FINAL REPORT SUMMARY

Project Name: Bringing Back the Fish

Commencement date: 23 / 06 / 2006

Completion date: 30 / 11 / 2009

Project leader: Cameron Lay

Staff involved: Matthew Gordos, Scott Nichols, Simon Walsh, Anthony Townsend

Project objectives

The main aim of the Bringing Back the Fish Project was to enhance aquatic ecosystems across the five NSW coastal Catchment Management Authority regions by restoring stream connectivity and rehabilitating key aquatic habitats. Using the prioritisations developed previously, priority instream barriers in each coastal CMA region were targeted for modification to improve fish passage. In addition, rehabilitation of key aquatic habitats was undertaken in each region to assist migratory fish communities. Over a three year period, the project aimed to:

- Remediate (modification, removal, or fishway installation) 10 priority weirs to enhance fish migration (2 / CMA).
- Improve fish passage through structural redesign or removal at 20 road crossings (4 / CMA).
- Modify and improve management of 45 floodgates in coastal NSW to provide improved fish passage and/or aquatic health.
- Rehabilitate 5 key habitat sites (1/CMA).
- Improve fish access to greater than 1000 km of stream length.
- Enhance habitat quality (250 ha) through activities including floodgate management, wetland reinundation, riparian revegetation, and Large Woody Debris insertion (LWD).
- Engage the commercial fishing industry and recreational fisheries in regional NRM program delivery.
- Complete an extended monitoring program at 5 key rehabilitation sites – 2 weirs (fishway and one other site), 1 road crossing, 1 floodgate, and 1 rehabilitated habitat site.

Project outputs and outcomes

The coastal component resulted in the completion of rehabilitation works at 94 priority sites including 10 weirs, 22 road crossings, 54 floodgates, and 8 priority habitat sites (see Table 1). Additionally, migrating fish now have improved access to 1,235 km of coastal waterways through the remediation of instream barriers.

TABLE 1: Remediation outputs delivered during Bringing Back the Fish Project.

STRUCTURE TYPE	EXPECTED OUTPUT	DELIVERED OUTPUT	KMS OPENED	KEY HABITAT IMPROVED (Ha)
WEIRS	10	10	611	0
ROADS	20	22	453	50
FLOODGATES	45	54	123	1,694
HABITAT	5	8	48	163
TOTAL	**80**	**94**	**1,235**	**1,907**

Project summary

The Bringing Back the Fish Project was a three year, $3 million program funded by the Australian Government through the Natural Heritage Trust and administered by the Southern Rivers Catchment Management Authority.

The Bringing Back the Fish Project resulted in improved migratory fish access to 1,235 km of additional waterway in coastal NSW through the remediation of 94 priority sites including 10 weirs, 22 road crossings, and 54 floodgates.

Native fish populations also benefited from aquatic habitat rehabilitation projects that improved core habitat health to 1,907 ha at 8 key habitat sites using innovative techniques including seagrass friendly moorings and bank stabilising rock fillets.

Approximately $2.5 million was provided towards the completion of onground works; with in-kind funding from project partners bringing total project expenditure to $9 million.

Regions where the project was conducted

The Bringing Back the Fish project covered the five NSW coastal Catchment Management Authority regions (Northern Rivers, Hunter Central Rivers, Hawkesbury-Nepean, Sydney Metropolitan, and Southern Rivers CMAs).

Location of specific sites / communities / organisations

A total of 94 sites were addressed as part of this project with the majority of these being located in the Northern Rivers CMA region. A large number of floodgates were remediated in this CMA (45 floodgates), in addition to 9 roads, 4 weirs and 2 habitat sites. The breakdown of structures addressed per CMA is shown in table 2.

TABLE 2: Breakdown of Bringing Back the Fish Project remediation outputs by CMA.

