



Former Lake Texcoco, Mexico City: Urban Park or Ecological Reserve?



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INTRODUCTION



Fig. 1 Historic Extent of Lake Texcoco



Fig. 2 Exposed bed of former Lake Texcoco



Fig. 3. Original plan proposed in 2012 by architect Iñaki Echeverría for the Texcoco Lake Ecological Park. Source: Inhabitat staff (2012).

Lake Texcoco, the seat of the Aztec Capital (Tenochtitlan), and now present-day Mexico City (Fig. 1), was drained by the Colonial and Independent authorities, causing immense environmental degradation that can still be observed today.

The remaining area of the former lake is a salty mudflat (Fig. 2) that constitutes the source of dust blown into the city, a cause of respiratory diseases. To alleviate this problem, a series of restoration and reclamation projects have been proposed.

One such project envisions the restoration of the wetlands in the form of an urban park (Fig. 3). However, rather than a park some sort of complex conservation program is needed.



Fig. 4. Aztec canoe. Source: The Florentine Codex (1793).

OBJECTIVE

In this study, we propose a new concept of park-reserve. This means a space with ecosystem services for urban and rural inhabitants and for migratory avian fauna.

METHODS

The methods used to design a prototype for a territory that serves as a nature reserve and an urban park, the following methodology was used (Fig. 5)

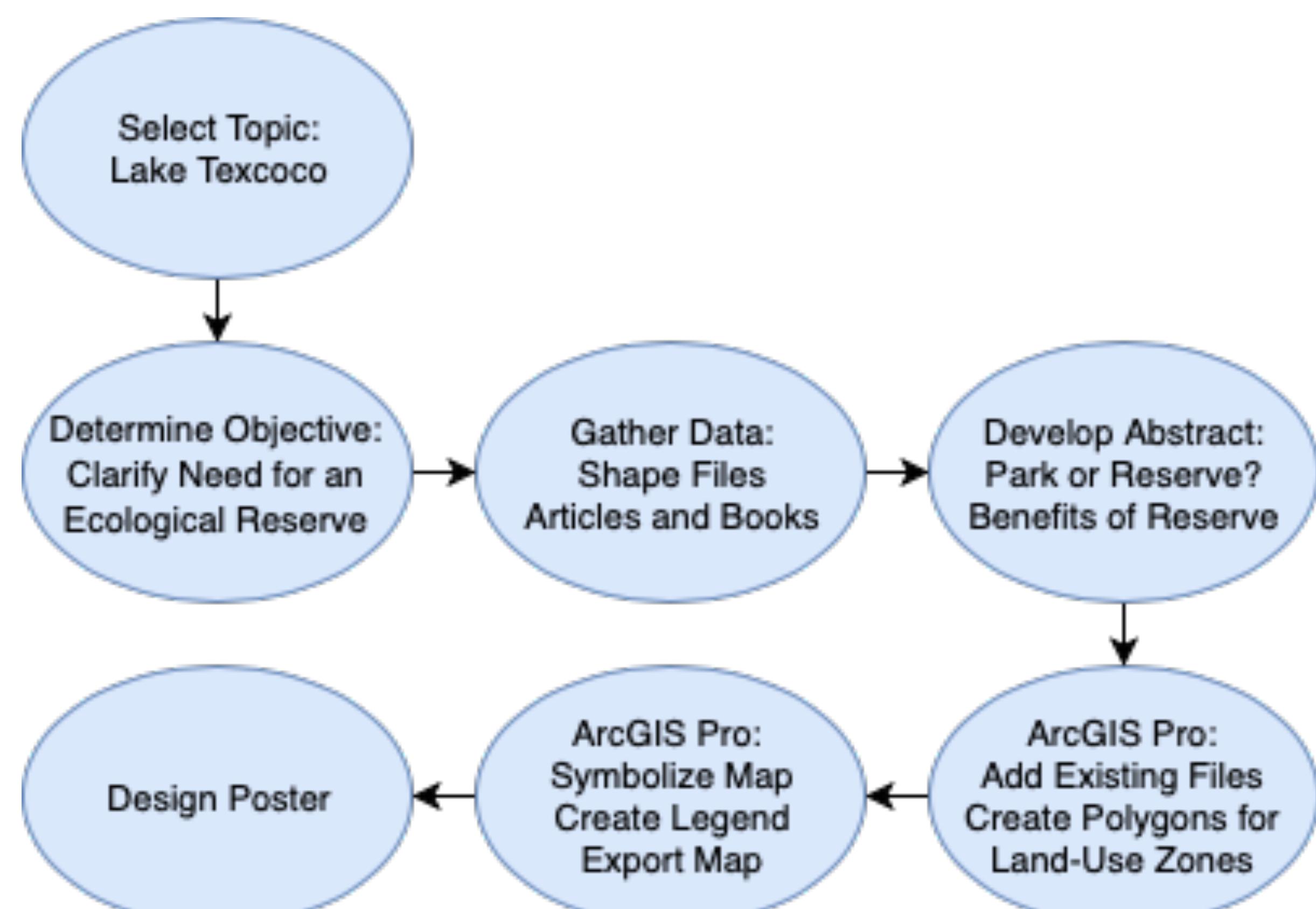


Fig. 5. Methodological scheme of this study

RESULTS: A PROPOSED DESIGN

The result of this project was a map redefining land uses within the park (Fig. 6). During this process, the juxtaposition between the urban and rural populations surrounding this area was taken into consideration. A buffer zone to the east could consist of cultural and educational programs focused on the historic lifestyles around Lake Texcoco. To the west, the buffer zone could include recreational activities, such as water sports, that should be prohibited within the reserve. Creating these buffer zones will only make the preservation of the ecological reserve more successful. Within the reserve, activities should be constricted and limited to non-destructive activities.

