

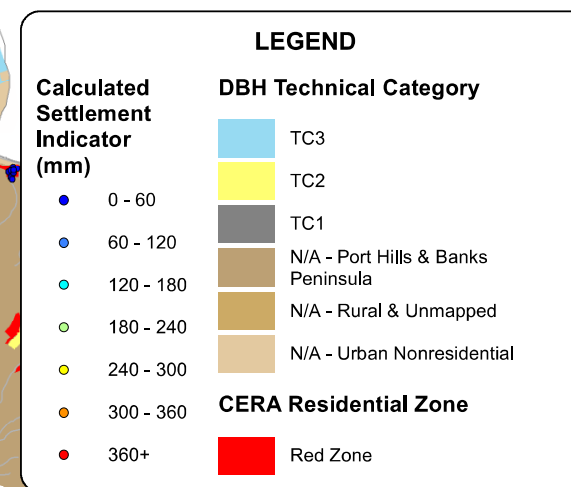
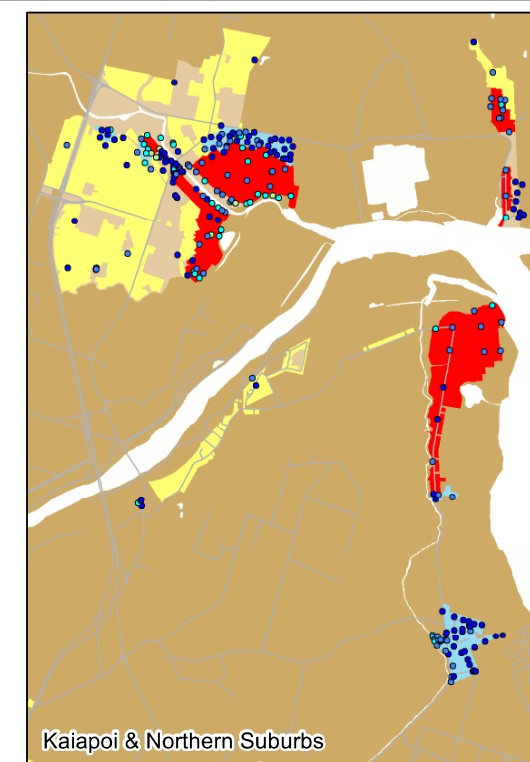
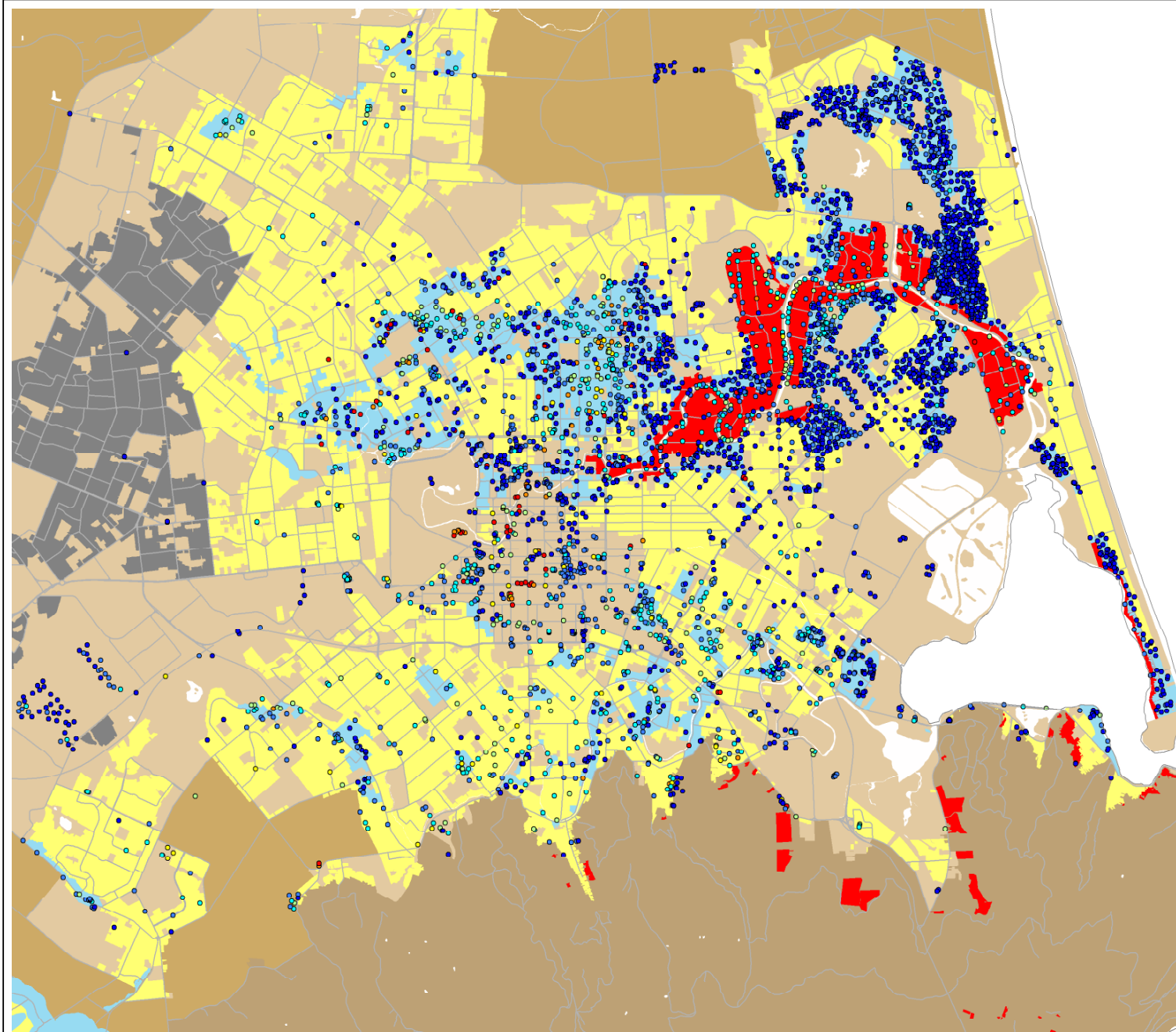
Appendix L: Groundwater sensitivity

ENVIRONMENTAL AND ENGINEERING CONSULTANTS



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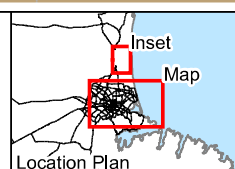
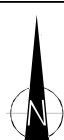
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0 1 2 3 4 (km)



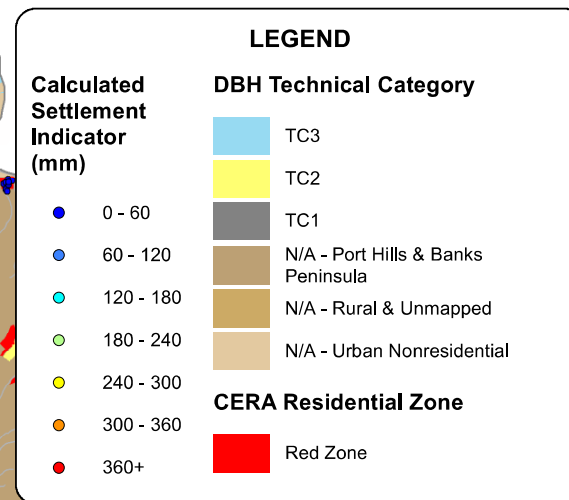
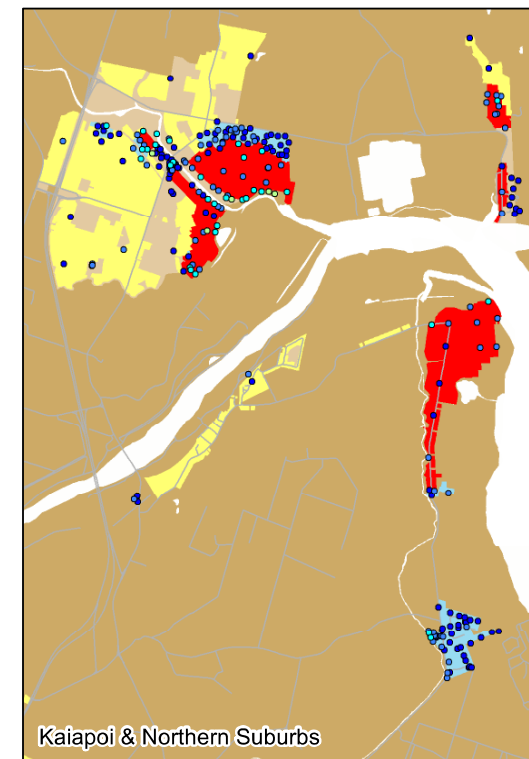
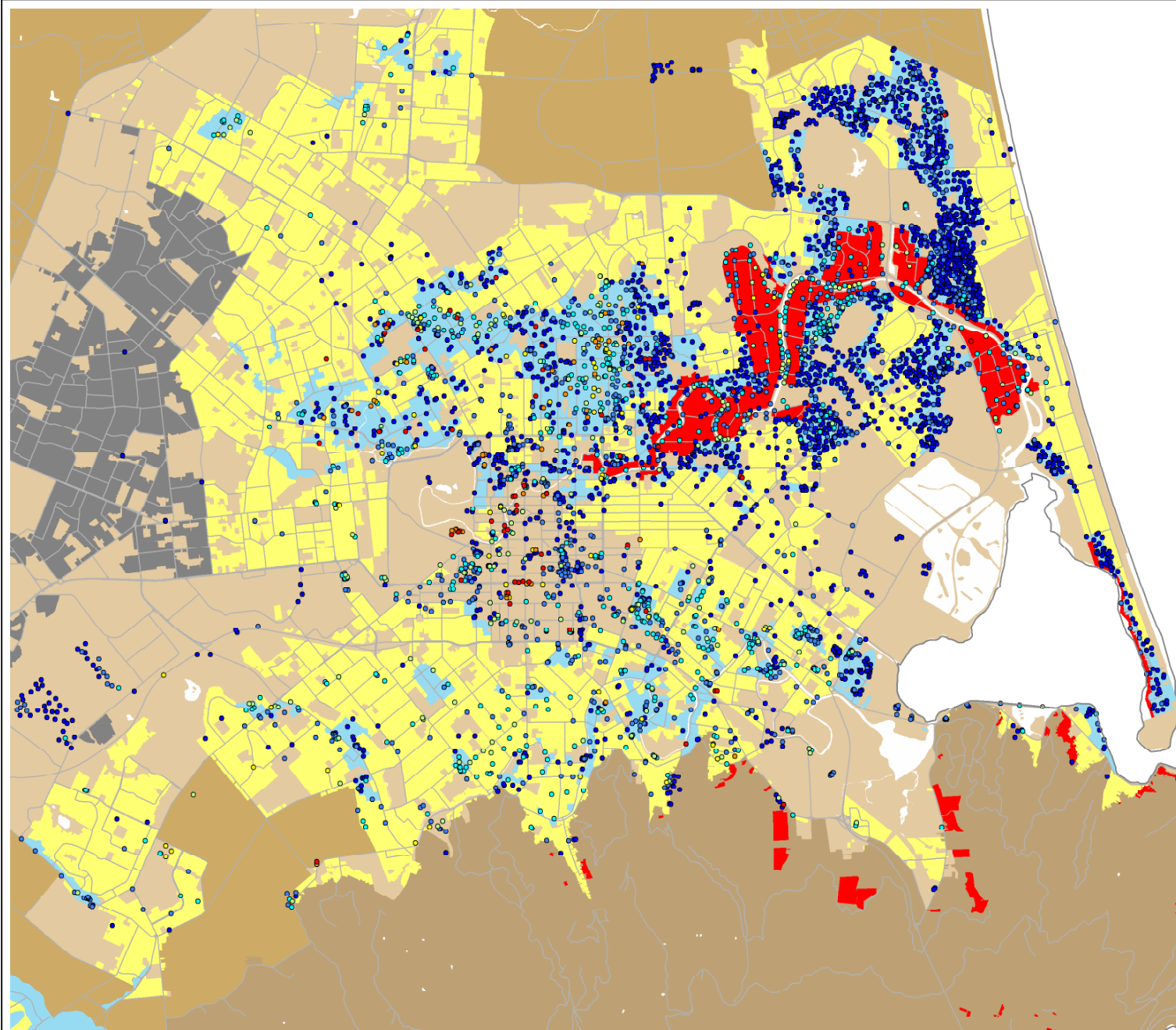
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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
Calculated Settlement Indicator (Groundwater Depth 20% Below Median, M7.5, PGA 0.13g)

FIGURE No. Figure L1

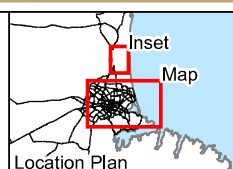
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A3 SCALE 1:60,000

0 1 2 3 4 (km)



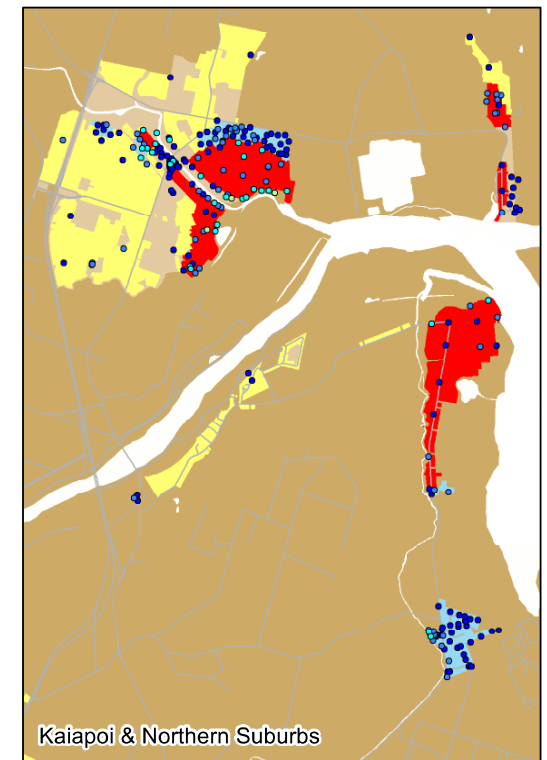
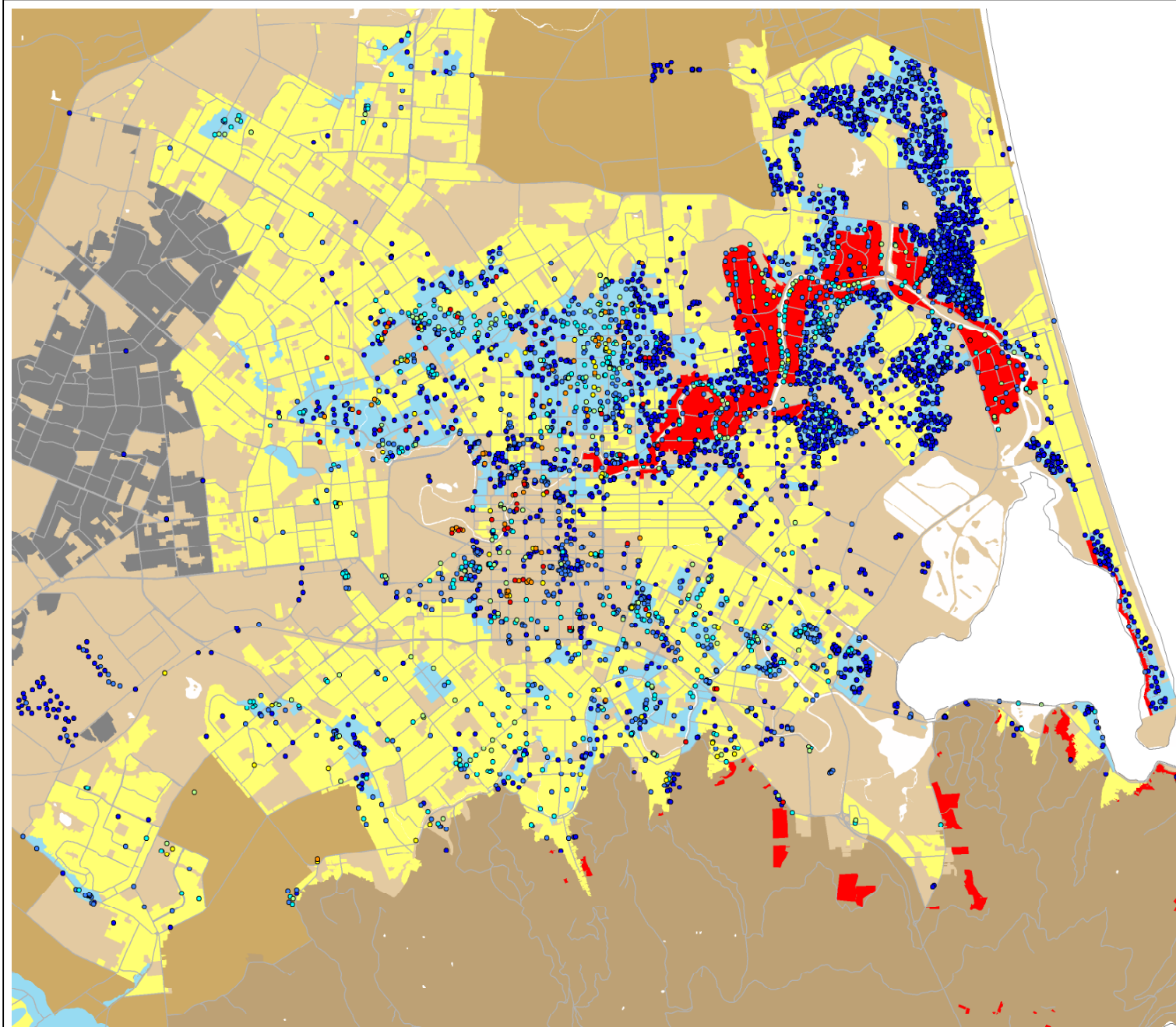
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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
Calculated Settlement Indicator (Median Groundwater Depth, M7.5, PGA 0.13g)

