

Water Resources

Holy Wisdom Monastery is part of the Lake Mendota Watershed. Drainage from this location finds its way through the Madison Lakes, to the Rock River and eventually to the Mississippi River and the Gulf of Mexico. For years the awareness of problems from both urban and rural runoff has been growing. I would like to explain the positive steps being taken with the new monastery building to address this critical environmental issue.

Before any construction could begin, our storm water control plan had to be approved by both Dane County and the Town of Westport. Their requirements are the most stringent of anywhere in the state. The design had to prove that a 100 year rain event would not result in any added runoff from the entire site. For the period of construction an earthen berm was built around the construction site to contain all rainfall and snow melt. Detention areas were designed with filtration weepers to filter the water before it left the work area. In addition, all disturbed areas outside the berm were mulched or seeded when the work in the area was completed.

When all construction is finished, the design of the site must also address runoff – that is, it must assure there is no runoff from the site in a 100 year storm. Here are some of the components built into the plan:

- Two rain gardens will be constructed to detain and infiltrate runoff to the south and west of the new building. All the site runoff is engineered to be directed to these two areas. The rain gardens will be seeded & planted with native broad-leaved plants and grasses.
- Rain barrels will be strategically place around the building to capture roof runoff so it can be used to water the plants around the buildings and on the green roofs.
- The green roofs themselves will capture and use rainwater thereby reducing runoff.
- The landscape around the buildings will be planted and seeded with native prairie. Any runoff not captured using the previous strategies will be diverted to relatively flat prairie areas where it will be absorbed.
- Last, some parts of the parking area will be made of “pervious concrete.” This product is a type of concrete through which the water can drain and immediately infiltrate into the groundwater.

With the completion of the new building at Holy Wisdom Monastery, the sisters’ design choices will not only have controlled the runoff from the site, but will have significantly reduced the amount that was occurring prior to beginning the new construction. The engineers of Montgomery & Associates have calculated that the runoff from a 100 year rain event will be reduced by over 13% as compared to predevelopment. Considering the fact that the building site is on top of a hill, this is a significant reduction!

*–Neal Smith, executive director, administration
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