

City of Lakewood

Strategic Parkland Acquisition Guidance

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Prepared by

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Prepared for



Lakewood
Community Resources

1. Executive Summary

The City of Lakewood (City) has a long-term goal of providing an equitable park system that maximizes the number of residents within a 10-minute walk of a publicly accessible park facility. To achieve this goal in the most cost effective and efficient manner, the City of Lakewood engaged The Conservation Fund (the Fund) to conduct a thorough analysis of Lakewood's parkland inventory to help identify potential acquisition opportunities and to help plan for anticipated growth by strategically identifying areas that would serve more residents within a 10-minute walk, while also helping make the system more equitable.

The Fund reviewed existing parklands, evaluated parcels that the City was already evaluating for acquisition, and analyzed every parcel in the City for its potential suitability to serve as new parkland. The geospatial mapping products that the Fund has provided to the City include:

- 1) parcels currently outside the 10-minute walk zone for the existing park system (includes parks owned by the City and other entities)
- 2) parcels that are within a 10-minute walk of RTD light rail stops, which serve as a proxy for a significant portion of anticipated future population growth, and
- 3) parcels analyzed with an equity lens based on the Center for Disease Control's (CDC's) Social Vulnerability Index.

Priority locations for potential acquisitions include areas near the approximately 10.6% of residents that currently do not have parkland within a 10-minute walk, areas within a 10-minute walk of an RTD light rail stop, and areas in the northern and eastern portions of the City that are designated as most socially vulnerable by the CDC.

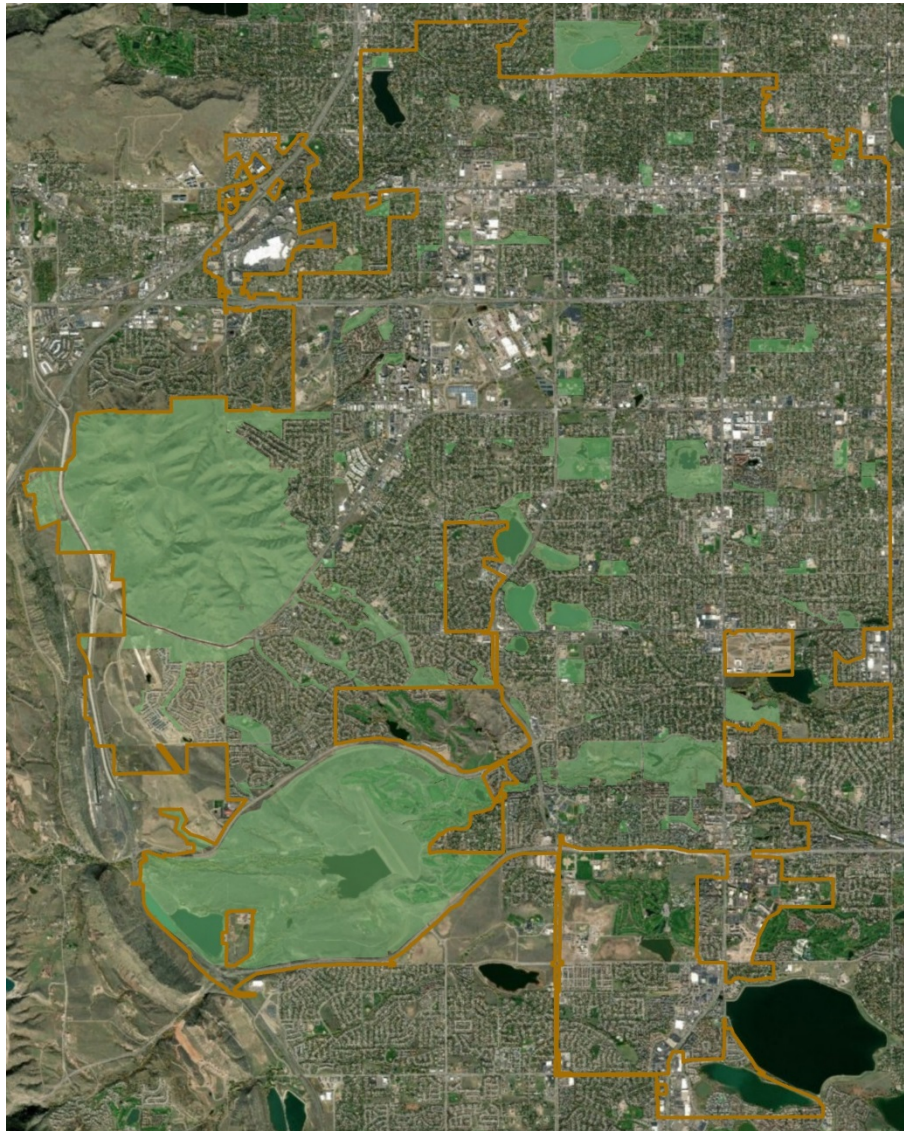
In addition to categorizing parcels based on the walk zone, the RTD light rail zone, and an equity lens, potential acquisitions were organized based on the type of acquisition opportunity:

- 1) gap in the existing park network,
- 2) expansion of an existing park, or
- 3) expansion of trail right-of-way.

The Fund also categorized opportunities based on the type of transaction that would be involved:

- 1) private landowner negotiations, or
- 2) inter-governmental agreements.

The Fund's technical analysis and geospatial products can serve as effective decision support tools for the City going forward. In addition to being able to characterize known existing acquisitions based on structured decision-making criteria, tools have been provided to be able to evaluate future unknown opportunities based on the same walk zone, RTD light rail zone and equity considerations. This provides a method for understanding the opportunity cost of pursuing future acquisitions as well as the feasibility of acquisition based on current landowner dynamics. The Fund hopes that these tools will serve the City well to assess both proactive and reactive park acquisition scenarios under the full array of ownership and development situations.



2. Methods

At project kickoff in April 2019, the City provided the Fund with current park system GIS data and other useful data for decision support on potential land acquisition opportunities. Helpful data included the locations of RTD light rail stops, existing and potential trail networks, municipal boundaries, ward boundaries, and land parcels for all of Jefferson County with information on landowners.

