

Juvenile Salmonid Survival Downstream of the Federal Columbia River Power System



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2008 JSATS Equipment

■ Transmitter

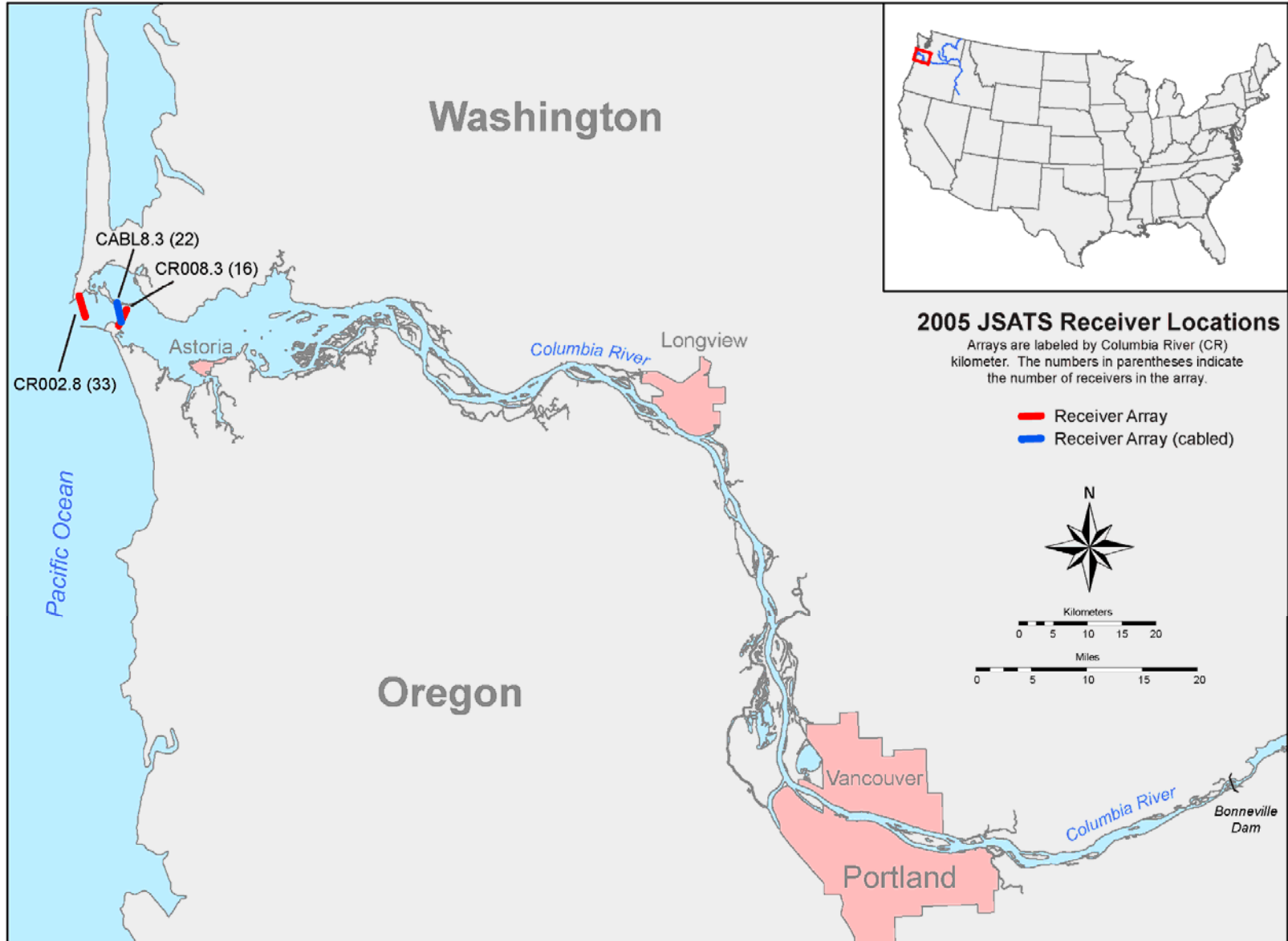
- 0.43 g in air
- Same length (12 mm) as PIT tag (C in image)
- Tag Life
 - 23 days (3 sec PRI)
 - 32 days (5 sec PRI)

