 75th percentile.	US Census 2021
Population growth	Growth rate higher than the US median	-All study counties have a percent change in population between 2000 – 2021 greater than the US median. -11 of the 12 having greater than the US 75th percentile.	US Census 2000 and US Census 2021
Percent urban Land area	Urban land area higher than the US median	-All study counties have a percentage of land in urban land designation greater than the US median. -10 of the 12 having greater than the US 75th percentile.	US Census Urban and Rural Classification 2010
Percent urban Population	Urban population percentage higher than the US median	-All study counties have a percentage of their population living in an urban land designation greater than the US median. -10 of the 12 having greater than the US 75th percentile.	US Census Urban and Rural Classification 2010
Metro or non-metro	Metropolitan County	11 of the 12 counties are classified as metropolitan counties.	USDA Rural-Urban Continuum Codes 2013
Median household income	Median household income higher than the US median	-All study counties have a median household income greater than the US median. -11 of the 12 having greater than the US 75th percentile.	US Census 2020
Number of farms	Median number of farms higher than the US median	-11 of the 12 counties have more farms than the US median number of farms -10 of the 12 having greater than the US 75th percentile.	USDA Agricultural Census 2017

We pretested the instrument with one LT in a pilot and had it expertly reviewed by the LTA. We contacted each LT by e-mail or phone. After two unsuccessful contact attempts, we shared the list of unresponsive LTs with the LTA, who contacted the LTs on our behalf. We followed up once more. Two researchers conducted the interviews via phone using a semi-structured method between March and July 2019. For the local government planner interviews, we emailed the planning director in each county in September 2022 to request an interview with the director or whomever they identified as a knowledgeable representative. Using a snowball sampling approach, we asked each participant to recommend additional planners with expertise for us to interview and contacted them accordingly. One researcher conducted the interviews by phone between September and October 2022. We transcribed the interviews, and one researcher coded them using structural coding (Saldaña 2016). Having promised anonymity to study participants, we report results without attribution of responses to any particular LT, local government, county, or state. Additionally, some state-level policies are relevant to this study but could not be presented considering interviewee confidentiality. We have provided enough information to describe the interviews' main results without compromising the participants' anonymity. These study methods were approved by the University's Institutional Review Board and all participants provided informed consent to participate in the study (IRB2015-212, IRB2021-0367).

3.3. Interview participation

For the LT interviews, 20 out of 41 LTs agreed to be interviewed. Twelve LTs declined the interview or did not respond, three were excluded as they had transferred their CEs to other holders, and we could not find contact information for six. In total, our response rate was 49%. LTs interviewed were more likely to be LTA accredited than those that we did not interview (90% versus 50%). The best response rate was from LTs located in the South, but we had representation from all Census regions (nine in the South, two in the Northeast, one in the Midwest, and eight in the West). On average, the LTs interviewed had been in operation for 33 years (range 11 years to 68 years) and had an average of 8 staff members (range 1 to 26).

Most of the LTs could be described as generalist, holding all types of CEs (broadly characterized as agricultural, biological, historic, or scenic). Allowable CE typologies differ by state statute and IRC requirements but are generally described accordingly: agricultural CEs include working lands CEs with purposes to perpetuate agricultural uses such as cultivated crops, rangelands, and timber production. Biological CEs are primarily for the preservation of biological diversity and native ecosystems. Historic easements protect cultural resources, such as historic buildings or places of cultural significance and their surrounding landscapes. Scenic easements primarily prevent the loss of scenic landscapes, especially those bordering scenic byways and rivers. Any given CE can fall into one or more of these categories (i.e. a CE may have purposes for both agricultural production and biological preservation). Nine of the LTs interviewed held all four types of CEs, four LTs held three types of CEs, three LTs held two types of CEs, and four LTs specialized in only one CE type. For the LTs that specialized, three LTs held only agricultural CEs (two in the West and one in the South), and one LT held only biological CEs (West).

Table 2. Number of interviewees by census region and type.

Census region	No. of land trusts interviewed	No. of planners interviewed	No. of counties in study from region
Midwest	1	2	2
Northeast	2	4	2
South	9	5	4
West	8	5	4
Total	20	16	12

For the local government planner interviews, we interviewed at least one planner per county, for a total of sixteen interviews (Table 2). All interviewees were planners who worked at the county planning department, had previously worked at the county planning department, or who worked in the county open space department.

