

# Waimea Community Dam Council Meeting

23 June 2022

Waimea Water



# Overview

## **WWL efficiently delivering a safe, reliable, resilient and fit for purpose Waimea Community Dam**

- ✓ Construction: Embankment and spillway nearing completion. ~**70%** complete
- ✓ Design: Adapted to geological conditions. Above and below spillway
- ✓ No serious harm injuries and full compliance with resource consent requirements.
- ❖ Project further delayed
- ❖ Further cost pressures largely driven by delay and M&E / diversion works
- ❖ Contractor initiated dispute escalation



# Progress Update: Embankment and concrete face

- ✓ Completed embankment in Dec 2021
- ✓ Completed concrete face in May 2022
- ✓ Installing pre-cast parapet wall. Expect to complete July 2022
- ❖ Installing dam face pipes July 2022 (delayed). Expect to install winches and screens during 3Q2022.





# Progress Update: Spillway

- ✓ Largely complete spillway during June / July 2022.
- ❖ Ogee-weir, new approach-apron over shear zones and new downstream cut-off walls during 2H2022





# Mechanical and Electrical

**M&E costs continue to escalate with inflation and implementation due to provisional sum nature**

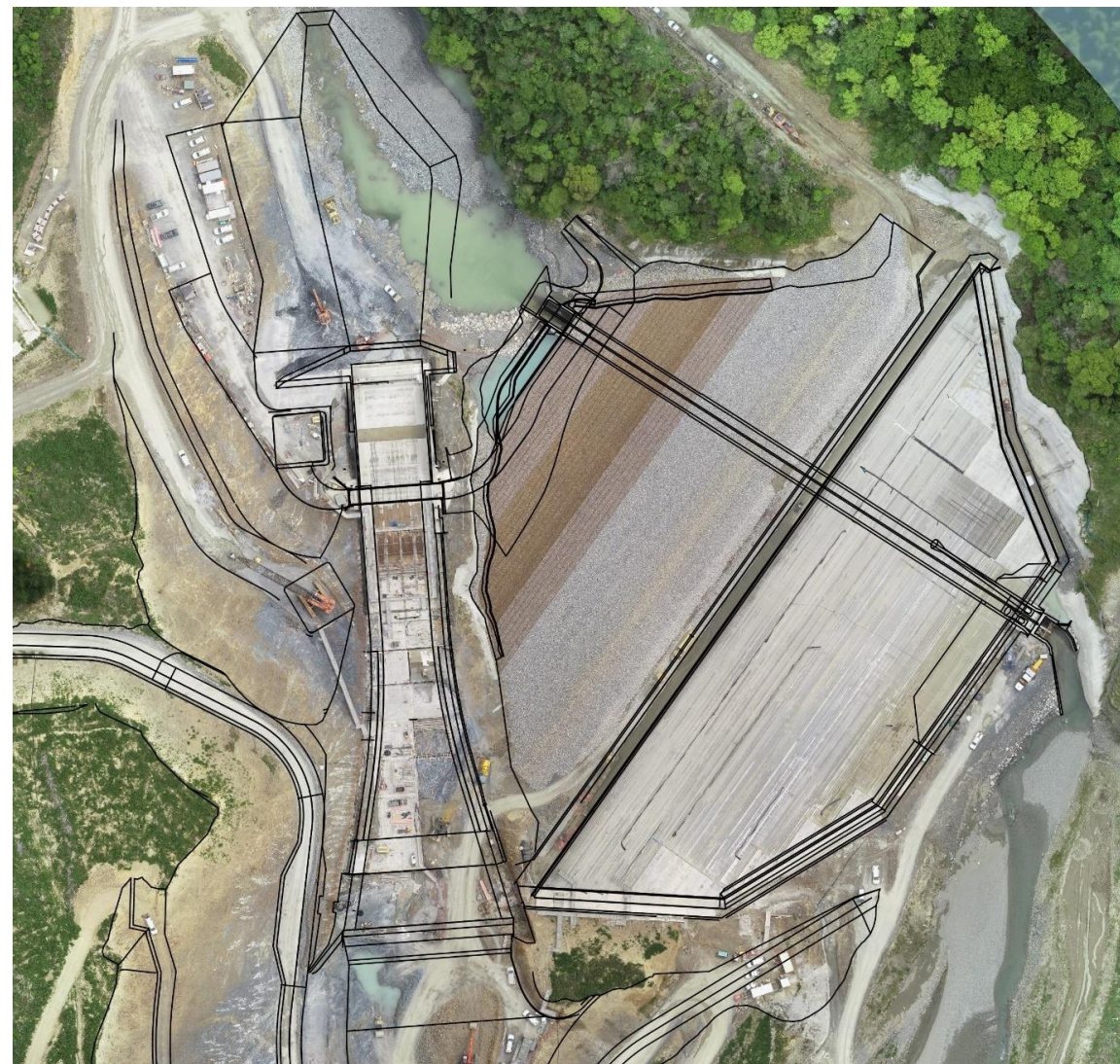
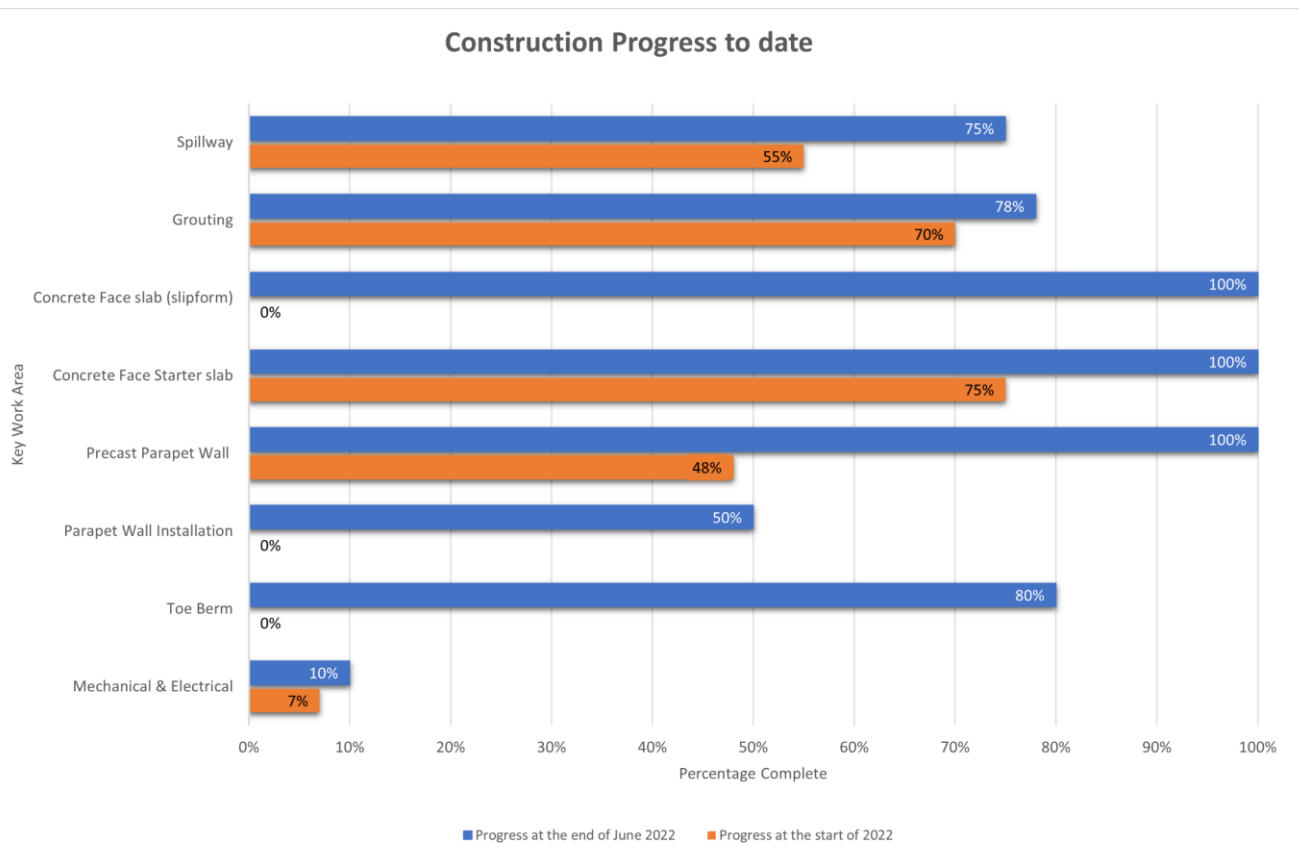
- Undesigned, unpriced and uncontracted at funding and contract award
- Cost and delay pressures
- Most materials (stainless steel, HDPE, GRP, valves, winches) now in Brightwater
- Contractor's programme to install works is significantly longer than plan