■ Receivers

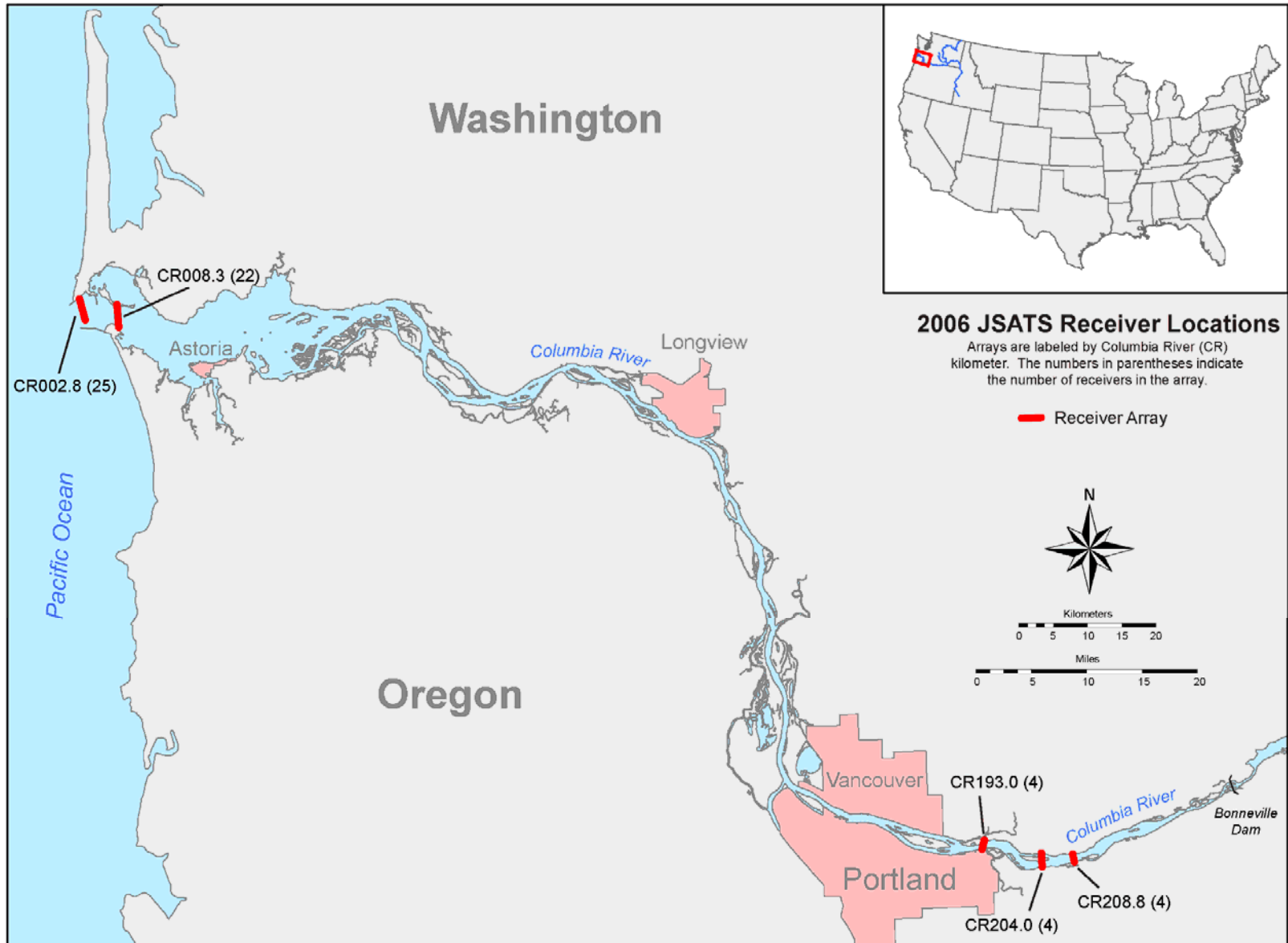
- Autonomous
- Mobile Tracker



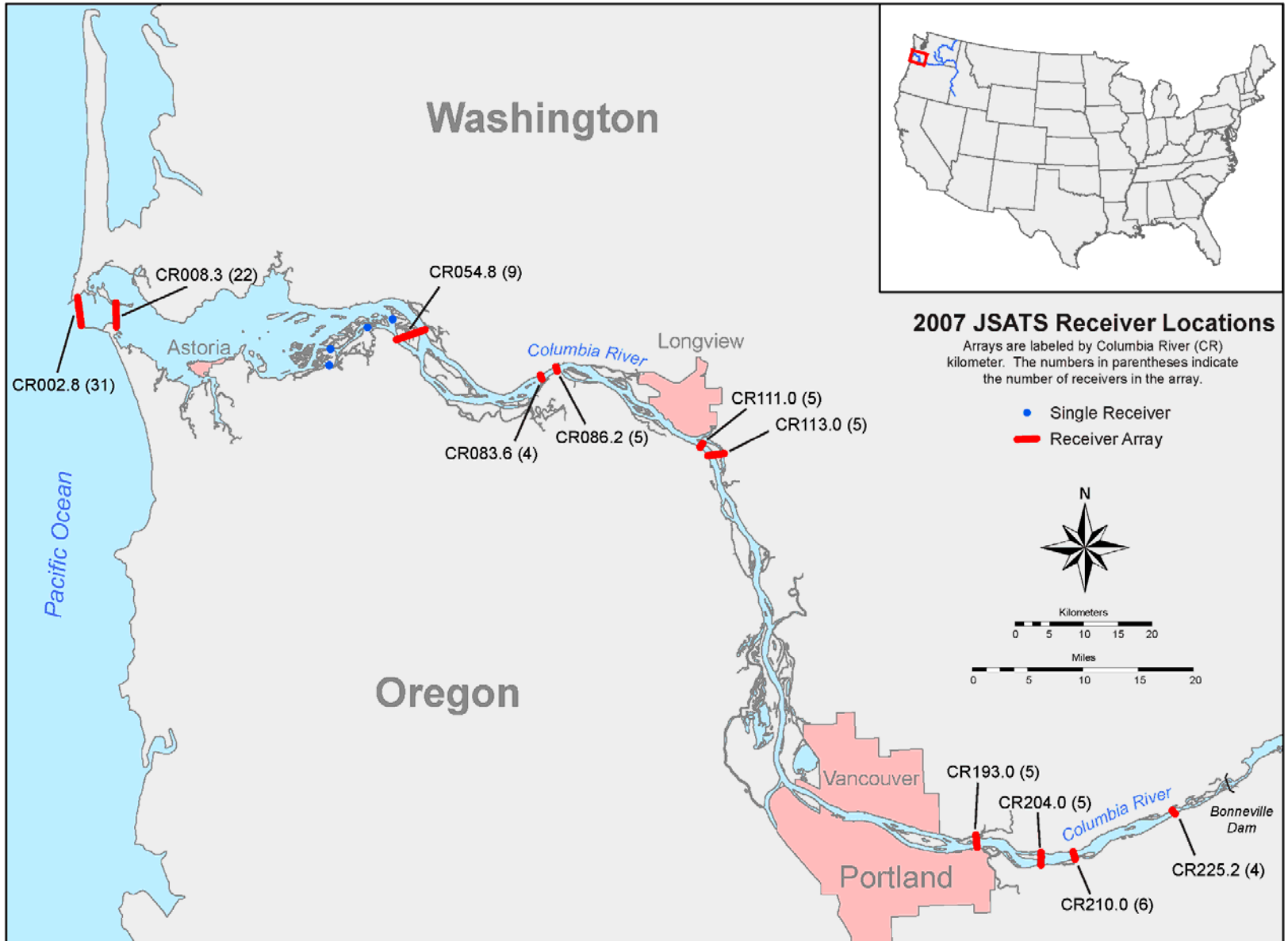
Receiver Locations - 2005



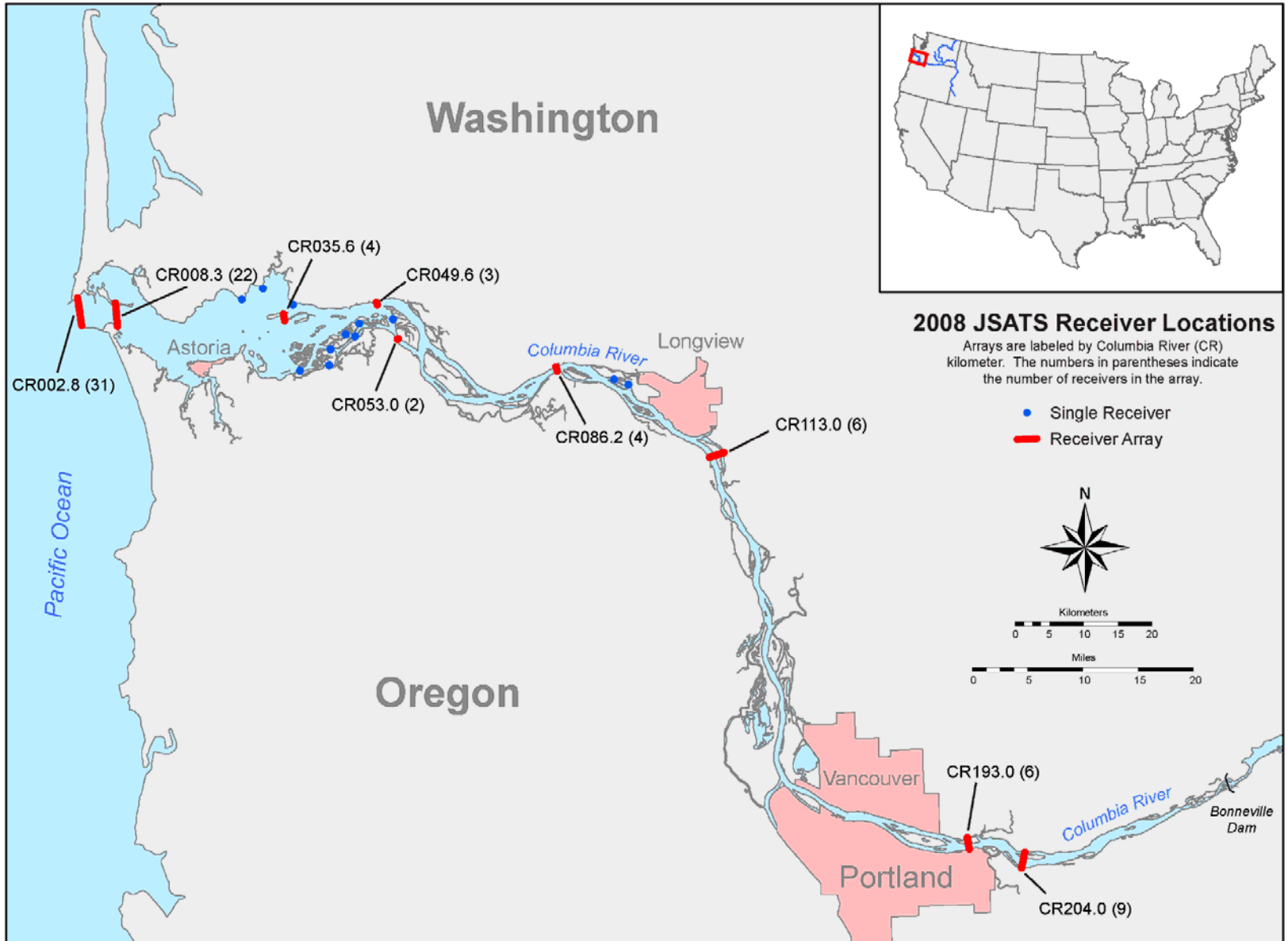