Potential Acquisitions Inventory

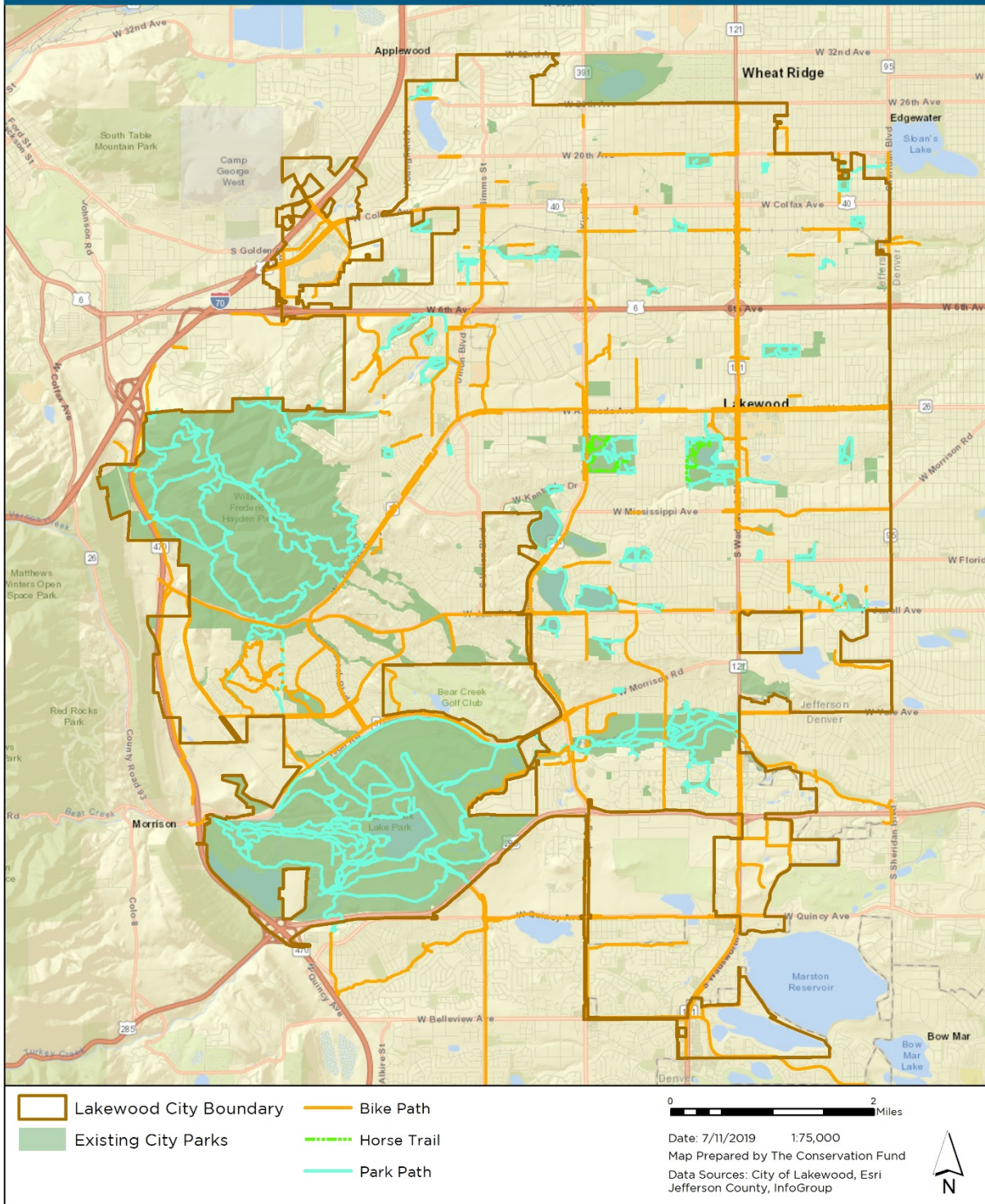
Through an iterative process, the City and the Fund created a layer of potential acquisition opportunities based on an array of factors including an analysis of existing vacant land as well as parks department staff interactions with city council members, other government entities, private landowners and developers. On May 1, 2019, the Fund and the City completed a driving tour of 25 potential parkland acquisition sites. This tour provided an opportunity to reaffirm the project goals and begin to refine potential land acquisition criteria based on on-the-ground observations and existing available GIS data.

Following the tour, the Fund crafted a set of structured decision-making criteria that would guide the parkland acquisition geospatial analysis by helping to identify potential acquisition opportunities and by anticipating future population growth areas where adding parkland would serve more residents within a 10-minute walk, while also helping make the system more equitable.

Specifically, the analysis identified potential park acquisition opportunities that would:

- 1) add new residents to the 10-minute walk zone,
- 2) add open space within a 10-minute walk of RTD light rail stops, and
- 3) add open space in areas of high social vulnerability as measured by the Center for Disease Control's (CDC's) Social Vulnerability Index.

Map 1 illustrates the City's annexed boundary, existing City-owned parks, and the existing trail network of bike paths, horse trails and park trails.



10-Minute Walk Zone Analysis

Prior to commencing the walk zone analysis, the City was able to provide the Fund with a time limited, license restricted demographic dataset from Infogroup™ via the Denver Regional Council of Governments (DRCOG). The 2018 Infogroup™ demographic data includes detailed population estimates inside the annexed boundary of the City of Lakewood, so all percentage calculations are based on an estimated percentage of residents that the park system needs to serve with a 10-minute walk zone. Please note that it would be extremely difficult to replicate this walk zone analysis without the Infogroup™ data, as it is significantly more fine-grained than the publicly available alternative provided by the US Census Bureau (i.e. Census block group centroid populations).

Another key element of the park zone analysis was the creation of a park access points layer by the City. This facilitated getting an accurate count of residents within a 10-minute walk of each park. In addition, the Fund and the City worked together to create an additional set of park access points for facilities within the annexed city boundary that were owned by other entities (e.g. the Foothills Park and Recreation District) and by municipalities adjacent to Lakewood but within a 10-minute walk of Lakewood residents (e.g. City of Denver).