# Progress Update: ~70% complete

- ❖ Resource and productivity challenges
- ❖ COVID related loss of staff (~7000 manhours) and delays

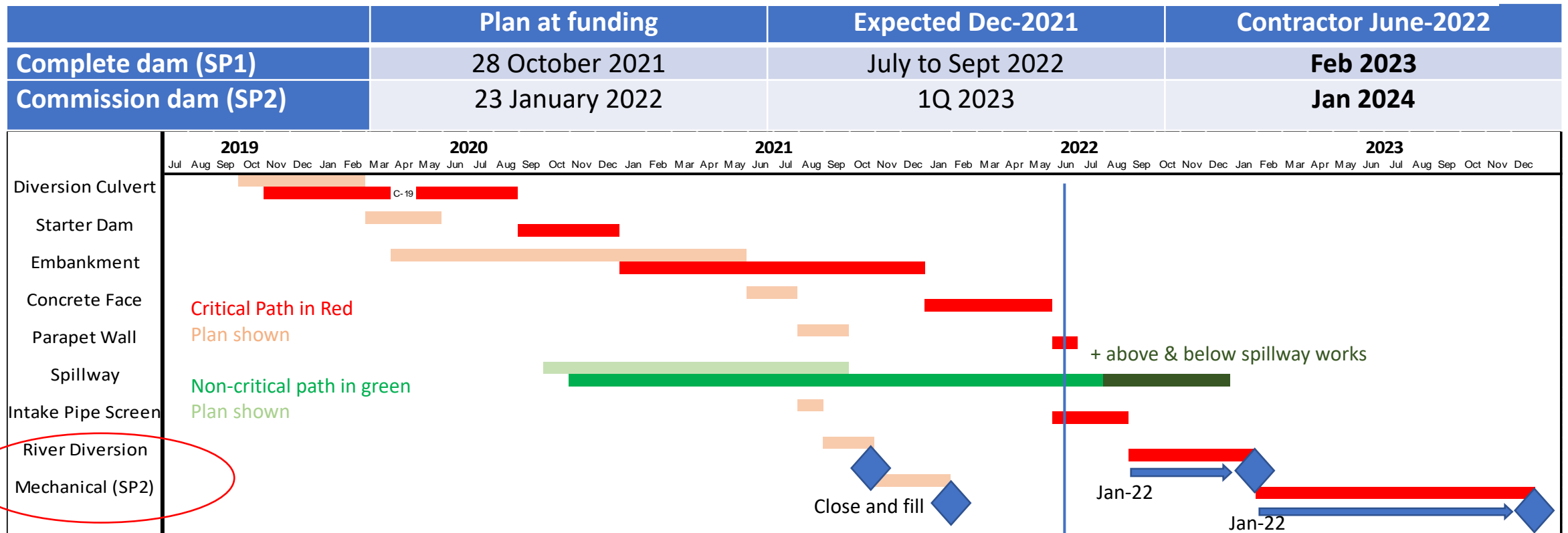


# Programme Delay

Contractor advised in 2Q2022 of further delays: Close and fill reservoir Feb 2023 after 2<sup>nd</sup> summer missed

- ❖ Falling resourcing (#) and productivity (\$ / month)
- ❖ Loss of workforce to COVID-19 restrictions (~7000 hours)
- ❖ Large and concerning prolongation of river diversion (X3) and mechanical works (X4) (*addressing*)

WWL investigating options to mitigate delays. Potential for some recovery.



