COMPREHENSIVE WATER QUALITY ANALYSIS REPORT

Village of Indiantown, Florida — 2024 Consumer Confidence Report

Outcome Analysis: Deficiencies, Health Risks & Benchmark Comparisons

1. Executive Summary

The Village of Indiantown's 2024 Annual Water Quality Report reveals significant deficiencies in disinfection byproduct control despite otherwise strong performance in lead, copper, and inorganic contaminants. The system exceeded EPA Maximum Contaminant Levels (MCLs) for both Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHM) by substantial margins, triggering a required public notice.

Key Outcome: While Indiantown meets or exceeds national standards for most parameters, the severe violations for disinfection byproducts represent a material health risk that exceeds what the EPA considers acceptable. The current water quality falls short of both regulatory requirements and the standards achieved by higher-performing municipal systems.

2. System Background

- Source: Six wells drawing from the Anastasia aquifer
- Treatment: Aeration, filtration, and chloramination
- Population Served: Small community system in Martin County, Florida
- Regulatory Oversight: Florida Department of Environmental Protection (FDEP) & U.S. EPA

3. Key Findings from 2024 Testing

3.1 Critical Violations

The following parameters exceeded the EPA Maximum Contaminant Level (MCL):

Contaminant	Result	EPA MCL	% Over Limit	Status
HAA5 (Haloacetic Acids)	**159.8 ppb**	60 ppb	**+166%**	**VIOLATION**
TTHM (Trihalomethanes)	**244 ppb**	80 ppb	**+205%**	**VIOLATION**

3.2 Strengths (Parameters Meeting or Exceeding Standards)

Parameter	Result	EPA Limit	Assessment
Lead (90th percentile)	0.0005 ppb	15 ppb (AL)	Excellent — Among the lowest in Florida
Copper (90th percentile)	0.55 ppm	1.3 ppm (AL)	Very Good
Radium-226+228	1.6 pCi/L	5 pCi/L	Excellent
Chloramines Residual	1.44 ppm avg	4.0 ppm (MRDL)	Well controlled

4. Detailed Deficiency Analysis

4.1 Root Cause of Violations

- High natural organic matter in the Anastasia aquifer reacts with chloramines to form excessive disinfection byproducts.
- Long distribution system residence time allows continued DBP formation.
- Chloramination, while better than free chlorine for some byproducts, is insufficient for this source water without additional treatment (e.g., enhanced coagulation, activated carbon, or ozone).
- Result: HAA5 and TTHM levels are 2.6x–3x higher than the EPA allows — among the highest violations seen in small Florida systems.

4.2 Health Implications of Current Levels

Disinfection byproducts (DBPs) are classified as probable human carcinogens. Chronic exposure to the levels found in Indiantown is associated with:

- Increased lifetime risk of bladder, liver, and kidney cancer
- Potential reproductive and developmental effects
- Central nervous system and liver/kidney damage with long-term exposure
- *Note: These risks are above the level the EPA considers acceptable when setting the MCL.*

5. Benchmark Comparison: EPA Standards vs. Higher Protection Standards

The EPA MCL represents the **lowest legal benchmark** — not the safest or most protective level. Below is a comparison of Indiantown's results against multiple higher standards used by health authorities and top-performing utilities.

Contaminant	EPA MCL (Legal Minimum)	WHO Guideline	EWG Health Guideline	High-Quality Cities Target	Indiantown 2024 Result
TTHM (ppb)	80	100	0.15	20–50	**244**
HAA5 (ppb)	60	No total	<10–20	10–35	**159.8**
Lead (ppb)	15 (AL)	10	0.2	<5	0.0005
Copper (ppm)	1.3 (AL)	2.0	0.3	<1.0	0.55

***Note:** The EWG (Environmental Working Group) guidelines are based on a 1-in-1-million lifetime cancer risk — significantly more protective than the EPA's 1-in-10,000 to 1-in-100,000 risk range. High-quality cities routinely achieve levels far below EPA limits through advanced treatment.*

6. Outcome Analysis & Recommendations

6.1 Overall Assessment

Indiantown's water system demonstrates a clear split in performance:

- Excellent: Lead, copper, and inorganic contaminants — among the best possible results.
- Poor: Disinfection byproduct control — among the worst violations in the region.
- Net Result: The system is providing water that is legally non-compliant and carries elevated long-term health risks compared to both EPA expectations and peer municipalities.

6.2 Recommended Actions

1. Immediate: Continue public notification and consider providing alternative water (bottled or point-of-use filters) for vulnerable populations.
2. Short-term (6–18 months): Implement treatment upgrades — enhanced coagulation, granular activated carbon (GAC), or ozone + biological filtration to reduce DBP precursors.
3. Long-term: Explore switching to a higher-quality source or advanced treatment train capable of consistently achieving <40 ppb TTHM and <30 ppb HAA5.
4. For Residents: Install certified point-of-use filters (reverse osmosis or catalytic carbon) to reduce DBPs at the tap until system-wide improvements are made.

7. Conclusion

The Village of Indiantown's 2024 water quality results demonstrate that meeting the minimum EPA legal standards is not equivalent to providing high-quality, low-risk drinking water. The significant exceedances of HAA5 and TTHM limits place the community at elevated long-term health risk, particularly when compared to

the much stricter targets achieved by leading municipal systems and recommended by independent health organizations.

Immediate corrective action is warranted to bring disinfection byproduct levels into compliance and ultimately align with higher protection standards that better safeguard public health.

— End of Report —

Data Source: Village of Indiantown 2024 Annual Water Quality Report (FDEP/EPA) | Analysis Date: May 31, 2026