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STORAGE DAM

EVAPORATION CONTROL

CRC Irrigation Futures, National Program for Sustainable Irrigation

Modular Covers

Plastic modules with upper and lower chambers to hold water ballast. Generally interlocking to increase storm resistance. There are a number of new products awaiting commercialization.



Modular covers are similar to continuous plastic covers except that they comprise multiple individual units which are not restrained and are free to move across the water surface. Modular system allows deployment on large storages.

The evaporation reduction performance from modular covers will depend on how tightly the modules pack together, and therefore may be in general slightly lower than for continuous plastic floating cover types.

Existing prototypes include a circular design (AquaCaps), and hexagonal designs (AquaArmour and Raftex).

Stability under high winds is critical and capital cost can be significant. Impact of high flow periods and wash through spillways needs consideration..



As each module is small in size, thousands of modules are required to cover the storage.

A number of new systems are being evaluated for the protection of water in the mining, urban and agricultural sector. As modules do not cover 100% of the surface, their evaporation saving performance will be correspondingly less than 100%.

However, as they are free floating they will travel with the wind to the down-wind margins of the dam and this is often where the warmest water is and where the highest evaporation occurs.

The cost per unit and life of the product will be important in determining the economic viability.

