

## AGRICULTURAL OVERVIEW: OPPORTUNITIES/CHALLENGES, Jan. 22, 2014

### **Flood Related:**

#### **Potential Challenges:**

- Construction of, or modifications to, on-farm infrastructure is limited by floodplain regulations that severely limit fill. Alternatives to fill are expensive, may be incompatible with operation.
- Potential Increase in frequency and early or late season timing of any flood depth reduces growing season, increases loss of produce crops for food safety standards, limits livestock operations and farm access.
- Potential increase in large floods threatens safety, increases financial losses and bank and field erosion.
- Flood safety standards: no new farm residences, and temporary farm-worker housing limited.

#### **Potential Opportunities:**

- Continue support for farm pads and elevated platforms; structural elevations of homes and barns.
- Work with Carnation/Duvall/unincorporated area lands to find incentives for farm/farmworker housing.
- Use forested buffers and flood fencing for bank stabilization, reduction of flood debris and damage to farms.
- Develop incentives for shared use of both on-farm infrastructure and out-of-floodplain infrastructure - farm pads, renovation of old large buildings, washing and packing facilities, development of distribution hubs to reduce need for on-farm infrastructure for direct marketing.
- Use mutual flood and farm (and transportation) objectives to support CIP projects (elevation of roads/bridges/Snoqualmie trail; removal of appropriate in-stream revetments) that improve conveyance and increase compensatory storage in the floodplain.

### **Fish Related:**

#### **Potential Challenges:**

- Regaining the aquatic habitat acres that are the primary limiting factor for Snoqualmie Chinook populations can result in removing agricultural acres from agricultural production.
- Conducting restoration projects on properties that have had the development rights purchased raises the challenge of removing agricultural acres that have had public funding and deeds and covenants intended to preserve the land for farming in perpetuity.
- Riparian buffers, whether by regulations or incentive, benefit some landowners, but are deleterious to other operations. The cumulative effects of buffers results in the reduction of agricultural acreage in the Agricultural Production District. The potential increase in beavers, elk and deer poses a threat to some agricultural operations.
- The drainage essential to floodplain agriculture has resulted in channelized fish bearing streams that:

- do not provide the in-stream habitat that would be provided by streams that meander;
- require periodic maintenance activities that are deleterious to habitat and potentially to fish;
- are often not buffered sufficiently for temperature regulation;
- may be connected to subsurface drainage tiles from adjacent fields; and
- are subject to excess nutrients, sediments or toxicants if agricultural best management practices are not followed, and sometimes if they are.

While best management practices have been developed, agriculture – especially in a floodway - can face the threat of enforcement or of the bar being raised to higher standards for water quality or fish, or mitigation requirements. If drainage maintenance cannot occur, fields become too wet to farm. Beavers that feed on mitigation plantings can block the intended drainage, and compound drainage issues.

- Water quality and water quantity, each pose a potential limit to agricultural operations. Farms with water rights or livestock may often need to draw water out of streams at the same time that flows are low for fish.
- Though some flexibility has been allowed through farm plans in the County Critical Areas Ordinance, state and federal regulations that protect streams and especially wetlands can either restrict on-farm infrastructure or can take farmland for mitigation.

**Potential Opportunities:**

- Continue to plant riparian buffers where willing landowners want them for the benefits they may provide: stewardship goals, filters for flood debris, bank stabilization, shade, exclusion of livestock from water way, attenuate needs for drainage maintenance, mitigation credits, aesthetics, financial through CREP leases or Salmon Safe Marketing, etc.
- Improve water quality for fish habitat through incentives, cost share, education, technical assistance and enforcement.
- Work on mutual solutions to water availability for fish and agriculture: watershed investment districts, controls on upslope development, moving water rights off small streams.
- Develop ways to plant buffers on priority areas through voluntary stewardship programs and off-site mitigation options.
- Add acreage to the Agricultural Production District as an offset to lands used for habitat restoration.
- Educate people upslope in the basin to the needs of both agriculture and fish in the floodplain below.