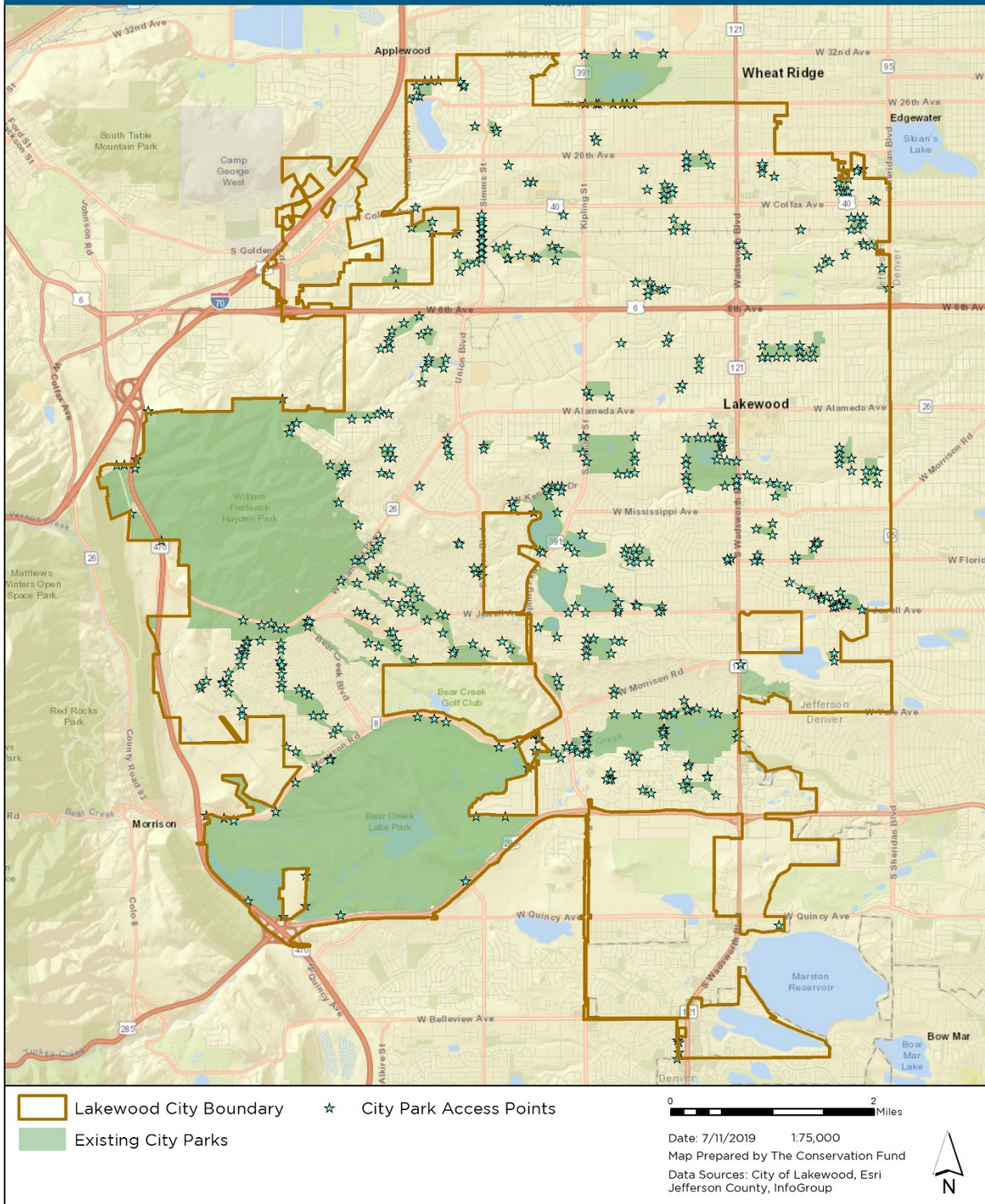
To generate walk zone layers, the Fund used a combination of Esri™ mapping tools that create areas that can be reached within a specified walking time using the road network. The specific details of the tools can be found in Appendix A. The Fund created two walk zone layers, one for City owned properties and one for a more inclusive walk zone that included parklands owned by other entities that were within a 10-minute walk of City residents.

Map 2 illustrates the City park access points that were used in the walk zone analysis.

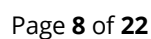
Light Rail Zone Analysis

The RTD light rail stops were used to generate a 10-minute walk zone using the same methodology that generated the walk zones using the park access points. This area is most likely to include areas of anticipated future development and higher population density, so integrating new parkland during redevelopment of these areas will ensure that residents can be better served by parks on a per capita basis.

Map 3 illustrates the areas within 10-minutes of the RTD light rail stops.



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Social Vulnerability Index

The City and the Fund agreed that equity could be best measured by the CDC's Social Vulnerability Index (SVI) by Census tract. The SVI incorporates socioeconomic and demographic factors that show, all other factors being equal, where park investments would provide community and health benefits to those most in need. The index score for each Tract was mapped, and the northeast corner of the City was identified as the most socially vulnerable based on the 15 factors that are incorporated into the Index.

Map 4 illustrates the SVI scores for each Census tract, where index scores closest to 1 are the most socially vulnerable. Please see Appendix A for more details on how SVI is calculated.

Categorizing Potential Acquisition Opportunities

In addition to analyzing the walk zone, the light rail zone and equity, potential acquisitions were categorized based on the type of acquisition opportunity:

- 1) gap in the existing park network,
- 2) expansion of an existing park, or
- 3) expansion of trail right-of-way.

Gaps refer to areas underserved by the existing park network based on their geographic location and the ability to access a park facility within a 10-minute walk.

