

# Youth River Watch: Austin, TX

## A Summary of:

**A River Runs Through It: Austin Youth River Watch, Final Report 1993-94**, December 1994, Office of Research and Evaluation, Austin Independent School District, Texas, by Jeannine Turner

## Overview

The Colorado River Watch Foundation (CRWF) is a not-for-profit organization dedicated to the scientific study, preservation, and conservation of the Colorado River. In 1991, CRWF proposed that the City of Austin develop a program involving at-risk minority students in river monitoring activities, the Austin Youth River Watch Program (AYRWP). The program has three major goals: to improve the water quality of the Colorado River and its tributaries; to reduce the dropout potential of students through positive role model interaction; and to increase the participation of minority students in critical environmental issues and in technical careers that require an understanding of science and mathematics.

## POPULATION

The outcomes provided in this evaluation apply to the 47 AYRWP participants during School Year 1993-94. Participants were 12 to 19 years of age and in grades 6 to 12. Seventeen were participating for their second year. Ninety-two percent of the students were identified as being at risk of dropping out of school, and 47 percent were over-aged for their grade level. Fifty-two percent of the trainees and 50 percent of the mentors were female. Twenty-three (50 percent) of the students were African American, 21 Hispanic, one Asian and one white. The ethnic composition of the mentors was four Hispanics, three African Americans, two whites and one Asian.

## Evidence of Effectiveness

The 47 participants in AYRWP in 1993-94 came from eight area public schools, a private middle school, and a learning center; one participant was home schooled. Data was collected only for the 43 in public schools. When Austin Independent School District students who participated in the program were compared with similar students who did not participate, AYRWP participants were found to:

- ◆ be more likely to advance to the next grade level (only 2.9 percent of participants were recommended to be retained in the same grade level, compared to 9.2 percent of non-participants)
- ◆ be less likely to dropout of school (no program participant dropped out, compared to the

average dropout rate of 8.8 percent for the school district)

- ◆ have a higher Grade Point Average (GPA for participants during Fall 1993 was 82.3, and for Spring 1994 was 81.8, compared to 79.2 and 79.3 for non-participants)

Also of note, eight of the seventeen 1992-93 participants who continued in 1993-94 were promoted to mentor positions.

The program was funded by the City of Austin with money from the water and wastewater utility rates, electric utility rates and drainage fees. Total funding for the program in 1993-1994 was \$82,303, at a cost of \$1,789 per student.

## Key Components

AYRWP engages students in learning by involving them in real-life activities. Students are responsible for conducting water quality tests in the Colorado River and its tributaries. To conduct the tests, the students must:

- ◆ use mathematics, calculations and measurements
- ◆ understand chemical reactions
- ◆ write reports that are sent to the Lower Colorado River Authority and added to its database
- ◆ present their studies at a school symposium and at the annual river watch symposium

Eleventh and twelfth-grade students, experienced in river water monitoring, are hired to work with the younger at-risk “trainees.” The mentors conduct chemical and biological monitoring with the trainees

at a designated monitoring station located on one of the 22 creeks that feed into the Colorado River. Mentors are paid to tutor the trainees in mathematics and/or science for at least two hours per week and to perform the water quality tests.

The program runs Monday through Friday after regular school. Participants are recruited among at-risk students. They can enroll in the program directly, or be recommended by teachers, parents or friends. Newly recruited students have a three-month probation period before being added to the roster. Middle school students who remain past the probationary period are treated as full members and are also paid for their participation in the water quality tests and in the tutoring sessions. Participants are involved in social activities that have water quality as the central theme. At the Annual Spring Student River Watch Symposium, participants present their monitoring data to community leaders and professional scientists.

## Contributing Factors

### *Immediate Outcomes*

Students were able to see improvements in their own behavior in a short period of time. Several reported that the program kept them “out of trouble” and “off the streets,” while providing experiences, knowledge and gainful activities. Others indicated greater interest in science and in their own future after participating in the program.

### *Service to Community*

The students’ participation has expanded and enhanced the water quality database of the Colorado River and its tributaries and helped the monitoring process of the water that serves their own communities.

### *Reality-Based Learning*

Students felt that the activities were useful and provided them with basic knowledge of mathematics, science, environmental issues and

English. “Through the river watch, I’ve heard about more environmental issues and my knowledge about them has increased,” declared one student. “We use math to figure out the [test] results, science to know what we are doing to help our Earth, and English to write in our journal about what we did,” wrote another.

### *Enrichment Activities*

To the question, “What did you most enjoy about your participation?” a student commented: “That it is helping me to learn more about science, and [I like] the money.” Another student enjoyed “learn[ing] new things and meet[ing] new people.” Some students emphasized the trips and the picnics. Others cited the workshops, symposium and seminars that they had attended. A student observed that “it’s fun, because it’s like a job, but not really.”

### **STUDY METHODOLOGY**

The researchers used interviews, student rosters, questionnaires and student data files to obtain information about student characteristics, grades, perceptions of program benefits and program activities. They also used the Generic Evaluation System (GENESYS) to compare the dropout and retainee statuses of participants with that of the overall school district. GENESYS is a program used by the Austin Independent School District's Office of Program Evaluation to evaluate the effectiveness of dropout prevention programs.

### **EVALUATION FUNDING**

The Austin Independent School District.

### **GEOGRAPHIC AREAS**

The students and mentors worked in monitoring stations across the City of Austin, TX.

### **CONTACT INFORMATION**

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