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7. The method defined in claim 5 wherein said measuring and predicting steps are carried out periodically on a set period which is independent on stage height.

8. A means for sampling sediment from a waterway comprising:

- a pumping sampler means for withdrawing water/sediment from the waterway;
- a programmable calculator means for controlling said pumping sampler, said programmable calculator means including means for activating said pumping sampler according to a SALT sampling scheme; recording means for recording stage height; and interface circuit board means connecting said programmable calculator to said pumping sampler means and to said recording means.

9. A means for sampling sediment from a waterway comprising:

- (a) a pumping sampler means for withdrawing water/sediment from the waterway;
- (b) measuring means for measuring the stage of said waterway;
- (c) a programmable calculator means for controlling said pumping sampler, said programmable calculator including

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(1) means for predicting the amount of sediment for the stage measured by said measuring means, and

(2) means for activating said pumping sampler means when the predicted amount of sediment reaches a predetermined value; and

(d) interface circuit board means connecting said programmable calculator to said pumping sampler means and to said measuring means.

10. The means defined in claim 9 wherein a plurality of stage measurements are made and wherein a corresponding plurality of sediment values are predicted by said programmable calculator, and said programmable calculator further includes means for summing said plurality of predicted sediment values and activating said pumping sampler means where said sum of predicted values exceeds a predetermined value.

11. The means defined in claim 9 wherein said programmable calculator further includes means for recording height of the water in the waterway.

12. The means defined in claim 11 wherein said programmable calculator further includes means for activating said programmable calculator at periodic intervals which are independent of stage height.

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