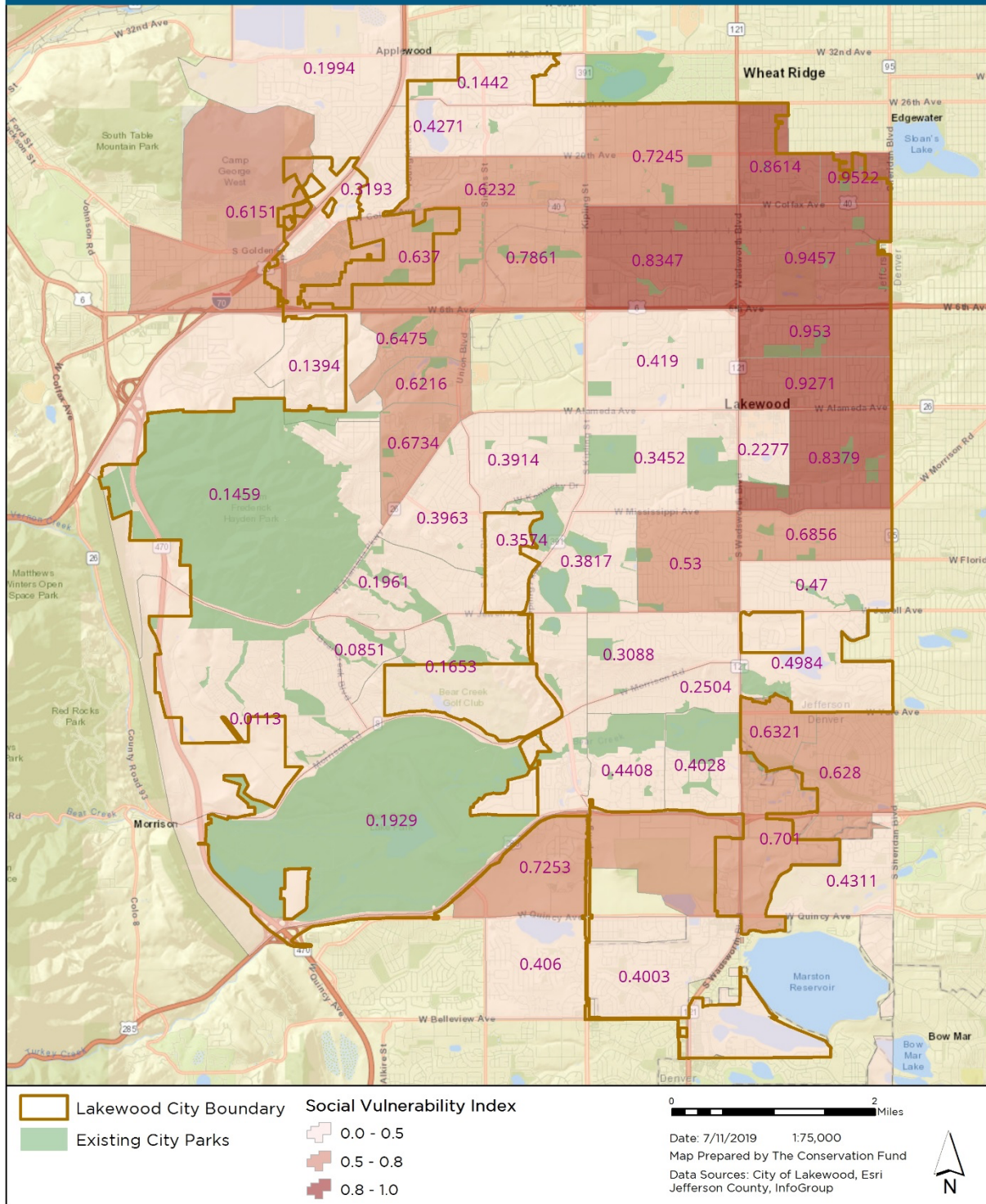
Expansions are lands adjacent to existing parks that could provide high marginal value additions that expand access or enhance programmatic opportunities at the existing park.

Trail expansions are lands that would improve connectivity of the existing bike trail network through an increase in trail segment length and/or trailhead access.

The Fund also categorized opportunities based on the type of transaction that would be involved:

- 1) private landowner negotiations, or
- 2) inter-governmental agreements.

Each transaction involves a different set of stakeholders and possibly different funding sources for the creation and management of new parks. The acquisition type and transaction types were incorporated into the appropriate GIS layers delivered to the City.



3. Findings

This analysis helps identify the 'marginal value' of acquiring potential park tracts based on equity, population density and potential future development.

