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April 1, 2010

MEMORANDUM

TO: Council Members

FROM: Paul Kline
Idaho Department of Fish and Game

SUBJECT: Presentation on New Genetic Tools and the Management of Columbia River
Salmon and Steelhead

Matthew Campbell, of the Idaho Department of Fish and Game, will brief the Council on PBT technology for addressing conservation and management issues of hatchery Chinook salmon and steelhead in the Columbia River basin

For over forty years, researchers and managers in the Columbia River Basin have used coded-wire tags (CWT) to monitor and assess the harvest patterns and survival rates of salmon and steelhead in the Columbia River basin. Despite its predominance in addressing the above management concerns, CWT technology has several limitations that hinder both its effectiveness and cost efficiency. One technological alternative, which could compliment and in many cases replace CWT based programs is parentage-based genetic tagging. Parentage-based tagging uses similar DNA techniques as those used in human parentage testing and allows the identification of the stock and age of any hatchery fish whose parents have been genetically screened. This technology, along with additional genetic tools for segregating wild stocks by origin (major group population or finer scale), should provide unprecedented tools for managing wild and hatchery populations in the future.

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