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Soil-Water Conservation Engineering and Structures

Presented By-

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Asst Professor

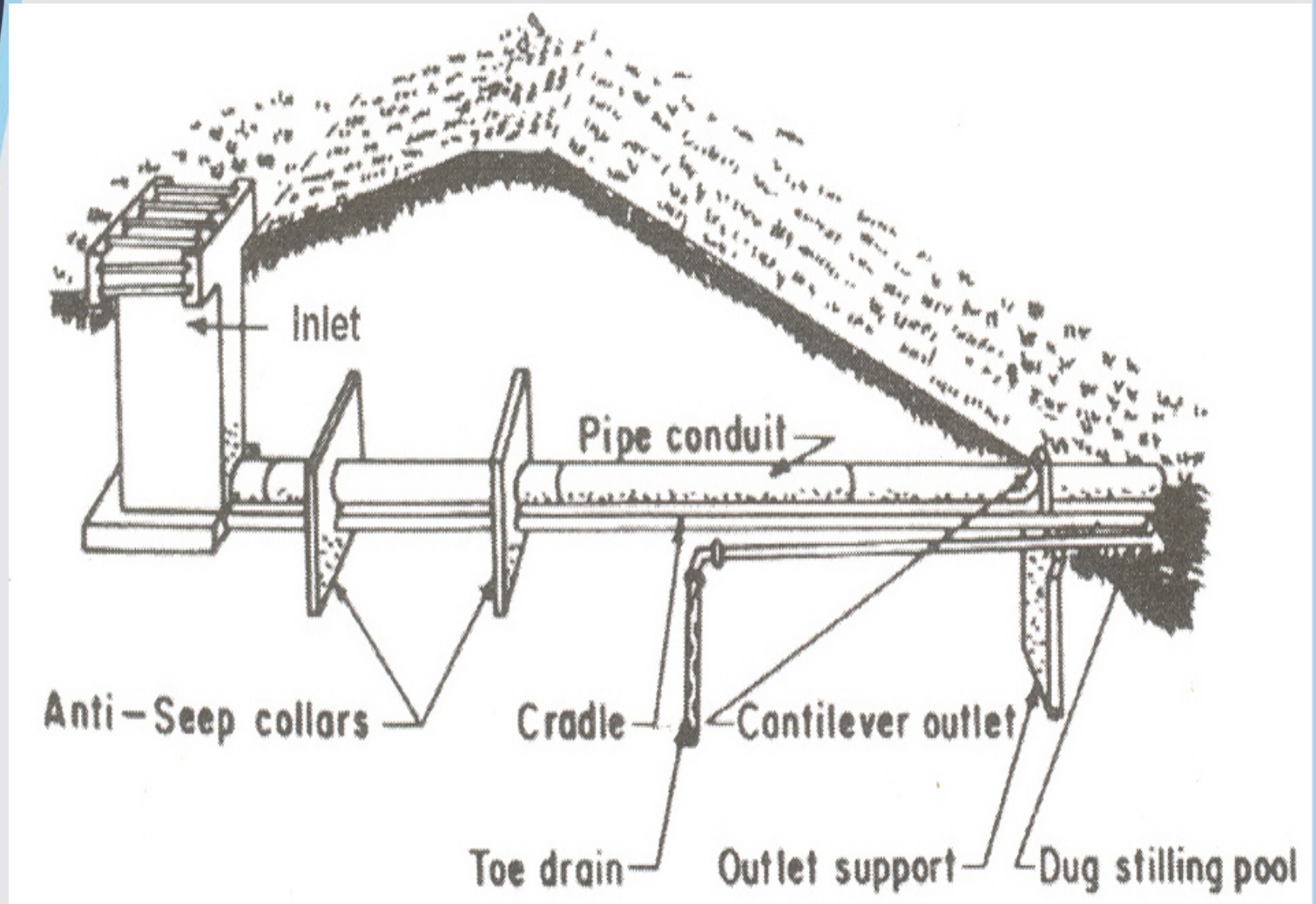
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DROP INLET SPILLWAY





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DROP INLET SPILLWAY

- **Closed conduit designed to carry water under pressure from above an embankment to a lower elevation without erosion.**



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MATERIAL

- **The riser of drop inlet spillway may be of plain concrete, masonry or pipe.**
- **The barrel may be of reinforced concrete, concrete or clay tile, or smooth metal pipe having water tight joints (RCC pipes in India).**



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Functional Use

- **Principal spillway for farm ponds and reservoirs.**
- **Grade stabilization.**
- **Principal spillways for debris basin.**
- **Flood prevention structures.**
- **Road way structures.**
- **Surface water inlet fro drainage or irrigation.**



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Adaptability

- **Efficient structure for controlling relative high heads usually above 3m.**
- **Provide appreciable amount of temporary storage above inlet.**



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Advantages

- 1. Requires less material than a drop spillway for the same head.**
- 2. Where an appreciable amount of storage is available above the inlet, the design discharge capacity of the structure can be materially reduced.**
- 3. Most efficient structure for flood prevention and channel grade stabilization.**



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Disadvantages

- 1. Small drop inlets are susceptible to be choked by debris.**
- 2. Limited to locations where satisfactory earthen embankments can be constructed.**



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Design of Drop Inlet Spillway

- **Design of earthen embankment, emergency spillway and other elements of the structure.**
- **Design should provide sufficient temporary storage between crest of inlet and emergency spillway to permit a drop inlet spillway of reasonable size and cost.**
- **Size of drop inlet spillway depends on amount of this temporary storage.**