Receiver Locations - 2006



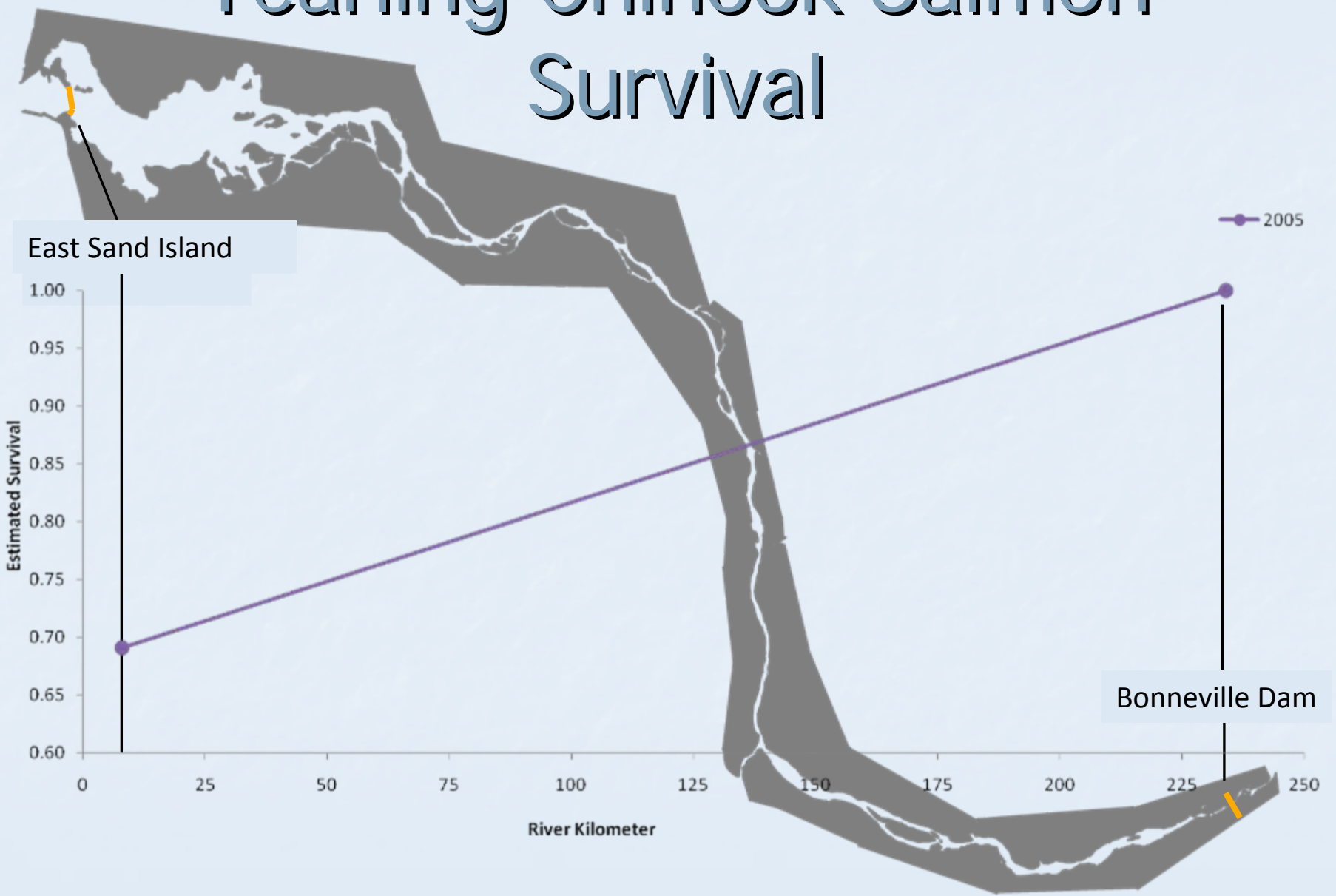
Receiver Locations - 2007



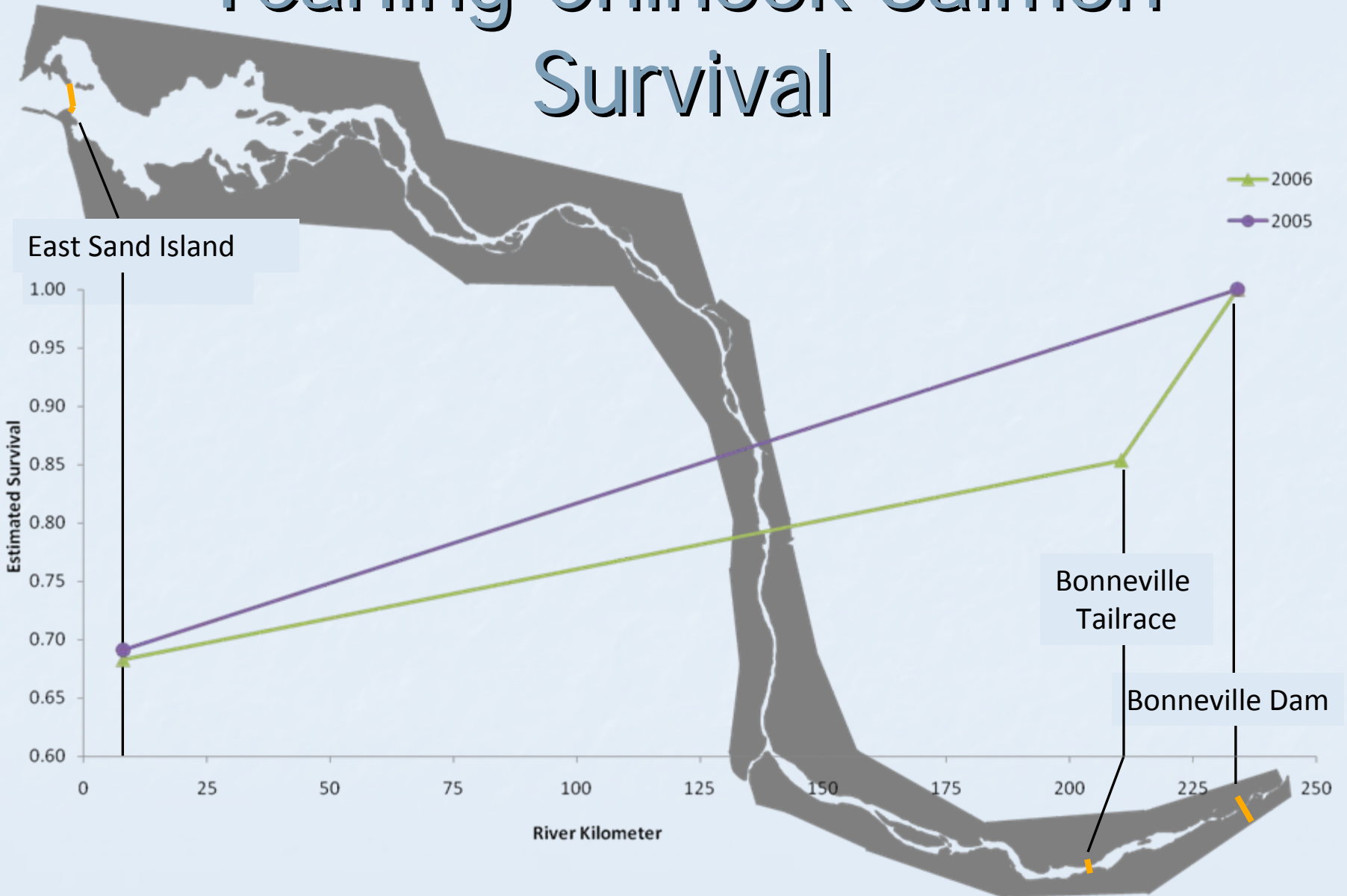
Receiver Locations - 2008



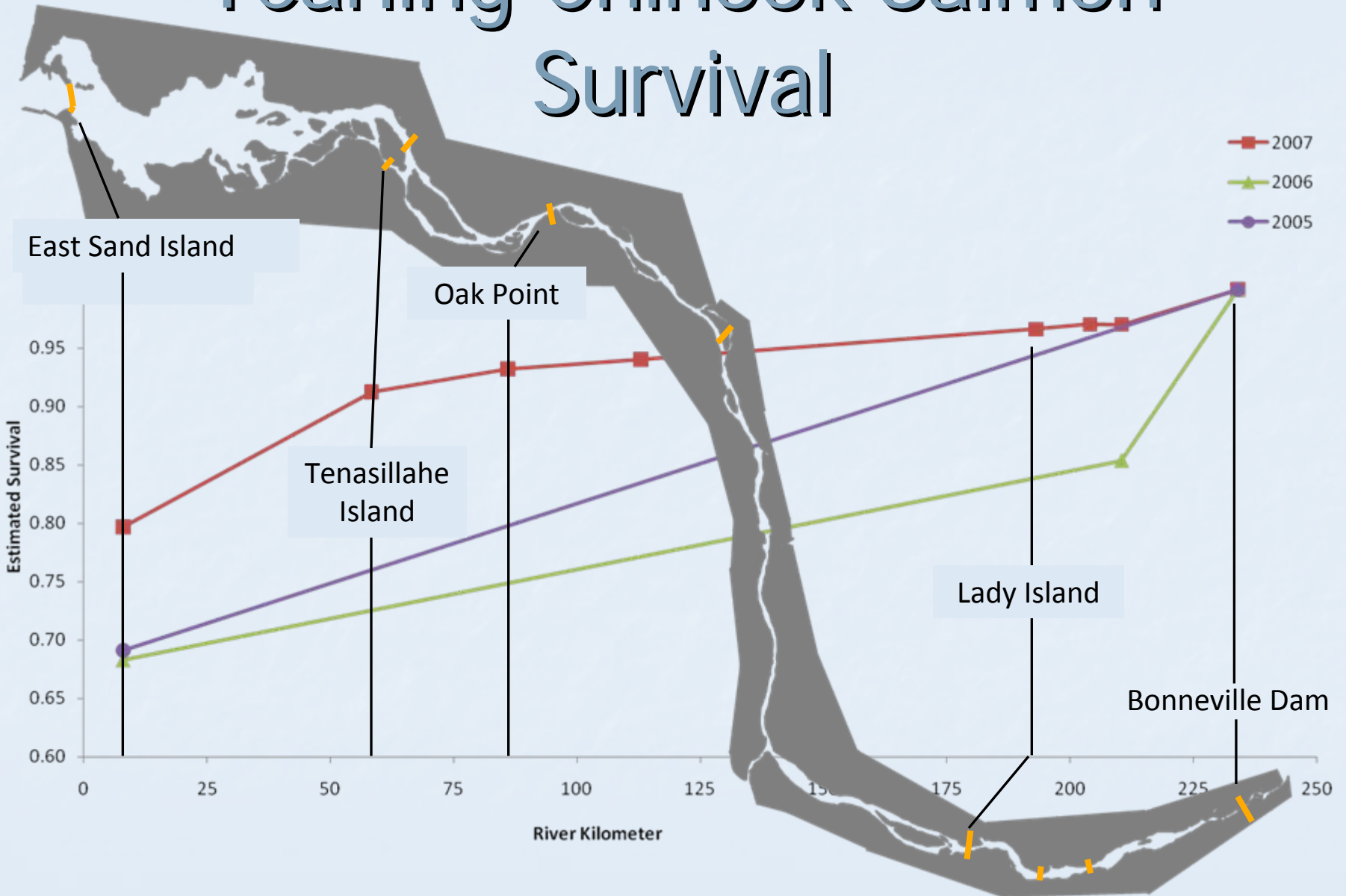
