Washington D.C. Forecast Unit

The forecast unit began as part of the Hydrologic Research Lab to bring some operational experience to people working in the lab on forecast procedures. It later became a stand-alone unit with basic responsibility for the Potomac River and the James River in Virginia. The principal hydrologist was Walter T. Sittner. Michael Mark was also one of the unit's forecasters. The functions of the unit were later transferred to the Harrisburg RFC.

Walter T. Sittner when he worked for the USGS back in 1948 at the Raritan River Manville, NJ gage.

After the closure of the unit in 1971, Walt. Sittner devoted all his efforts on improving river forecasting models, procedures and services. He is the author of many papers and was the first at the NWS to develop a continuous API rainfall – runoff model.

The Hurricane Camille report[1] contains the following description of this unit:

> Washington River Forecast Facility is responsible for preparing river forecasts for the Potomac, Rappahannock, James, and York rivers and tributaries and local Chesapeake Bay drainage in Maryland and Delaware. It provides River District Offices in Washington and Richmond with basic river and flood forecasts. This facility is unique within the hydrologic services system in that it functions as a River Forecast Center but is organically assigned to the Hydrologic Research and Development Laboratory under the Associate Director of the Weather Bureau for Hydrology. All other centers are responsible to a Weather Bureau Regional Director.

The report goes on to recommend:

> --The Washington River Forecst Facility be placed under the administrative and operational control of the Director, Weather Bureau Eastern Region, as soon as possible. Plans for consolidating the Washington, D. C., and Harrisburg, Pennsylvania, centers reflected in the FY 71 budget should be continued, but correction of the organizational anomaly should not be contingent on the FY 71 budget action.

[1] Hurricane Camille Report, DOC 19??

Eric Anderson: In 1964 river forecasts for the Potomac and James River basins were produced by the Development Branch of the R&D Laboratory at OH. It was thought that it would be of value to have an operational component at headquarters. Walt Sittner was in charge of the unit with Larry Ferral as his primary assistant. The forecasts were generated on an IBM 1620 computer using software similar to that developed by the Fort Worth RFC. One 1620 was the only computer available for all of OH at that time. Those of us in the R&D Lab could sign up for a maximum of 2 hours of time on the machine up to a week in advance. If we were in the middle of something during our allotted time and there was a need to put out a forecast, we were bumped off the machine. As a sidelight, on the 1620 it took me 2 hours to generate one year of simulated streamflow using the snow, Stanford, and unit hydrograph procedures – 4 separate programs each producing punched cards to use as input to the subsequent program – one for the snow model, one for the Stanford model, one for unit hydrograph computations, and one to plot the resulting simulated hydrograph against observed values. Thus to run the 5 years of data I had for the Central Sierra Snow Lab took a whole week as long as I wasn't bumped off the machine by Walt or Larry – this caused one to make parameter changes carefully and many at one time] Michael Marks took over for Larry when he transferred to Sacramento. Walt got out of operational forecasting somewhere around 1966-68 when he was given the assignment to produce a continuous API model so there could be a comparison between the API method and the newer conceptual models. Not too long after that Michael and the Potomac and James forecast responsibility was transfer up to the Harrisburg RFC. Walt Sittner knew the 1620 machine in and out. He would help the IBM man when repairs were needed. Walt could read the lights on the machine to tell exactly where in a program a problem was occurring. He programmed primarily in SPS (a symbolic programming language where you had to keep track of what was stored in each register on the computer). This allowed him to pack as much as possible into the 2K memory of the 1620. It was never the same for Walt when we went to using newer and much larger computers. Walt was very systematic and tried to be logical in everything he did, that is until John Schaake came to OH. Walt was working on the Continuous Hydrograph Adjustment Technique (CHAT) at the time. John Schaake was making the rounds to find out what people were working on. Before Walt got too far into describing CHAT, John told him there was a much better way to solve the problem even though he had never been involved in operational forecasting. From that moment on, in most cases, if Schaake was for something, Walt was against it and vice versa – very little logical decision making in those cases.