4. Results

4.1. Planners familiarity and coordination with LTs: planner's perspective

Planners were evenly split on their familiarity with the work of LTs in their area, with planners in six counties indicating that they are very familiar and planners in six counties indicating minimal familiarity. There was no clear relationship between state or Census region and local government familiarity with LTs. In instances where a county had an open space district as a separate department, it often became the case that planners in the planning department were not very familiar with the work of LTs. Instead, LTs coordinated with the open space district. In all but one of the counties, planners coordinated with LTs in some way.

There was a spectrum of coordination from counties with a close working relationship with LTs to counties with no relationship with LTs. Five of the counties had relationships that could be described as a close working relationship, six as parallel actors, and one as no relationship (Table 3). A close working relationship is defined as an emergent, informal partnership between the local government and LTs where local governments and one or more LTs coordinated efforts in multiple ways to manifest a shared future vision for land use. Although these partnerships were strong, there was little to no formalization of the relationship through memoranda of understandings, charters, or statutory mandates. Rather, informal coordination was facilitated through pre-existing relationships and networks resulting from close geographical ties and overlapping interests.

The second coordination type was parallel actors. In these occurrences, the county planning vision and the LT vision for future land use generally aligned yet the two entities were working separately, once again with no formalized relationship. No relationship meant the county planning department did not know what the LTs were doing and lacked coordination entirely. Table 3 illustrates the common cooperative activities for close working relationship counties and parallel actor counties. Close working relationship counties displayed several of these coordination activities, while parallel actors displayed only one or two coordination activities.

Planners in nine counties indicated that LTs in their area share information concerning the location of CEs. Some of the counties had cloud-based data where the LTs could contribute directly, and other counties reached out at intervals. Planners in two

Table 3. Categorization of local government and LT relationships.

	Close working relationship ($n = 5$)	Parallel actors ($n = 6$)
Characteristics of relationship	• Equal partners • Shared vision for future land use through the open space plan • Committed to implementing shared vision of open space plan • Multiple coordination activities • Not formalized	• Vision for future land use aligns generally • Actions complimentary, but not coordinated • Coordination limited to short interactions, specific requests • Not formalized
Types of coordination	• County planners sitting on LT boards • LT personnel sitting on planning commission • County funding LT CE acquisition • County providing matching funds for LT applications to state conservation grant programs • County and LT jointly hosting landowner workshops • LT placing CE on county land • LT checking in with County before placing CEs	• LT participated in comprehensive plan updates • LT provided guidance on county codes when asked • Elected officials provide letters of support for LTs seeking state or federal funding • County contacted LT if there was a development application on or near a CE • County fielded questions for LTs inquiring about properties or boundary changes

counties were unsure whether LTs shared the information. Finally, there was one county where the planner indicated no coordination and no information sharing with LTs. Planners in ten of the counties agreed that it would be helpful for LTs to increase their coordination with government planners. Although none of the planners voiced a dire need for more coordination, most appreciated the value of collaboration in planning generally. Some planners indicated that there were particular LTs that were not as involved in the planning process, so it would be beneficial to increase coordination with them.

4.2. How county planners see the LTs' role: planner's perspective

When asked about the role of LTs compared to local government in shaping future land use, one of the most common responses was the LTs' superior capacity to fundraise for land preservation projects. Planners talked about the ability of the county to work with LTs to identify land preservation priorities but that the LTs are "better funded to purchase and preserve those areas," especially as compared to smaller municipalities. The LTs can "go out and have events that generate money, and also seek out large donors so that they can amass enough capital to broker land conservation agreements and easements." This was mentioned by planners in four counties across the spectrum of county investment in land preservation (i.e. it was equally mentioned by counties with significant financial resources for land preservation and those

with smaller budgets). As noted by planners, an essential aspect of the LTs' role is their ability to "secure [targeted] properties more quickly, [and] more nimbly sometimes than a public entity can." As one planner stated, "[they] can go out to foundations and collect those monies that they need in order to do it faster. They've served a really crucial role in securing thousands of acres of open space and land."