Yearling Chinook Salmon Survival



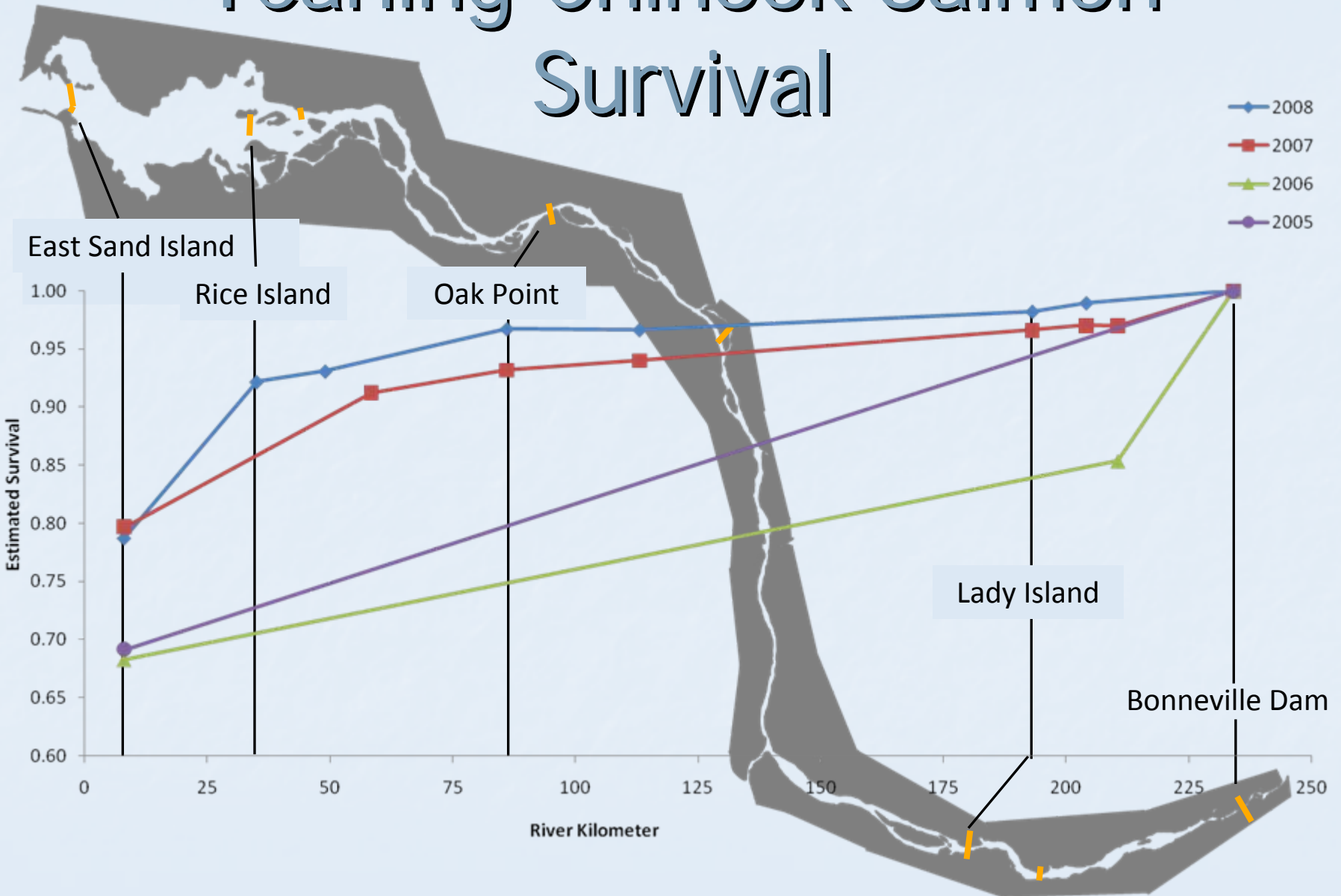
Yearling Chinook Salmon Survival



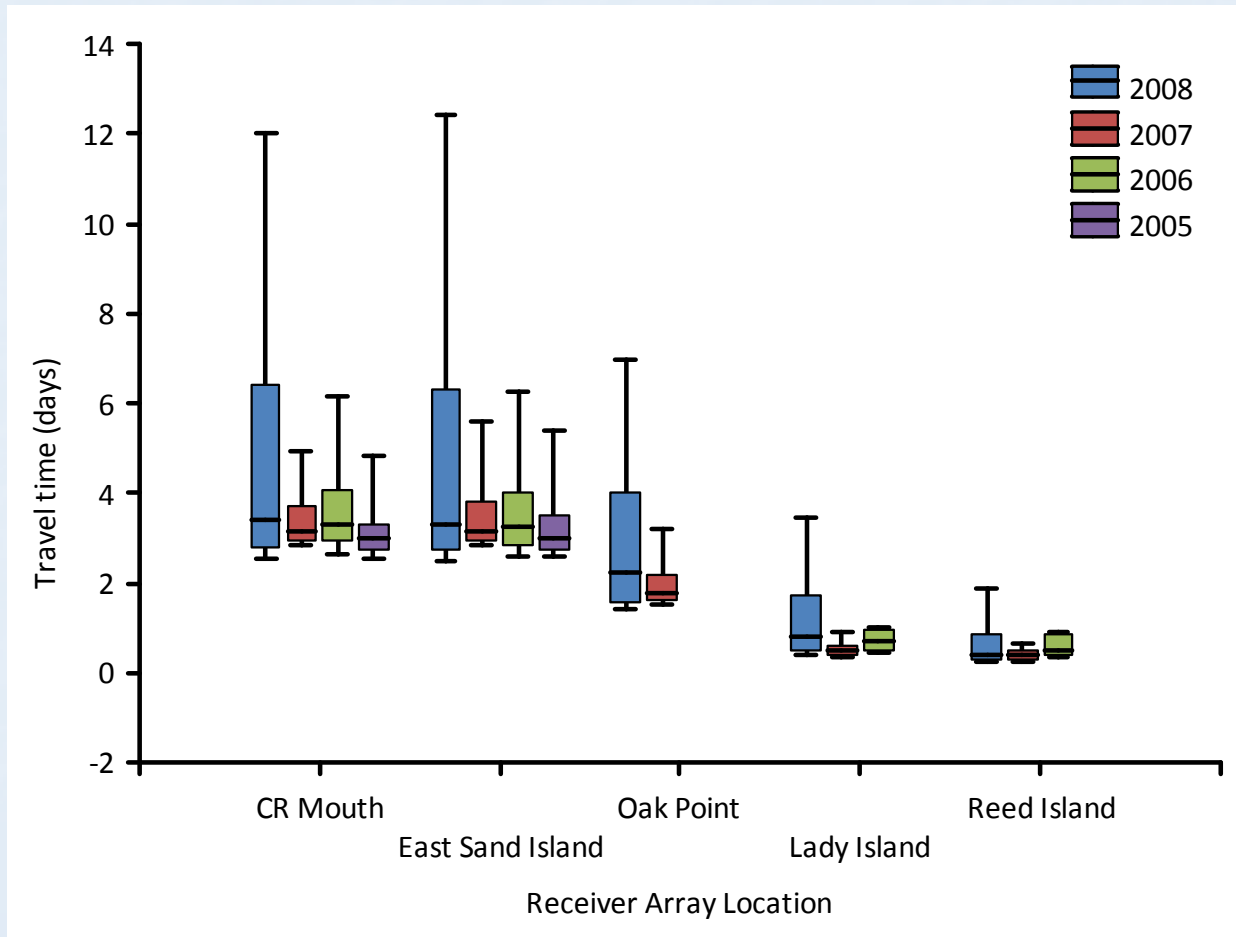
Yearling Chinook Salmon Survival



