

GSDI Septic Evaluators Program Field Evaluation Guidelines

Effluent Disposal Area (EDA) Aging: General Definitions for all EDA Types

- **Good:** A system is in its young or early middle age with no evidence of past flooding or high effluent. A young system would show little or no ponding in the EDA bottom in systems where the EDA bottom is observable.
- **Fair:** A system is in middle age. A middle aged system has ponded effluent on the bottom. This is the normal working condition for many EDA types.
- **Poor:** A system is nearing the end of its useful life under the current load. It is not yet failing it may be in need of replacement, especially late in its life. Systems in poor condition that have had little use or have been out of use may have more basic underlying problems that can't be overcome by repair alone.
- **Failing:** The system meets the statutory definition of failure or, in the judgment of the evaluator, failure may be imminent.
 - **Failure:** 485-A:2 Definitions. – IV. "Failure" means the conditions produced when a sub-surface sewage or waste disposal system does not properly contain or treat sewage or causes the discharge of sewage on the ground surface or directly into surface waters, or the effluent disposal area is located in the seasonal high groundwater table.

Stone and Pipe (S&P)

- **Good:** A young S&P bed in good condition will have little or no standing effluent contained in it.
 - No observable signs of past high effluent levels. If the D-box is found and opened, there will be no signs of liquid staining above the pipe inverts.
- **Fair:** Some effluent standing.
 - Will not have effluent higher than the invert of the lateral perforated distribution pipes.
 - Carefully observe the color of the stone and soil immediately above the bed area for signs of past high liquid.
 - EDA in late middle age with effluent ponded higher than perforation inverts but without signs of EDA flooding would be in **fair to poor** condition.
- **Poor:** An S&P bed in poor condition will have standing effluent higher than the lateral inverts but below the top of the stone. It is common for strong signs to be present in the cover soil of past flooding. The D-box will retain these signs for months or years, even after a system goes out of use.

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Plastic Chambers

- **Good:** No observed standing effluent. No observed settlement.
- **Fair:** Standing effluent less than halfway up to the inlet invert. No observed settlement.
- **Poor:** Open space more than half full or significant settlement. Significant organic sliming may be present. Significant settlement alone would qualify the EDA as in poor condition. Collapsed or crushed would also mean the EDA is in poor condition.
- **Failing:** Units full or signs in the distribution network of past flooding. Settlement past the louver tops may mean that the units will fail quickly.

Concrete Chambers

- **Good:** No observed standing effluent. No observed settlement.
- **Fair:** Standing effluent less than halfway up in the open volume. Measure the void space height. Less than six inches indicates settlement. This reduces EDA life.
- **Poor:** open space more than half full or significant settlement. Significant organic sliming may be present.
- **Failing:** Units full, or signs in the distribution network of past flooding.

Large Diameter Gravelless Pipe (LDGP)

- **Good:**
 - Parallel – Little standing effluent will be found. The lower quarter of receiving sand will be gray with no black colors observed.
 - Serial – Less than 1 quarter of the tubes will have effluent.
- **Fair:**
 - Parallel – Standing effluent is less than halfway up to the invert of the feed lines, approximately one third the diameters of the tubes.
 - Look for the formation of black iron sulfide in the receiving sand. Grey colors above may be found.
 - Serial – Less than one half of the tubes have standing effluent.
- **Poor:**
 - Parallel – Tubes are more than half full to the inverts of the inlet lines. Black colors are prominent in the receiving sand. The inside may be full of a gray, anaerobic slime, the remnants of dead anaerobic bacteria.
 - Serial – More than one half the tubes full of effluent. Black colors in the receiving soil of full tubes.

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Eljen GSF (Indrains) Unit Aging – Eljen GSF units age locally, so that some units may appear old/poor and others nearby appear fair or good. Eljen GSF EDA Evaluation: several observations are usually necessary; an average of the conditions must be used to correctly evaluate the EDA.

- **A Yung Unit:** In good condition, will have no standing effluent. The surrounding sand will be gray underneath and may be gray near the distribution pipe on top of the units. Effluent will quickly drain when applied.
- **A Middle Aged Unit:** In fair condition may have more gray colors across the top. Black colors may appear on lower sides and underneath. Effluent drains more slowly. This is often the normal working condition of the unit.
- **An Old Unit:** Has turned anaerobic. Black colors are present on sides and top; standing effluent is present. If the covering fabric is opened, gray or white slime filling the voids indicate advanced age.

Parallel Distribution

- **Good:** Most units look young, with no standing effluent. It is possible to find a few (less than one quarter) with standing effluent. Some may appear to never have been used.
- **Fair:** Less than one half the units show signs of aging, effluent retention, or black colors. Other units must look young.
- **Poor:** Most units show signs of aging, with slow draining, standing effluent, and black colors.

Serial Distribution

- **Good:** Only the first part loaded, with signs of aging in less than one quarter of the total units, and no signs in lower rows.
- **Fair:** Less than one half of the units have standing effluent.
- **Poor:** All upper rows full and effluent is at the lower rows.
- **Failing:** Most units full, with black colors in receiving soil. Effluent may back up or surface.

Pump Eljen: Eljen units require small pump doses and may require lower flow rates. GSF EDAs may exhibit surfacing of effluent during pump cycles, usually near the D-box. If the effluent does surface but quickly recedes when pumping stops, this may be a sign of this transient failure mode. If the EDA is otherwise fair or good, reducing dose volume and flow rate may alleviate the problem.