FIGURE No. Figure L2

Rev. 0



LEGEND

Calculated Settlement Indicator (mm)

- 0 - 60
- 60 - 120
- 120 - 180
- 180 - 240
- 240 - 300
- 300 - 360
- 360+

DBH Technical Category

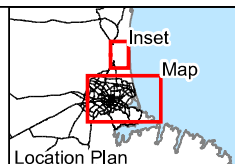
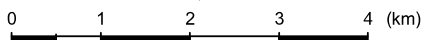
- TC3
- TC2
- TC1
- N/A - Port Hills & Banks Peninsula
- N/A - Rural & Unmapped
- N/A - Urban Nonresidential

CERA Residential Zone

- Red Zone

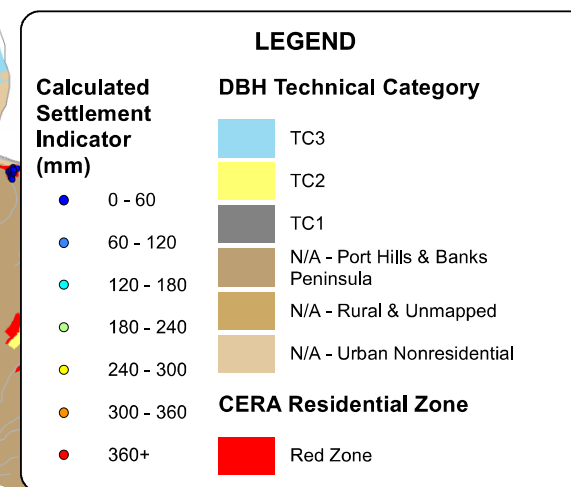
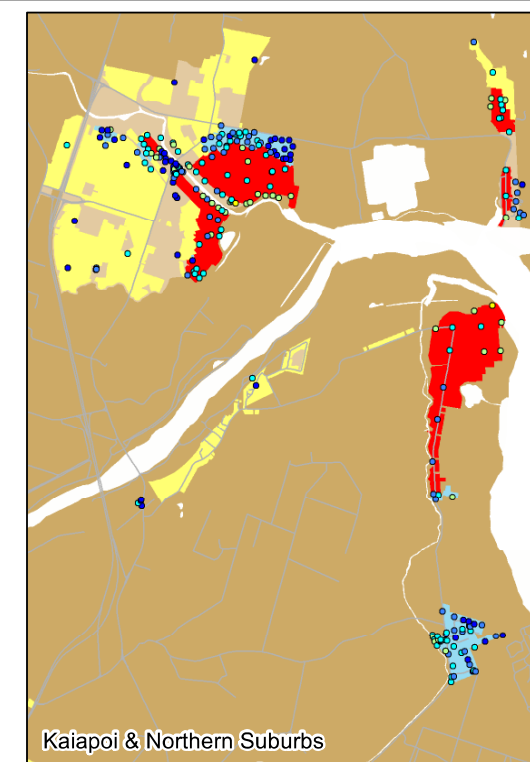
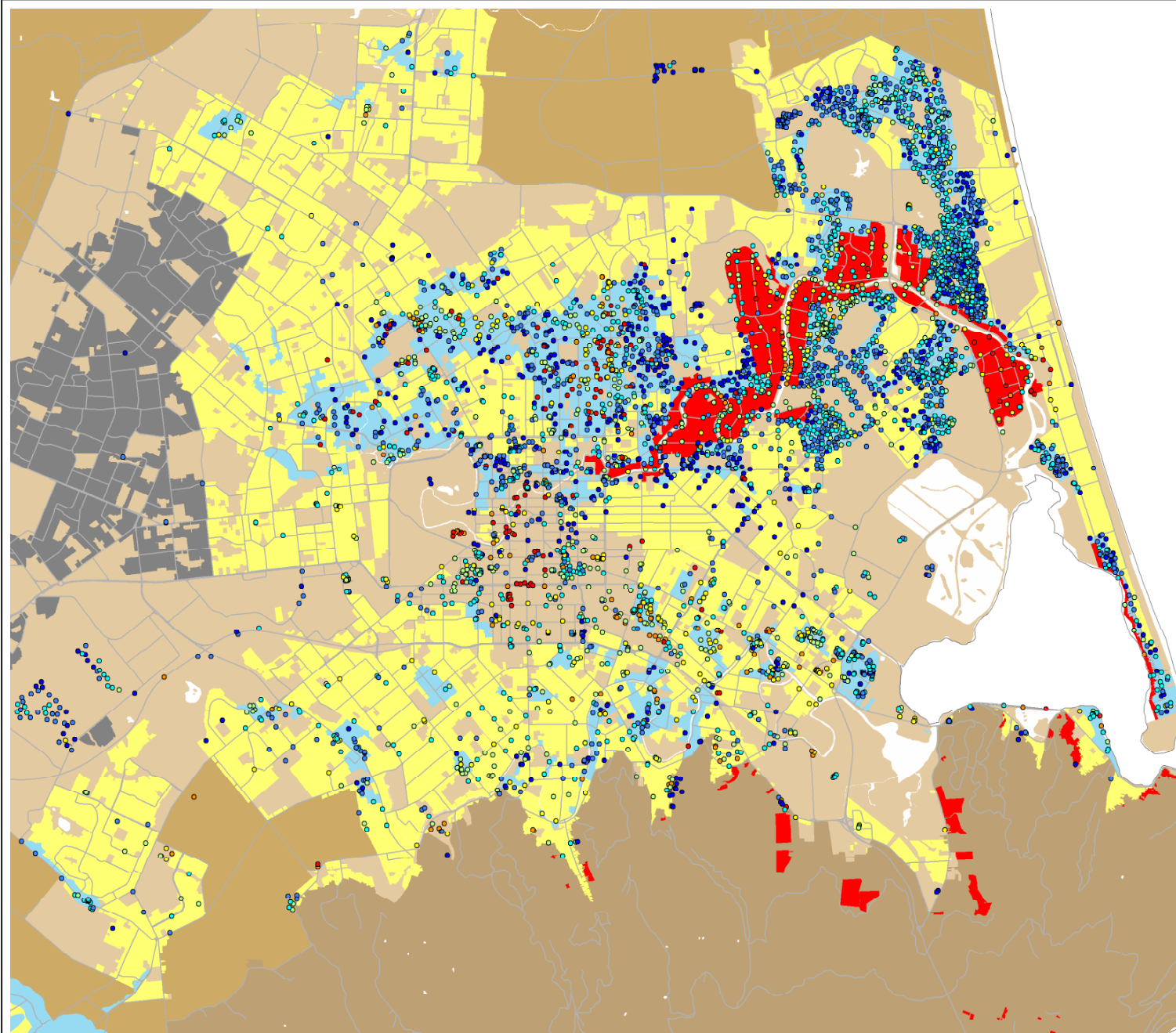
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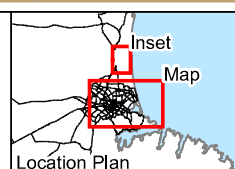
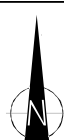
EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 Calculated Settlement Indicator (Groundwater Depth 20% Above Median, M7.5, PGA 0.13g)



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A3 SCALE 1:60,000

0 1 2 3 4 (km)



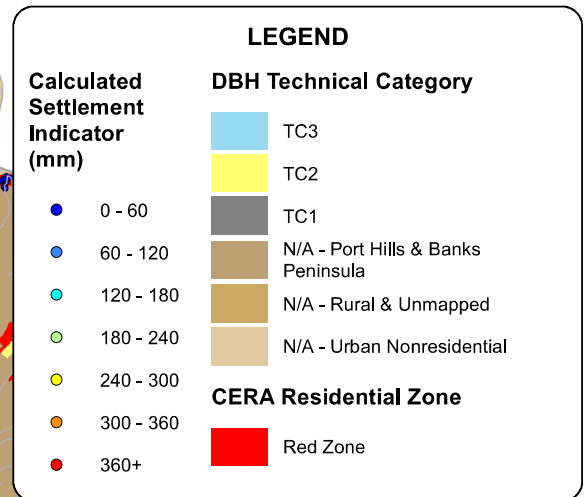
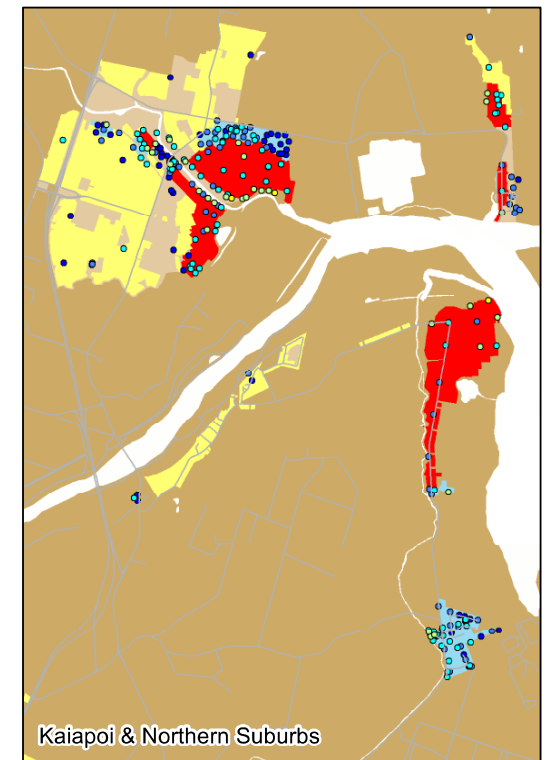
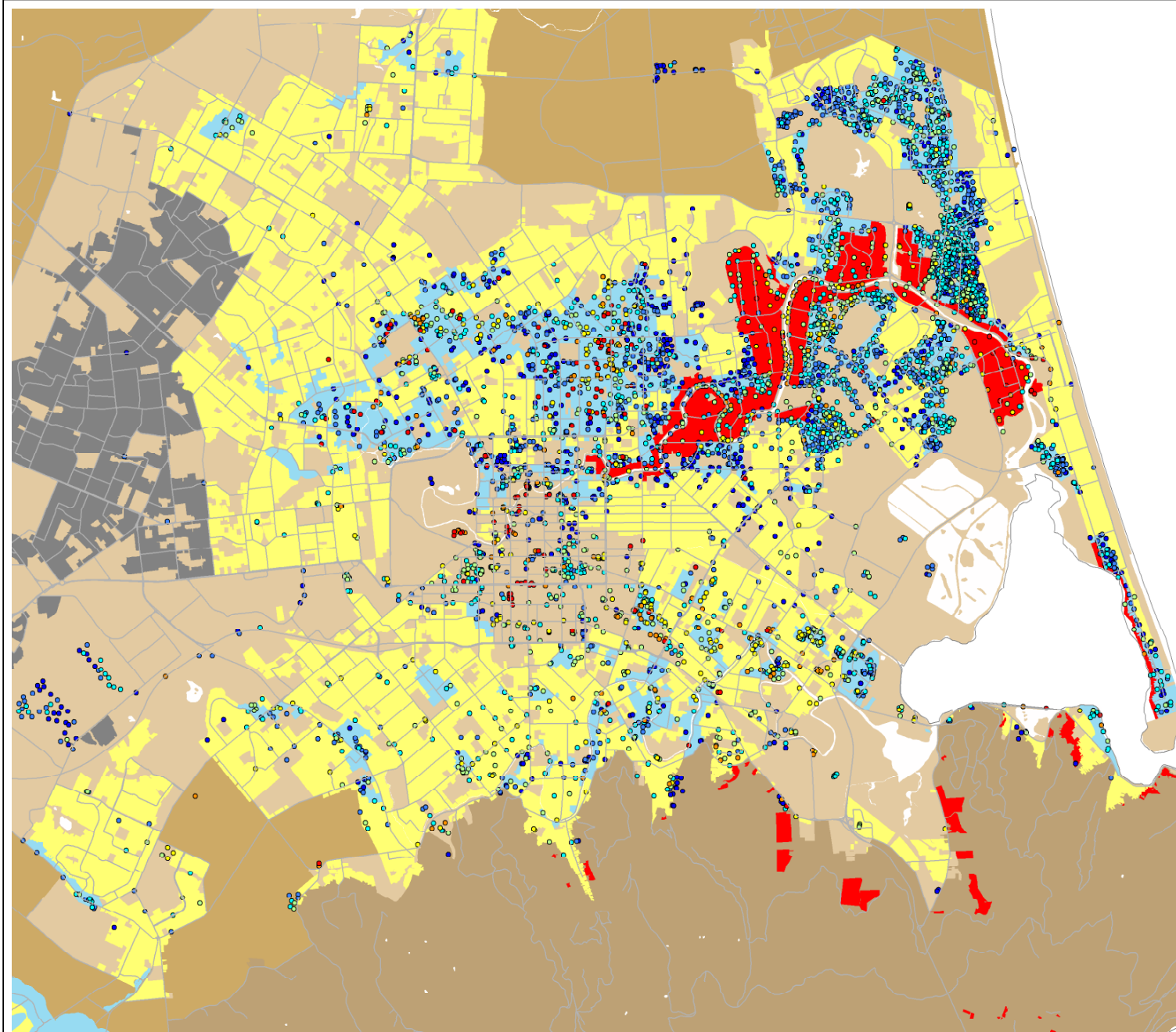
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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
Calculated Settlement Indicator (Groundwater Depth 20% Below Median, M7.5, PGA 0.22g)

