**Transcript – day in the life of our reef rescuers**

**Deb Callister - Assistant Secretary – Reef Branch**

My names Deb Callister and I’m the assistant secretary in the reef branch. When I say reefs everybody thinks coral reefs. But the Great Barrier Reef world heritage area is way more than just coral reefs. Sure it’s the worlds largest coral reef and that’s absolutely important but it also has all these other really important habitats including massive seagrass meadows which sea turtles feed on, dugongs feed on, fish nurseries. There’s a whole range of other habitats. We all worked to implement the reef 2050 plan which means we deliver a lot of programs and develop a lot of policy to try and help keep the Great Barrier Reef safe and protected. We work with reef stakeholders whether it be farmers in the catchment, whether it be community people doing reef clean ups along the coast, scientists out there studying what the threats are out in the reef. We’re right at that nexus working closely with agriculture and the environment.

**Ben Karlson - Senior project officer – Reef delivery team**

For a grazier their livelihood is based upon the productivity of the land. Our water quality projects work with graziers in the Great Barrier Reef catchment to stop sediment running off farms and out onto the reef. My names Ben Karlson I’m a senior project officer with the department’s reef delivery team. With our gully erosion control plan we work with a team of technical partners coordinated by CSIRO and these are sedimentologists and fluvialgeo-morphologist who help us with the more technical aspects of the programs. Across generations there’s been over grazing so the ground cover has been removed and this leaves the soil basically bare and vulnerable to erosions so when there’s big rain events then as often occurs up on Queensland there’s no roots to actually hold the soil there in situ so it just runs off into the water ways and out onto the reef. And it’s kind of like a feedback loop where it starts being removed from a certain area and you get a bit more of a cavity forming some more water funnelled into the specific area and it picks up more and more soil and eventually you have a system that expands hectares. So these gullies are causing a loss in productivity for the graziers but their also causing drastic negative environmental impacts for the Great Barrier Reef.

**Deb Callister - Assistant Secretary – Reef Branch**

One of the things with water quality is particularly close to shore is it the things we do on land will then flow out through the river systems and out into the near shore environment and that means it can do things like smother near shore corals, it can smother seagrass and that can impact in that overall environment.

**Ben Karlson - Senior project officer – Reef delivery team**

Through the installation of erosion control structures, water diversion banks, porous check dams and larger engineer works. These things coupled with cattle exclusion fencing and revegetation secure the long-term future of these sites. When the vegetation becomes established the roots of these plants hold the soil in situ and prevent it from running out onto the reef.

**Deb Callister - Assistant Secretary – Reef Branch**

So that means we have to work with land managers to try and deliver outcomes that reduce things such as nitrogen run off from cane fields, reduce sediment run off from gully erosion. What we’re trying to do is work for outcomes that will actually resonate with land managers. They have to be something that works for them in the way that they manage their properties it has to be practical, they have to be able to see the benefits and it has to be enduring so when the program finishes the benefits and the changes can endure. Absolutely the Great Barrier Reef has challenges and the biggest challenge for the reef of course is like many many eco systems in Australia and it’s the impact of climate change. But that doesn’t mean that we shouldn’t be doing what we can to mitigate the threats where we can and to help it adapt to those threats in the future and that’s absolutely what we’re trying to target through the reef 2050 plan and through the major funding programs that we’re delivering in combination with a whole bunch of excellent agencies and great stakeholders who are all working to try and protect it in the future.

**Ben Karlson - Senior project officer – Reef delivery team**

I’ve seen the impacts that climate change and other anthropogenic processes are having and it makes me really proud to be part of a team that’s working on solutions for these issues even if it’s just one piece from a larger puzzle.