CMA REGION	WEIRS	ROADS	FLOODGATES	HABITAT	TOTAL
NRCMA	4	9	45	2	**60**
HCRCMA	3	5	4	1	**13**
HNCMA	0	3	1	2	**6**
SMCMA	3	2	0	2	**7**
SRCMA	0	3	4	1	**8**
TOTAL	**10**	**22**	**54**	**8**	**94**

TABLE 3: Sites addressed as part of the Bringing Back the Fish project and environmental benefit reinstated

CMA	SITE NAME	CATCHMENT	REMEDIATION OUTPUT	PROJECT BENEFIT
WEIRS				
Northern Rivers	Manyweathers Weir	Richmond	Removed obsolete weir	288 km
Northern Rivers	Mullumbimby Ck Weir 2	Brunswick	Removed weir, inserted rock-ramp fishway	9 km
Northern Rivers	Hickeys Creek Weir	Macleay	Removed obsolete weir	62 km
Northern Rivers	Duroby Creek Weir	Tweed	Removed obsolete weir	10 km
Hunter Central Rivers	Locketts Crossing	Coolongolook	Rock-ramp fishway, box culvert	63 km
Hunter Central Rivers	Stroud Weir	Karuah	Full-width rock-ramp fishway	47 km
Hunter Central Rivers	Lansdowne Weir	Macleay	Altered attraction flow, raised weir invert	5 km
Sydney Metropolitan	Ingleburn Weir	Georges	Rock repositioning	52 km
Sydney Metropolitan	Redundant Weir	Georges	Remove obsolete weir	26 km
Sydney Metropolitan	Lane Cove Weir	Parramatta	Partial-width rock-ramp fishway	49 km
ROADS				
Northern Rivers	Old Lismore Rd Culvert	Tweed	Low flow box culverts (4)	16 km
Northern Rivers	Casuarina Lane Causeway	Clarence	Rock-ramp fishway & box culvert	96 km
Northern Rivers	Stuarts Island Causeway	Nambucca	Low flow box culverts (2)	1 km
Northern Rivers	Lorne Road Obsolete	Camden Haven	Removed obsolete crossing	15 km
Northern Rivers	Houghlahans Ck Obsolete	Richmond	Removed obsolete crossing	1 km
Northern Rivers	Tucki Tucki Obsolete	Richmond	Removed obsolete crossing	7 km
Northern Rivers	Lacks Ck Obsolete 1	Brunswick	Removed obsolete crossing	1 km
Northern Rivers	Lacks Ck Obsolete 2	Brunswick	Removed obsolete crossing	3 km

CMA	SITE NAME	CATCHMENT	REMEDIATION OUTPUT	PROJECT BENEFIT
Northern Rivers	Upper Burringbar Rd Obsolete	Tweed	Removed obsolete crossing	6 km
Hunter Central Rivers	Clarksons Crossing	Wallamba	Removed obsolete crossing	3 km
Hunter Central Rivers	Wang Wauk	Wang Wauk	Removed obsolete crossing	85 km
Hunter Central Rivers	Stantons Crossing	Manning	Rock-ramp fishway	2 km
Hunter Central Rivers	Hortons Crossing	Manning	Rock-ramp fishway	12 km
Hunter Central Rivers	Manning Obsolete	Manning	Removed obsolete crossing	4 km
Hawkesbury-Nepean	Bunnigalore Road	Wollondilly	Full-width rock-ramp fishways, bank protection, alternate watering points, revegetation	29 km
Hawkesbury-Nepean	Cattai Road	Hawkesbury	Partial-width rock-ramp fishway	8 km / 22 ha
Hawkesbury-Nepean	McClymonts Road	Hawkesbury	Partial-width rock-ramp fishway, box culverts	75 km
Sydney Metropolitan	Australia Avenue	Parramatta	Partial-width rock-ramp fishway	1 km / 5 ha
Sydney Metropolitan	Turella Weir	Georges	Partial-width rock-ramp fishway	3 km
Southern Rivers	Quart Pot Road	Clyde	Low flow box culverts (2)	20 km
Southern Rivers	The River Road	Clyde	Low flow box culverts (2)	22 km
Southern Rivers	Northangera Road	Shoalhaven	Low flow box culverts (3)	43 km
FLOODGATES				
Northern Rivers	Tweed (22)	Tweed	Auto-tidal gates	43 km / 50 ha
Northern Rivers	Richmond (6)	Richmond	Auto-tidal gates	8 km
Northern Rivers	Clarence (16)	Clarence	Various improved management options	50 km / 442 ha
Northern Rivers	Macleay (1)	Macleay	Auto-tidal gate	6 km / 571 ha
Hunter Central Rivers	Mamboo Island 1	Tweed	Inserted sill at raised invert	10 ha
Hunter Central Rivers	Mamboo Island 2	Richmond	Inserted sill at raised invert	10 ha
Hunter Central Rivers	Mamboo Island 3	Clarence	Inserted sill at raised invert	10 ha
Hunter Central Rivers	Tomago	Macleay	Inserted Smartgate	1 km / 226 ha
Hawkesbury-Nepean	Bayview Golf Club	Hawkesbury (Pittwater)	Auto-tidal floodgate	3 km
Southern Rivers	Shoalhaven (3)	Shoalhaven	Auto-tidal gate	4 km
Southern Rivers	Jellat Jellat	Bega	Winch gate	9 km / 375 ha
HABITAT				
Northern Rivers	Clarence Estuary	Clarence	Low flow box culverts (2) & Lake Wooloweyah	7 km
Northern Rivers	Vallances Road STP	Brunswick	Fencing, causeways,	1 km