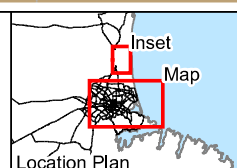
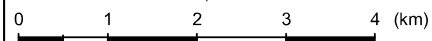
FIGURE No. Figure L4

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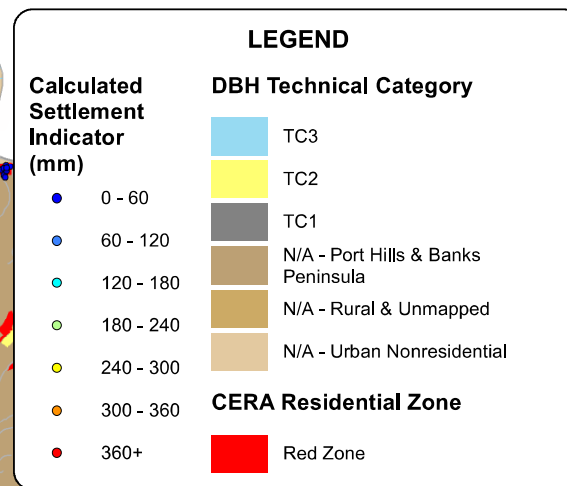
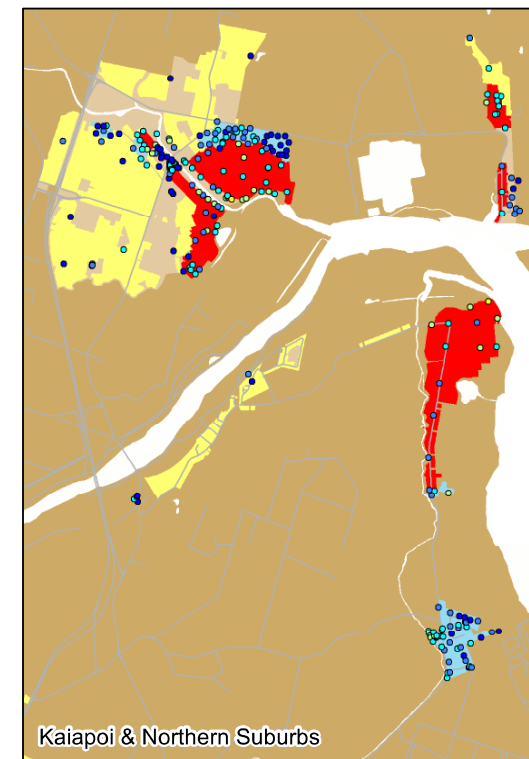
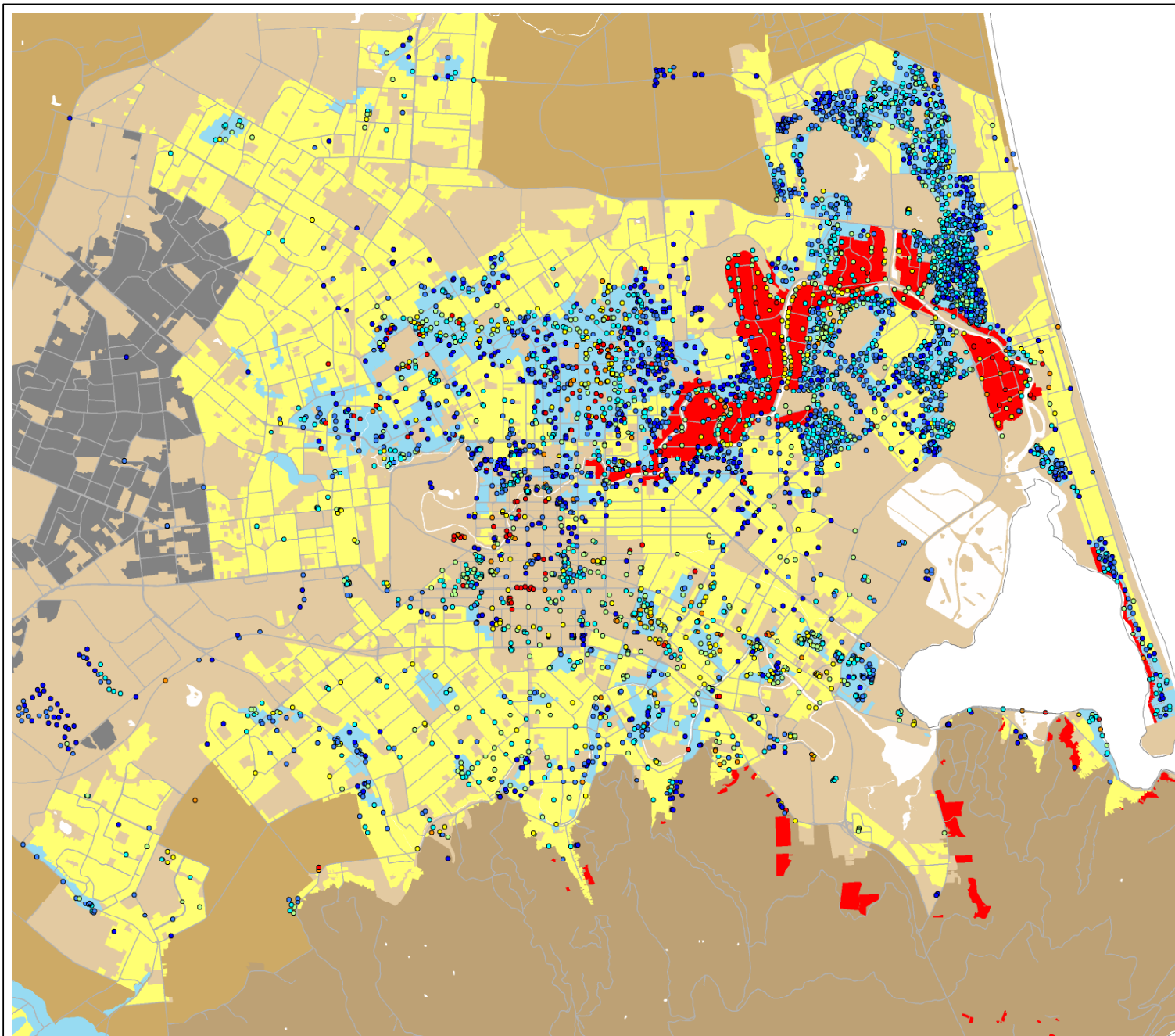
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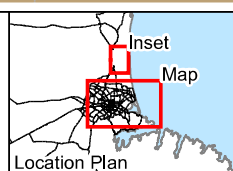
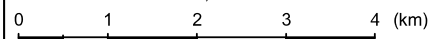
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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
Calculated Settlement Indicator (Median Groundwater Depth, M7.5, PGA 0.22g)



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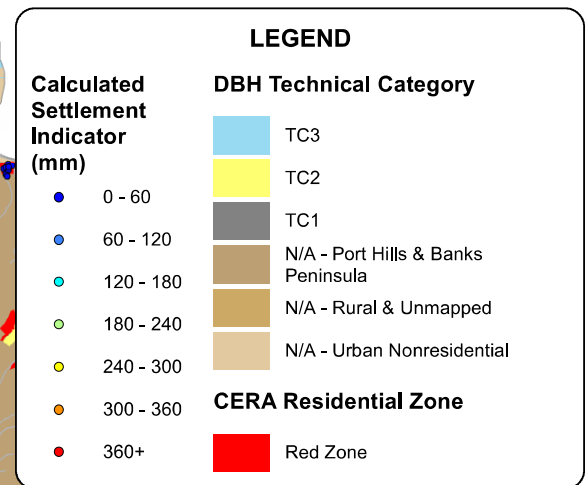
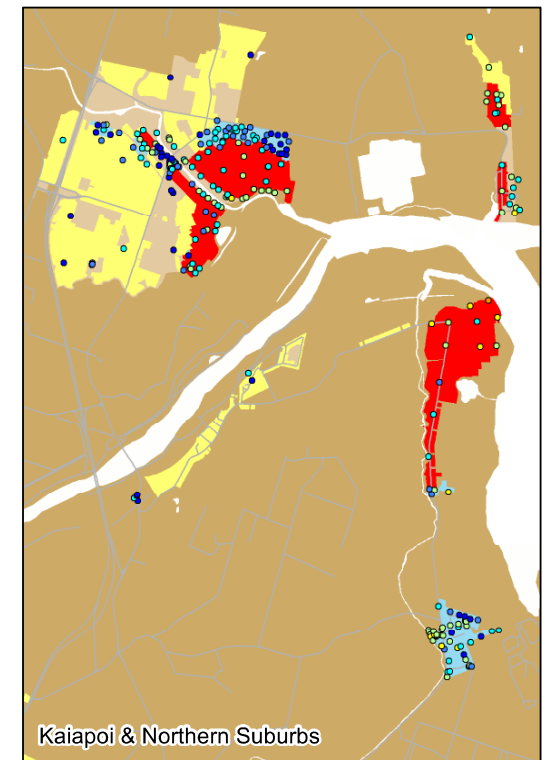
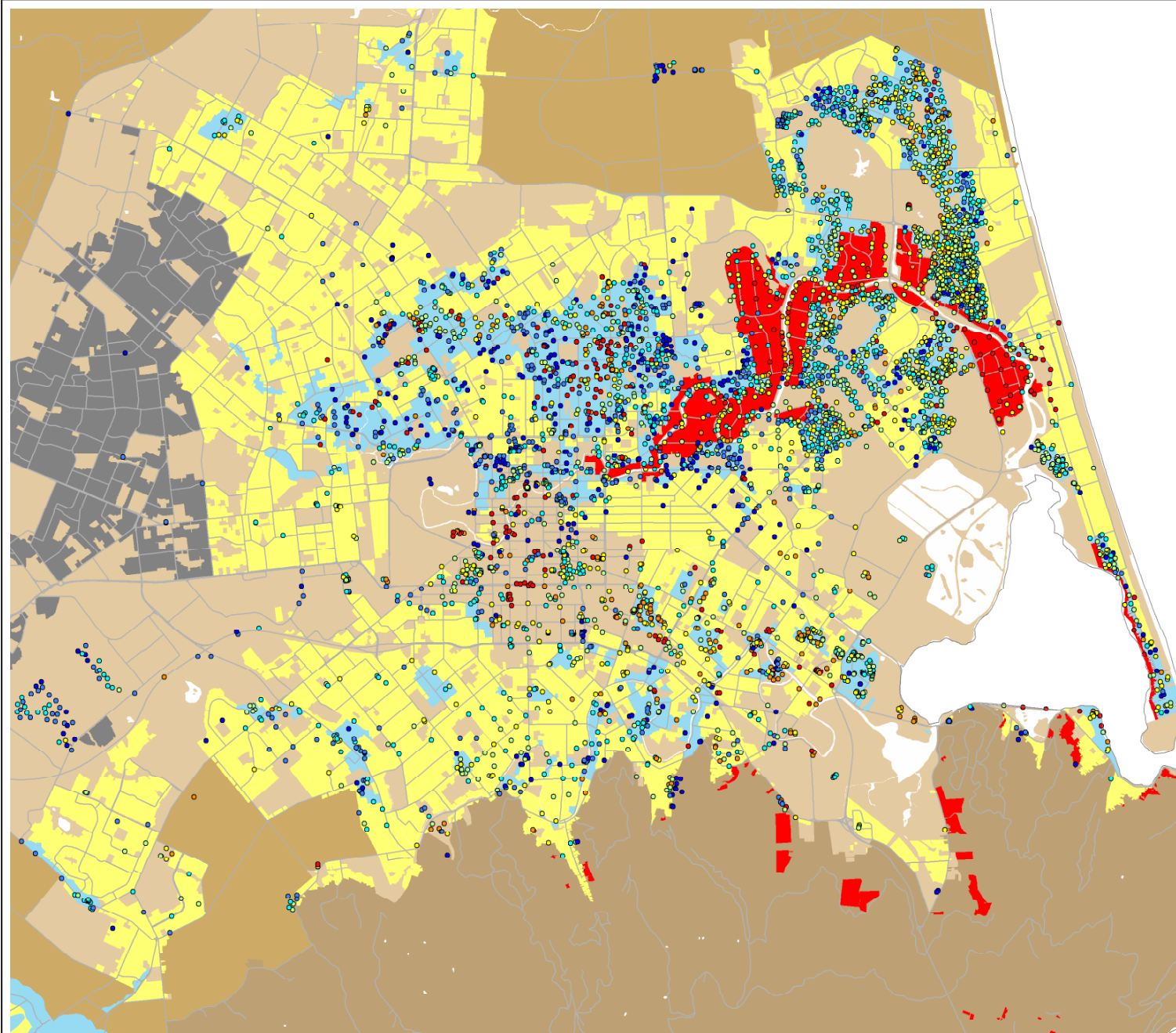
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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
Calculated Settlement Indicator (Groundwater Depth 20% Above Median, M7.5, PGA 0.22g)

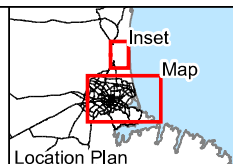
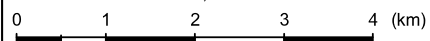
FIGURE No. Figure L6

