

**Guidelines for Instream Work**  
**Flood Disaster Recovery**  
**Vermont Agency of Natural Resources**  
**September 3, 2011**

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The Agency of Natural Resources (ANR) recognizes that recovery from this state-wide flood disaster will require extensive in-stream work. Rivers Program engineers will be helping Vermont communities by providing technical and problem-solving assistance. Conditions that existed prior to the flood may, in cases, not be desirable or even possible to recreate, but we will assist landowners, municipalities, and other agencies to accomplish the recovery goals while reducing vulnerability, loss, and public safety hazards during the next flood.

**Expedited Flood Recovery Assistance:** ANR is providing technical assistance, both in the field and by phone, to:

- 1. Relocate streams to a former location** - during the immediate flood recovery period, staff are authorizing excavation and relocation of stream channels to pre-flood alignments where necessary to reestablish roads and other public infrastructure and to restore/protect private property.
- 2. Reestablish channel capacity** - authorizing the removal of gravel and other debris from segments of river where the channel has filled in or no longer has the capacity to carry the annual flood discharge, and where water or property damage has occurred or further damage is imminent.
- 3. Facilitate stream stability** - providing technical assistance on the most successful approaches and engineering solutions to improving both vertical and lateral stream stability where public infrastructure and private property has been damaged or is threatened such that future floods will result in less damage rather than more.
- 4. Reestablish stream crossings** - working with VTrans, municipalities, and private owners to reestablish hundreds of culverts and bridges, in a manner which reduces the public safety hazard and vulnerability to future flood loss. This includes assistance to determine appropriate structure type, size and location.

**Practices requiring ANR review and advance approval:** The following practices, common following other flood events, but which likely contributed to subsequent flood damage, must be reviewed and approved in advance:

- 1. Berming** – using gravel and other aggregate to fill and create a linear barrier between the river and its floodplain. This practice will only be approved in instances where no other option exists to protect a damaged or threatened facility.
- 2. Rechanneling streams in unstable dimensions and/or elevations** – excavating the channel substantially deeper, wider, and/or steeper than the dimensions required for the annual flood discharge; or extending dredging operations beyond that necessary for the removal of existing threats
- 3. Creating straightened river channels** – excavating new channels that did not exist prior to the flood event.
- 4. Bank stabilization where no structures or infrastructure are currently threatened.**

**State laws still apply:** We are using emergency authority during this extreme situation. State laws governing stream alterations are not suspended during flood recovery. Particular in-stream practices will be regulated during this time and are listed above. Emergency in-stream work may proceed under emergency provisions set in statute and will be expedited under the Stream Alteration General Permit.

**Information by County (cell phone numbers):**

**Todd Menees, P.E. - (802) 345-3510**

(Southern VT - including Rutland, So.Windsor, Windham & Bennington Counties)

**Barry Cahoon, P.E. - (802) 343-0217**

(Northeast VT - including Essex, Caledonia & Orleans Counties; & backup for Windham & Bennington Counties)

**Chris Brunelle - (802) 777-5328**

(Northwest VT – including Franklin, Chittenden, Lamoille & Grand Isle counties & back up for Addison & Rutland Counties)

**Patrick Ross, P.E. - (802) 279-1143**

(Central VT – including Washington, Orange, No.Windsor, and Addison Counties)

**Mike Kline - (802) 793-7617**

(Rivers Program Manager)

**Gravel Pit Access and Removal – Act 250:** Act 250 has temporarily suspended enforcement of extraction and trucking limits, and is allowing closed gravel pits and rock quarries to be reopened as needed. **Call your District Environmental Coordinator** to inform them of the emergency gravel extraction and provide the information related to the activity. In addition, the NRB is temporarily suspending enforcement of limits on hours of operation and trucking for landfills.