Another common distinction planners made was that LTs have a more singular focus on land preservation while local governments have a more pluralistic focus. In planners' views, LTs can "funnel all of their efforts" into the "singular task of locating and preserving properties." In contrast, municipalities need to "[make] sure that the needs of the residents are met in all kinds of ways." Planners noted that as long as LTs "work cooperatively with local governments in shaping that future land use" their role is "very valuable." One planner noted that when LTs' goals align with the community goals, it's "a win win for everybody." Several planners saw LTs "as being a tool to help achieve county goals as well as local goals," painting LTs as an entity supporting the local government conservation goals. Similarly, another planner noted that the county does not have the staffing or funding to do conservation work, so the LTs step in to fill that role. Additionally, in counties where the local government had staffing and funding capacity for conservation work, planners mentioned that the LTs are still valuable to work with landowners who "might not be willing to work with the government." Planners in two counties noted that LTs and their use of CEs create opportunities for landowners who want to retain and not develop their property but would like to realize some value from it. Compared to local government's regulatory work, another planner noted the benefit of (most) CEs' permanency. And finally, one planner noted that CEs' environmental protections can exceed regulatory approaches.

While the majority spoke very positively about LTs' roles, several planners noted how LTs' functions could be limited or complicated. The first is scalar/spatial differentiation; LTs may be hyper-focused on one area of the county, or a separate area of the state, while the county is interested in preserving rural lands more generally. Another planner saw the role of LTs as helpful, albeit limited, because LTs lack land-use authority, other than placing CEs. With a broader spectrum of regulatory tools, the county's actions are much more likely to shape future land use than LTs' actions.

4.3. LT involvement in government land-use planning: LT perspective

Half of the LTs interviewed (ten of twenty) indicated that they participated in local land-use planning, such as commenting on comprehensive plan updates or working with local governments on open space plans. LTs (nine of ten) that operated within a single county or only a few counties were more likely to participate in local land-use planning than LTs (seven of nine) with a statewide, national, or international scope. The organizations with large geographic scopes attributed their lack of participation to the challenges of horizontal coordination with the large number of local planning jurisdictions. Three of the LTs noted that they are fundamentally involved in the comprehensive plan by sharing information, helping to write it, or implement it. One LT stated, "in fact, the towns comprehensive plan even cites us as boots on the ground so to speak." Another mentioned, "[s]o not only did we follow open space plans that were written, we actually wrote a half dozen or more for the municipalities. So we were very involved in helping direct the priority systems in municipalities."

A common theme among the LTs that participated in local land-use planning (mentioned by four of the ten participating LTs) was their awareness and commitment to remain neutral in potentially adversarial land-use debates. For example, one LT spoke about considering requesting more robust zoning requirements during the county's comprehensive plan update. However, they ultimately decided against doing so because they anticipated stakeholders' resistance, and they wanted to maintain good relationships. Similarly, when asked whether the LT does any formal or informal lobbying related to local land-use planning (such as lobbying for or against zoning changes), sixteen of the twenty total LTs said they do not, and an additional two said sometimes. One LT that does not lobby said they were careful not to be seen as anti-development. Additionally, they mentioned the importance of staying neutral because they only work with willing landowners, presumably meaning that they do not want to alienate future CE donors by inciting controversy. One of the LTs that sometimes lobbies gave specific examples of infrastructure projects against which they lobbied. However, they also mentioned that they backed off after the project got politically heated. Another LT that sometimes lobbies said they only speak out publicly if it is in support of projects, staying silent if they are against them.

The LTs' responses were equally divided when asked whether their involvement in local land-use planning had been effective or efficient. There was no pattern of counties or Census regions where involvement was deemed effective versus ineffective. For instance, even within one county, LTs answered differently regarding the effectiveness of involvement. Three LTs noted sentiments of feeling heard while participating in the local government planning process. One noted, "[w]e're a very well-known civic institution and the county takes our input seriously, as seriously as anybody's." One LT noted that their most effective interactions with local planners had been those that were "behind-the-scenes conversations about specific sites and specific properties." The LTs that considered their involvement ineffective attributed it to a lack of evidence that their involvement manifested change or described the limits of their influence. Two voiced frustration about their ability to influence change through the public planning process, citing strong property right sentiments in one area and a pro-development culture where the LT felt as though they were "the minority voice" for conservation in another area.