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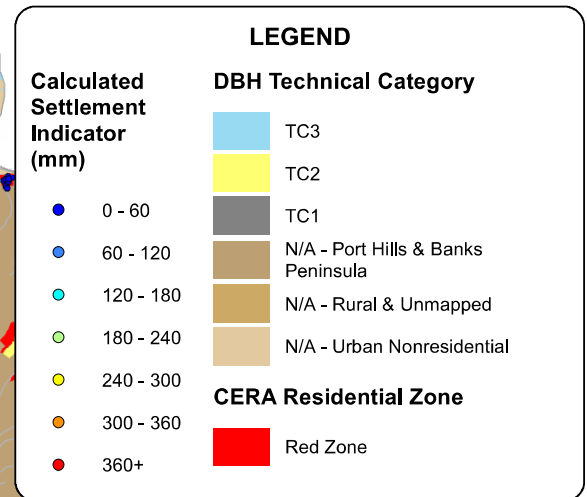
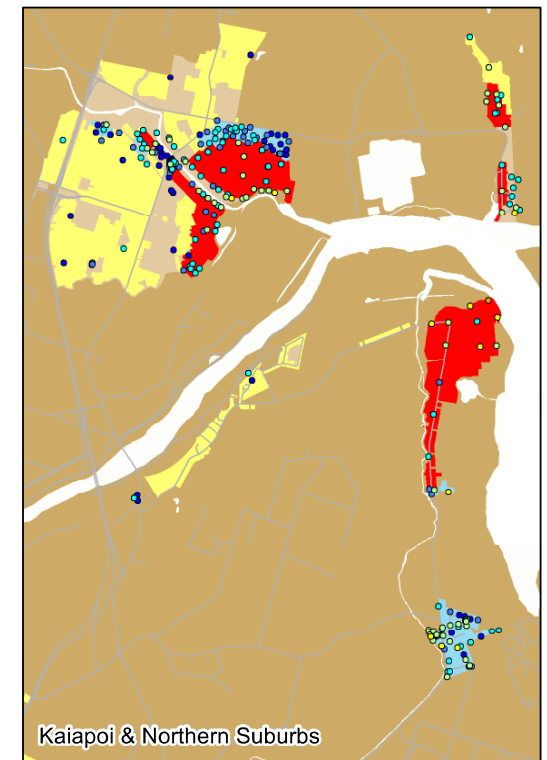
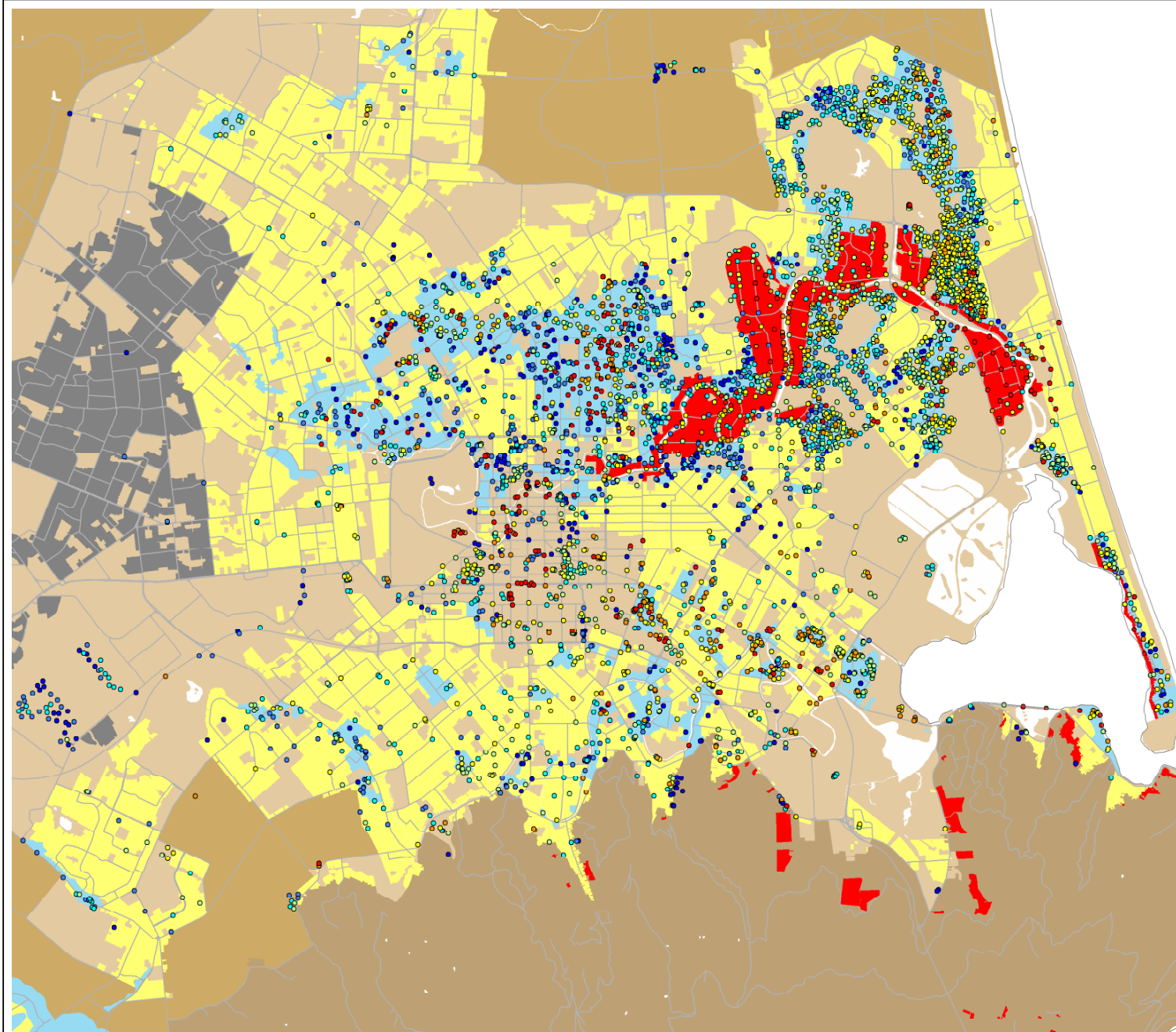


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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 Calculated Settlement Indicator (Groundwater Depth 20% Below Median, M7.5, PGA 0.35g)

FIGURE No. Figure L7

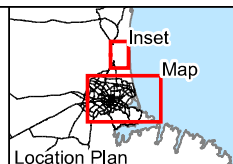
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A3 SCALE 1:60,000

0 1 2 3 4 (km)



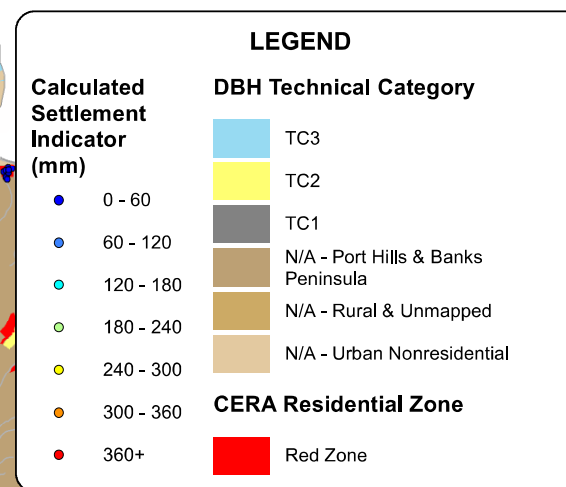
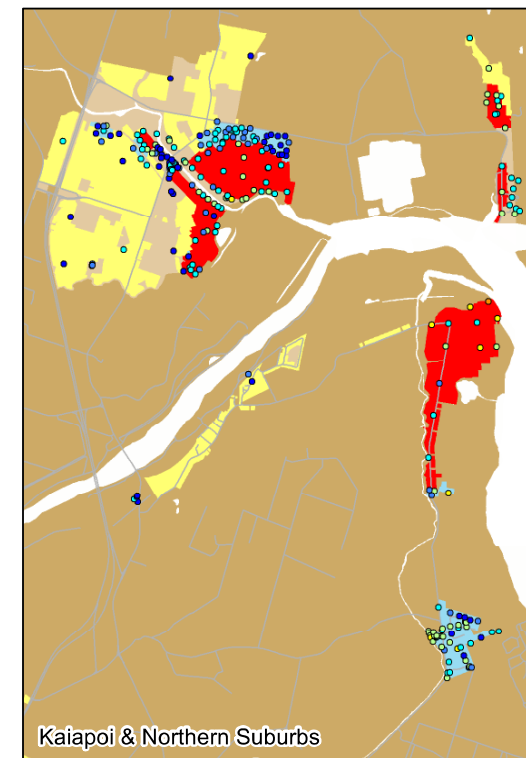
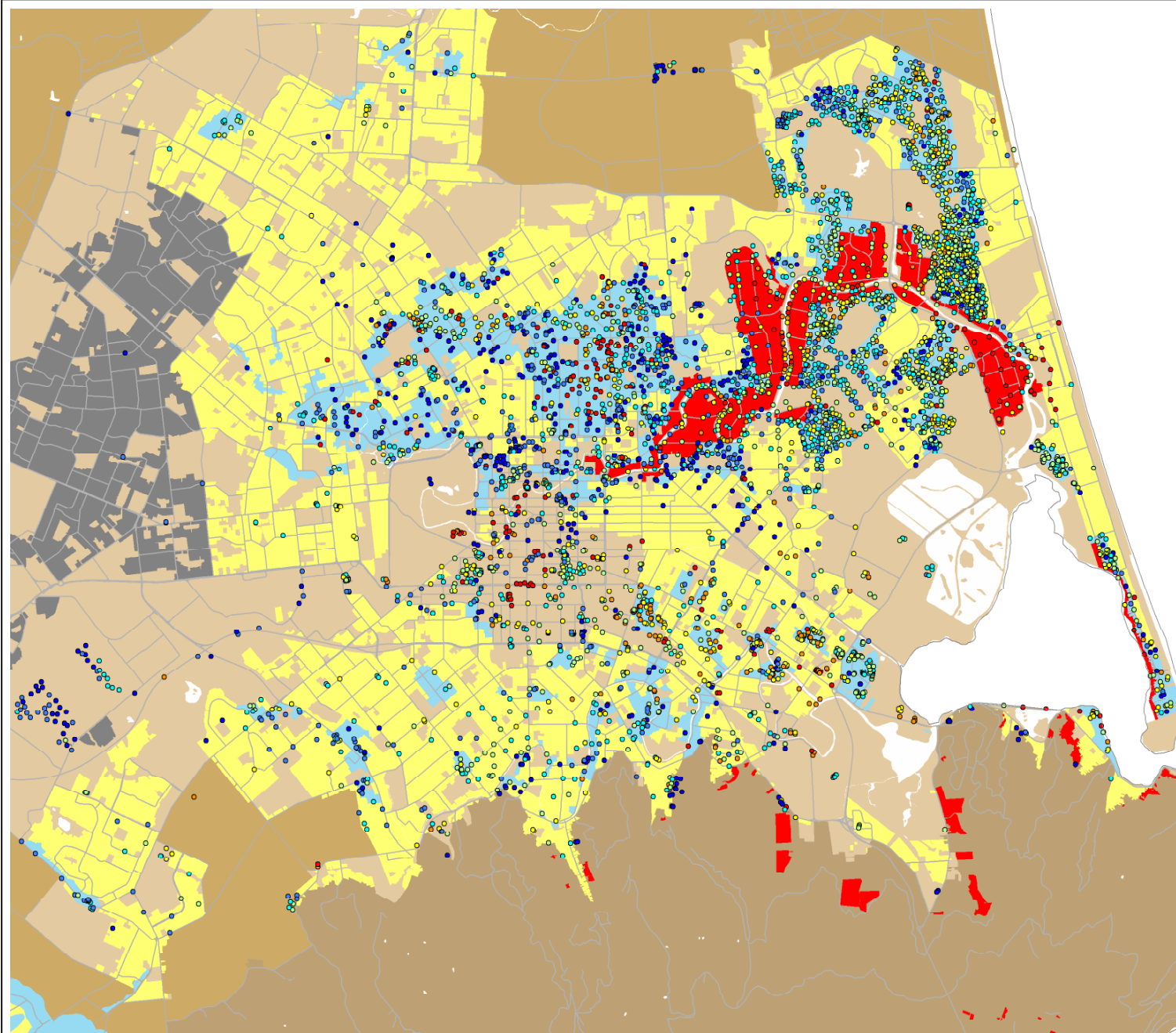
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ARCFILE 52020-0200-LSN096
SCALE (AT A3 SIZE)
1:60,000
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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
Calculated Settlement Indicator (Median Groundwater Depth, M7.5, PGA 0.35g)

FIGURE No. Figure L8

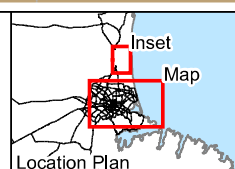
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A3 SCALE 1:60,000

0 1 2 3 4 (km)



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SCALE (AT A3 SIZE) 1:60,000
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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
Calculated Settlement Indicator (Groundwater Depth 20% Above Median, M7.5, PGA 0.35g)

FIGURE No. Figure L9

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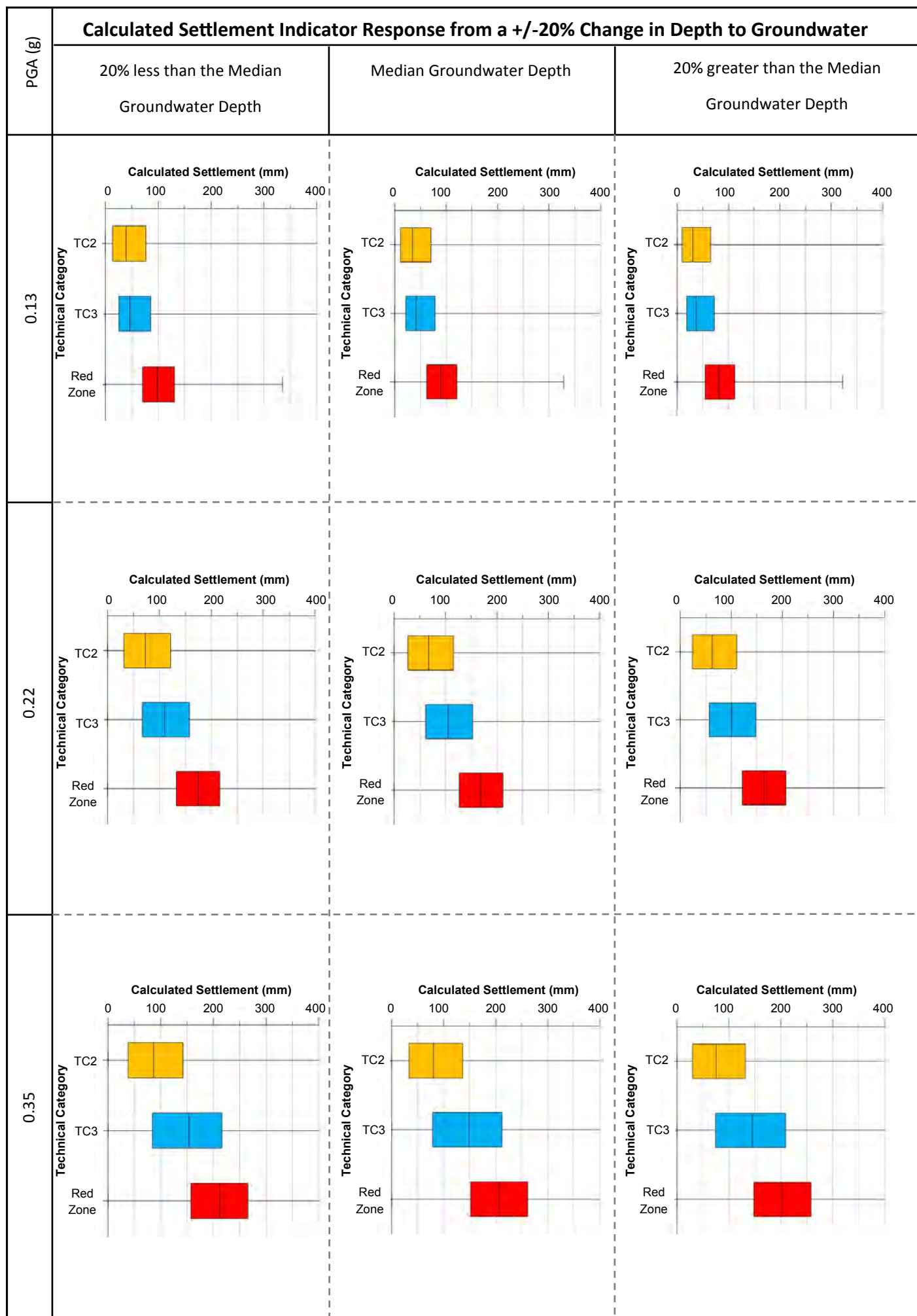


