Farm Dairy Effluent - Managing Stormwater

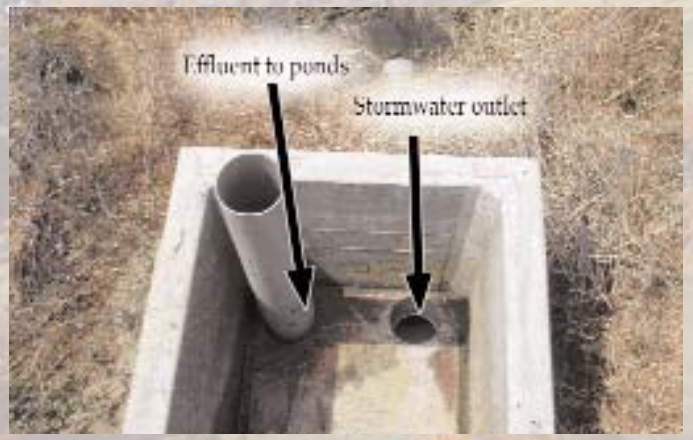
The intrusion of stormwater into treatment ponds decreases their efficiency by:

- Reducing the retention time of effluent within the system. A minimum 90 days retention time is necessary for effective treatment.
- Lowering the pond's temperature. This affects essential bacteria and algae which thrive at warmer temperatures.
- Flushing poorly treated effluent through the system into the receiving waters.
- Solids carry over from pond to pond resulting in poor system performance until the ponds are cleaned.

NOTE: With an annual rainfall of 1200mm and a building/yards runoff area of 250m^2, up to 300 cubic metres of clean water can be added to the treatment system.

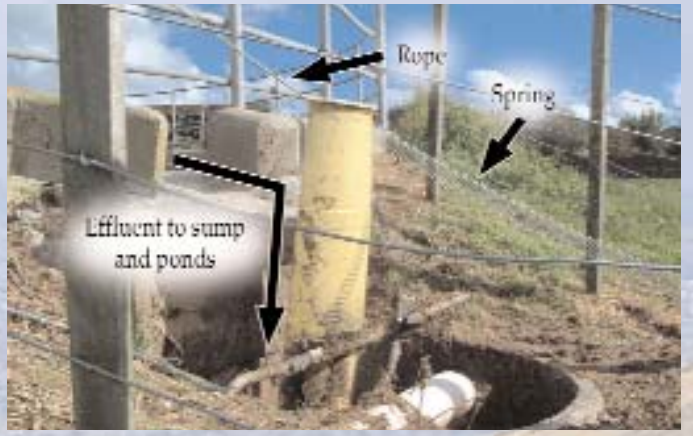
Many methods are used to divert water from the buildings and yards away from the treatment system AFTER the yard is cleaned. Here are some examples.

1. SUMP AND UPSTAND



Pipe upstand is moved to channel effluent to the ponds or stormwater to drain. Photo shows diverter in stormwater mode.

2. (i) WEST COAST CHUTE

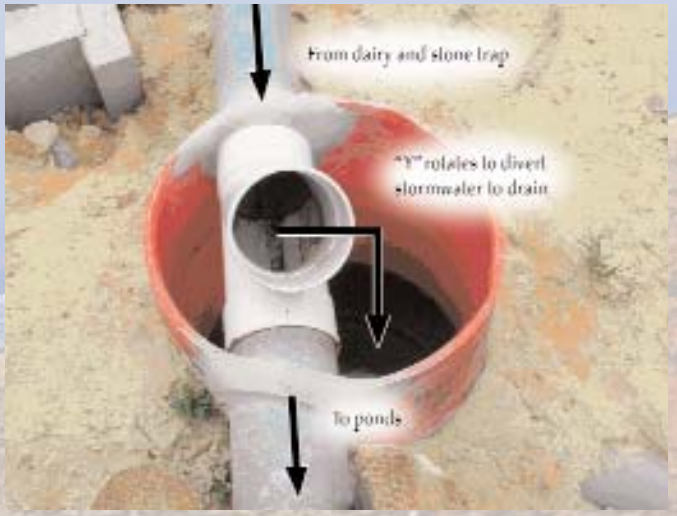


Effluent Mode
The rope is tied at the yard rail, and is accessible from the quad. The spring pulls the chute to stormwater position when the rope is released.

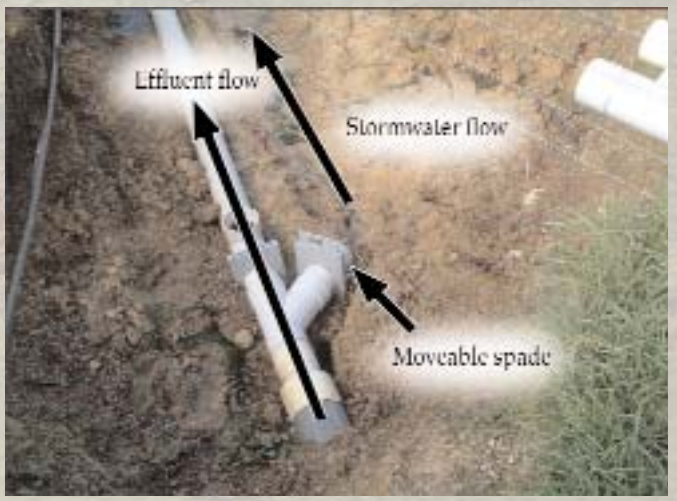
2. (ii) WEST COAST CHUTE

Stormwater mode.

3. ROTATING "Y"



4. "Y" WITH SPADE



The spade is moved to select either "stormwater" or "effluent" mode.

5. AUTOMATIC

Solenoid actuated diversion valves operated remotely from the dairy. As they are some distance away and below ground a position indicator would be advisable.

6. FEEDPAD

Feed pad diverter. The board is removed to channel effluent to ponds when pad is in use.

Catchment Stormwater

Stormwater from the surrounding land must be diverted away from the treatment system. Do this by using either channels or bunds around the treatment system.
(See front cover image).

Operation of Stormwater Diversion Systems

It is essential that good management practice is followed to optimise the performance of the effluent treatment system and to avoid the accidental discharge of untreated effluent to the stormwater drain. To be effective the use of the stormwater diversion system must be part of the daily routine.

Signs, coloured boards or flags visible from a distance can be used to indicate the position of the diversion system.

For all farm dairy effluent enquiries contact the Whangarei office:

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