



Two years after completion of the project to convert from underground to open pit mining operations, McArthur River Mine has undertaken all initial rehabilitation of the McArthur River and Barney Creek channels as part of a long-term rehabilitation strategy.

In an effort to further assist rapid re-establishment of the riverine habitats, we are continuing to plant more seedlings and conduct more direct seeding of the channels.

While the Phase 3 Development Project will not require further rechanneling of McArthur River or Barney Creek, our commitment to return the environment to the form and function of its original state is best demonstrated with rehabilitation works done to date.

MRM's intensive rehabilitation program continues to show positive results.

Key facts

- 80,000 tube-stock plants have been planted along the diverted McArthur River and Barney Creek, more than double the 35,000 originally planned.
- More than 15,000 fish representing 46 species have been captured and tagged since 2006 and there is evidence that migration is occurring in the channels.
- The rechanneling has been effective in establishing a habitat supportive of the endangered Freshwater Sawfish and a wide variety of other species.
- More than 48,380 riparian bird observations have been made since 2006 involving 138 bird species, including the purple-crowned fairy wren and the buff sided robin.

The rehabilitation of McArthur River and Barney Creek remains a high priority for MRM, with the following key activities already completed to re-establish the ecosystems:

Rehabilitation of McArthur River and Barney Creek

August 2011

- Large woody debris was placed along the channel bed in an additional 35 locations in 2010 to provide micro-habitats for fish. Improved diversity, size and composition of fish species were found as a result.
- The river banks were revegetated using seeds and seedlings from local species already growing along the banks such as Melaleucas, Eucalyptuses and Casuarinas.
- Appropriate soils and fine sediments were used on the channel banks to promote root development.
- Rocky crevices and banks were recreated.
- Plants and weeds were maintained, monitored and replaced as necessary.

10 steps in rehabilitation strategy

1. Site surveys
2. Site clearing
3. Topsoil and vegetation recovery
4. Topsoil infilling of the rock lined batter slopes
5. Placement of large woody debris
6. Planting of seeds and tube-stock from a selection of local species
7. Fertiliser application
8. Maintenance activities
9. Monitoring

Two years on from the successful diversion of the McArthur River, MRM's intensive rehabilitation program is continuing to show positive results.

Since 2008, direct seeding of the McArthur River channel has occurred twice and approximately 80,000 tube-stock planted. This figure is more than double the 35,000 tube-stock originally committed as part of the project's Public Environmental Report for the open pit project.

In the Barney Creek area alone, MRM has planted approximately 27,000 trees since 2007, with some plants now up to nine metres in height after having the benefit of one more growing year than the McArthur River rehabilitation.

MRM – PHASE 3 DEVELOPMENT PROJECT

Monitoring to check progress

The re-alignment of the McArthur River channel was constructed to imitate the form and function of the existing river as closely as possible, and annual monitoring results confirm the area is improving each year with MRM's rehabilitation efforts.

MRM is starting to see a positive trend of animal and plant life returning, which is now populating the beds and banks of the new river alignment. Importantly, fish monitoring has shown that Freshwater Sawfish and other species are travelling through the new channel.

1. Rehabilitation is successfully underway at the McArthur River and Barney Creek channels.



Barney Creek early 2008



Barney Creek early 2011



McArthur River early 2008



McArthur River early 2011

2. More than 80,000 tube-stock plants and trees have been planted along the McArthur River and Barney Creek banks, which is double the 35,000 originally planned.

3. Monitoring results show the areas being rehabilitated are improving each year.



The river banks are planted using seeds and seedlings grown in MRM's nursery. MRM plants local species that already grow along the banks.



MRM now uses special 'irrigation sleds' to water tube-stock which allows planting in the dry season and gives rehabilitation the best possible start.



Water quality and sediment monitoring is undertaken regularly. More than 15,000 fish from 45 species have been tagged and monitoring shows the fish are migrating along the waterways.

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