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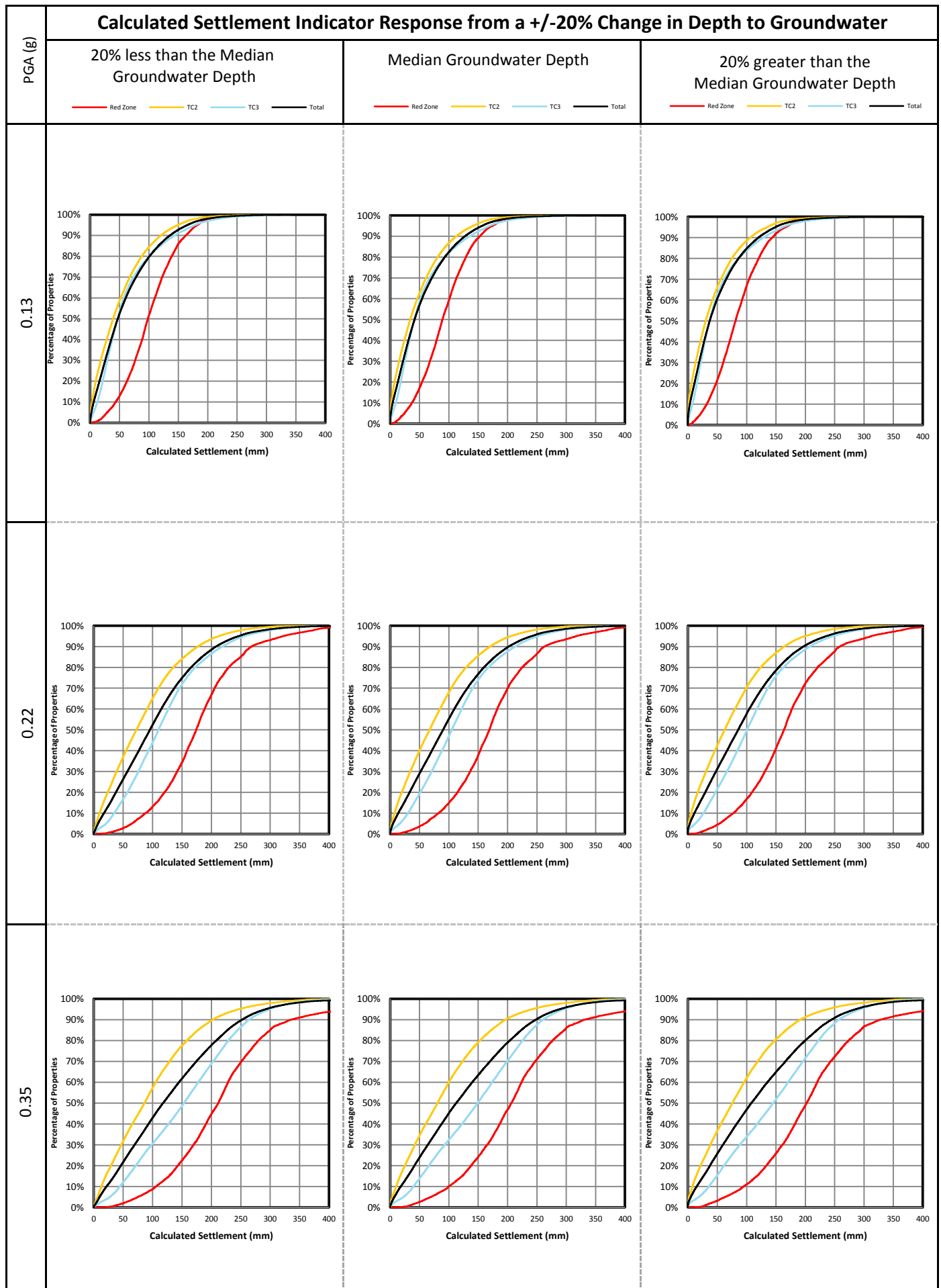


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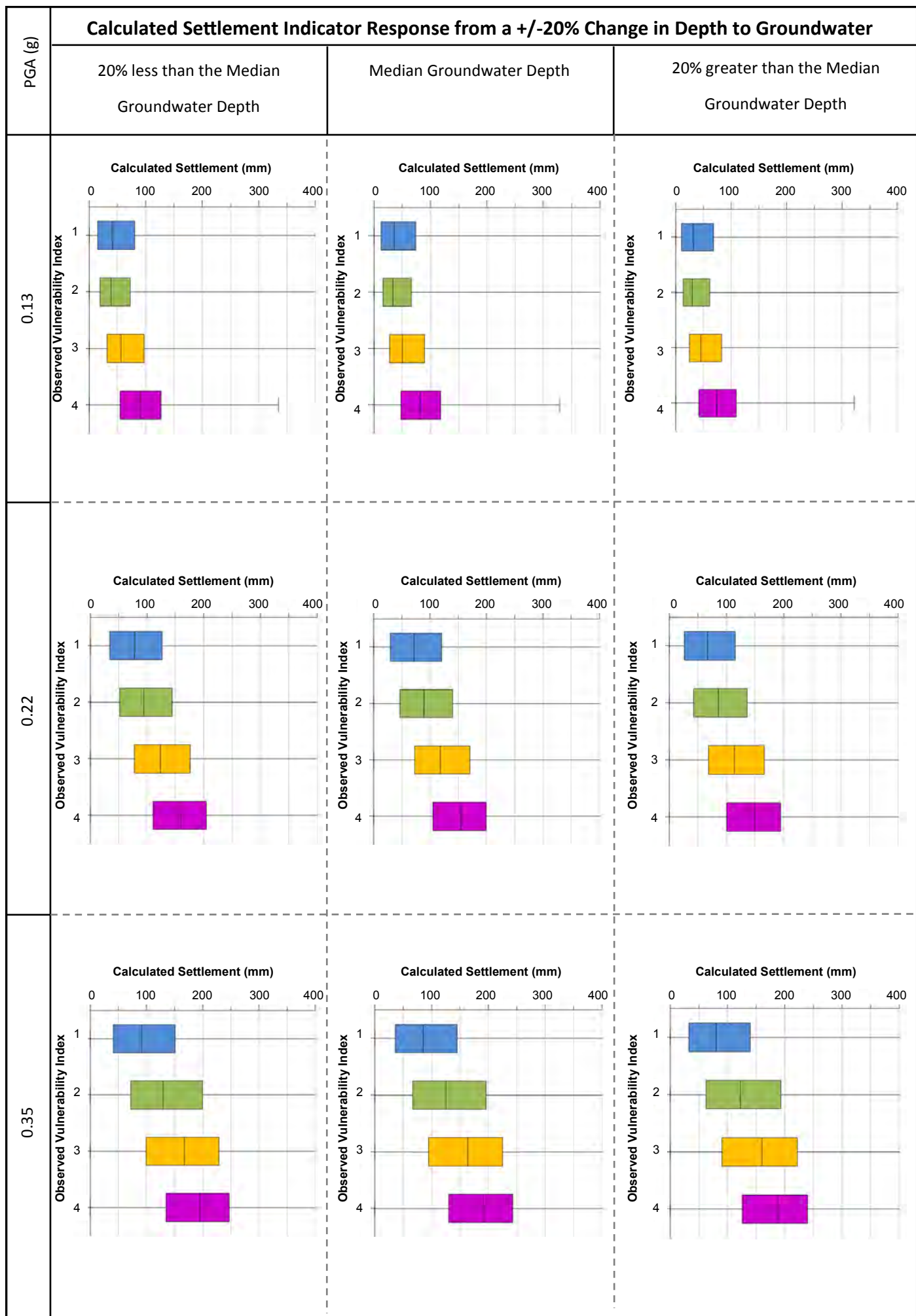


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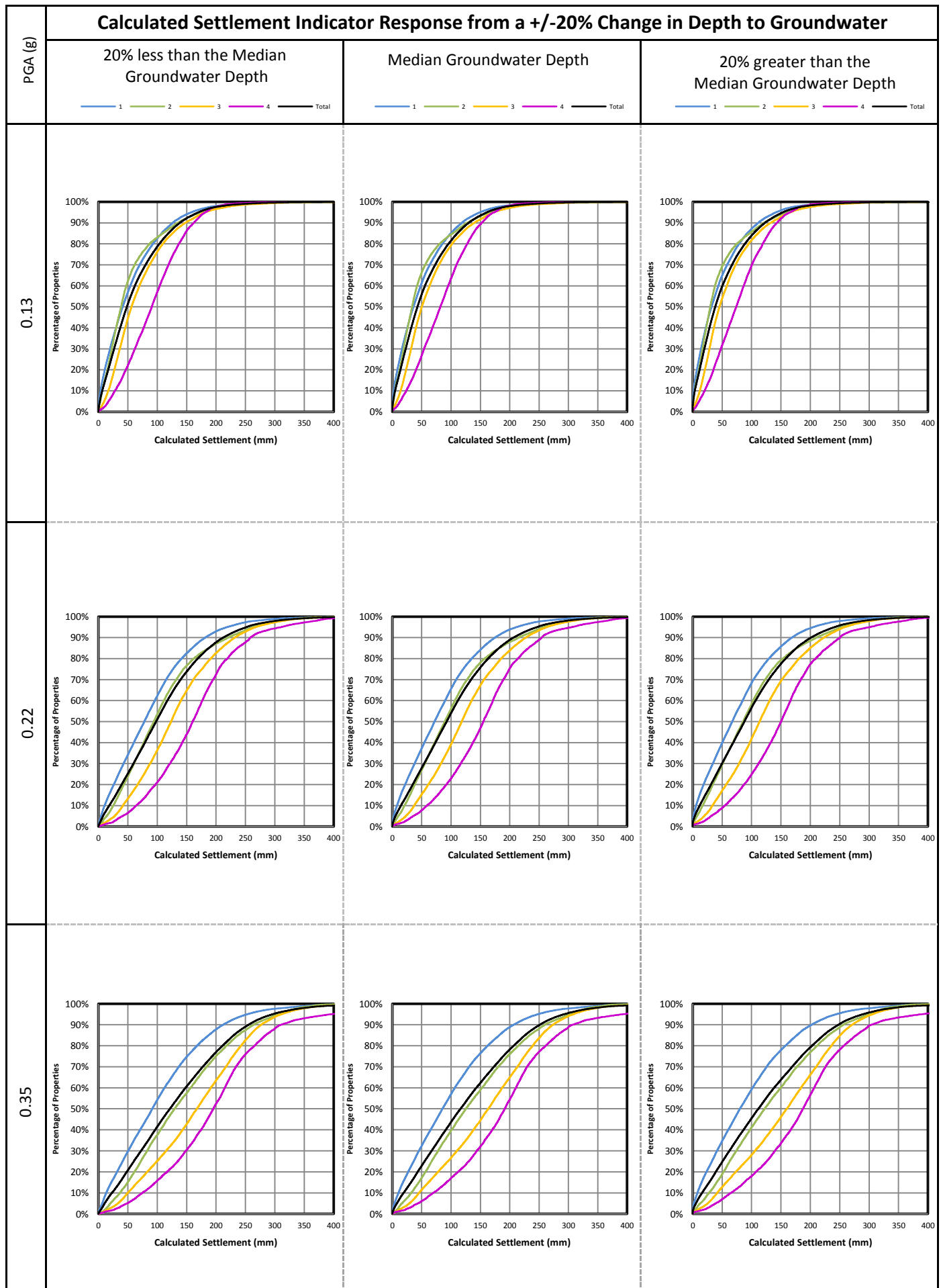
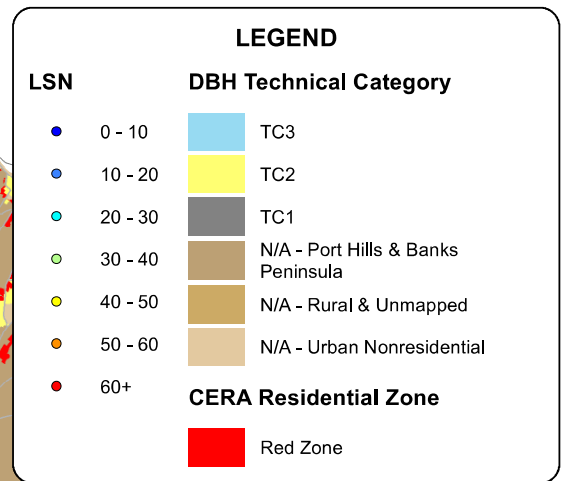
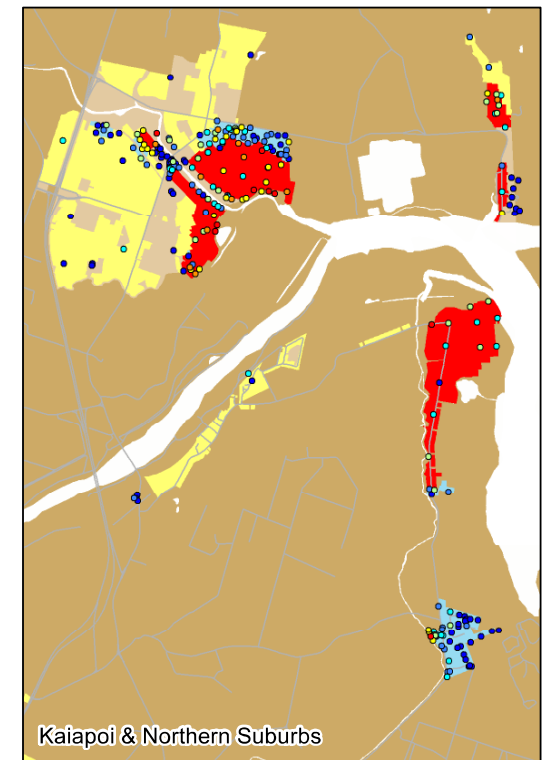
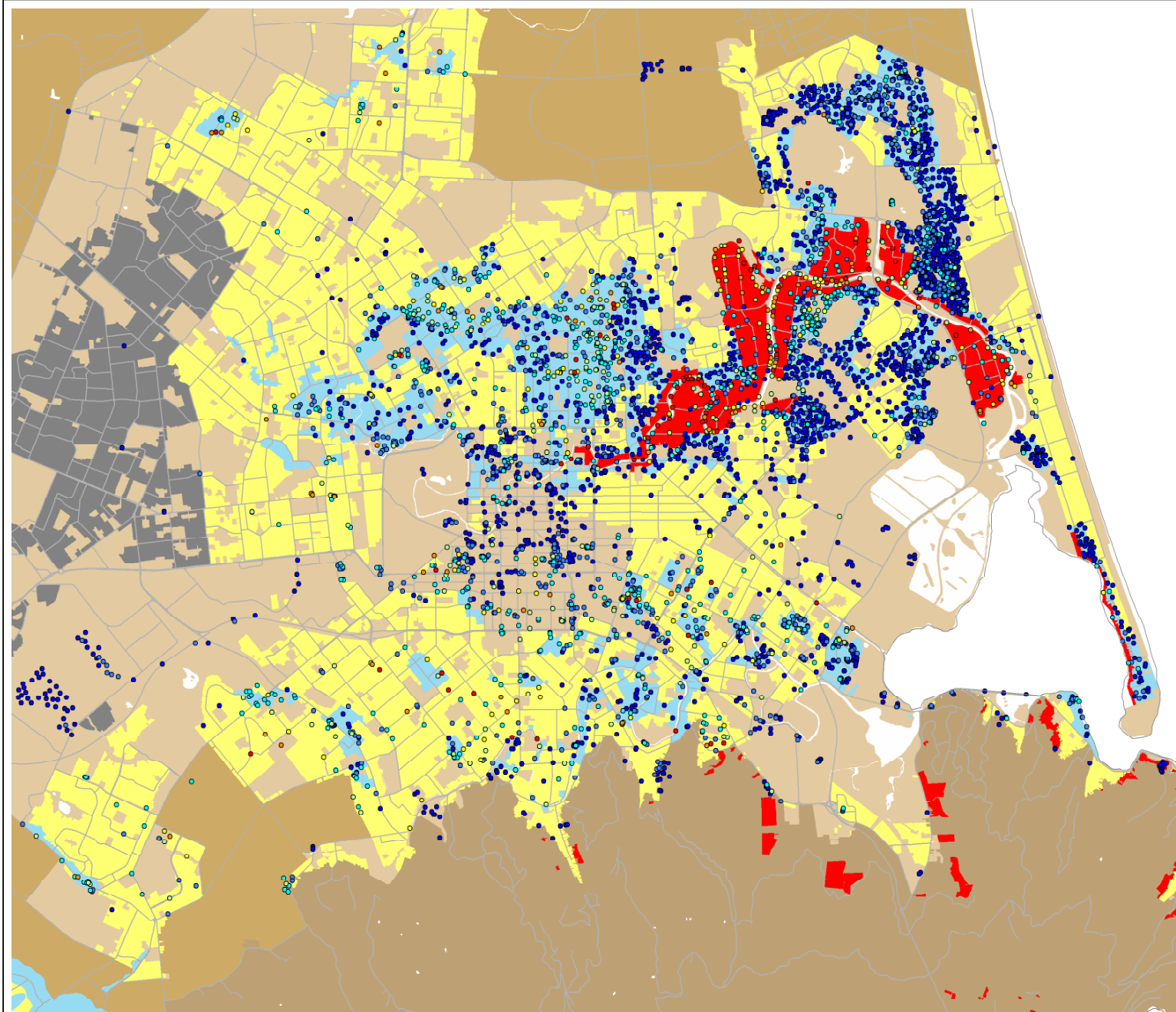
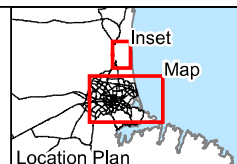
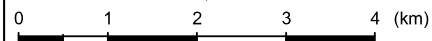


