

### **Process for Scheduling Lampricide Treatments in the U.S.**

#### Basic Facts:

- 1) Field seasons for each year contain 12 two-week time periods plus a deferral period (each period normally includes 10 work days and 4 days off); all treatments must be completed within one of these 13 time periods.
- 2) A typical work load for a field season is approximately 100 treatments, depending on the length and complexity of streams to be treated, and dispersed among 3 field stations; streams range in size from one mile to over 300 miles in length.
- 3) Each stream has an individual requirement for discharge that has historically produced good results in terms of eradicating larval sea lampreys.
- 4) There are approximately five optimal time periods each spring in the treatment schedule where stream discharge is sufficient for treating large streams that will obtain optimal mortality of larval sea lampreys.
- 5) There are approximately three time periods within the treatment schedule, during mid-summer, when discharges are typically too low to effectively complete most treatments, particularly most large streams. Smaller streams with relatively lower densities of larval sea lampreys are typically scheduled during these time periods.
- 6) There are approximately two fall time periods within the treatment schedule in which streams with high discharge requirements can be treated. The expected discharge at this time is governed by rainfall.
- 7) Small streams can usually be scheduled into non-optimal time slots more readily because the expected total flow time is less, and alternative treatment techniques can be employed that will produce adequate results.

#### Scheduling:

- 1) The first priority to scheduling each stream for treatment is to place it into a time period in which good control of the larval sea lamprey population can be achieved. If the treatment is completed with suboptimal discharge conditions and the kill of larval sea lampreys is less than expected (perhaps only 90%), the treatment may need to be repeated. Scheduling is normally completed by consulting Appendix H.
- 2) There are typically more large streams on the proposed schedule than can be accommodated by the five optimal springtime periods; stream treatments should then be prioritized based on those that cannot be placed elsewhere.
- 3) Protection of endangered/threatened species dictates time requirements and other details for some treatments. A typical consideration, i.e. the presence of lake

- sturgeon, is to treat after August 1, based on the expected size of juvenile fish. The optimal time periods in late fall are typically reserved for these treatments.
- 4) State permits are an annual requirement. The state will usually have stipulations that mandate the timing of individual treatments. One example is streams with large runs of spawning salmonids are typically treated prior to September.
  - 5) Large runs of spawning fish are normally avoided. This typically applies to spawning suckers in the spring and salmonids in the fall. Treatments are completed prior to the time period when the fish are severely stressed or after they are expected to leave the stream.
  - 6) Some treatments require personnel and resources from more than one station to complete. This means that some time periods will be unavailable due to demands of other treatments.
  - 7) The many smaller streams can be scheduled into less optimal time periods. These treatments will fill many of the time periods which are not appropriate for other treatments.
  - 8) Streams that have exhibited extreme water chemistry characteristics and are likely to have pH suppression as a result of treatment are given preference for time periods when this phenomenon is not likely to occur.
  - 9) Festivals and other known weekend water activities are a factor for many streams and may prevent treatments during certain dates.
  - 10) Some treatments require an accompanying lentic, granular Bayluscide application. An attempt is made to schedule the lentic treatment after the stream treatment; however, the actual timing of the lentic treatment may depend on environmental conditions such as dissolved oxygen and water temperature.
  - 11) Treatments downstream of large power dams are dependent upon, and at the mercy of electrical companies which are, in turn, governed by Federal Energy Regulatory Commission regulations and maintenance schedules. Contact with the power companies should be made as soon as possible to ensure cooperation with the facility.
  - 12) Beaver dams can restrict the timing of a treatment. Some streams are nearly impossible to treat when beaver activity is at a maximum in late fall or when stream discharge is extremely low.