The MaxWell Plus, as manufactured and installed exclusively by Torrent Resources Incorporated, is the industry standard for draining large paved surfaces, nuisance water and other demanding applications. This patented system incorporates state-of-the-art pre-treatment technology.

THE ULTIMATE IN DESIGN

Since 1974, nearly 65,000 MaxWell® Systems have proven their worth as a cost-effective solution in a wide variety of drainage applications. They are accepted by state and municipal agencies and are a standard detail in numerous drainage manuals. Many municipalities have recognized the inherent benefits of the MaxWell Plus and now require it for drainage of all paved surfaces.

SUPERIOR PRE-TREATMENT

Industry research, together with Torrent Resources’ own experience, have shown that initial storm drainage flows have the greatest impact on system performance. This “first flush” occurs during the first few minutes of runoff, and carries the majority of sediment and debris. Larger paved surfaces or connecting pipes can generate high peak flows which may strain system function. In addition, nuisance water flows require controlled processing separate from normal storm runoff demands.

Absorbent Technology

Both MaxWell Plus settling chambers are equipped with absorbent sponges to provide prompt removal of oily residue. These floating pillow-like devices are 100% water repellent and literally wick petrochemical compounds from the water. Each sponge has a capacity of up to 128 ounces to accommodate effective, long-term treatment. This is accomplished by completely filling and safely removing runoff constituents down to rainbow sheens that are typically no more than one molecule thick.

SECURITY FEATURES

MaxWell Plus Systems include bolted, theft-deterrent, cast iron gratings and covers as standard security features. Special inset castings which are resistant to loosening from accidental impact are available for use in landscaped applications. Matched mating surfaces and “Storm Water Only” wording are standard.

THE MAXWELL FIVE-YEAR WARRANTY

Innovative engineering, quality materials and exacting construction are standard with every MaxWell® System designed, manufactured and installed by Torrent Resources Incorporated. The MaxWell Drainage Systems Warranty is the best in the industry and guarantees against failures due to workmanship or materials for a period of five years from date of completion.

The Watermark for Drainage Solutions.

INDUSTRY SERVICES

Site Drainage Systems
Industrial Pressurized French Drains
Piping
Drainage Appurtenances
Pump Systems

Technical Analysis
Design Review
Preparation Testing
Geologic Database
ADEQ Dept. Registration

Resource Systems
Municipal/Private Recharge Wells
Injection Wells & Galleries

Environmental Applications
Pattern Drilling-Silt Remediation
Drainage Rehabilitation
Debris Abstractions
OSHA HAZMAT-Certified

Drainage Rehabilitation
Problem Assessment
Site Redevelopment-Modification
System Airtests

Drainage Maintenance
Preventive Maintenance
Service Contracts
Debris Cleaning

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NM Lic. 98504 GF04

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CA Lic. 88679 A, C-42
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Manufactured and Installed Exclusively by Torrent Resources Incorporated
Please see reverse side for additional information
U.S. Patent No. 4,923,330

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MAXWELL® PLUS DRAINAGE SYSTEM DETAIL AND SPECIFICATIONS

CALCULATING MAXWELL PLUS REQUIREMENTS:
The type of property, soil permeability, rainfall intensity and local drainage ordinances determine the number and design of MaxWell Systems. For general applications draining retained stormwater, use one standard MaxWell® Plus per the instructions below for up to 5 acres of landscaped contributing area, and up to 2 acres of paved surface. To drain nuisance water flow in storm runoff systems, add a remote inlet to the system. For smaller drainage needs, refer to one MaxWell® IV. For industrial drainage, our Envibro® System may be recommended. For additional considerations, please refer to “Design Suggestions for Retention And Drainage Systems” or consult our Design Staff.

COMPLETING THE MAXWELL PLUS DRAWING
To apply the MaxWell Plus drawing to your specific project, simply fill in the blue boxes per the following instructions. For assistance, please consult our Design Staff.

PRIMARY SETTLING CHAMBER DEPTH
The overall depth of the Primary Settling Chamber is determined by the amount of surface area being drained, a standard depth of 15 feet for the total area of contributing drainage area, plus 2 feet for each additional acre, up to the design limits of the property type noted in “Calculating MaxWell Plus Requirements” noted above. Other conditions that would require increased chamber depths are property usage, maintenance scheduling, and severe or unusual service conditions.

Connecting pipe depth may dictate deeper chambers so as to maintain the effectiveness of the settling process. Maximum chamber depth is 25 feet. A pump and lift station is recommended for systems with deeper requirements.

ESTIMATED TOTAL DEPTH
The Estimated Total Depth is the approximate total system depth required to achieve 10 continuous feet of penetration into permeable soils, based upon known soil information. Torrent utilizes specialized “used” equipped rigs to get through the difficult cemented soils and to reach clean drainage soils at depths up to 180 feet. An extensive drilling log database is available to use as a reference.

SETTLING CHAMBER DEPTH
On MaxWell Plus Systems of over 30 feet overall depth and up to 0.25cfs drainage, our FloFast® Drainage Pipe is used with the standard settling chamber depth of 15 feet. Maximum chamber depth is 25 feet.

INLET PIPE DEPTH
Pipes up to 12” in diameter from catch basins, underground storage, etc. may be connected into the primary settling chamber. Larger pipe diameters dictate the use of manhole material for the primary settling chamber with 48” grates on the cone. Inverts deeper than 5 feet will require additional depth in both system settling chambers to maintain effective settling capacities.

INTAKE INLET HEIGHT
The Intake Inlet Height determines the effectiveness of the settling process in the Primary Settling Chamber. A minimum intake height of 11 feet is used with the standard primary settling chamber depth of 15 feet. Greater intake heights would be required with increased system demands as noted in Primary Settling Chamber Depth. Freeboard Depth Varies with inlet pipe elevation. Increase primary/secondary settling chamber depths as needed to maintain all inlet pipe elevations above connector pipe overflow.

CHAMBER SEPARATION
The standard separation between chambers is 10 fee from center to center. Soil conditions and deeper inverts may dictate required separations in chamber separation.

DRAINAGE PIPE
This dimension also applies to the MaxWell® Dewater Shields, the FloFast® Drainage Screen, and fittings. The size is based upon system design rates, multiple primary settling chambers, soil conditions, and need for adequate venting. Choices are 6", 8", or 12" diameter. Refer to our company’s “Design Suggestions for Retention and Drainage Systems” for recommendations on which size best matches your application.

BOITED RING & GATE / COVER
Standard models are quality cast iron and available to fit 24" or 30" diametral openings. All units are bolted in two locations with wording “Storm Water Only” in raised letters. For other surface treatments, please refer to “Design Suggestions for Retention and Drainage Systems.”

Connecting pipe depth may dictate deeper chambers so as to maintain the effectiveness of the settling process. Maximum chamber depth is 25 feet. A pump and lift station is recommended for systems with deeper requirements.