**Friends of the Environment Report – Scenarios 5-6**

Groundwater Modelling, HWRS518

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### Scenario 3: Post development with seasonality

***Objective:***

Add the proposed agricultural element (pumping and localized recharge) for growing pistachios to your post-development model with seasonality. Agriculture starts now, 100 years after the end of the burn-in. Both pumping and recharge related to agriculture occur at the rates described and are continuous throughout the year.

* How can you quantify the impacts of the proposed agricultural element on the hydrologic system 100 years into the future?
* How do these impacts compare with the impacts of the town's pumping?
* How will the agricultural element affect the town's ability to meet its water demand (both for quantity and quality?) Describe your metrics as precisely as you can and quantify the impact(s).

***Results:***

### Scenario 4: Post development with seasonality, future projection

***Objective:***

Moving forward, we will be running more models to try to decide whether to allow the agricultural activity and/or whether to propose changes to its design. Whenever you are faced with running many models (or calibrating a model), it is worth considering carefully whether the model can be simplified. Can we justify ignoring seasonality in ET? If so, we could use a constant rate which would make our model less dynamic and probably faster-running. But, we want to make sure that we don't misrepresent any important impacts of the farm. Consider the question of ignoring seasonality from the point of view of four stakeholders: the agricultural company proposing the new facility, the town, a local environmental group, and the Environmental Protection Agency. Provide a one paragraph support of your position.

***Results:***