10-Minute Walk Zone Analysis

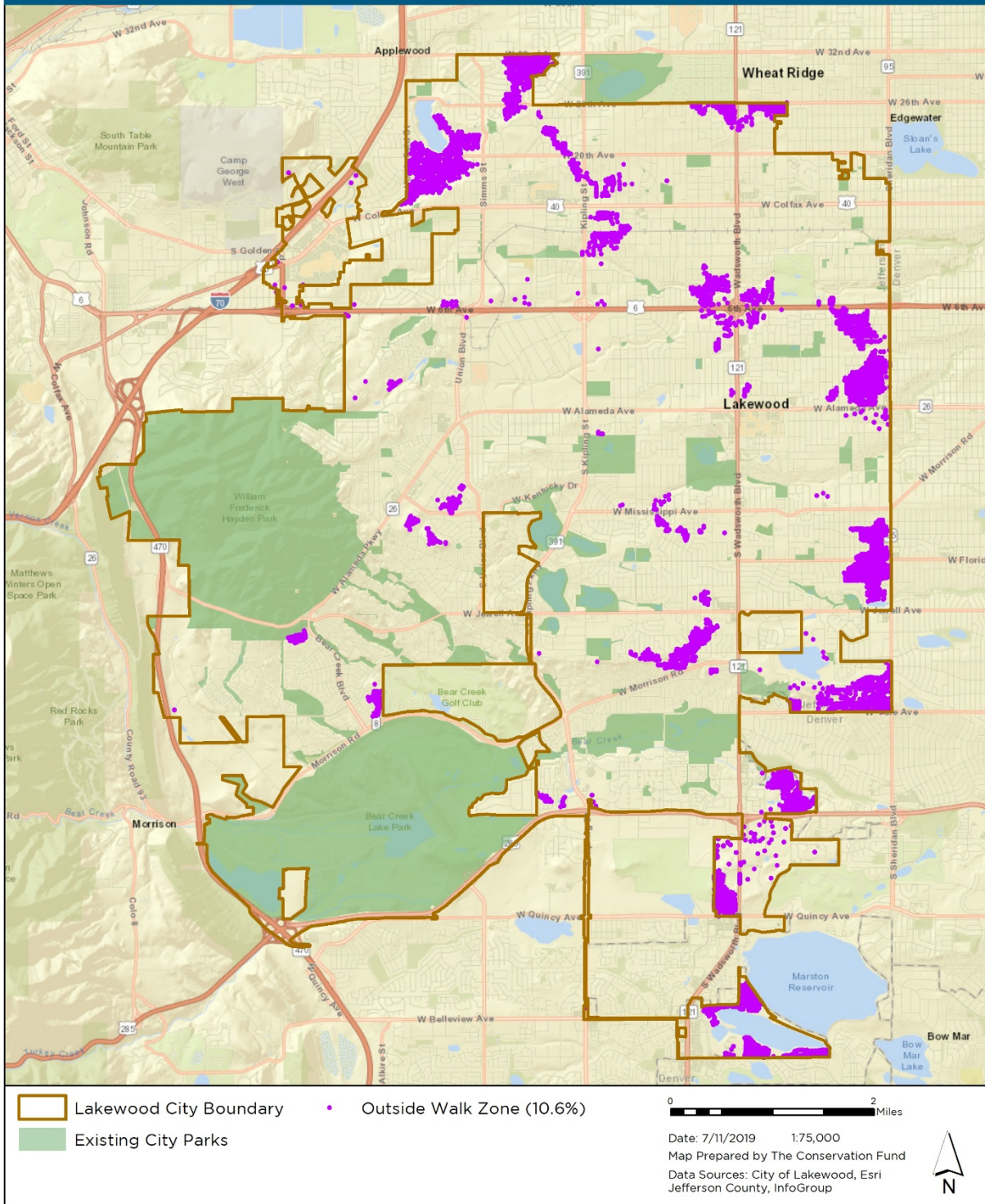
The 10-minute walk zone was developed through a partnership between the National Recreation and Park Association, the Trust for Public Land, and the Urban Land Institute to create a movement to ensure there is a great park within a 10-minute walk of every person, in every neighborhood, in every city across the country. Over 220 cities including the City of Lakewood have come together to support this campaign, recognizing the standard as a best practice in the parks and recreation industry.

Based on the existing park system and associated park access points identified by the City, 11.7 percent of residents are outside the 10-minute walk zone standard. Using a more inclusive walk zone that adds park access points for park properties owned by other entities such as the City of Denver and the Metro Districts, 10.6 percent would remain outside the 10-minute walk zone.

By acquiring the few strategic potential park and trail right-of-way sites that have been identified, the residents outside the walk zone could drop to just under 10 percent. A reasonable portion of this 10 percent of residents outside the walk zone standard are near school facilities that have park infrastructure and/or are near lands owned by Homeowners Associations but are not included in the analysis since the open spaces are not publicly accessible to the same extent as municipal parklands. There are also a handful of other open spaces that are near reservoirs, but again, the lands adjacent to these facilities are not open to the public.

The Fund has generated a GIS layer that shows City parcels that could help fulfill the 10-minute walk zone standard if they were to become available in the future for park purposes. This layer was generated by calculating a 10-minute walk zone for all Infogroup™ demographic data that fell outside the inclusive walk zone. Please note, however, the vast majority of these properties are not vacant and are currently serving as residential or commercial land uses. Nonetheless, if a property becomes vacant and/or is proposed for redevelopment, this layer will help to determine if the property could be suitable for parkland that would support the 10-minute walk zone standard. Examples of this could be the redevelopment of a parking lot, disposition of a portion of a property still being used for residential and commercial purposes, or re-purposing surplus land from school districts or other public entities.

Map 5 illustrates the 10.6 percent of residents currently outside the 10-minute walk zone, as represented by the 2018 Infogroup™ demographic data.



Light Rail Zone Analysis

As of 2018, less than 10,000 people lived within a 10-minute walk of the RTD light rail stops in the City (out of a total City population of over 154,000). Redevelopment near the light rail stops may be increasing residential density in this area, thereby increasing the demand for parkland. It will likely be relatively expensive on a per-acre basis to acquire these lands. It is worth considering paying a premium to acquire lands in these areas given the likely future population density and the current lack of parkland.

Map 6 illustrates the relationship between the transit stop walk zones, the existing park network and the residents outside the 10-minute walk zone for existing parks.

Social Vulnerability Index

Using the SVI's compendium of 15 factors, investments in the areas in the northeast corner of the City would be the most equitable to pursue. Note that a portion of this area overlaps with the 10-minute transit walk zone. It is possible that due to gentrification and/or displacement, these areas will have lower SVI scores over time. Nonetheless, since these areas may become denser, the value of park investments in these locations will remain. Investments in these Census tracts that are outside the 10-minute transit walk zone are most likely going to be areas that remain relatively vulnerable on the SVI compared to other parts of the City for the foreseeable future.

