**PERENNIAL LIFECYCLE & TREATMENT TIMING**

**ROOT WRENCH**
Attach root wrench to sapling and pull roots out.

**HERBICIDE**
Foliar spray leaves, and lower 18” of bark with herbicide.

**CUT AND TREAT**
Cut shrub at the base and spray outer rings.

**FORESTRY MOW**
Cut, grind and clear vegetation. Follow up with other treatments.

**PRESCRIBED FIRE**
Burn seedlings and saplings

**GRAZING**
Goats or sheep eat foliage and bark.

Monitoring and repeated management is necessary for long term control of established infestations.

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**GLOSSY BUCKTHORN**
*Frangula alnus*

**Dormancy**

**Flowering**

**Seed dispersal**

**Leaf out**

**Sapling**

**Seedling**

**Fruit development and maturation**

**Germinating seed**

**Pollination**

**Seed dispersal**