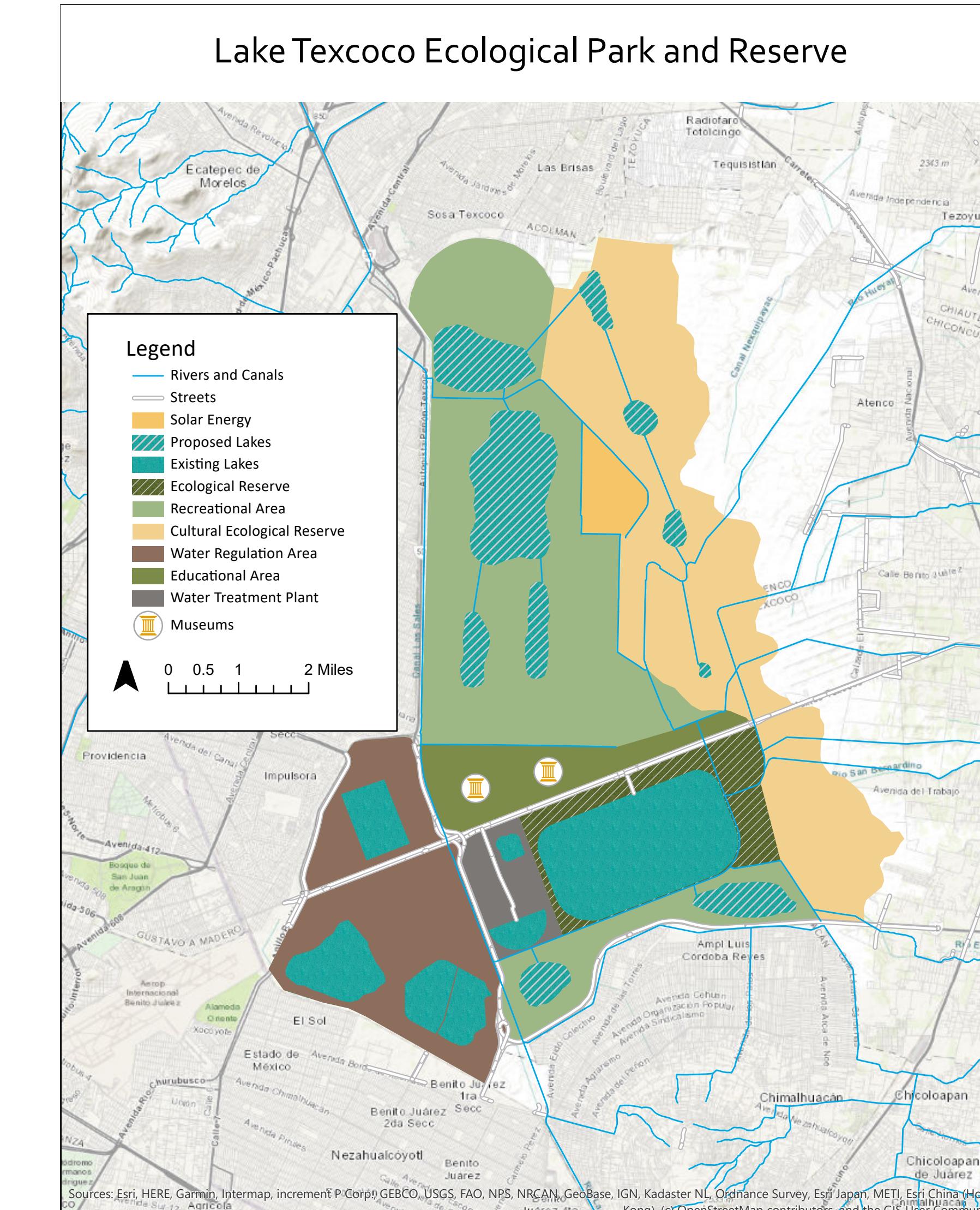


Fig. 6 Resulting map for a proposed park-reserve for Lake Texcoco

CONCLUSIONS AND RECOMMENDATIONS

An ecological reserve is needed to restore the environment, mitigate air pollution, recharge aquifers and decrease the subsidence of land. A portion of the land could even be dedicated to renewable energy to maintain the park and decrease the carbon footprint of Mexico City.

REFERENCES AND DATA SOURCES

Inhabitat staff, 2012. Construction begins on Texcoco Lake National Park: The World's Largest Park in the World. Available at: <https://inhabitat.com/texcoco-lake-ecological-park-a-vast-green-space-for-mexico-city-that-is-41-times-larger-than-central-park/schematic-overview-promo-537/>.

Diamant, A. J., C. Siebe, C. Estrada, J. Aguilón, A. Rojas, E. C. García, and C. S. Pardo 2015. Retos y oportunidades para el aprovechamiento y manejo ambiental del ex lago de Texcoco. *Boletín de la Sociedad Geológica Mexicana* 67 (2):145–166.

Gutiérrez-Yurrita, P. J., J. San Román, and M. López. 2017. El concepto de dominios ambientales como estrategia en la planificación territorial del sistema lacustre del Lago de Texcoco, estado de México. *Revista Geográfica Venezolana* 58 (2):320–345.