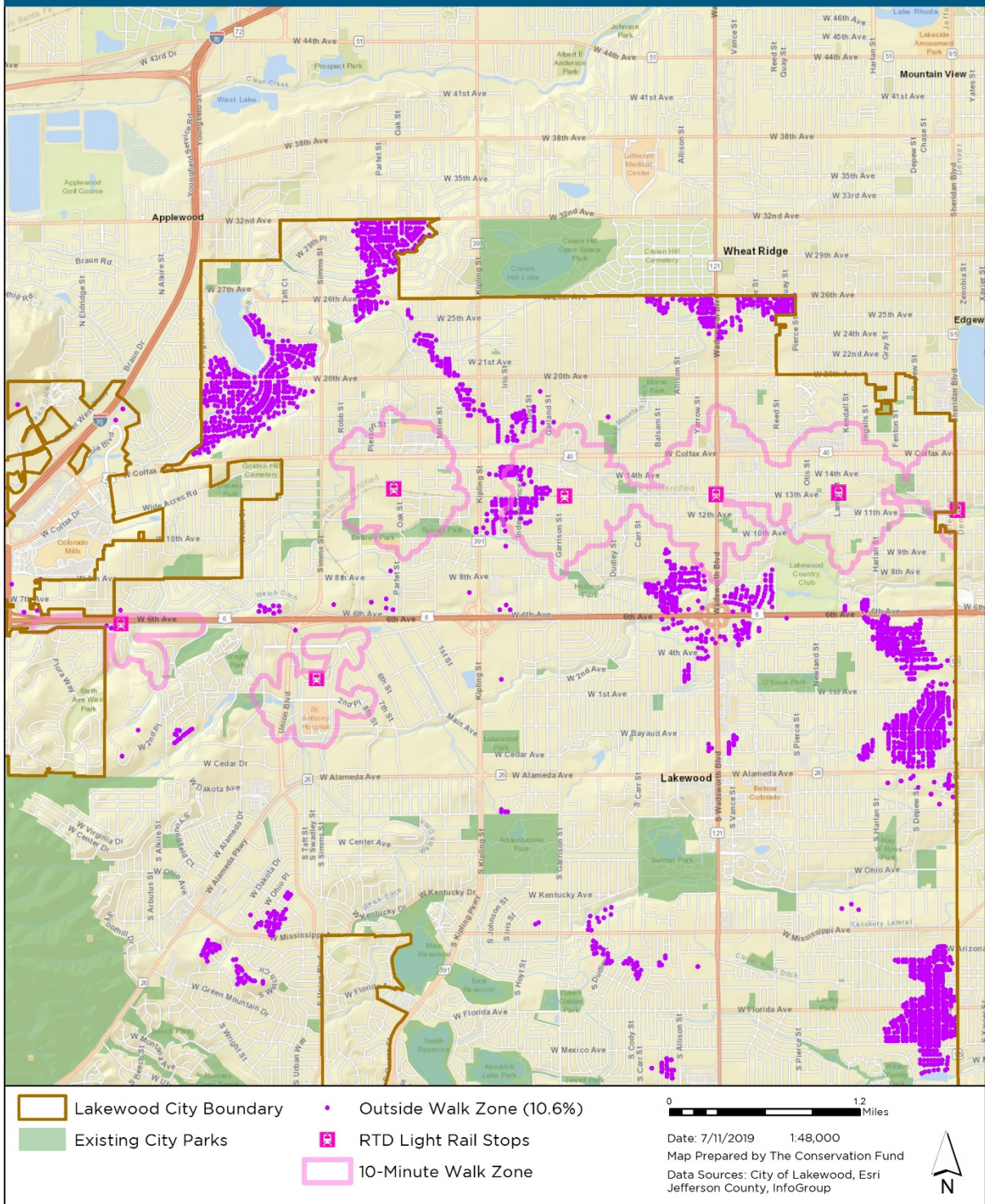
Map 7 illustrate the Census tracts with the highest social vulnerability and their relationship to the 10.6% of current residents outside the 10-minute walk zone for existing parks.

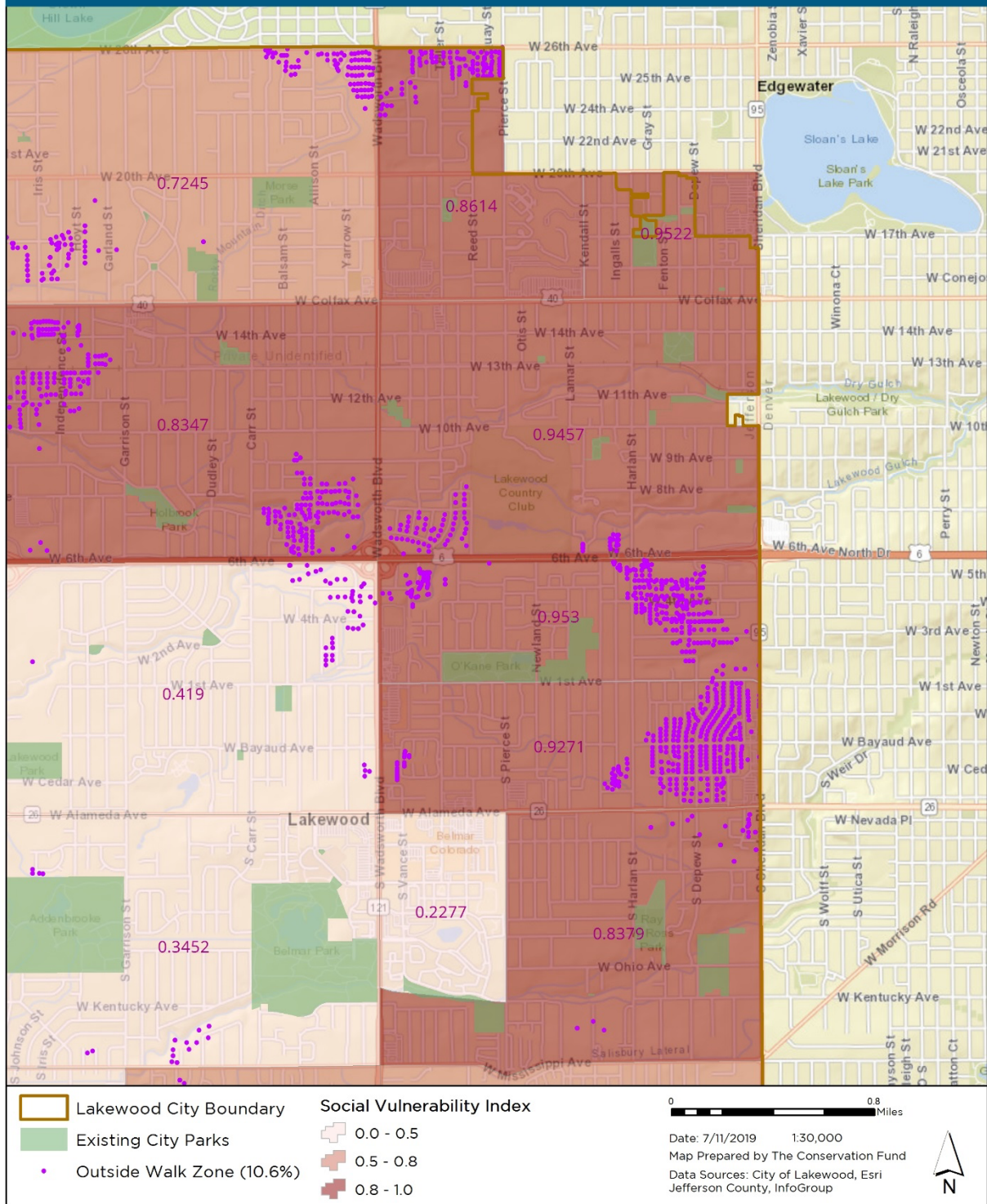
City of Lakewood Strategic Parkland Acquisition Guidance