# Cost forecast

## Events since Feb-21 SOI Cost

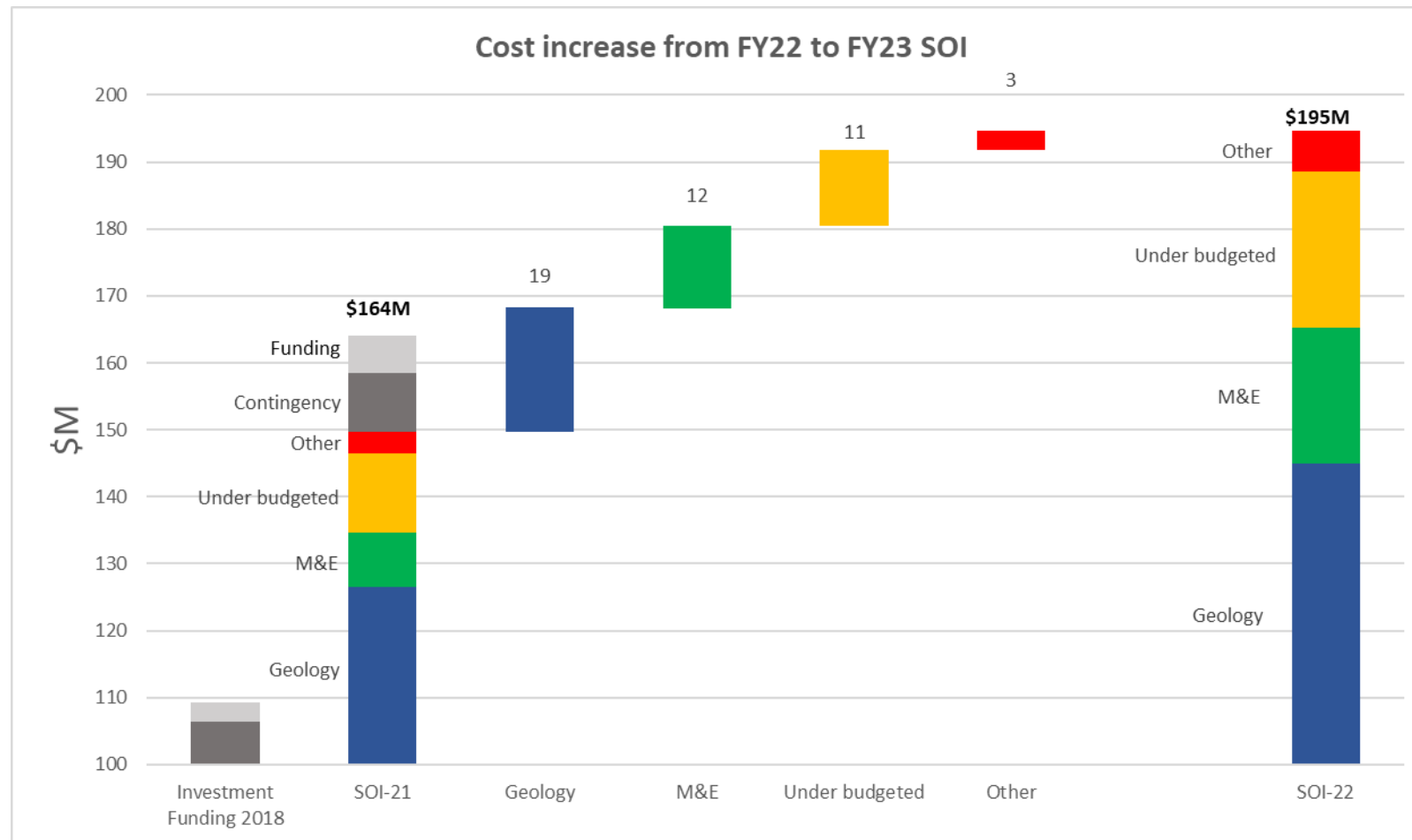
**Feb-2022: \$185M + risk**

- Approach shear zones
- Plunge pool + shear zones
- Grouting & foundation treatment
- M&E costs