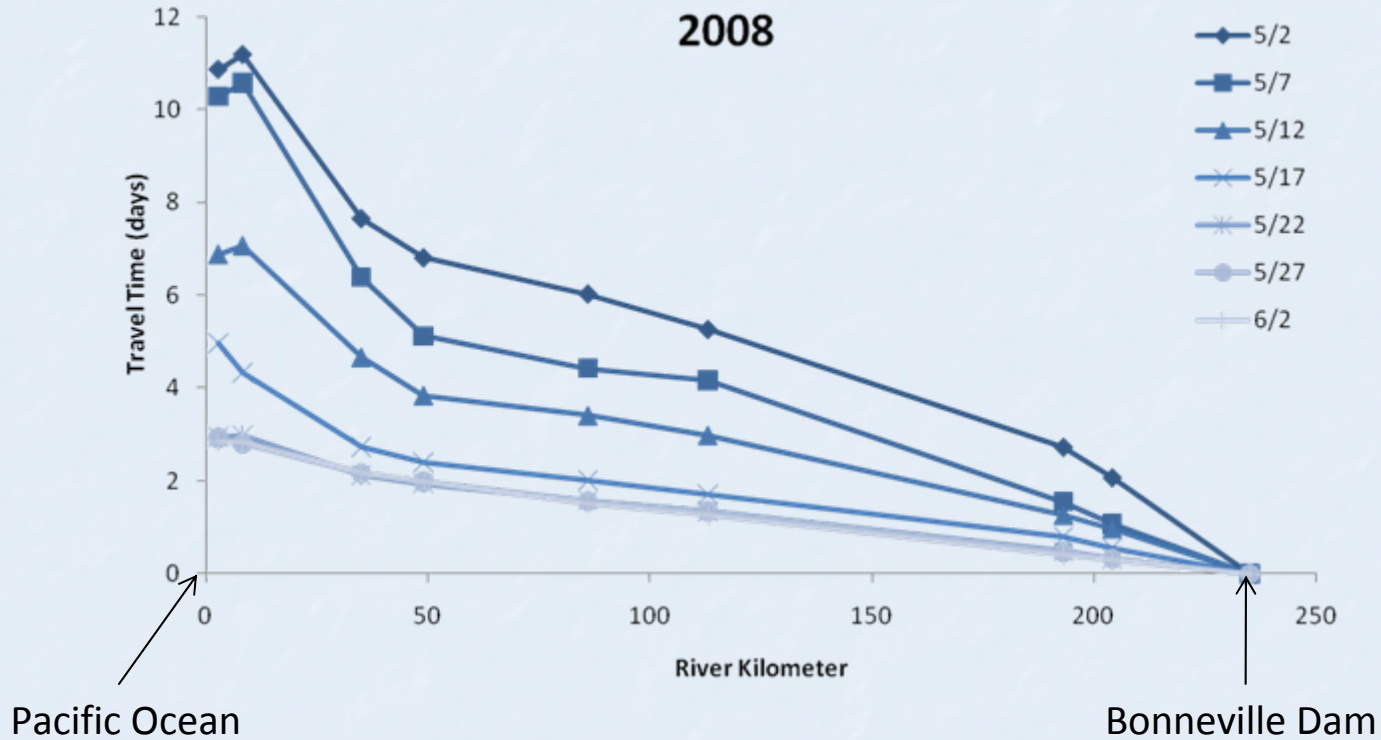
Yearling Chinook Salmon Survival



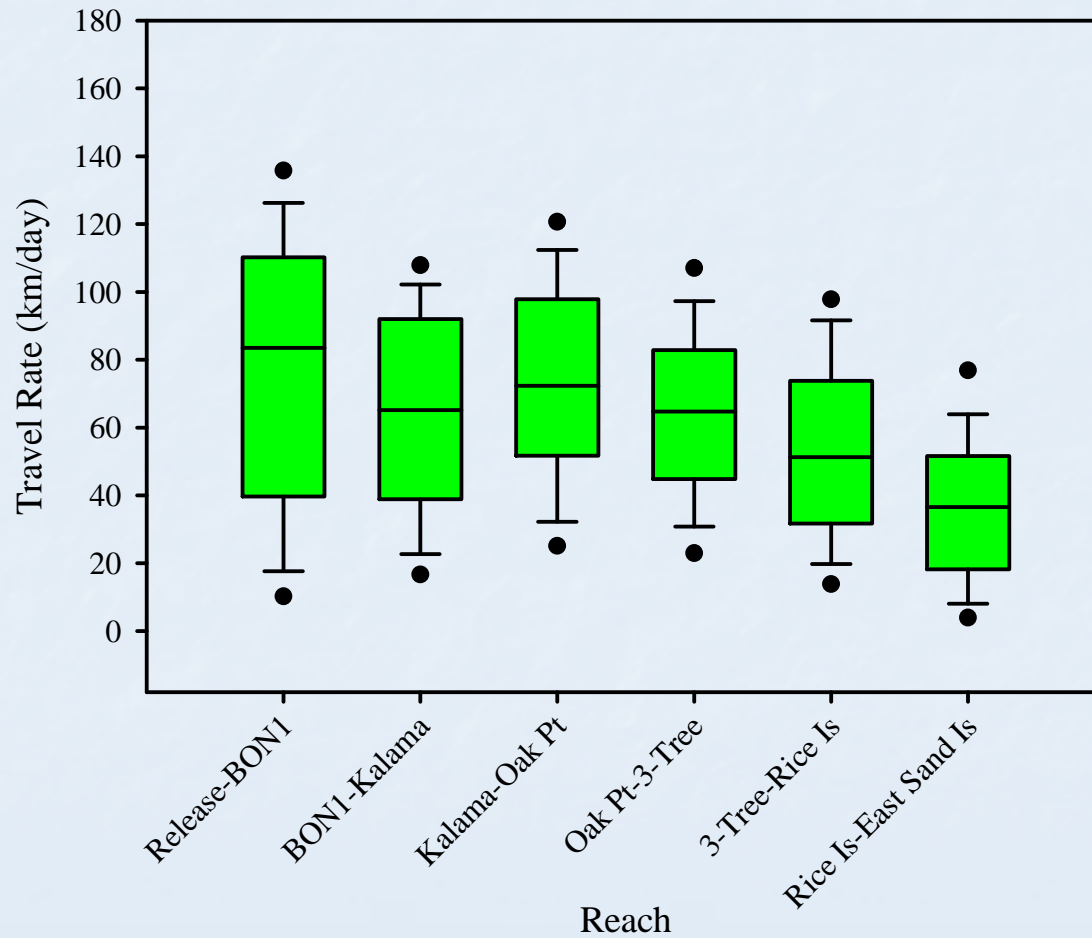
Yearling Chinook Salmon Travel Time- more variable in 2008



