**Locations problems:**

* PG121 - Onepipi - did not have lon/lat: corrected to same lon/lat as PG092 Onepipi

174.3689974 -41.13900134 601 795 SF Onepipi Bay G121

* G062 - D’Urville - fully outside tiled region - no match: OK leave as non-matching - no change to coordinates

I am also missing this one. To remove

* G086 - Head Nikau - close to shore - OK retain: match to closest polygon

173.8956032 -41.17010106 165 76 PP Head Nikau G086: that is on land. Probably taken at the mussel farm nearby.

* G096 - Te Mahia - on land - and a long way in: clearly wrong! On MPI map Te Mahia should be at x=1681390.0056, y=5436803.2623 But label on MPI map is G108?  
  in our list though G108 is Port Hardy (which is on D’Urville Island…) However MPI list of Port Hardy is G108 too, so the MPI map label is wrong too. Need to fix these coordinates to x=1681390.0056, y=5436803.2623 lon=173.9709, lat=-41.21606

173.9709359 -41.21606075 319 689 SF Te Mahia G108: I agree it is probably labelled wrong. There is already a G108 but no G096. This location (Lon and Lat) is on Te Mahia Jetty, so we can these ones.

* G105 - Black Rock - OK - this is at the head of an inlet - OK retain: match to closest polygon

174.053254 -41.18998226 317 688 SF Black Rock G107. Labelled as G107 on MPI map (but G105 missing, probably mislabelled). Located within Kenepuru Sound, at the head of Nikau Cove.

* G128 - Cook Strait 1 - too far out: remove

This point is too far. I agree, remove.

* PG017 - Anakoha Bay - OK - at the end of an inlet - OK retain: match to G017 (174.095 -41.004 1692086 5460222)

174.1055036 -41.04969886 232 588 SF Anakoha Bay G017: Match to G017

* PG111 - Kenepuru Head - inland: should be the same as G111 (1693614 5441549), and not as recorded (1689756 5448481) Need to fix these coordinates: match to G111 Kenepuru Head

174.1160318 -41.17231225 325 692 SF Kenepuru Head G111: This location is in the water. Can be corrected to lon and lat.

* PG128 - Robertson Point - to far out to sea - no match: remove

No match and too far out. To remove.

* PG237 - Port Gore 3 - on land - clearly wrong - should be (1700423.1103 5454097.5219) Need to fix these coordinates - match to G237 (1705190 5453050)

174.195107 -41.05816963 371 215 PP Port Gore 3 G237. Matches to G237 which seems to be correct (in water within Port Gore).

**Species Names:**

* alexnames <- c("Alexandrium spp.",
* "Alexandrium cf. pacificum","Alexandrium pacificum",
* "Alexandrium cf. catenella","Alexandrium catenella")
* habdat.alex <- habdat[habdat$REPORTED\_NAME%**in**%alexnames,]
* nrow(habdat.alex) *# 887*

Alexandrium pacificum and Alexandrium catanella are the same species. Cf. and spp. denote uncertainties in identification, so it would be more robust to remove them for the moment.

**Multiple events in the same week:**

tt <- table(paste(events.alex$Site\_Code,events.alex$mWeek))

table(tt[tt>1])

##

## 2 5 6

## 215 2 3

## 12504 PG091 Tio Point 2014-02-26 13:53:00 17

## 12505 PG091 Tio Point 2014-02-26 13:53:00 17

## 12506 PG091 Tio Point 2014-02-26 13:53:00 17

## 12507 PG091 Tio Point 2014-02-26 13:53:00 17

## 12508 PG091 Tio Point 2014-02-26 13:53:00 17

I checked with Emily. This could be the result of a transect that was run by a researcher at a mussel farm to analyse local distribution patterns. They were recorded with the same ID/location. Better to remove as these were one-off sampling schemes.