CMA	SITE NAME	CATCHMENT	REMEDIATION OUTPUT	PROJECT BENEFIT
			revegetation, rock fillets	
Hunter Central Rivers	Lower Wallamba Estuary	Wallamba	Levee decommissioning, rock fillets	107 Ha
Hawkesbury-Nepean	Seagrass Friendly Moorings	Hawkesbury (Pittwater)	Install 34 seagrass friendly moorings	1 ha
Hawkesbury-Nepean	One Tree Reach Wetland	Hawkesbury	Purchase of wetland for conservation	9 ha
Sydney Metropolitan	Seagrass Friendly Moorings	Sydney Harbour (Manly Cove)	Install 33 Seagrass friendly moorings	1 ha
Sydney Metropolitan	Wharf Road Saltmarsh	Parramatta	Weed and rubbish removal	1 ha
Southern Rivers	The River Road	Clyde	Full-width rock-ramp fishway	40 km

A wide rang of stakeholders were engaged as part of the project including:

- Catchment Management Authorities,
- Regional Steering Committees,
- Local Government (see below),
- Office of Water (formerly Department of Water and Energy),
- Land Property Management Agency (formerly Department of Lands),
- Department of Environment, Climate Change, and Water,
- National Parks and Wildlife Service,
- Soil Conservation Services,
- State Water Corporation, Fishway Consulting Services,
- Manly Hydraulics Laboratory,
- Department of Commerce,
- MidCoast Water,
- Streamline River Restoration,
- Local Aboriginal Land Councils,
- Landcare / RiverCare,
- Recreational Fishermen,
- Council of Freshwater Anglers,
- Commercial Fishermen,
- Wetland Care Australia,
- NSW Recreational Fishing Trust, and the
- NSW Environmental Trust.

Local Governments engaged during this project included:

- Tweed Shire Council
- Byron Shire Council
- Singleton Shire Council
- Cessnock Shire Council

- Ballina Shire Council
- Lismore City Council
- Kyogle Shire Council
- Richmond Valley Council
- Richmond River County Council
- Armidale-Dumaresq Shire Council
- Clarence Valley Council,
- Coffs Harbour City Council
- Nambucca Shire Council
- Kempsey Shire Council
- Port Macquarie Shire Council
- Greater Taree City Council
- Gloucester Shire Council
- Great Lakes Shire Council
- Port Stephens Shire Council
- Lake Macquarie Shire Council
- Wyong Shire Council
- Gosford Shire Council
- Hawkesbury City Council
- The Hills Shire Council
- Pittwater Council
- Campbelltown City Council
- Fairfield City Council
- Liverpool City Council
- Canterbury City Council
- Rockdale City Council
- Shoalhaven City Council
- Eurobodalla Shire Council
- Palerang Council
- Bega Valley Shire Council

Expected impacts at these sites / communities / organisations

Specific site benefits are shown in the table above, however fish passage was reinstated to a total of 1,235 km of waterways and 1,907 Ha of wetland habitat rehabilitated.

Partnerships were developed with the stakeholder organisations listed above to address priority sites. These partnerships are ongoing and will serve to further improve the quality and availability of fish habitat beyond the life of the Bringing Back the Fish project.

Stakeholder groups, in particular local councils have benefited from the project through provision of information relating to improved construction techniques for instream structures and by providing methods for addressing existing instream structures so that fish passage will continue to benefit in the future.