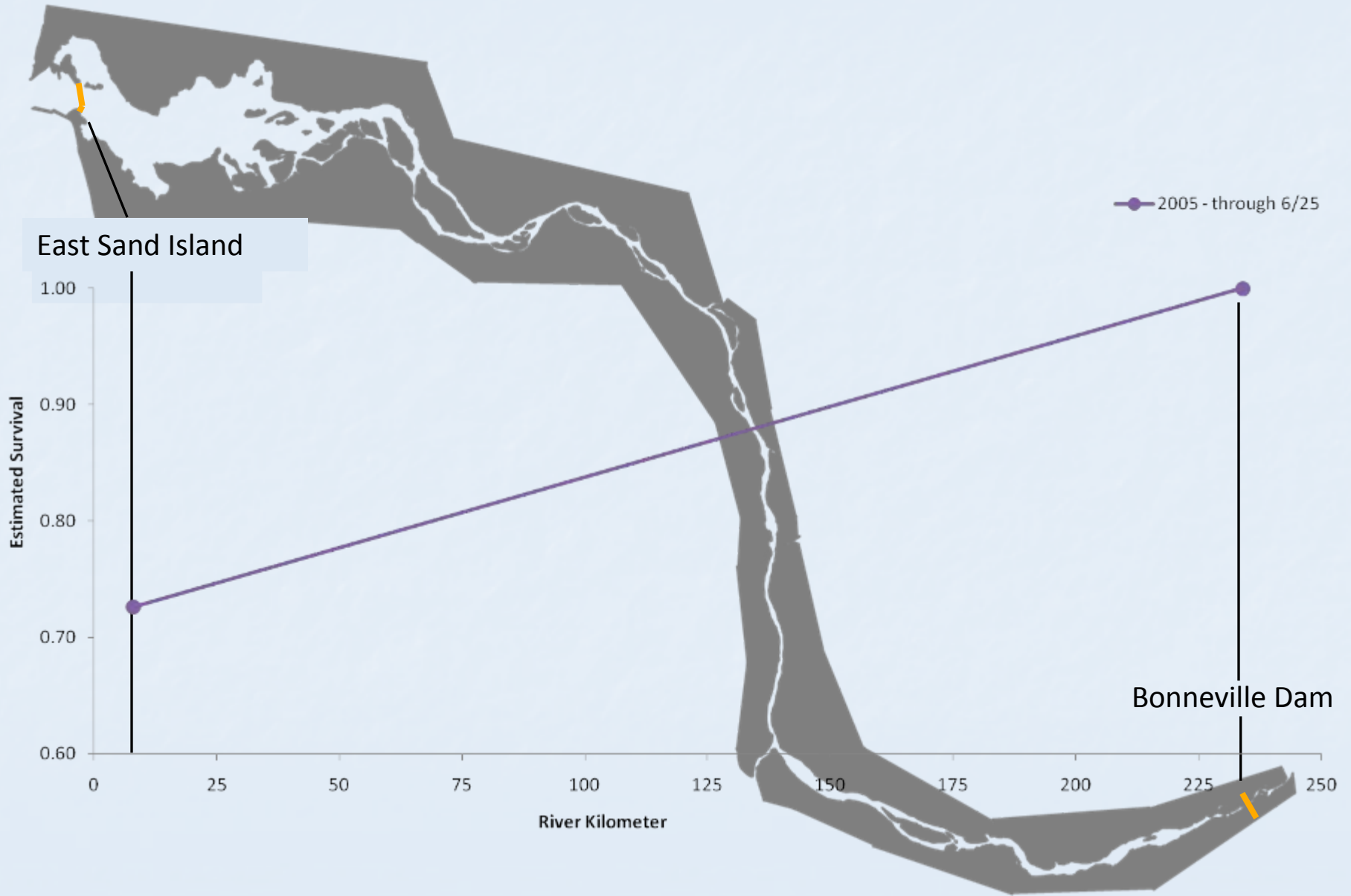
Yearling Chinook Salmon – Early Groups Travel Slower



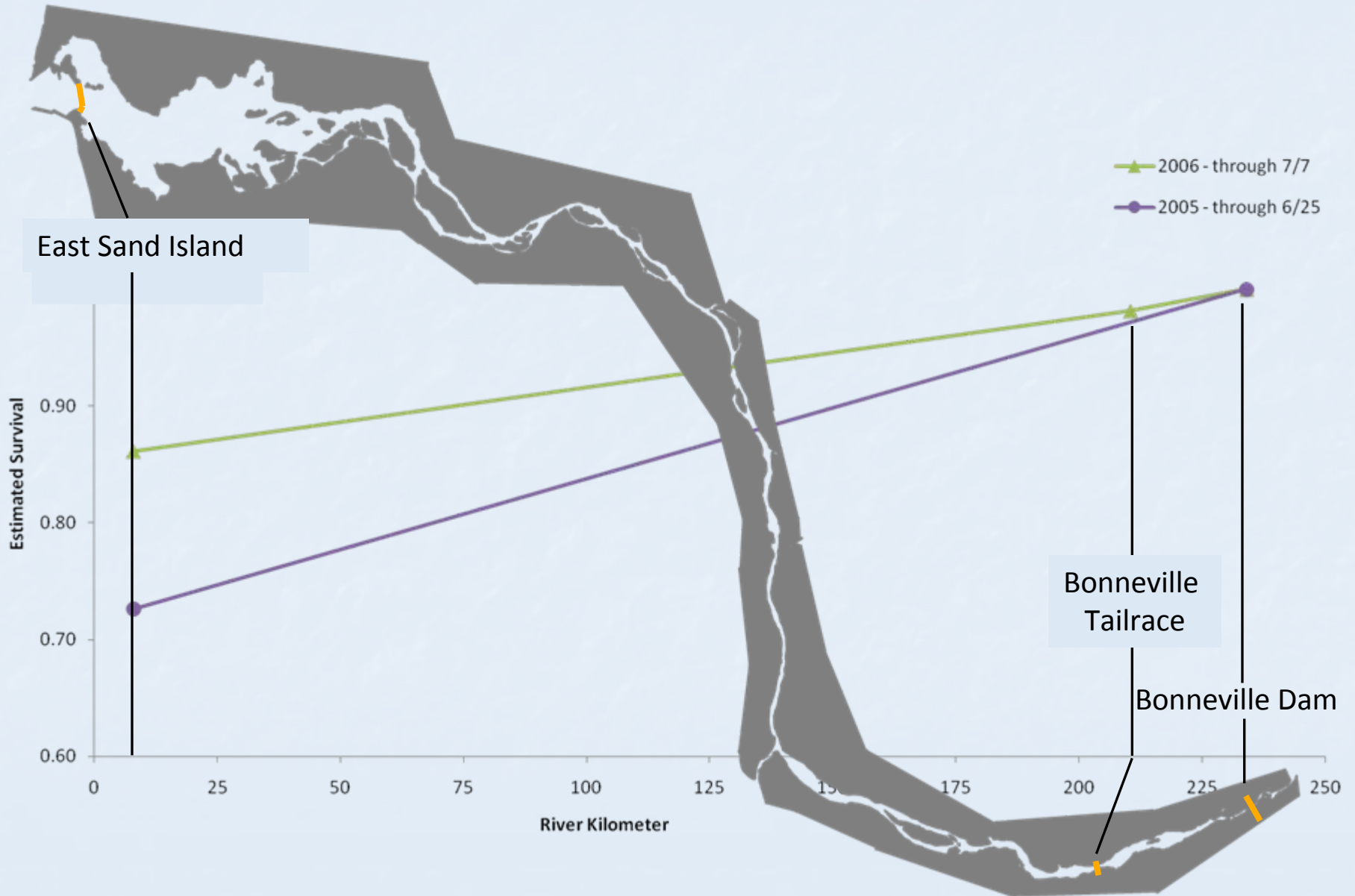
Yearling Chinook Salmon – travel rate decreases as fish move downstream



