As Florida acknowledges its 167th anniversary of becoming the 27th state in the union on March 3, we need to celebrate its natural beauty and abundant resources, which have been a draw for over a century and a half for people who came here to work, build businesses, and make a life for themselves and their families.

While reviewing Florida’s great history, we also need to take a look at its future, especially with regards to our infrastructure. Every system above ground and underground that allows us to enjoy modern civilization is part of the infrastructure. This includes bridges, roads, power grids, and drinking water and sewer systems. Without a good, functioning infrastructure, Florida would not be able to accommodate all of the people who have chosen to live here, and we would have nothing even approaching a first-world existence.

In 2009, the American Society of Civil Engineers (ASCE) put out its latest “Infrastructure Report Card” for the nation, which carefully ranked the condition of 15 major types of infrastructure in every state. The average grade across all of the areas was a resounding “D.” The investment to improve this grade over the span of five years, according to ASCE, was estimated at $2.2 trillion.

The American Recovery and Reinvestment Act (ARRA) of 2009 designated $787 billion to be spent over the course of ten years. According to www.recovery.gov, $62 billion of that was assigned to upgrade and replace failing infrastructure—a very small portion compared to the ASCE estimate.

This puts the pressure to repair and replace water lines and sewer lines on the shoulders of state and local governments. The response to these realities in our present political climate is silence. No one wants to touch it, because of the scope of the problem; it’s just too hot of an issue and one that seems almost insurmountable.

As an example, did you know that the City of Ft. Lauderdale delivers over 16 billion gallons of potable water per year to its customers? The City has more than 12,000 valves, 5,700 fire hydrants, 788 miles of water main, 62,000 service lines, and 204 pump stations, with a total infrastructure valued at over $1 billion. Multiply that by all of the cities and towns in the state and you begin to see the enormity of the challenge we face.

Water and wastewater systems in several major cities are more than 100 years old. They have been repaired, patched up, and expanded over the years, but the overall systems are ancient. As a result, water is leaking from eroding pipes and cracked conduits at a rate that’s hard to estimate. According to the U.S Environmental Protection Agency (EPA), the portion of these water systems connected to U.S. homes leak at an average rate of 10,000 gallons per home, per year; that’s the equivalent of a swimming pool for every residence. In total, that’s an average of more than 1 trillion gallons a year, the equivalent of the annual water use in Los Angeles, Chicago, and Miami combined.

When you layer that waste with the population growth in America that’s projected to hit 400 million people in the next 40 years, the hard reality is that we will soon run out of water.

The above figures do not even take into consideration how much water is used outside of our homes, for agriculture, business, and industry. For example, in 2005 the power industry used 200 million gallons a day to generate electricity via thermolectric systems. That number will continue to rise, especially in areas of the country that are experiencing population growth, yet have limited water resources.

The solutions must start now, because the problems are too large to be ignored. We all want clean water to drink and use, we want abundant water for our landscapes, for recreation, and for the power we need. We want all of these things, yet fail to see that none of them are guaranteed entitlements. They are resource services that come at immense cost. We need to start thinking about our infrastructure now—and take action.