

Studies Point the Way Ahead

by Sandy Guldman

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Stetson Engineers, hired by the County in cooperation with Friends with a grant from the EPA, and A.A. Rich and Associates, hired by Friends with a grant from the National Fish and Wildlife Foundation, have identified several key problems affecting the health of the creek in their studies of the watershed.

A long list of potential actions was evaluated by the Watershed Planning Advisory Committee and three problems were selected as the focus of Stetson's final work project. The conceptual plans designed by Stetson are to promote augmentation of summer stream flow by increasing infiltration, to restore flood plains and to stabilize stream banks in confined areas in an environmentally friendly manner. James Reilly and Matt Smeltzer presented the three conceptual plans at an Advisory committee meeting held in November.

Augmentation of Summer Flow: Low summer flows in the creek make it difficult for fish to survive. One way to address this problem is to increase the amount of winter rainfall that infiltrates. This has at least three benefits: it reduces flooding; it decreases transport of pollutants into the stream by surface runoff; and it increases the storage of groundwater. It is the stored groundwater that then slowly reaches the creek and augments summer flows. Stetson provided a series of steps for evaluating the suitability of a site for enhancing infiltration, including soil type, depth to groundwater, presence of structures that could be harmed by shallow groundwater, and slope stability.

Flood Plain Restoration: By a large margin, the best thing to do for the watershed is to restore the natural floodplain. This provides flood protection; enhances the environment for native plants, fish, and wildlife; promotes infiltration; and improves water quality. Flood plain restoration requires space and will be difficult to do in our watershed where homes and businesses are often built very near the creek. However, Friends will support efforts at flood plain restoration in places where there is adequate space.

Bank Stabilization: Eroding banks that threaten gardens or structures are a common problem in the watershed. Unfortunately, many bank stabilization projects leave the bank bare of native vegetation and hostile to fish. As an added disadvantage, they often cause erosion problems upstream or downstream of where they are installed. Stetson has proposed some environmentally friendly bank stabilization methods for areas where there is not enough space for flood-plain restoration.

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