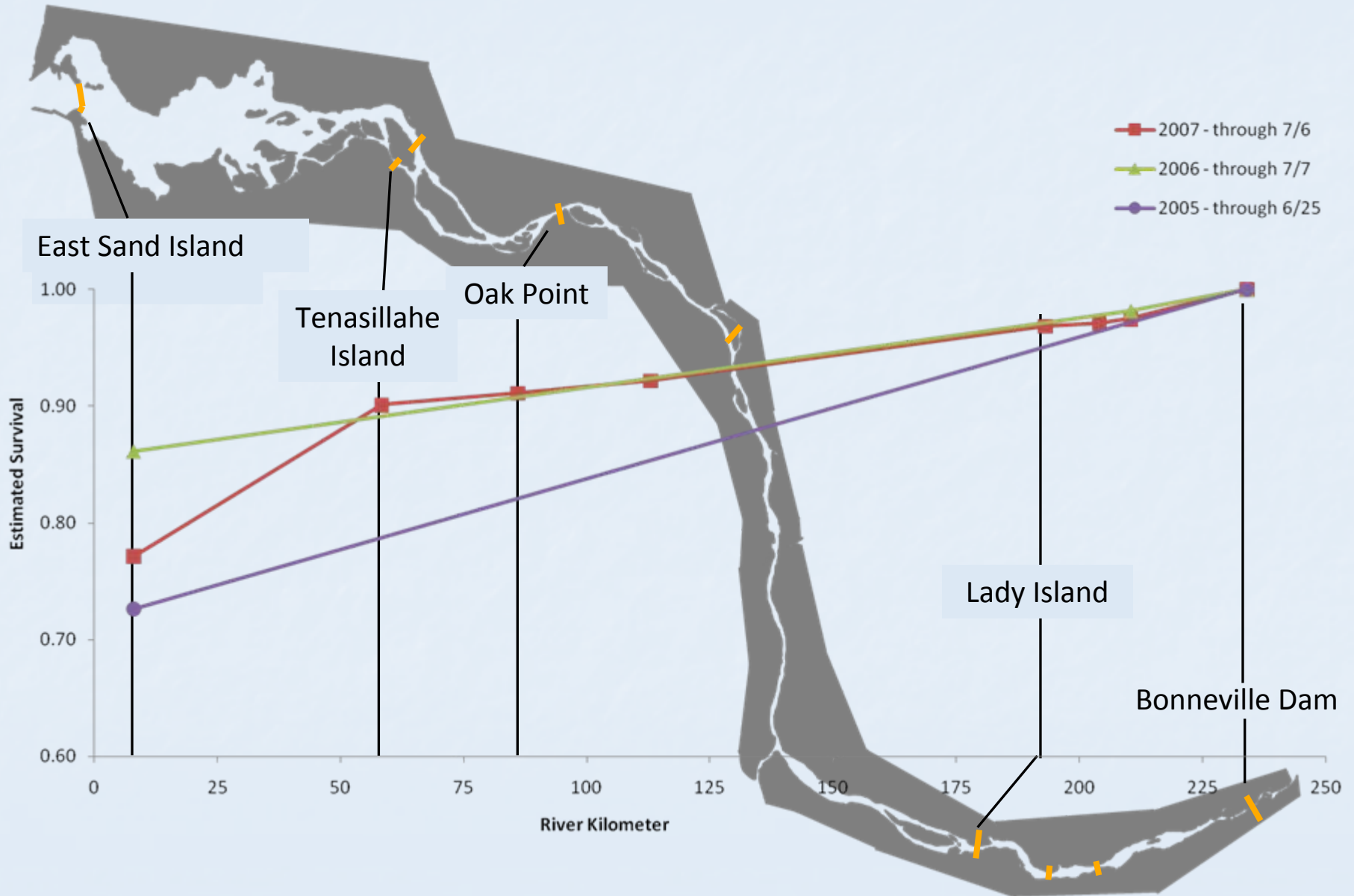
Subyearling Chinook Salmon Survival



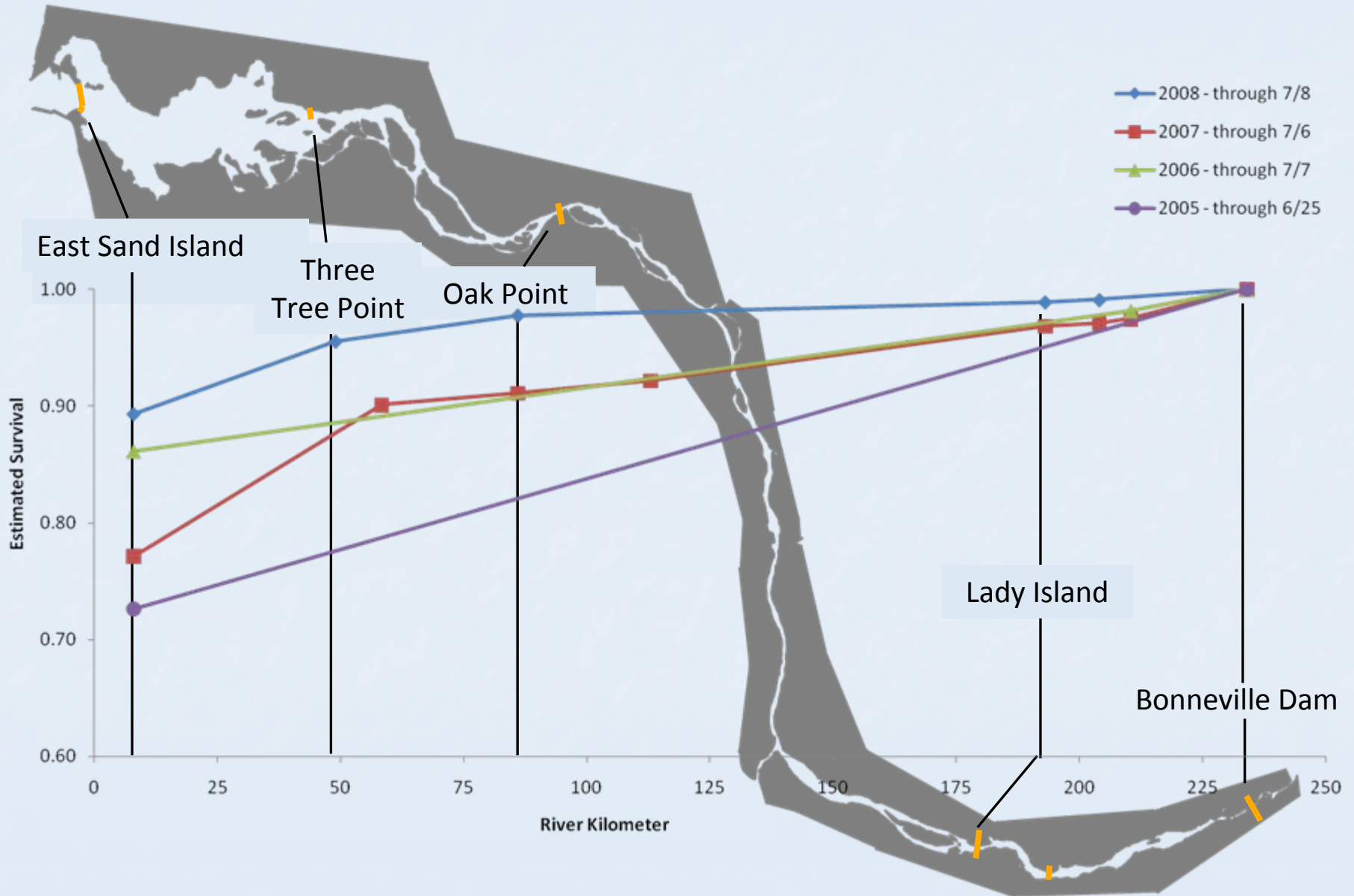
Subyearling Chinook Salmon Survival



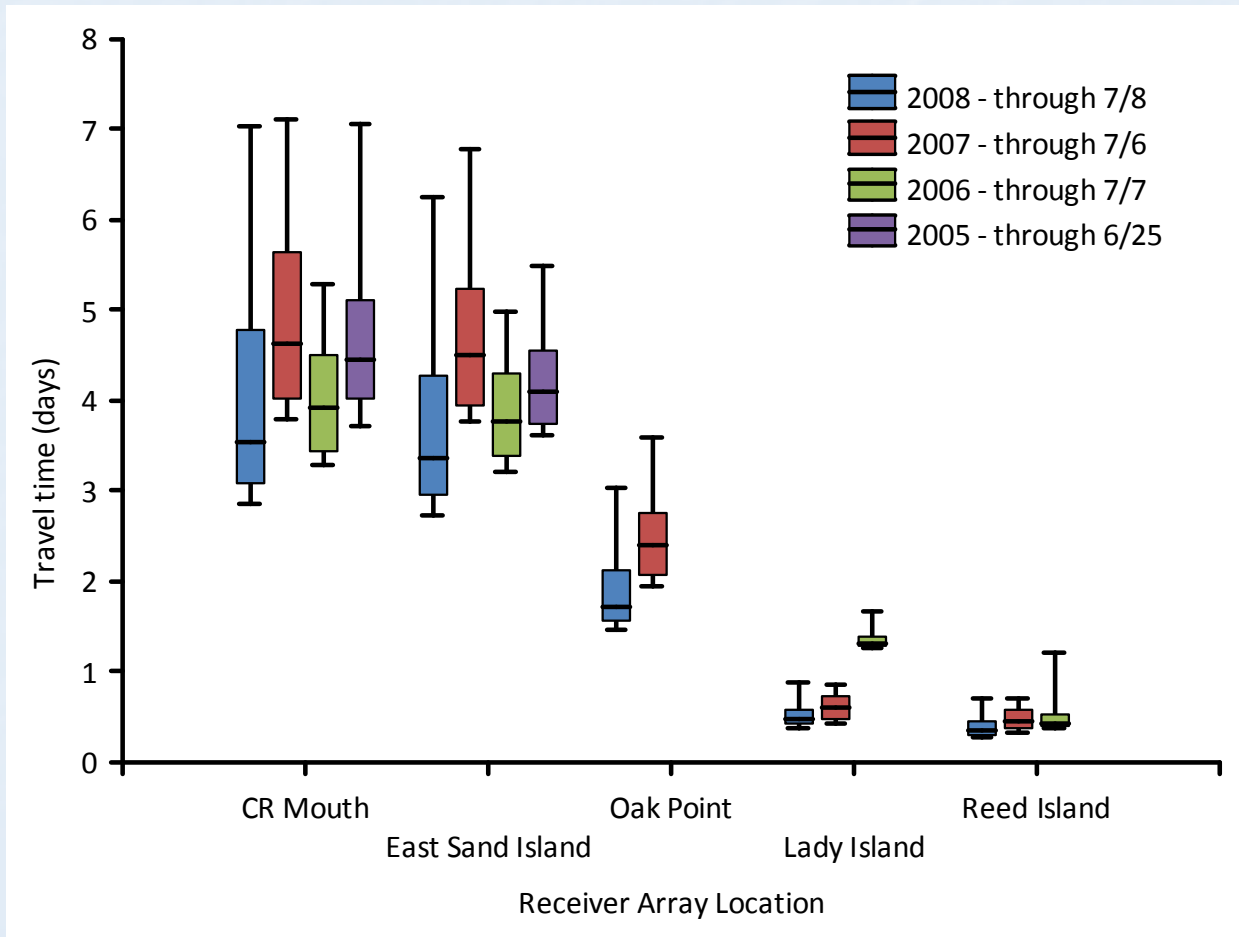
Subyearling Chinook Salmon Survival



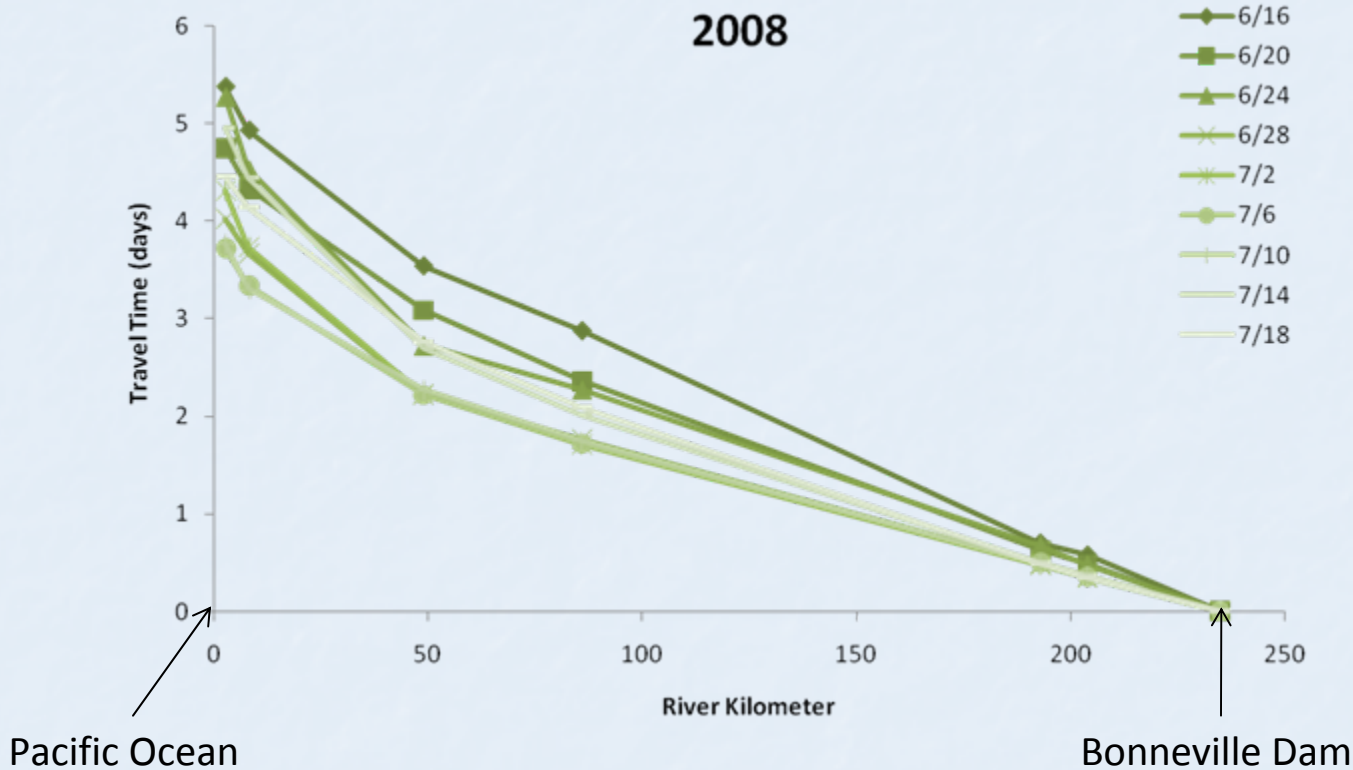
Subyearling Chinook Salmon Survival



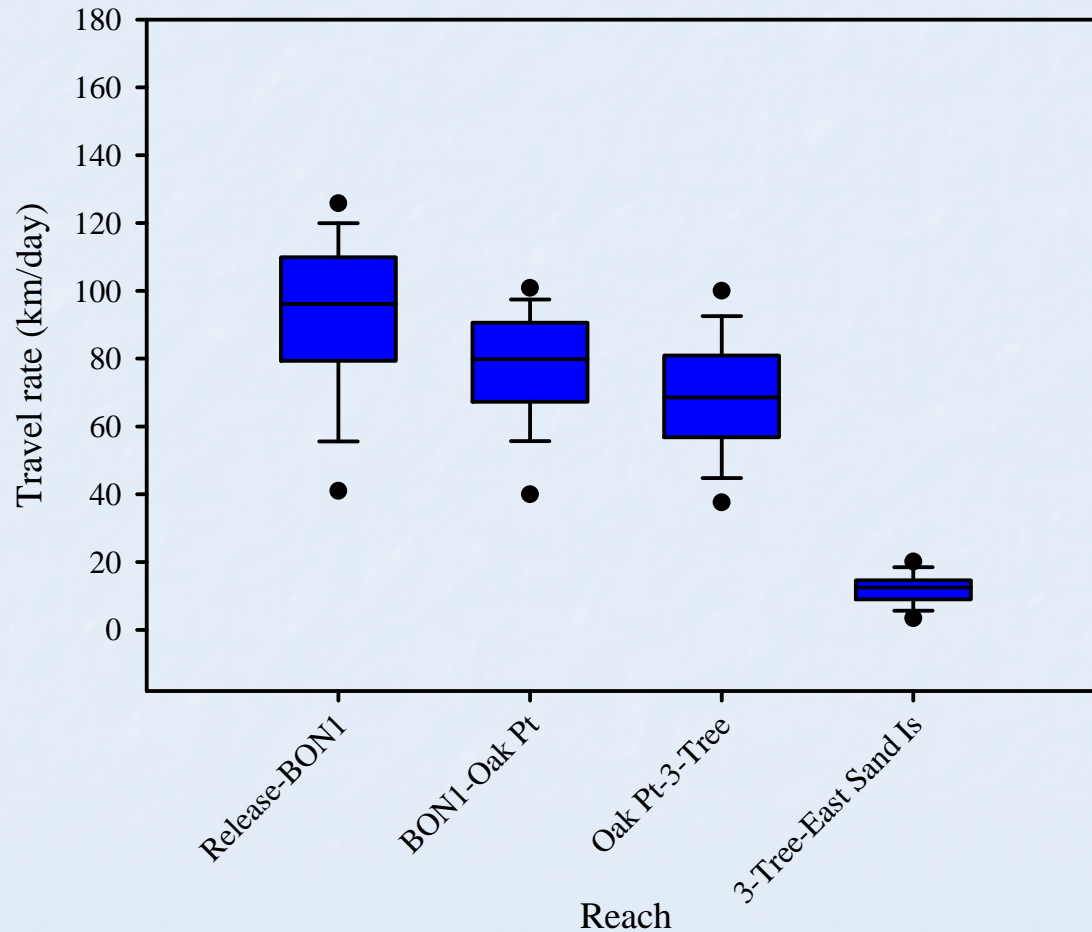
Subyearling Chinook Salmon Travel Time



Subyearling Chinook Salmon – Early Groups Travel Slower



Subyearling Chinook Salmon – travel rate decreases downstream



2008 R&D Efforts

- Plume/near-ocean receiver system
 - Designed/tested in 2008
 - Trawl resistant housing
 - Supports remote communication
- Smaller transmitter
 - 0.30 g tag



Future Plans

- 2009 Plans (limited funding)
 - No fish tagging BON, use JDA project study fish
 - Add additional array Astoria Bridge (in area of highest loss)
 - Spring mobile tracking focus lower 30-50 Km
- 2010 Plans (assumes funding)
(Regional ESA Recovery Plan Support Unknown, CRFM SCT Support Low)
 - Tag fish at BON if deemed necessary
 - Use fish JDA, TDA, BON project studies
 - Focus on lower river losses to determine cause/location of loss
 - Capability to evaluate survival to the river mouth for fish passing all routes at JDA, TDA, and BON
 - Plume capabilities likely possible

For More Information

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