Figure L13



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A3 SCALE 1:60,000

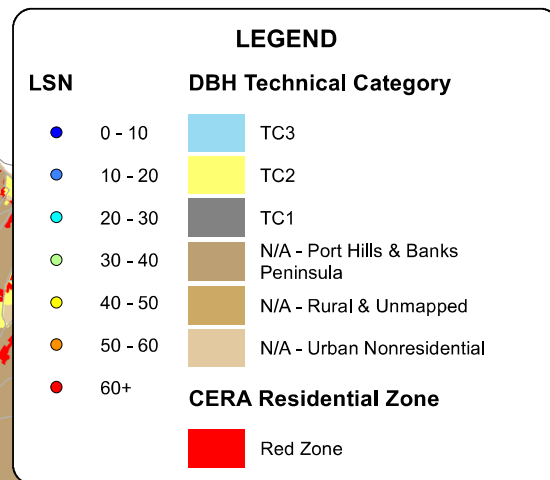
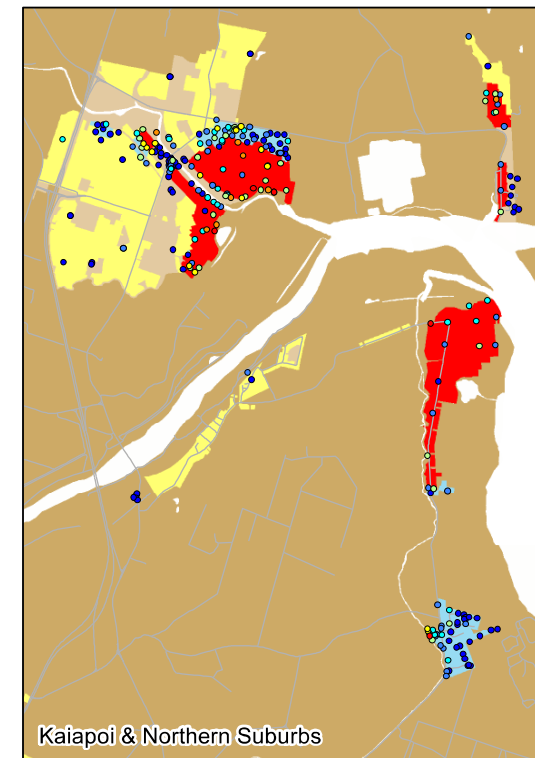
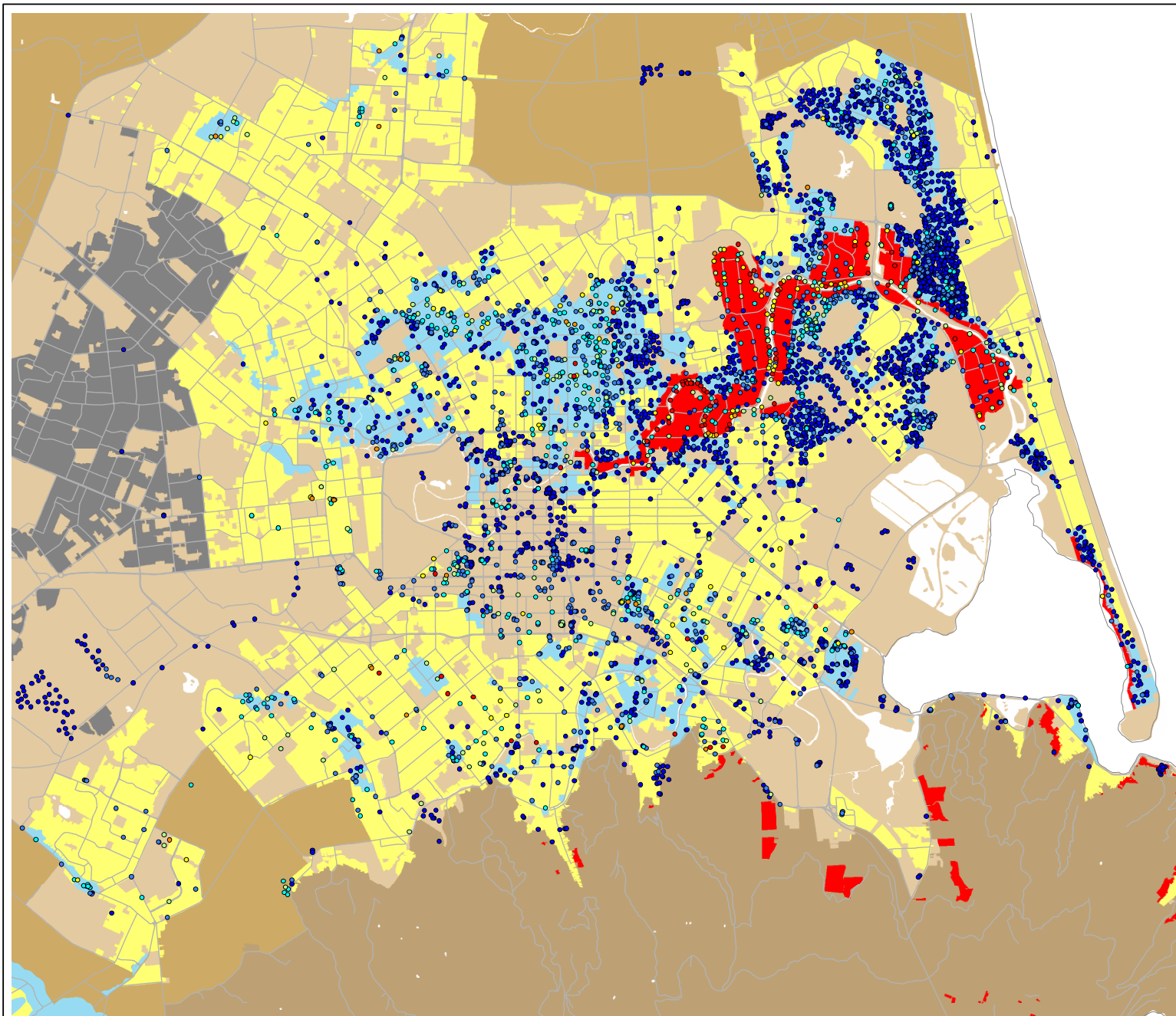


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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 LSN (Groundwater Depth
 20% Below Median, M7.5, PGA 0.13g)

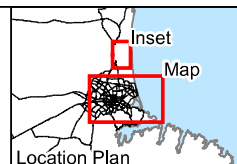
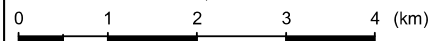
FIGURE No. Figure L14

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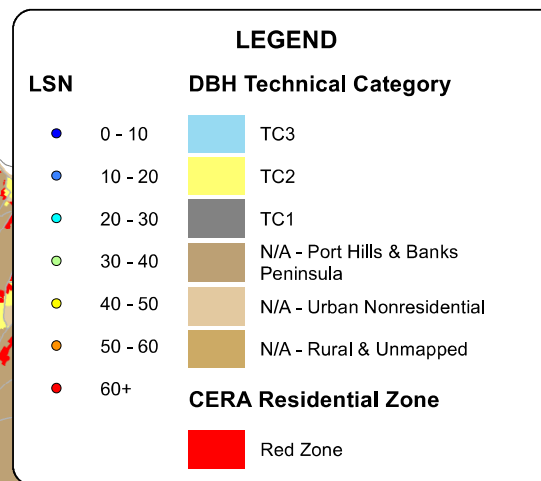
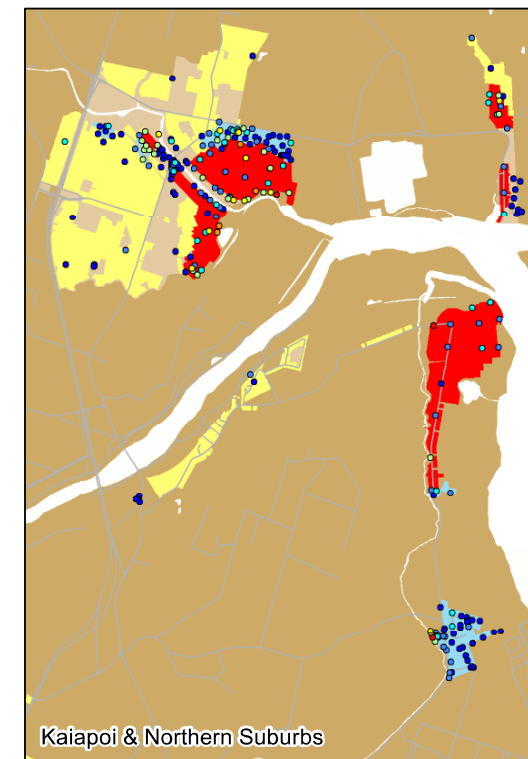
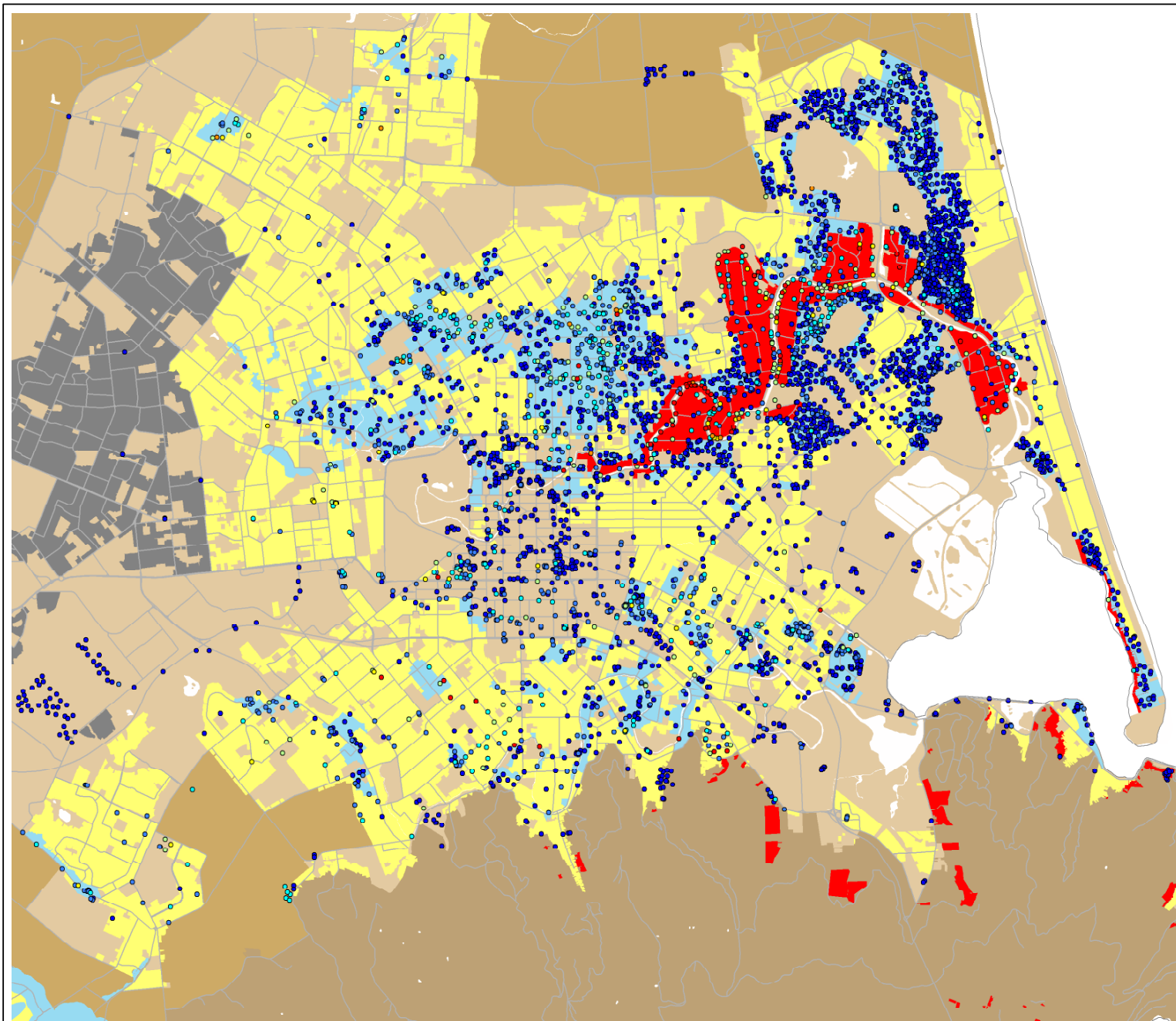


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EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 LSN (Median Groundwater
 Depth, M7.5, PGA 0.13g)

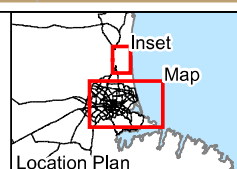
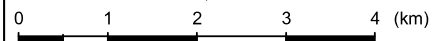
FIGURE No. Figure L15