Map 6



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4. Next Steps / Strategies

Evaluating the tradeoffs in investments that fulfill the 10-minute walk zone standard, the light rail zone, and the equity lens will be a function of timing and specific property owner situations, such as the landowner interest, feasibility of implementation, appraised value of the land and other considerations. In terms of the spending of funds available to the Community Resources Department, transactions involving private landowners appear to be the most feasible in the near-term. Inter-governmental agreements likely would involve exchanges and transfer payments from other capital accounts and are likely to take some time.

The feasibility of private landowner acquisitions will be a function of the willingness of the landowner to sell property to the City, and this will vary from owner to owner. Some trail right-of-way expansions could be extremely difficult to achieve since it would require consensus from multiple owners to implement a new trail segment. The feasibility of inter-governmental exchanges and/or sales with entities such as Departments of Transportation, Jefferson County Schools, or utility companies, also will vary depending on the agency and situation. Nonetheless, having knowledge of when these opportunities arise will be facilitated by having a park acquisition decision support tool in place to evaluate proactive and reactive opportunities as they emerge.

The Fund's technical analysis and geospatial products can serve as effective decision support tools for the City going forward. In addition to being able to characterize known existing acquisitions based on structured decision-making criteria, tools have been provided to characterize future unknown opportunities that may arise based on the same 10-minute walk zone, light rail zone and equity considerations. They also organize future acquisition opportunities by gaps in the park network, expansions of existing parks and expansions of trail right-of-way.

The decision support tools further categorize opportunities based on the type of transaction that would be involved whether that be private land-owner negotiations or inter-governmental agreements. This provides a method for understanding the urgency and opportunity cost of pursuing future acquisitions as well as the feasibility of acquisition based on the landowner situation.

The Fund hopes that these tools will serve the City well to assess both proactive and reactive park acquisition scenarios under the full array of ownership and development situations.

APPENDIX A – GIS Layers and Methods

GIS Data Deliverables

ArcGIS 10.6.1 Map Document: *Lakewood_StrategicParklandAcquisitionPlan.mxd*

- Boundary Files
 - Annexed Municipal Boundary used for all analysis (filename: *LakewoodBoundaryPost2019Annex*)
 - County Boundaries (filename: *CountyBoundaries_ESRI*)
- Park Access Layers
 - Park Access Points for existing City parks (filename: *CityParksAccess*)
 - Park Access Points for more inclusive walk zone analysis (filename: *CityParksAccess_Inclusive*)
 - Existing parks layer with extra attributes (e.g. number of households/people within 10-minute walk, proxy for margin value of level of service) (filename: *LevelofService*)
 - Metro Park District Ownerships (filename: *MetroParkOwnership*)
 - Protected Areas Database records of adjacent municipalities (filename: *PADUS_AdjacentLakewood*)
- Walk Zone Layers
 - Outside 10-Minute Walk Zone areas – Infogroup™ points
 - Using existing City parks only (11.7%) (filename: *HH_BaU*)
 - Using more inclusive walk zone (10.6%) (filename: *HH_S3*)
 - Walk zone polygons
 - Using existing City parks only (filename: *BusinessAsUsual*)
 - Using more inclusive walk zone (filename: *WalkZone_S2*)
- Transit Layers
 - RTD Light Rail stops (filename: *RTDLightRailStops*)
 - 10-minute walk zone for RTD light rail stops (filename: *LightRail_10minWalkZone*)
- SVI Layers
 - CDC Social Vulnerability Index for Colorado Census Tracts (filename: *SVI_CO*)
 - CDC Social Vulnerability Index for Lakewood Census Tracts (filename: *SVI_Lakewood*)
- Other Supporting Layers
 - Lakewood Trails – Existing Paths (attributes: bike path, horse trail, park path) (filename: *Trails_existing*)
 - Lakewood Trails – Proposed Roads/Paths (attributes: barrier crossing, bike lane, shared roadway, shared use path) (filename: *RoadsPaths_Proposed*)

- Jefferson County roads (filename: *JeffCo_Roads*)
- Attributed Citywide parcel layer (filename: *Lakewood_JeffCoParcels_ParkAttributes*)
 - Parcels currently outside the 10-minute walk zone standard
 - Parcels that would service 10-Minute Walk Zone gaps if they became parks
 - Parcels within a 10-minute walk of the RTD Light Rail stops
 - Parcel's Census tract score for the SVI Composite Index
- Confidential layers
 - Current desirables list (filename: *LakewoodParkDesireables_2019_06*)
 - Park access points used to generate the Scenario 1 layer (filename: *LakewoodParkAccessPoints*)
 - Scenario 1 walk zone (filename: *WalkZone_S1*)

About the Social Vulnerability Index

Based on discussions during the field visit and available GIS data, the City and the Fund agreed that equity would be best measured by the Center for Disease Control's (CDC's) Social Vulnerability Index (SVI) by Census tract. The SVI is a compendium of 15 factors that provide a normalized, quantitative score from 0-1 on the level of social vulnerability of each Census tract, with 1 being the most vulnerable. More information is available in an accompanying fact sheet and metadata document.

