1986-2000 – Responding to Grand Coulee and Agriculture

Completion of Grand Coulee Dam in 1942 brought thousands of acres under irrigation and dramatic changes to the land, streams and drainage areas within the 2,400 square mile Moses Lake watershed. Now overly rich and nearly choking in nutrients, portions of the lake had become sediment and waste deposit sites with serious environmental problems. More research and complex solutions were underway.

During 1986, intending to provide fast flowing water to flush debris and suspended solids back into the main water current without shoreline erosion, the District installed a 160-foot long, 4-foot cantilever retaining wall and lengthened the current diversion culvert at the northwest corner of Neppel Crossing. (Known as the "Alder Street Fill").

Drumheller Dam

The Rocky Ford Creek "detention pond" was built "to impound the waters of the creek for a short period of time to allow biological activity to reduce the nutrient load in the water *before* it enters Moses Lake and, secondly, as a fish barrier to prevent upstream migration of carp." Now known as Drumheller Dam, the impound area was designed on 5.6 acres to contain 16 acre-feet of water.

Accomplishments:

The Moses Lake Clean Lake project was completed in 1990, resulting in:

- BMP - Best Management Practices
- Expansion of irrigated acreage
- Irrigation water management programs
- MLIRD - Water quality monitoring programs

Partners & collaborators: NRCS, UW, Conservation Districts

Reports issued:

- Moses Lake Clean Lake Final Report, R.C. Bain, March 1990
- Moses Lake Area Water Quality Monitoring report, R.C Bain, June 1993
- Internal Phosphorus Loading related to Mixing and Dilution in a Dendritic

Shallow Prairie Lake, C.A. Jones and E.B. Welch, 1994

- Moses Lake Area Water Quality Monitoring Report, R.C. Bain, August 1998
- Lake Trophic State Changes & Constant Algal Compositions Following Dilution and Diversion, E.B. Welch, et. Al., 1992

PELICAN HORN – NEW IDEAS & MULTIPLE USES

The Pelican Horn Fish Barrier was first placed in Moses Lake during the spring of 1995. Due to declining crappie and blue gill fish populations, a new "Cooperative Plan" had evolved to isolate Pelican Horn from the rest of the lake to create a protected 80 acre spawning and nursery area. The intent was to improve survival of pan-fish using an "in-lake" nursery and spawning ground free from competition and predation. Most of the work was accomplished with local volunteer help and funding for equipment, operations and maintenance provided by the Cooperative partners. Using brood stock captured in the spring and raised in the isolated Pelican Horn enclosure, over 10,000 juveniles were released during the fall into the main body of the lake.

Cooperative Project partners: Region Two Fisheries Management staff, Central Washington Fisheries Advisory Committee, MLIRD, Volunteers