

*25th Flood Warning Systems Training Symposium and Preparedness Workshop  
Operating and Maintaining Flood Warning Systems In Challenging Times*

May 6th – 9th, 2014  
Atlantis Hotel & Convention Center  
Reno, Nevada

*Expanding and updating the INA-CIRSA Flash Flood Warning System*  
Eng. Esteban O. Velez  
INA-CIRSA System Manager

*Track:* Flood Warning System Design, Operations, Maintenance and Repair

**Abstract:** This presentation shows the INA-CIRSA ALERT system with 62 remote stations running in mountain basins in the Province of Cordoba, Argentina at these days. It supplies information for early rain detection and forecasting products for flood and flash flood warnings.

With a statewide cooperative program, the inclusion of the last stations for different basins in the province provide early rain and flood detection with different data needs for local and regional emergency managers. The system applies different kinds of triggered alarms depending of basin responses including issuance of warnings by phone and SMS.

Likewise it is analyzed the operated response of the ALERT system in generation and data dissemination. Conclusions are obtained on the way of optimizing the alert system in order to accomplish and cover events in these basins.

**Biography:**

Esteban O. Velez

Electrical / Electronic Engineer

Main Professional of CONICET (National Council of Scientific and Technical Investigations), at CIRSA (Center of Semi Arid Region) of INA (National Institute of Water), Villa Carlos Paz, Cordoba, Argentina.

Medrano 235 - Villa Carlos Paz, X5152MCE – Argentina - Email: [esteban@onenet.com.ar](mailto:esteban@onenet.com.ar)

Main Specialty

Automatic systems for Data Collection and Transmission in Real Time for Hydrology, Water Quality and Air Quality. Certified Specialist of the PHI (International Hydrological Program) of UNESCO (United Nations Education, Scientific and Cultural Organization) on this subject.

- Automatic Meteorological and Hydrological Data collection.
- Flood Warning System Design, Operations and Maintenance.
- Design of flood detection networks and Testing flood warning systems.
- Equipment maintenance and Training System innovations.
- Real Time Data communication via radio VHF, UHF, Cellular Phones, Satellite, direct connects.
- Maintenance and Calibration of Hydrological and Meteorological sensors.
- Flood and flash flood forecasting.