Socioeconomic

% Poverty

% Unemployed

Per Capita Income

% No High School Diploma

Household Composition & Disability

% 65 years +

% 17 & younger

% Disability

% Single parent < 18 years old

Minority Status & Language

% Minority

% English as 'second' language

Housing & Transportation

% Multi-family housing

% Mobile home

% 'crowded' People > Rooms

% No vehicle

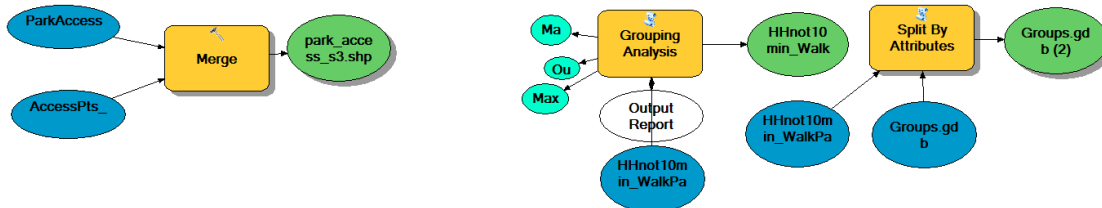
% Institutionalized

About the Walk Zone Analysis

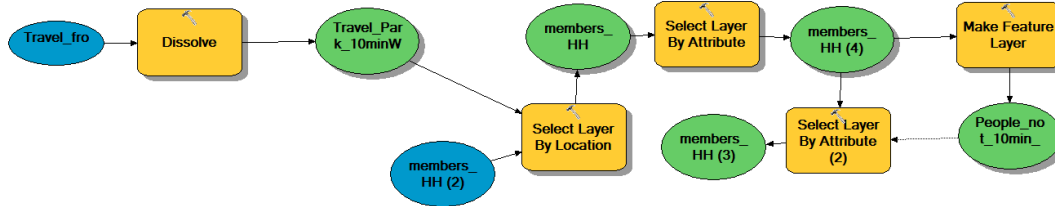
The Fund used a combination of ESRI's tools including ArcGIS 10.6.1, ArcGIS Online, and ArcPro 2.3.3. The Fund used ArcGIS Online suite of Analysis tools under the Proximity toolbox/Create Drive-Time Areas tool to generate walking zones. This tool creates areas that can be reached within a specified walking time. It measures out from one or many points (up to 1,000), along roads, to create a layer that portrays real conditions on the ground. The walking zones were merged and dissolved into one file. We then used the Clip and Select tools to calculate the number of people not served by a 10-minute walking zone. The same toolset was used to generate the walk zones for the RTD light rail stops.

Below is a sample model created in ArcGIS Model Builder environment that illustrates the steps and tools used to create the walk zones. The model is not fully automated as some of the steps are executed in the ArcGIS Online setting and imported into the desktop applications.

Step 1: Create access points **Step 2: For scenario 3 data needs to be in 1000 record groupings. Create Walk Zones in ArcGIS Online environment**



Step 3: Import Walk Zones back into Model Builder and dissolve into one zone **Step 4: Determine how many people are outside the Walk Zones**



APPENDIX B – About The Conservation Fund

The Fund is a national nonprofit organization dedicated to advancing America's land and water legacy. From its offices in Colorado and around the country, the Fund has protected land in all 50 states—over 8 million acres since 1985, including over 260,000 acres in Colorado. The Fund is a nationally recognized, experienced leader in green infrastructure planning and strategic land acquisition analysis. Their national Strategic Conservation Planning team and their Senior Project Manager for Conservation Acquisition have supported the City of Lakewood in its parkland analysis.

William L. Allen, III, Vice President, Conservation Services

Will oversees a portfolio of business units that address many of the most pressing conservation priorities and challenges, including city, water, and climate sustainability; rural economic development and food systems, aquaculture innovation and technology, and conservation leadership training and professional development.

Will also manages the Fund's customized planning services, including green infrastructure plans, strategic mitigation, optimization and data-driven decision support tools, and tactical conservation guidance. Will and his team have received planning and mapping awards from the American Planning Association, the American Society of Landscape Architects, and Esri, Inc.

Will is the co-author of the 2018 Cambridge University Press book *The Science of Strategic Conservation: Protecting More with Less* and served as co-editor-in-chief and managing editor of the Journal of Conservation Planning from 2005-2017. Will is a member of the American Planning Association, co-founder of the Society for Conservation GIS, and fellow at the Center for Behavioral and Experimental Agri-Environment Research (CBEAR) at the University of Delaware. Will holds a B.A. in Urban Studies from Stanford University and a Masters in Regional Planning from the University of North Carolina-Chapel Hill.

Jazmin Varela, Associate Director, Conservation Services

Jazmin has been The Conservation Fund's Associate Director for Conservation Services since 2016 and was previously the Strategic Conservation Planning Information Manager (since 2007). Jazmin has served as the lead green infrastructure network designer for Green Infrastructure Plans in Angelina County-TX, Central Indiana, Chicago, and Columbia-Boone County-MO and Cameron County-TX. She has worked as part of the design team for plans in the Chicago region, Houston-Galveston region, Los Angeles County, fifteen state-wide plans and on multiple ecosystem services valuation projects.

Jazmin is interested in large landscape collaborative conservation, engaging communities as active participants of conservation outcomes, sustainable food production, water and climate change impacts on communities and the environment.

Jazmin earned a Master of Environmental Management from Duke University's Nicholas School of the Environment and Earth Sciences with a certificate in geospatial analysis. She earned her Bachelor of Science degree in Geography from Appalachian State University.

Justin Spring, Senior Project Manager, Conservation Acquisition

Justin is the Senior Project Manager for the Colorado office and has two decades of experience in land conservation and natural resource issues. Since 2002, he has facilitated the protection of over \$70 million of property across Colorado ranging from small urban parks, to working farms and ranches, and high-country mining claims. Justin serves on the Colorado State Forest Service Stewardship Committee and is a mentor for the Public Interest Fellowship Program at Colorado College. He was formerly a board member on the Colorado Coalition of Land Trusts, member of the Conservation Advisory Board for Colorado Mountain Club, and past Vice President of the South Metro Land Conservancy.

Prior to joining The Conservation Fund, Justin worked at the Trust for Public Land for 16 years, most recently as the Colorado Director of Land Protection. He also worked for ERO Resources, a natural resource planning firm based in Denver.

Justin holds a B.A. in Environmental Science-Biology from the Colorado College and studied tropical field research in Costa Rica. In his spare time, he enjoys traveling and camping with the family, gardening, running, and biking.