



# PLANNING A WATER TREATMENT PROJECT - DESIGN CONSIDERATIONS CHECKLIST

Understanding the flow, water quality, duration, and space available is critical when designing an effective treatment system to meet water discharge quality requirements.

## Flow Rate - How much water will be discharged?

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Flow rate is needed to determine media requirements & the size of the system.

Answer the following questions if flow is intermittent or there are other sources of water:

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| <input type="checkbox"/> Intermittent Flow           | <input type="checkbox"/> Total Flow                 |
| <input type="checkbox"/> Anticipated volume per day? | <input type="checkbox"/> Additional sump pump flow? |
| <input type="checkbox"/> Operating hours per day?    | <input type="checkbox"/> Rainfall considerations    |

## Water Quality

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Knowing water quality is necessary for determining treatment needs. Influent water quality & effluent discharge standards dictate what contaminants need to be removed.

Collect water quality information through the following activities:

- Perform water quality analysis using one or more monitoring wells
- Conduct pump test & take water samples from an actively pumping well
- Test samples for constituents of concern in the permit & other that may hinder treatment

## Discharge Duration - How long will discharge last?

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Knowing the duration of the project is require to calculate the life of media bed.

Review the following considerations:

- Seasonal changes may impact flow
- Duration can impact permitting
- Discharge fees can impact decisions regardingn treatment & discharge points

## Discharge Point - Where to discharge?

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Understanding the discharge location will have significant impact on the amount of treatment required prior to discharge.

Evaluate potential discharge locations that apply to your project:

- Where is water being discharged?
  - Onsite Holding/Recharge
  - Sanitary or Storm Sewer
  - Surface Water Body

## Space Available On-site

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Availability of space on site is crucial, and you must plan for the area to accommodate required system. Space dictates if media will be sized for the entire duration or be exchanged periodically.

Review the following considerations:

- Consider site logistics
- Consider impact of treatment system setup/weight on the excavation/shoring

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