**June-2022: \$195M + risk**

- Delay risk based on Contractor forecast
  - Further M&E / River-Diversion costs
  - Geology largely as contemplated
- ❖ Excludes unquantifiable risks (excessive weather; disputes)

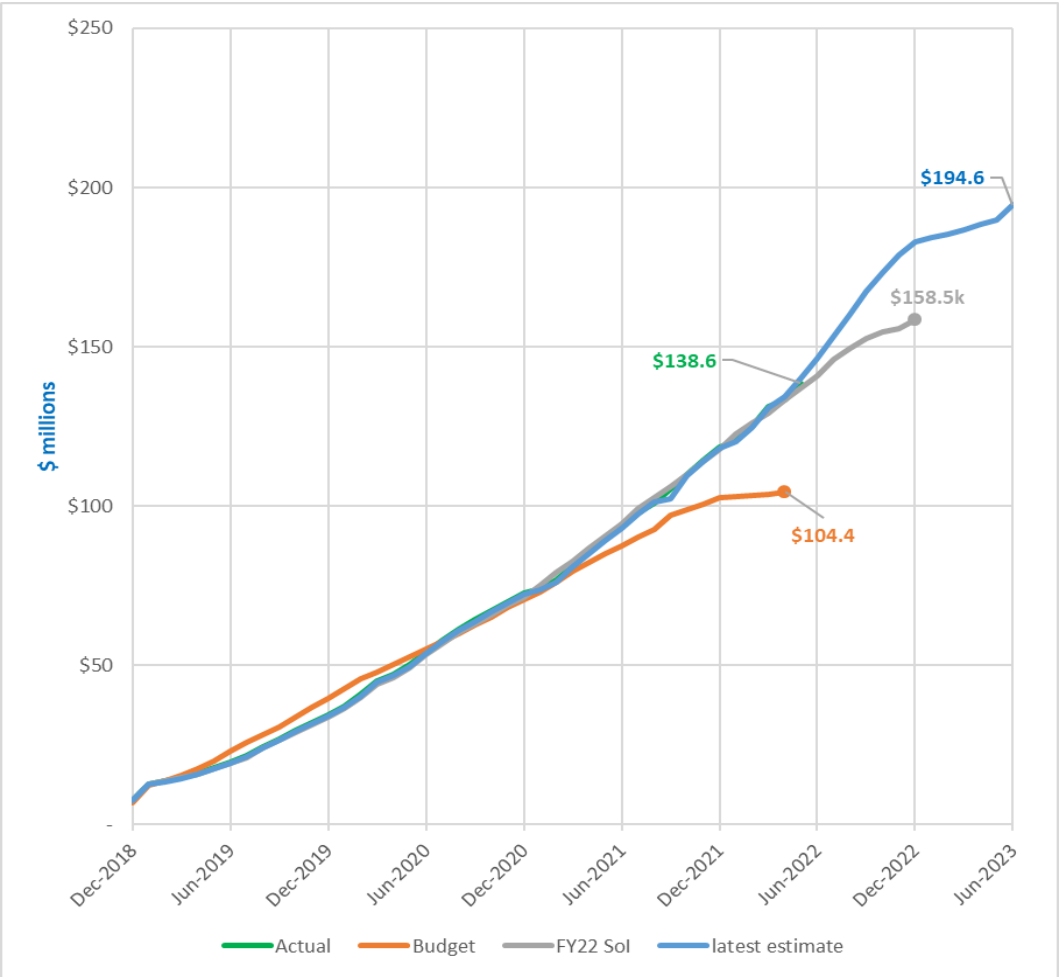
Expect \$195M excluding un-quantifiable risks