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A3 SCALE 1:60,000

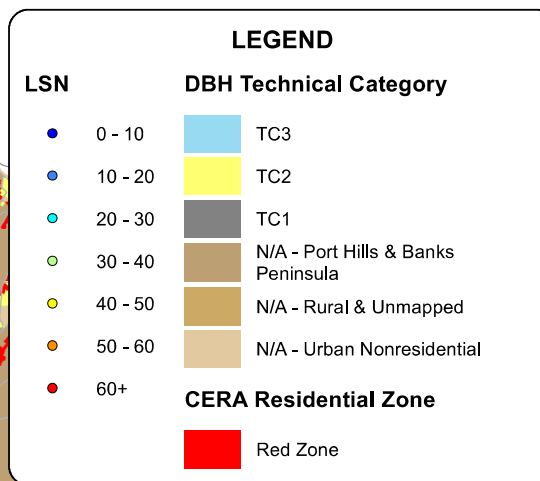
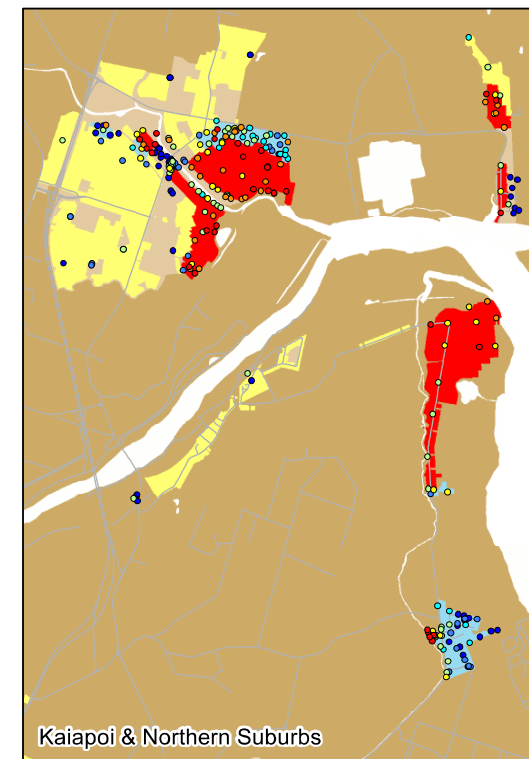
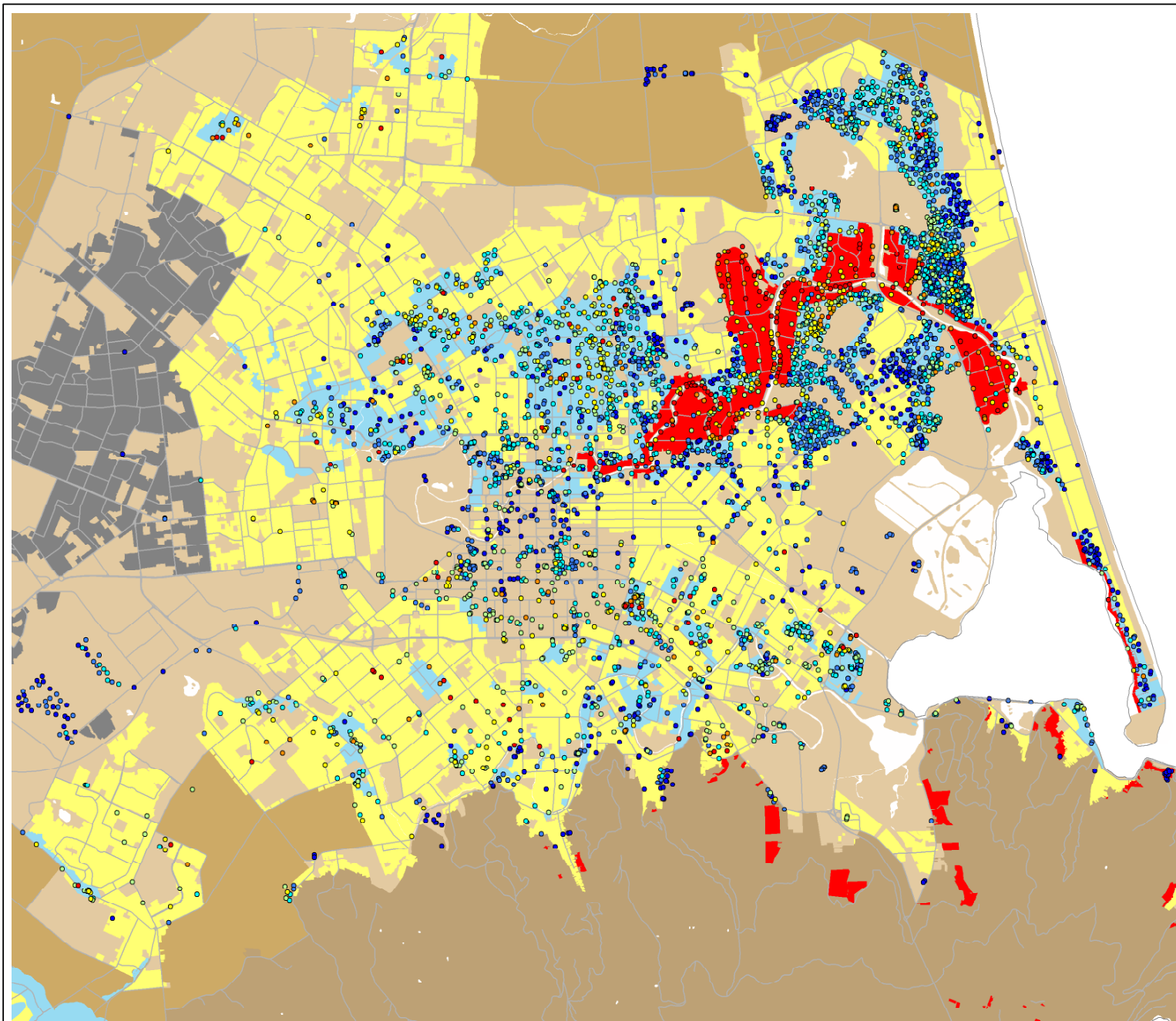


DRAWN	CXP	Feb.13
CHECKED		
APPROVED		
ARCFILE	52020-0200-LSN129	
SCALE (AT A3 SIZE)	1:60,000	
Prepared by	Tonkin & Taylor Ltd.	
Ref:	52020.0200	

EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 LSN (Groundwater Depth
 20% Above Median, M7.5, PGA 0.13g)

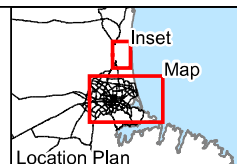
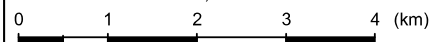
FIGURE No. Figure L16

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A3 SCALE 1:60,000

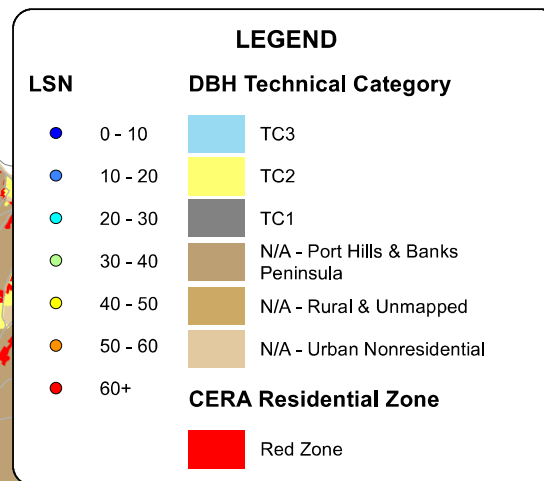
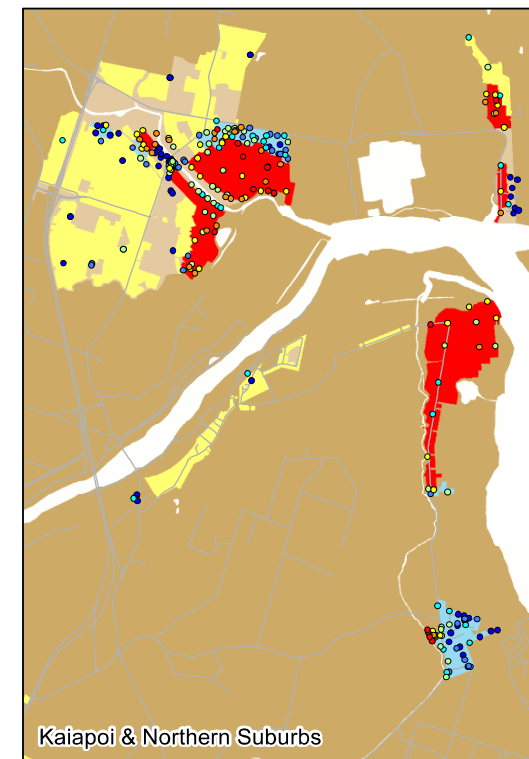
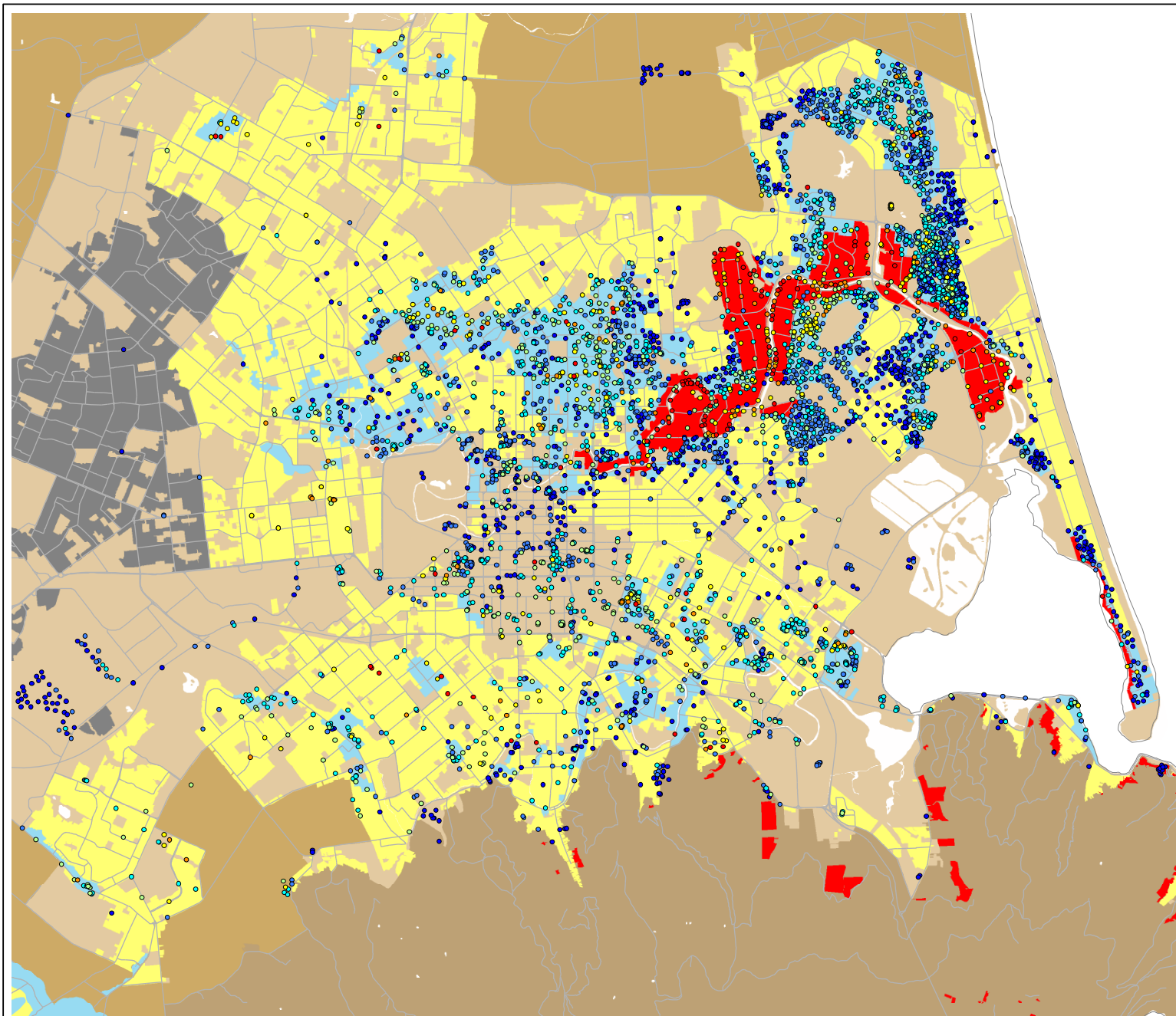


DRAWN	CXP	Feb.13
CHECKED		
APPROVED		
ARCFILE	52020-0200-LSN132	
SCALE (AT A3 SIZE)	1:60,000	
Prepared by	Tonkin & Taylor Ltd.	
Ref:	52020.0200	

EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 LSN (Groundwater Depth)
 20% Below Median, M7.5, PGA 0.22g)

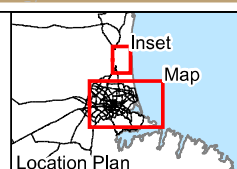
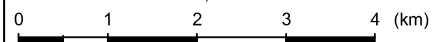
FIGURE No. Figure L17

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A3 SCALE 1:60,000

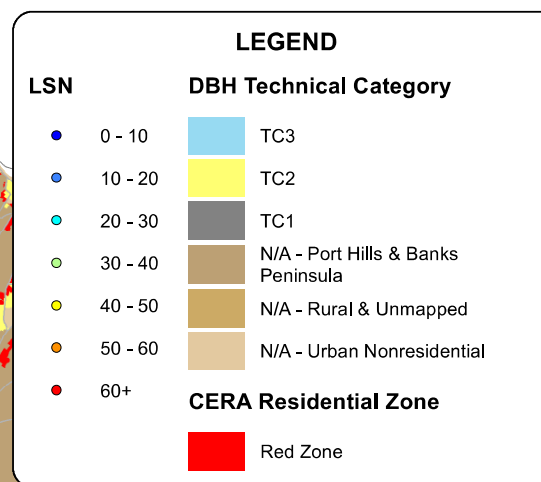
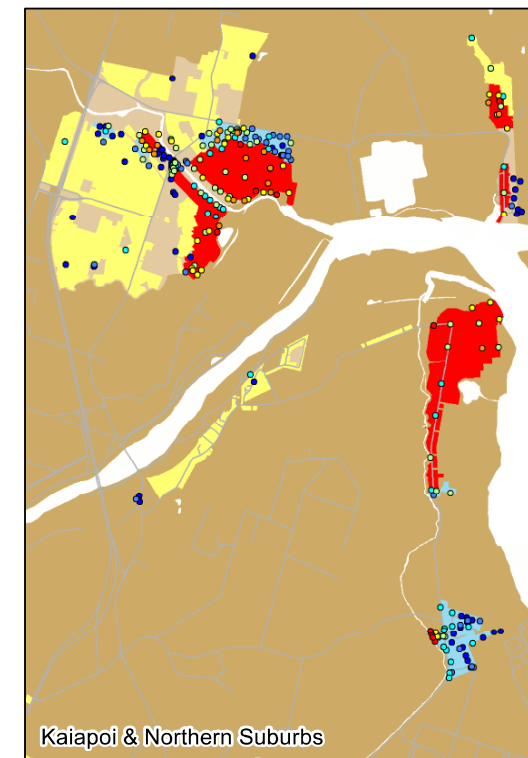
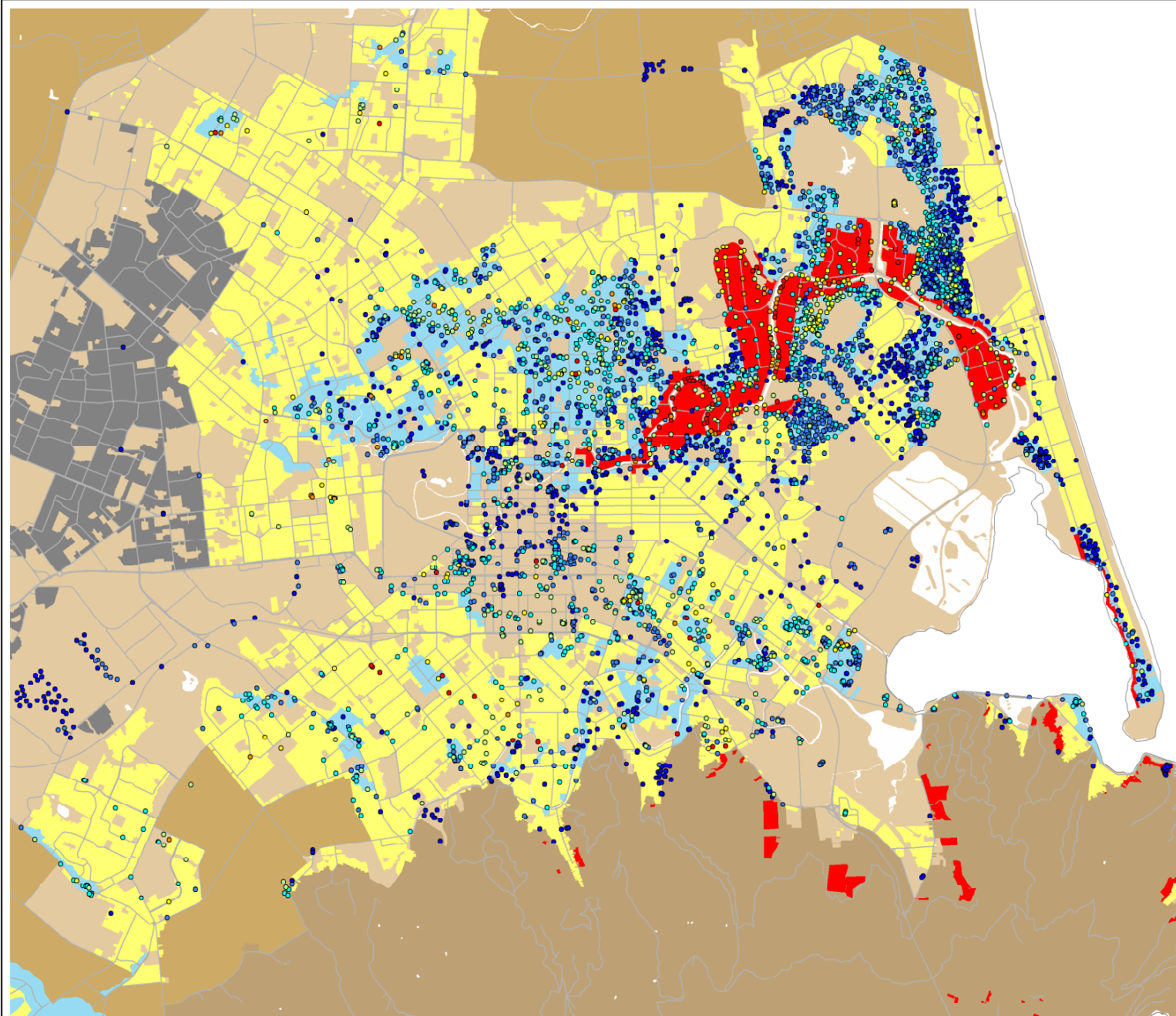


