

ATD NORTHWEST

VIDEO INSTRUMENTATION AT WORK

WILDLIFE OBSERVATIONS

Background:

Portable hand-held, pole mounted or trailer mounted video systems are often used to observe and record various phenomena for short periods of time. They are used for insect & wildlife observations, environmental projects, for license plate surveys, for sporting events, and for documenting traffic or unauthorized dumping activities.

A universal problem on state & local highways across the nation is the incursion of various animal populations onto the vehicle right-of-way. On one recent wildlife project, it was desired to evaluate the day-night movement of animals at a specified deer crossing on a major interstate highway in Wyoming. ATD Northwest, Inc. was commissioned to design the system and provide the equipment to videotape this event. We used several PATH pole mounted video systems with multiple cameras to accomplish the task. Each camera package included a color digital zoom camera and a wide-angle infrared camera. The electronics package was configured to accommodate recording and viewing several cameras on a VHS time-lapse video recorder. Each system was provided with a deep-cycle marine battery accompanied by a 110 volt charging system so as to keep the system running in case of primary power failure.



Fences were installed to channel the deer toward a specific crossing on the highway. Trigger devices activated warning signs to alert drivers when deer were approaching the area. The movement of the animals toward the crossing, the actual crossing and their movement away from the designated site was recorded with time & date information. The follow-on effort is to determine if the animals can be channeled into a tunnel beneath the roadway instead of crossing the highway at grade level. The equipment has been modified to include additional IR cameras and lights to better analyze the movement of the animals as they approach the tunnel.



Another application for this specialized video equipment required the observation of fish pens in the strait of Juan de Fuca under severe wind & wave conditions. ATD Northwest provided a dual camera system to observe the effects of high waves upon the fish pen structure during these stressful conditions. Observations were to be made from a land sight approximately 5,000 ft from the fish pen. Obtaining extremely close-up pictures using an extended telephoto lens under these conditions is very difficult! We solved the problem by using a dual camera system with one wide angle camera with a cross-hair fiducial mark in the center of the image. A second telephoto camera was bore-sighted to the wide-angle camera. When the operator was able to center the cross-hairs of the wide-angle lens on the fish pen, the telephoto camera provided a perfectly clear close-up picture detailing the effects of the waves upon the structure.

Our personnel have participated in videotaping the varied activities associated with commercial fish farms, details of fish ladder activities and the night activities of primates under infrared illumination. One unique assignment was to observe the timing, travel and hiding places of cock-roaches in a culinary environment. The videotaping of underwater activities of various fish or amphibians is also possible.

ATD Northwest maintains many different types of specialized video equipment for short term analysis of insect or wildlife at their Redmond, Washington warehouse. We provide turn-key services when requested. We also rent the equipment so that your own personnel may accomplish specialized studies or programs.

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