4.4. LTs Interference with county planning: LT perspective

Fifteen of the twenty LTs answered that they ensure their conservation decisions align with the local county's comprehensive plans. We found representation in this group in every state in the study, predominantly caused by the LT view of the comprehensive plan as a reflection of residents' land-use preferences and vision. One LT described comprehensive plans as a "kind of grassroots effort plan that the county has looked for integration of what's happened and how the residents want their county to grow." Accordingly, LTs wanted to align with the comprehensive plan to keep relationships and their image healthy: "I think if the LT is seen as com[ing] in and preserving a large area that's slated for a certain type of development... then I think that that'd be not being a team player." One LT was quite emphatic, saying "we absolutely won't do [a CE] that, that wouldn't be in compliance with the comprehensive plan." LTs seek alignment with the comprehensive plan so that they are not placing CEs in future high growth areas, surrounding the CE and potentially defeating its conservation value.

Three LTs were unclear in their stated relationships to the comprehensive plans and did not mention associated consultation or conformity. These LTs operated at scales of multiple counties or states, and identified other decision drivers (e.g. federal government partners' conservation priorities, mitigation criteria) instead of local comprehensive plans. However, not all multi-county or multi-state LTs lacked conformity with local county comprehensive plans, because similarly situated LTs whom we interviewed were compliant.

Three of the twenty LTs gave examples of potentially interfering with county planning. Where publicly protected lands and LT protected lands comprised about 50% of the land area, one LT noted that they began to pull back from trying to prevent all development as they became aware of the negative effects of such a limitation—especially commercial development—for the local residents. Another LT described a situation where the county government wanted to amend a CE to straighten a roadway, which ultimately, they were unable to do. Finally, one LT noted that although rare, they do not rule out acquiring CEs on properties designated as high-growth areas if they think the county has zoned it incorrectly.

4.5. LT Interference in county planning: planners' perspective

When asked whether LTs' work and their use of CEs contributes, interferes, or is unrelated to the realization of the county's land-use plans, eleven of the twelve counties noted that LTs contribute. One county planner indicated that LT work in their area was primarily unrelated to county goals. The planner spoke about the LTs' efforts to put CEs on marginal farmland, removing them from agricultural production, while the county's goal was to support and preserve agricultural viability and associated land.

Planners in seven counties perceived the county's public interest in the LTs' work. But several planners had difficulty answering this question, in return asking, "what public?" Planners in four counties indicated that "it depends," and their qualifications included the contents of the individual CE instruments, particularly whether they protect important conservation values that reflect the public interest. One planner observed the trade-off of LTs representing the interest of some residents who want to maintain the rural character of a portion of the county at the expense of other residents who seek the opportunity to build low-density residential in the same areas. Another planner noted that the LTs with whom the county works closely "really interact quite a bit with public agencies and are interested in public opinion because they also get financial support from having widespread support... but I can see the fact that might not always be the case." Finally, a planner indicated that, from their perspective, the LT's work will benefit the public, but the county landowners' perception is that "it doesn't affect them at all."

A single planner observed that the LTs' work in their area likely benefits only a relative few, notably somewhere else (outside the county). Accordingly, many county landowners saw the LTs as outsiders and did not welcome their adjacent land preservation. This sentiment potentially stemmed from a sense of communal culture that shifted when LTs conserved land; where formerly neighbors allowed other neighbors to enter and recreate (hunt, fish) on private property, LTs now barred trespass.

4.6. Public oversight: LT perspective

While none of our study counties require a public entity's formal approval of CEs conveyed to LTs, many of the LTs identified forms of direct and indirect public oversight

within the work they do. The most common form is a public funding agency's oversight. Many LTs in our study use local funds, in the form of applications to grant programs, applications for conservation credits, or designated funding from the state or county, to fund CE acquisition. In these cases, the legislation that funds the CE program has enumerated eligibility criteria which these funding agents use to judge applications. Public oversight can manifest at different stages in the acquisition process, including at the LT's initial funding application, and later through monitoring of the CE purchased with public funds. In states that offer tax credits for CE donations, the CEs also go through a state level oversight mechanism. LTs within two states mentioned oversight that relates directly to provisions within their state CE enabling acts, including requirements that CEs align with the comprehensive plan, and requirements that LTs be certified by the state annually, potentially catching any bad actors.

