



Annual Assessment of Florida's Water Resources and Conservation Lands

2020 Edition

Executive Summary

The full report is available at:

http://edr.state.fl.us/Content/natural-resources/LandandWaterAnnualAssessment_2020Edition.pdf.

Executive Summary

The Office of Economic and Demographic Research (EDR) has completed the fourth annual assessment of Florida's water resources and conservation lands pursuant to section 403.928, Florida Statutes. This 2020 Edition is the first version to largely address all statutory requirements and identify the next steps necessary to fully comply with section 403.928, Florida Statutes.

Lands can be acquired for conservation by public or private entities and can be obtained in fee or less-than-fee simple ownership.¹ Once acquired, the lands are typically managed to maintain their conservation purposes. As such, expenditures on conservation lands can be categorized into acquisition expenditures and management expenditures. In Fiscal Year 2018-19, the State of Florida expended \$49.53 million on conservation land acquisition and \$226.35 million on conservation land management.² Regarding the impact on ad valorem taxation, roughly 2.42 percent of the statewide county tax base and 2.15 percent of the statewide school tax base have been removed from the tax roll. As a result, on net, approximately \$513 million in county taxes and \$397 million in school taxes were shifted to other property owners or lost due to lands being held in conservation in 2019.³

Approximately 30 percent of all land in the State of Florida is currently designated for conservation purposes, with eight counties already over 50 percent.⁴ If all lands identified in plans set forth by state agencies and water management districts are acquired, this share will jump to over 41 percent.⁵ If federal, local, and private plans were accounted for, this share would be even greater. Summing the projected total acquisition costs for the additional conservation lands identified in the plans developed by the state and water management districts produces a preliminary cost estimate of just over \$25 billion, of which the analysis suggests that roughly 86 percent would be a state responsibility. At the current rate of annual state conservation land acquisition expenditures, it would take about 370 years to generate the state's share; within the next five years, about one quarter of a percent of the total state cost would be generated. Any future conservation lands that are acquired will entail additional costs for management as well as the acquisition cost. Currently, a dedicated revenue source for managing the state's lands does not exist. Assuming the current level of expenditures per acre, the additional cost to the state to manage its potential land acquisitions is projected to be \$100.87 million, annually.

With just under one-third of the land in the State of Florida already acquired for conservation purposes and approaching one-half after accounting for potential conservation land acquisition in the future, significant policy questions arise. For example, how much conservation land is needed and for what purpose? Where should it be located? Should the current pace of the state's conservation land acquisition efforts be accelerated? At what point does the volume of conservation land acreage alter the pattern of economic growth as expanding metropolitan areas are forced upward instead of outward? Is this change acceptable to policy makers? Should there

¹ See Section 2.5 for further details on ownership types.

² See Table 2.2.8.

³ See Table 2.1.3.

⁴ See Tables 2.1.1. The eight counties are: Broward, Collier, Miami-Dade, Monroe, Okaloosa, Franklin, Liberty, and Wakulla.

⁵ See Table 2.3.3. This projection does not include any additions to current federal, local, or private conservation lands and is lower than previous editions indicated because overlap between state lists has now been removed.

be a greater focus on selling non-essential conservation lands as surplus? Is primarily owning conservation land in fee simple the most efficient strategy for Florida? Would encouraging less-than-fee simple ownership help to alleviate economic concerns associated with government ownership of conservation land? Are adequate funds available for managing current and future acquisitions? It is EDR's objective that this ongoing report will assist policy makers in developing the answers to these types of questions.

Regarding water supply and demand, according to the water management districts, water demand is projected to increase by nearly 18 percent between 2015 and 2035 and reach 7,549.7 millions of gallons daily by 2035 (assuming average annual rainfall and not accounting for potential new water conservation activities). EDR's prototype water demand model produces similar results. The two largest drivers of water demand are and will continue to be population growth and agriculture. According to the districts' regional water supply plans and water supply assessments, the water needs of the state can be met through the 2035 planning horizon with a combination of traditional and alternative water sources, appropriate management, conservation, and implementation of the projects identified in the applicable regional water supply plans. Because no district can meet its future demand solely with existing source capacity,⁶ these extra efforts (and the funding for them) are critical over the period from now through 2035.

