

**PROJECT: DNA Source Tracking**

<p><b>1. DESCRIPTION:</b> Quarterly Canals and ICW Monitoring, Client request</p>
<p><b>2. PURPOSE/GOALS:</b> To establish baseline water quality conditions and provide relevant examination as to the source of bacteriological pollutants in local waterways.</p>
<p><b>3. HISTORICAL UPDATE:</b> 6/24/15 County staff were introduced to the technology used in microbial DNA source tracking as of 2/21/17 Broward County EML acquired instrumentation and supplies to independently analyze samples.</p>
<p><b>4. USE OF DATA:</b> Data intended for use by FDEP for TMDL program.</p>
<p><b>5. RELEVANCE:</b> DNA source tracking is a tool by which molecular analysis is used to determine the host source of fecal bacteria, such as originating from human or canine fecal waste. Water quality analysis using standard microbiological culture techniques can identify the presence of fecal bacteria, however, DNA source tracking provides a systematic approach to identify where the fecal bacteria originate from.</p>
<p><b>6. EFFECTIVENESS:</b> Project supports TMDL pollution control action plans.</p>
<p><b>7. SAMPLE SITES:</b> Currently 14 sites as part of Quarterly Canal Ambient Surface Water Quality Network.</p> <p><b>SAMPLING CONSIDERATIONS:</b> All samples are collected at the sub-surface (approximately 0.5 meters). Sampling is performed with Niskin samplers on land runs or grabber devices by boat.</p> <p><b>PARAMETERS:</b> Human, Dog and Gull</p>
<p><b>8. FREQUENCY/DURATION/SCHEDULE:</b> Current sampling occurs on a quarterly basis</p>
<p><b>9. DELIVERABLES:</b> Data submission to clients, all data available for presentation.</p>
<p><b>10. SPECIAL EQUIPMENT/SUPPLIES CONSIDERATIONS:</b> EML will support this project through the provision of sampling equipment to collect grab samples.</p>
<p><b>11. UNIQUE QA/QC REQUIREMENTS:</b> Duplicates, Field Clean Equipment Blanks on every sampling event.</p>
<p><b>12. FUNDING/REVENUE:</b> Broward County General Fund</p>