Mayor O'Leary joined the Waterbury Police Department in 1980 and rose through the ranks, becoming Chief of Police in 2004. Chief O'Leary served in that role until his retirement in 2009. Following his retirement, he was recruited by the town of Wolcott, Connecticut to serve as Police Chief to help rebuild the management structure and modernize the department. In 2011, O'Leary stepped down from this role to successfully run for Mayor of the City of Waterbury, taking office in December 2011.

Mayor O'Leary's career has been marked by a deep commitment to Waterbury with a "can-do" attitude to effect positive change through collaboration and community building. As Police Chief of Waterbury, his innovative and aggressive approach to law enforcement has been credited with steadily decreasing the city's crime rate. In 2004, then-Police Chief O'Leary founded the new Waterbury Police Activities League (PAL), which has become a national model for police prevention and service. Developed to serve inner-city at-risk youth by providing educational and athletic opportunities, the organization has grown from a membership of 100 youths to over 4,000 today. Under O'Leary's guidance, a campus-like PAL facility has been built and now includes a renovated former school building for after-school programs, a recreation facility, and boxing center. With the help and support of community partners, a nearby brownfield has been remediated and has been transformed into a park and recreational fields.

In 2007, O'Leary's career in law enforcement received national attention. His tenacity in standing by a local rape victim, known to the public only as "Jane Doe," and ultimately solving the crime eleven years later, became the focus of an NBC Dateline report originally aired that year. Mayor O'Leary now serves on the Board of Directors of "Jane Doe No More," a nonprofit founded by Donna Palomba to "improve the way society responds to victims of sexual assault."
O'Leary's commitment to community extends beyond law enforcement to encompass a holistic and grass-roots approach to community building. In 2009, he became a commissioner on the City's Board of Education, with the goal of identifying new and innovative approaches to public education that would help raise the City's educational attainment rates. Upon becoming Mayor in 2011, O'Leary's earlier efforts came to fruition, with the opening of three new pre-K through 8th grade elementary schools, and the Waterbury Career Academy High School.

Since his first day in office, Mayor O'Leary has stressed renewed accountability and responsibility at the government level to help forge new community partnerships and renew community trust. Responding to neighborhood concerns with blighted housing and vacant lots, O'Leary coalesced neighborhood groups and community leaders and launched a comprehensive anti-blight initiative with mutual tasks and responsibilities. The initiative has resulted in an aggressive approach to blight and litter enforcement, increased demolition of substandard housing, new data collection standards and stronger community partnerships. Using a similar approach to park maintenance concerns, O'Leary developed a summer youth corps that worked with Park Department staff to systematically address routine maintenance issues throughout the City's park system. He also enlisted Waterbury officially in the national "Cities of Service" coalition, which uses citizen service as a serious strategy to address pressing local challenges.

Partnership, community building and improved quality of life have also been key to O'Leary's early success in stimulating economic development in the City. Balancing the budget, achieving an annual surplus and personally visiting the major rating agencies in New York and Boston, to convince them to raise the City's bond rating to A+ have been the hallmarks of O'Leary's financial acumen and his determination to keep the City's financial foundation strong. Working with the state and federal government, he has also championed an aggressive and successful brownfield corridor redevelopment program that is reclaiming old industrial sites along the river-rail spine of the City, the site of an alternative transportation riverfront greenway.
Mayor O'Leary believes Waterbury has the right mixture of natural assets, strategic location, strong neighborhoods, financial stability and innovative leadership to position itself for sustainable growth. He is making that happen.