4.7. Public oversight: planners perspective

Planners almost universally disagreed with the need for more public input in the LT CE acquisition process, but for different reasons. In counties with close working relationships, one of the most prominent reasons for not needing more public input was its irrelevance, given the existing valuation of LT partnerships. For example, planners on the local LT board noted that they "hear everything firsthand in advance before it happens." Another emphasized how close-knit the planning and conservation community was in the county, stating,

you see a lot of the same people from different meetings and we know each other pretty well ... I think that as far as what they do, they're not trying to hide, I don't think, what they're doing, I think they're very open about what they're trying to accomplish.

Another stated,

all of the work that we do to lay out our guiding document, our growth plan, our county comprehensive plan, all of that is up for public opinion and public comment. We take that public input seriously, and modify our plans based on that. So, if the LTs are working closely with the local governments, I think that public input is already part of that process.

In addition, many planners felt that it was a landowner's right to convey an easement on their property without public input, equating it to by-right development. One planner noted, "I think my acquisition real estate brain is like, it's like any private buyer. They have the funding, they're buying, and we don't really get to say what it is they're doing with the land." Another stated,

we live in an environment where private property rights are paramount in our legal system. And if a person who owns property has the same right to develop it as they do to conserve it, why do we think the public has a right to be involved in the conservation in a way if they're not also involved in the development?

Several planners qualified their oversight answers with the need for consistency between the CEs and the county comprehensive plan; one planner stated, "I don't know that anybody thinks there should be more government oversight of those private

LTs as long as they're all operating in accord with the comp plan, which they have been. So, I don't really hear that come up."

Several planners identified the fact that having an approval process for individual CEs could allow personal interests to interfere with the conservation decisions, perhaps in a not-in-my-backyard (NIMBY) way. One planner described how the public often favors certain actions when discussed in the form of broad goals and concepts, "but if you start asking them how they feel and seek their input on individual land decisions, that's going to create problems." The planner further stated,

I think that the role of local government should be to establish future land-use plans that reflect the values of the public in that community. Once they've established those plans and values and goals, as you start to get down to decision-making on individual tracks of land permitting or purchasing, if it fits with the goals and the plan, then folks should be able to do it.

Planners did see room for additional public input when the government is directly funding CEs. One planner noted, "if the local government was providing funding to the non-profit in some way, then yes, I can see there has to be some strings attached." Several planners also mentioned that it is not a bad idea for the LTs to seek input from the community or neighbors voluntarily. Finally, one planner did note a concern about running out of developable land if too much land was preserved. The planner was unsure, however, how the public would feel if this happened and felt it did not necessitate adding an additional layer of oversight.

5. Discussion and conclusion

The perspectives of public planners and LTs in our study generally do not support the assertion that an "invisible forest" of CEs interferes with government planning processes (Olmsted 2011, 52). While the level of coordination between LTs and local governments in placing specific easements varied, there was little to no evidence that the CEs interfered with county or municipal planning goals. As the literature suggests, LTs vitally supplement local government's ability to realize critical land protection in growing exurban counties (Daniels and Lapping 2005; Fairfax and Guenzler 2001), in many ways representing a parallel and complementary back-up institution (Ostrom 1999). Contrary to the findings in previous literature, both planners and LTs did not support the call for additional public oversight in the CE placement process for privately donated or funded CEs (Pidot 2011; Olmsted 2011; Owley 2011; Morris 2008; Korngold 2007). On both sides of the perspectives, each found the various levels of direct and indirect public oversight sufficient to coordinate efforts, particularly where CEs were consistent with the comprehensive plans. Planners and LTs indicated that LTs intentionally align themselves with the county's comprehensive plan because they rely upon the public for donations and want to avoid being seen as divisive figures. In most counties, planners indicated that LTs share information about the location of their easements. Additional forms of coordination include LT board or planning commission representation and funding. Similar to Gerber (2012), we found that many (half) of the LTs participate in government land-use planning, but most are not openly political or confrontational on planning issues.

This work highlights a previously unrecognized, more informal, nuanced, and critically important relationship between local planners and the LTs that has evolved organically in some counties, regardless of formalized coordination. It represents a collaborative governance process for land-use planning in US counties, guided by the comprehensive planning process. LTs are constrained by their lack of land-use authority and must rely on willing individuals to cooperatively conserve lands, raising funding and public support for their efforts. By working in the same jurisdictional space, LTs and planners recognize the complementary nature of their roles. Most planners saw and appreciated the LTs' ability to acquire funds and act quickly and nimbly to preserve land, identifying it as one of the most important roles that LTs play. The ability of the LTs to act quickly to preserve land as it becomes available (and before it is acquired for development) means that LTs play a key role in local government open space plan implementation. This land acquisition alacrity has been identified as a vital tenet of effective open space protection (Steelman and Hess 2009).

