

Appendix A

Timeline of biological events

The timeline of biological events in each decision period is given in Table A1. While this simplified sequence of events is stylized, it includes the essential features of joint-trout-chub dynamics in the mainstem.

Table A1: Timeline of biological events in each decision period.

Order	Event	Updates
1	Trout and chub stocks are observed	X_t, Y_t
	Trout removal decision is made, cost is realized	$A_t, C(A_t)$
2	New recruitment (& migration) is generated	x_t, y_t
3	Existing trout stock affects juvenile chub survival	$s_Y(X_t)$
4	Trout removals undertaken	$s_X(A_t)$
5	Total trout stock natural survivorship	γ
	Adult chub stock natural survivorship	η
6	Complete updating of the two stocks	X_{t+1}, Y_{t+1}