# Cost forecast

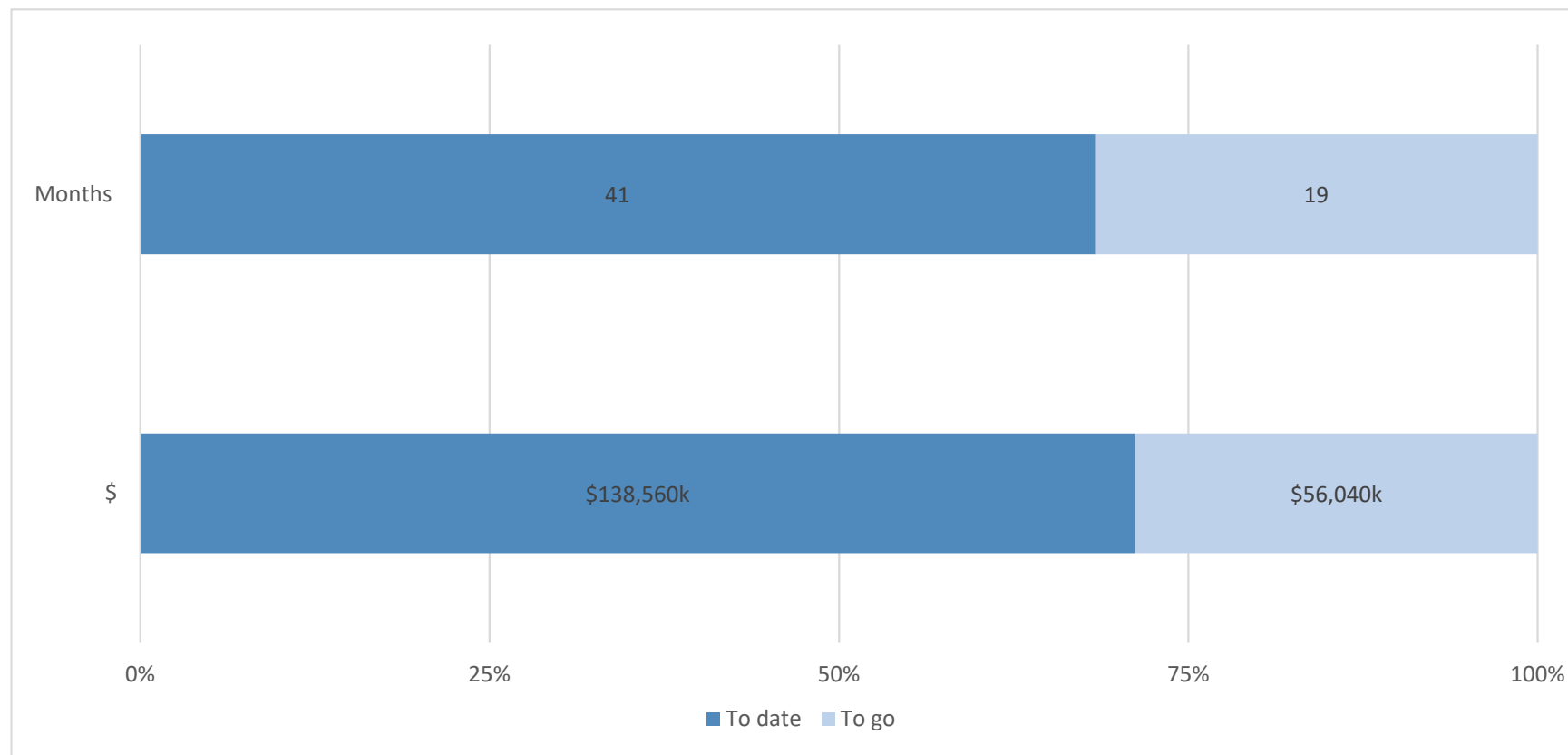
S-Curve



Funding source and use



# Progress and Funding: ~ 70% complete





# Residual Risks

- ❖ Project cost based on currently known costs and risks
  - Reasonable estimate of known risks and trends
  - Based on Contractor's forecast delays, prior to mitigation / recovery
- ❖ Cost forecast excludes un-quantifiable risks / unallocated contingency
  - COVID-19 impacts
  - Excessive-weather
- ❖ Implementing river diversion
- ❖ Further delays (procurement / delivery)
- ❖ Contractor claims and dispute costs