However, while these results indicate an alignment of LT and public planning work and the essential role LTs play in implementing open space plans (all but one county), about half of the LTs in the study who participated in public planning processes perceived their participation as ineffective. Ultimately, LTs are one of the many interest groups vying for their voice to be heard in the public planning process, with variable influence depending on the county. LTs' development of a close working relationship with public planners through multiple coordination activities may be a strategy for LTs to gain influence over the public planning process when resources allow. However, most LTs ensure that their involvement does not traverse into lobbying, especially publicly. Some LTs that operate on multi-county spatial scales were less likely to engage in local public planning processes, mainly because of the large number of jurisdictions with whom they would need to engage.

Where LTs are the primary driver of land preservation (rather than local governments), LTs' CE use appears to be a pragmatic response to property rights obstacles that weaken or make governmental land-use regulations politically infeasible. The evidence of alignment between LT and local government planning priorities supports the idea that the devolution of land preservation authority to US LTs may represent an increase in local government's land market influence compared to local government's solo endeavors (Hodge and Adams 2012). Devolving environmental governance to LTs can be seen as increasing governmental influence over land use because of the government's influence over LTs (Hodge and Adams 2012).

While we find that the LTs' work largely aligns with local comprehensive plans in the US, our results do not extend to the assessment of whether these land-use decisions are objectively or subjectively good for the communities, good for conservation, or whether other tools or combinations of land preservation tools would be preferable for conservation or equity. The extent to which LTs' land-use decisions are considered equitable or representative of the public interest may be related to the treatment of equity and representativeness in the underlying comprehensive plans, given their alignment (Loh *et al.* 2022). However, several planners had difficulty with whether the work of LTs represents the will of the public, aptly noting that "the public interest" is a notoriously tricky concept and one with which public planners continuously struggle (Tait 2016).

Similarly, whether CE placements are considered sound conservation decisions depends upon the underlying comprehensive plans' conservation robustness and the ability of the local government to implement such plans, given the larger political

framework of their areas, both of which we did not empirically assess. Optimal conservation plans and reserve design will change over time, depending upon environmental and social changes, and the success of plan implementation, which LTs affect (Meir, Andelman, and Possingham 2004). As noted by several planners, CEs are a limited tool for realizing land preservation goals, given their funding constraints, LT capabilities, and the willingness of landowners to grant them. Recent reviews of growth management in the US highlight the importance of having more than one land-use control tool to achieve land-use goals (Ewing *et al.* 2022). With these findings, it is also important to note that the LTs who participated in our interviews may be more collaborative and open, since they agreed to the interview. We attempted to ameliorate self-selection bias by repeated contact attempts with the LTs, including contact through a trusted intermediary (the LTA). County planners, however, could fully comment on the work of all the LTs in their county, even those we could not interview.

From the perspective of LT characteristics, future research could further engage the question of differential engagement and alignment of local versus statewide, national, and international LTs with local public comprehensive planning. From the perspective of local planning department characteristics, future work could address the structure and size of the local government planning apparatus and the effect of these characteristics on the nature of the local government/LT relationship. Finally, this work could be corroborated by spatial analyses overlaying LT conservation acquisitions with future land-use maps developed through the comprehensive planning process to quantify the percentage alignment between LT conservation acquisitions and future desired land-use designations.

In this study, we interviewed local public planners and LTs in rapidly growing US metropolitan counties to describe how non-profit LT CE acquisition complements, interferes with, or is unrelated to local public comprehensive planning. While the devolution of planning authority to LTs and their use of CEs in the US has raised questions about whose interests they represent and how they operate in relation to traditional public planning approaches, little work has empirically assessed these topics. This study found that LTs largely align their acquisition work with county comprehensive plans unless those LTs operate over large geographic scales without local offices. In our study counties, these collaborative processes evolved without formal agreements or relationships. Despite the increase in lands protected by CEs over the last forty years, public planners did not see them as interfering with local goals. Instead, planners viewed LTs as playing a crucial role in implementing the open space portions of county comprehensive plans.

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