

Community Project on DJROA Rain Harvesting System (SPAH)

Report prepared by: Ir. Fong Tian Yong

EM involvement on in community projects through its Standing Committee on Welfare and Service Matters dated back to 2008 when IEM was requested to provide technical advice services for village's projects by a few village committees. For SPAH project alone, IEM has assisted 3 villages i.e. Sg. Penjuring village in Bentong Bentong, as well Plentong village and Jementah villages in Johor, in the design and construction of SPAH projects.

The fourth SPAH project was mooted by Damansara Jaya Residents and Owners Association (DJROA) as a demonstration project for that area in support of the government's call for green technologygoing green. DJROA is an active Resident Association having won few awards from MBPJ as model RA. DJROA has also participated in LA2, Recycling and etc.

At the request from of DJROA, IEM helped to prepare a technical paper with the design sketch for of the SPAH demo project. With this, DJROA managed to obtained a grant of RM14,700 from MBPJ on in August 2010. With thatSubsequently, the IEM team assisted in preparing the final design, supervision and certification of completion of the project.

The main components of this project are:-

i). **Gutter system** to convey rain water to the rain water tank.

ii). Leaf eater:

Leaf eater is a hoper with sloping netting to block leaves from entering the conveying pipes

iii). First flush:

The first flush is a device to discard the first 10 minutes of rain water which is contaminated with dust and bird droppings on the roof. The system consists if of a tube installed before the rain water tank. When the tube is full, a ball floating on top is designed to block the top of the tube thus allowing subsequent rain water to flow into the rain water tank. For this caseln this demonstration project, a transparent tube was used to allow visitors to understand the working of the systemthe system better.

iv). Rain water (RW) tank

The capacity of the RW tank is computed based on roof area of collection as per the guideline ofs: $3 - 5 \text{ m}^3$ Three to five cu meters for every 100 square meterm² of roof area.

v). Rain Bank

Rain Bank is an electronic device installed above the pump that gives priority to discharge water from RW tank first when the tap is turned on. When the RW tank is empty, the Rain Bank will then switch to the normal water supply tank (SYABAS supply).

As a demonstration project, The IEM team assisted in designing the display board on the a schematic diagram. and anThe team also designed an information board on the introductionwhich introduces to the SPAH concept, local and foreign experiences and as well as the global movement on of SPAH. These boards will be useful and informative to visitors who wish to learn more about SPAH since this project is targeted to educate residents and students around this area and beyond.

The DJROA SPAH project was officiated by Datuk Bandar of MBPJ representative on 6th Nov 2010 at DJROA community centre. The function was attended by MBPJ officials, State state assemblyman for of Damansara Utama, government officers, councilors from a few local authorities, residents and the public. The president of DJROA gave credit to IEM for the its technical assistance in making this the project a reality as they find it difficult to find someone familiar with this type of project. In his speech, the Datuk Bandar speech was full of praise for this project as it is their first green project built with the partnership of

the local community and NGO. IEM representative Y. Bhg. Datuk Ir. Rosaline Ganendra in her speech explained the importance of water conservation and IEM's CSR activities initiatives under the Standing Committee on Welfare and Service Matters. She expressed her gratitude to MBPJ and DJROA for allowing having IEM to beas part of this the project. As engineers, IEM is duty bound to put forward innovative engineering solutions that can sustain and boost the nation's development.





(1) Datuk Bandar MBPJ representative and VIPs splashing rain water from SPAH system on 6 Nov 2010



(2) IEM representative Datuk Ir. Rosaline Ganendra briefing the crowd on the functioning of SPAH design by IEM – 6/11/2010

(3) IEM representative Datuk Ir. Rosaline Ganendra receiving a token of appreciation from DJROA President – 6/11/2010



(4) IEM representative Datuk Ir. Rosaline Ganendra with MBPJ councilors, officials and DJROA committee members – 6/11/2010



(5) IEM community project – SPAH in Sg Penjuring village, Bentong Pahang : officiating officiated by Minister of Housing and LG Local Government and Minister of Health with IEM representatives Ir Choo Kok Beng and Ir



(6) IEM- designed SPAH system installed at Sg Penjuring village, Bentong