# Example Data Summary Sheet for an Infiltration Basin Design

***(Note: Example only – see minimum design criteria in DNR technical standard 1003)***

|  |  |
| --- | --- |
| **Design Element** | **Design Data** |
| **Site assessment data: (see attached maps)** | |
| Contributing drainage area to basin (Subwatershed B) | 10 acres |
| Distance to nearest private well (including off-site wells) | > 100 feet |
| Distance to nearest municipal well | > 1,000 feet |
| Ground slope at site of proposed basin | average 3% |
| Proposed outfall conveyance system/discharge (w/ distances) | 15” outfall pipe to Town Rd. 75’ away |
| Any downstream roads or other structures? (describe) | Yes – 24” cmp road culvert |
| **Soil investigation data (see attached map & soil logs):** | |
| Number of soil investigations completed | 3 (in basin area, see plan) |
| Do elevations of test holes extend 5 ft. below proposed bottom? | Yes (see soil tests and plan details) |
| Average soil texture at pond bottom elevation (USDA) | Sandy loam |
| Design infiltration rate at basin bottom and method of analysis | .5 in./hr., Table 2 of 1002 standard |
| Measured infiltration rate *following construction* | 2.2 in./hr., double-ring infiltrometer |
| Distance from pond bottom to bedrock | > 5 feet |
| Distance from BMP bottom to highest groundwater table | Trench bottom 3 ft. above redox. |
| **General basin design data (see attached detailed drawings):** | |
| Basin bottom area | 1.0 acres |
| Effective infiltration area | 1.0 acres |
| 1% of development area (120 acres) | 1.2 acres |
| Basin bottom elevation | elev. 899.0 |
| Top of berm elevation (after settling) and width | elev. 906.0 / 10 feet wide |
| Basin storage below outlet | 43,560 cu. ft. |
| Time to completely infiltrate stored water | 6 hrs |
| Sediment forebay size & depth | 6,969 sq. ft. / 5 feet |
| Pre-treatment prior to infiltration | 61% TSS removal |
| Additional design features | 3’ x 3’ x 50’ rock trench |
|  | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Infiltration Data for Subwatershed** | | | | |
| **Pre-dev. infil. volume** | **Post-dev. infil. volume w/basin** | **% of Pre-dev. infil. provided** | **Average annual runoff volume** | **25% of the runoff from the 2 yr. / 24 hr. storm (cu. ft.)** |
| 2,011,216 cu. ft. | 1,045,440 cu. ft. | 52% | 74,800 cu. ft. | 7,841 cu. ft. |
|  | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Basin Inflow, Outflow & Storage Data | | | | |
| **Inflow Peak Flows** | MaximumOutflow Rate | **Max. Water Elevation** | **Storage Volume**  **at Max. Elev.** | **Outflow Control Structures\*** |
| 0.6 cfs (Post 1-yr./24 hr. peak) | 0 cfs | 899.5 ft. | 28,924 cu. ft. | #1 |
| 0.8 cfs (Post 2-yr./24 hr. peak) | 0 cfs | 899.75 ft. | 42,950 cu. ft. | #1 |
| 3.3 cfs (Post 10-yr./24 hr. peak) | 0 cfs | 901.18 ft. | 132,858 cu. ft. | #1 |
| 11 cfs (Post 100-yr./24 hr. peak) | 1.6 cfs | 904.5 ft. | 383,328 cu. ft. | #1 & #2 |

\* **The controlling elements are summarized below (See attached detail drawing of outlet structure):**

#1 = Infiltration @ .5 in./hr.

#2 = 12 inch outlet pipe, invert elev. @ 902.0

#3 = 10 foot wide emergency spillway @ elev. 904.75

|  |  |  |
| --- | --- | --- |
| **Water Quality Data** | | |
| **Parameter** | **Units** | **Removal** |
| Total Suspended Solids | Lb / year | 81% |
| Total Phosphorus | Lb / year | 77% |