The total costs, excluding operations and maintenance, associated with ensuring that future water supplies are available to meet the increasing water demands are estimated to be between \$0.31 and \$1.77 billion over the 2015 through 2035 planning horizon⁷. EDR's prototype model suggests that the costs are more likely to be at the high end of this range. These estimates are based on an analysis of projects identified by water management districts through the water supply planning process and may change significantly in the future as the methodologies, both of EDR and the water management districts, are refined. This cost estimate only captures the costs of developing alternative water supplies. The future demand not met with existing supply assumes average weather conditions and that the demand which has been met in the past will continue to be met in the future. The risk inherent in these assumptions needs to be explored. In addition, the estimated cost of the projects identified for the natural systems that are currently in recovery or prevention status to meet the minimum flow and minimum water levels are \$7.80 billion.⁸ The state's share of all of the expenditures necessary to ensure sufficient water supply is expected to be about 4.5 percent.

Preliminary forecasts of the expenditures necessary to comply with several of the federal and state laws and regulations governing water quality protection and restoration indicate a future state expenditure will be needed of approximately \$267.29 million for the development of total maximum daily loads,⁹ \$5.26 billion for the implementation of basin management action plans,¹⁰ and \$8.46 billion for completion of the comprehensive Everglades restoration plan.¹¹ Future editions will expand the water quality analysis to include expenditure forecasts for other activities required by or implemented pursuant to federal or state law, including alternative plans for

⁶ See Table 4.1.2.

⁷ See Table 4.6.9.

⁸ See Section 4.8.

⁹ See Table 5.1.4.

¹⁰ See Table 5.1.6.

¹¹ See the conclusion of Section 7.2.

impaired waters, water quality monitoring, and Everglades restoration initiatives outside of the Comprehensive Everglades Restoration Plan. Alone, the expected state expenditures for Total Maximum Daily Load development, Basin Management Action Plan implementation, and Comprehensive Everglades Restoration Plan implementation will exceed currently dedicated revenues and result in funding shortfalls. The degree to which the assumed timeframes and cost shares underlying these expenditure forecasts are legally required is still being assessed.

In the 2018-19 fiscal year, the State of Florida expended approximately \$140 million on water supply¹² projects and an additional \$1,021.94 million on water quality and other water resource-related programs.¹³ In the most recent three fiscal years, expenditures for water resources have increased significantly, leading to questions about financial sustainability. Based on historical trends, EDR's forecasts indicate that the recent levels of increases in expenditures cannot be sustained into the future using only the implied revenue shares historically allocated to water quality. In this regard, a gap exists in every future year, growing to \$577.23 million¹⁴ by the end of the ten-year forecast period—and this does not include any specific adjustments for new or expanding initiatives. Potential options to close the projected gap include the use of statutorily uncommitted Documentary Stamp Taxes, additional General Revenue funds, or bonding. As a result, substantial policy questions arise. What is the total amount of funding that should be committed to these initiatives? What are the appropriate levels of funding and shares among public and private stakeholders? To what extent should land acquisition programs be required to identify quantifiable water resource benefits? It is EDR's objective that this annual report will assist policy makers in developing the answers to these types of questions.

Expenditures necessary to replace, maintain, and expand Florida's aging infrastructure over the next decades will reach tens of billions of dollars statewide. The U.S. Environmental Protection Agency's most recent drinking water, wastewater, and stormwater 20-year survey-based estimates for Florida total \$44.3 billion after adjusting for inflation. The surveys only include capital investment needs, so Florida's state, regional, and local governments and its public and private utilities will likely spend far more in total. Similar to the work underway in other states, more research is needed to fully identify all of Florida's water infrastructure needs. A key policy question arises: once they have been identified, what is the state's role in addressing these infrastructure costs?

Subsequent editions of this report will further analyze the future expenditures necessary to comply with laws governing water supply and water quality as well as achieve the Legislature's intent that sufficient water be available for all existing and future reasonable-beneficial uses and the natural systems, while avoiding the adverse effects of competition for water supplies. EDR is continuing to refine the integrated water supply and demand model and to collect the data necessary to address this analysis. After further refinement, the model will be submitted for peer review before full deployment.

¹² See Table 3.1.1.

¹³ See Table 3.3.7.

¹⁴ See Table 8.1.2.