DRAWN	CXP	Feb.13
CHECKED		
APPROVED		
ARCFILE	52020-0200-LSN072	
SCALE (AT A3 SIZE)	1:60,000	
Prepared by	Tonkin & Taylor Ltd.	
Ref:	52020.0200	

EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 LSN (Median Groundwater
 Depth, M7.5, PGA 0.22g)

FIGURE No. Figure L18

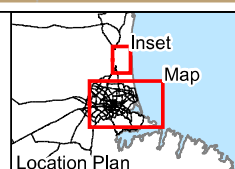
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A3 SCALE 1:60,000

0 1 2 3 4 (km)



EQC
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

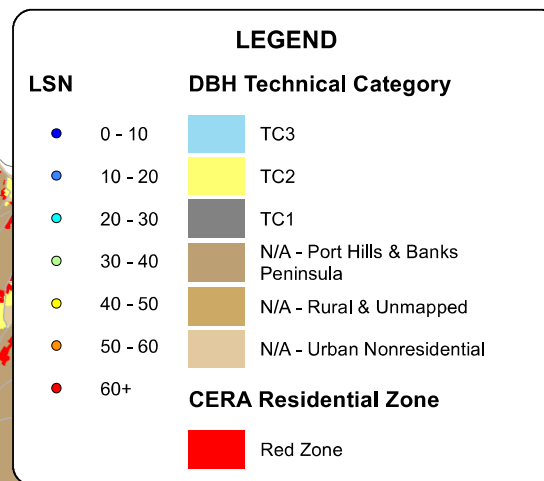
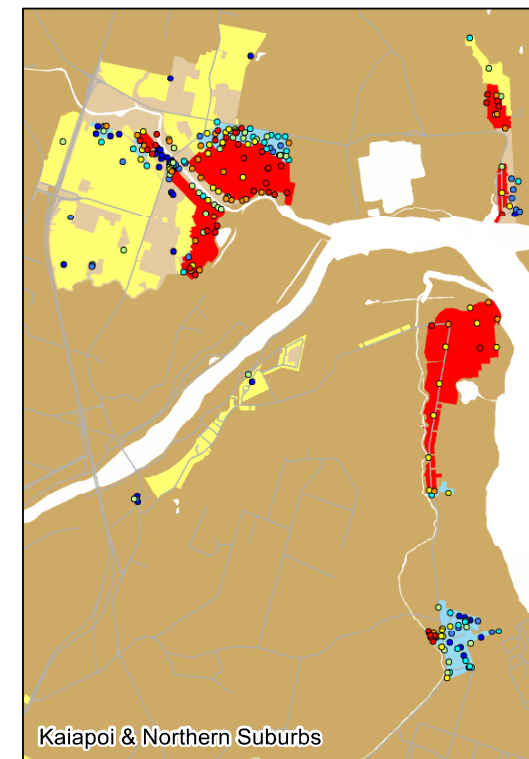
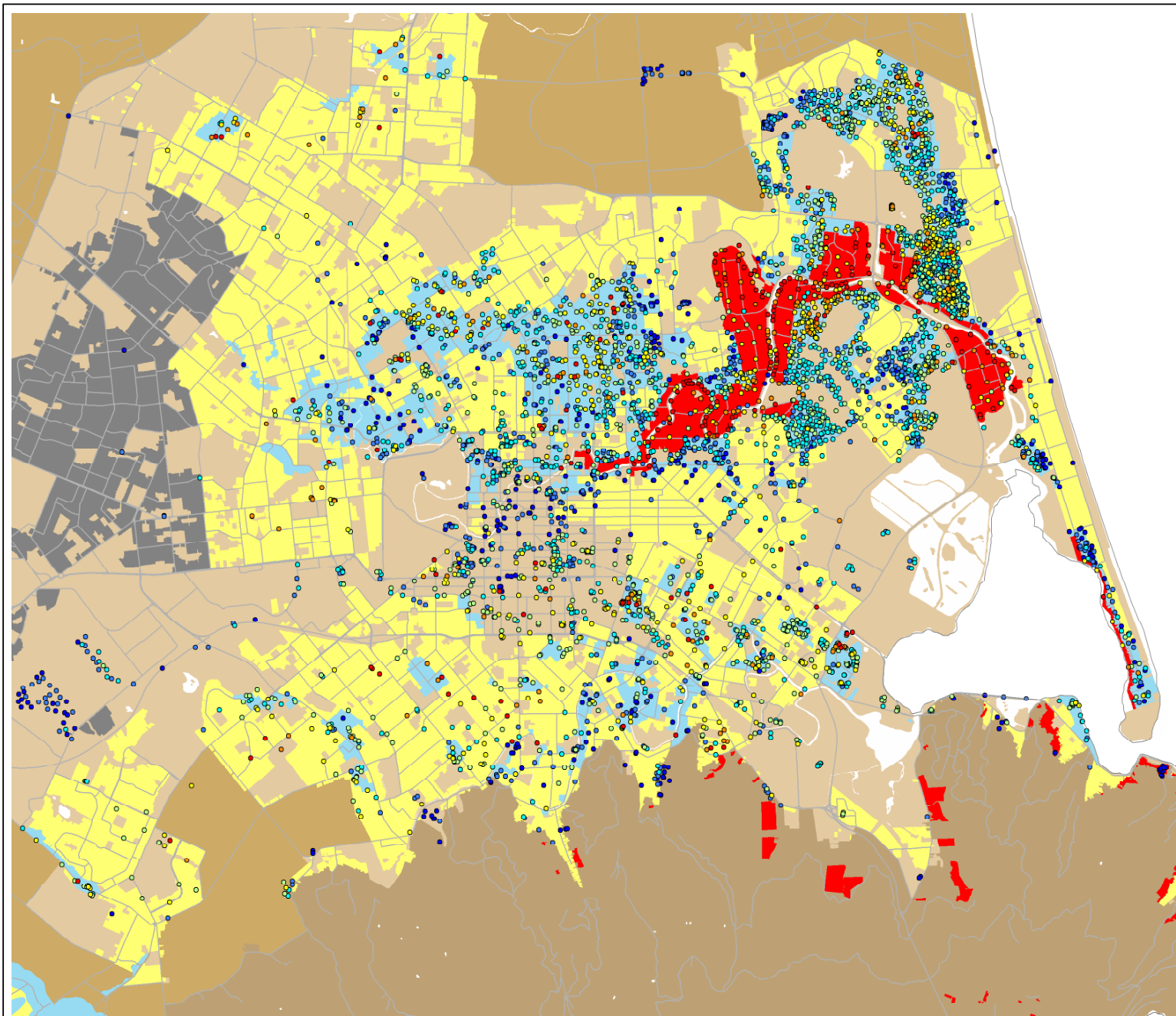
DRAWN	CXP	Feb.13
CHECKED		
APPROVED		
ARCFILE 52020-0200-LSN131		
SCALE (AT A3 SIZE) 1:60,000		
Prepared by Tonkin & Taylor Ltd. Ref: 52020.0200		

FIGURE No.

EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
LSN (Groundwater Depth
20% Above Median, M7.5, PGA 0.22g)

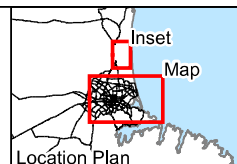
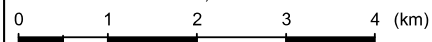
Figure L19

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A3 SCALE 1:60,000

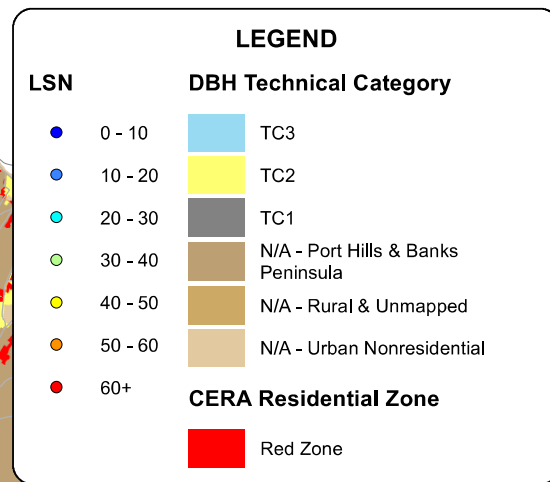
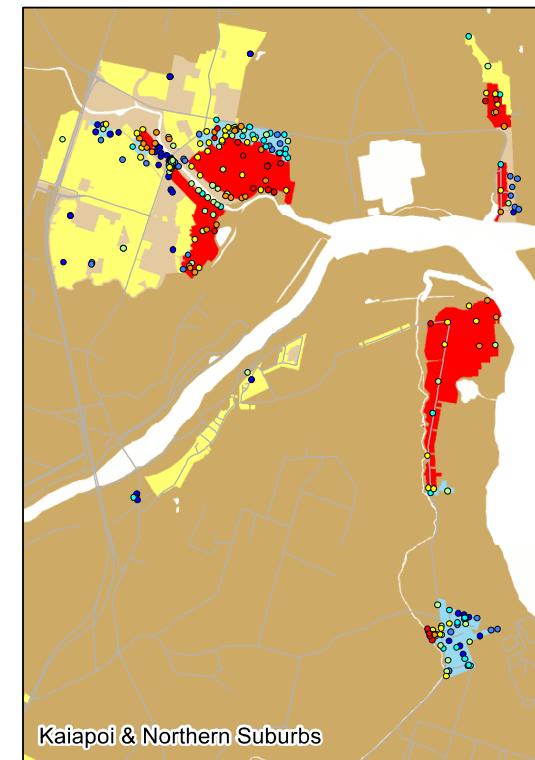
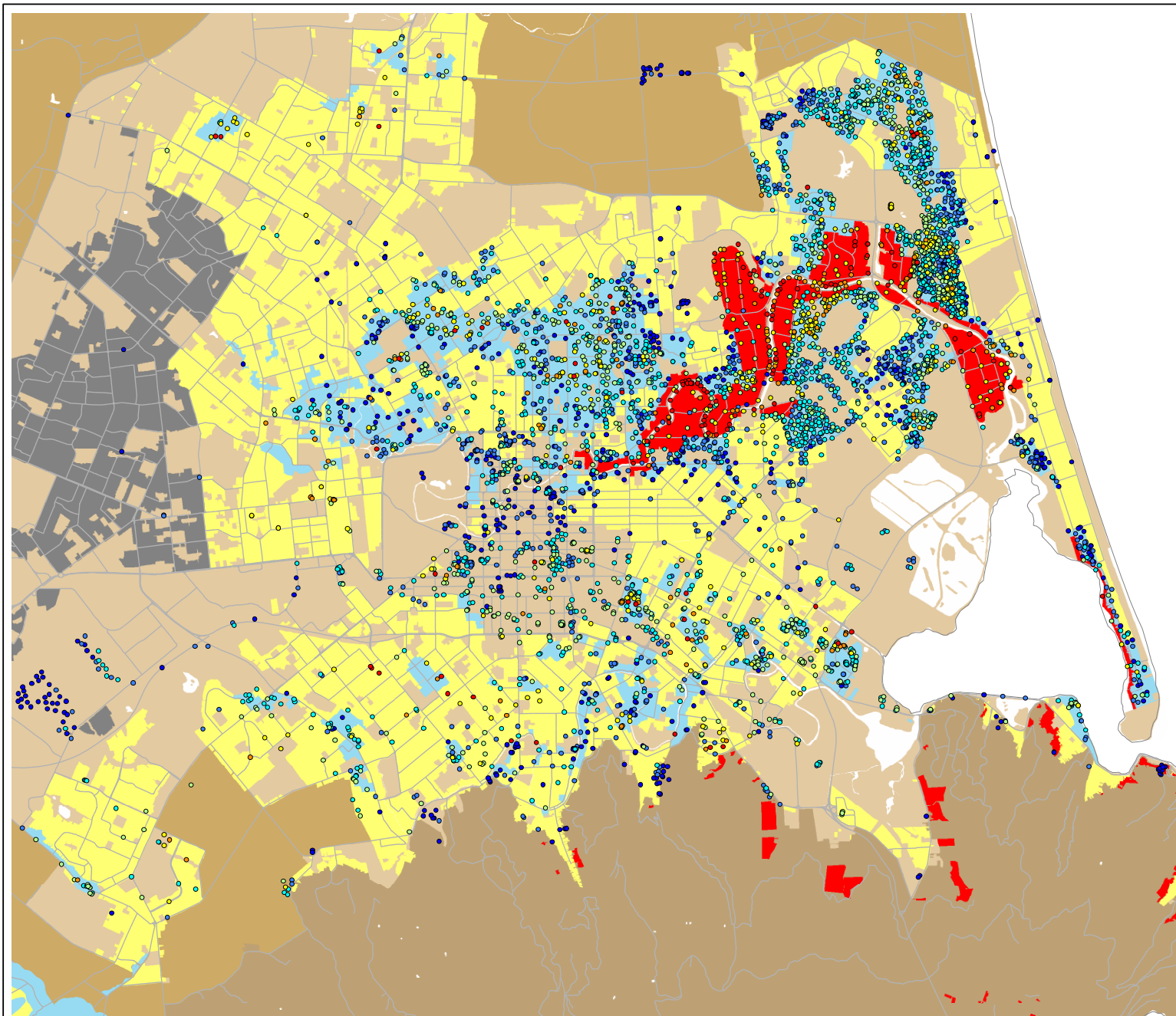


DRAWN	CXP	Feb.13
CHECKED		
APPROVED		
ARCFILE	52020-0200-LSN134	
SCALE (AT A3 SIZE)	1:60,000	
Prepared by	Tonkin & Taylor Ltd.	
Ref:	52020.0200	

EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 LSN (Groundwater Depth
 20% Below Median, M7.5, PGA 0.35g)

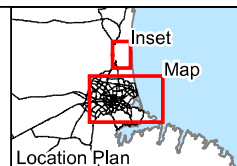
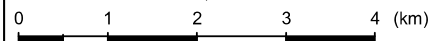
FIGURE No. Figure L20

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A3 SCALE 1:60,000

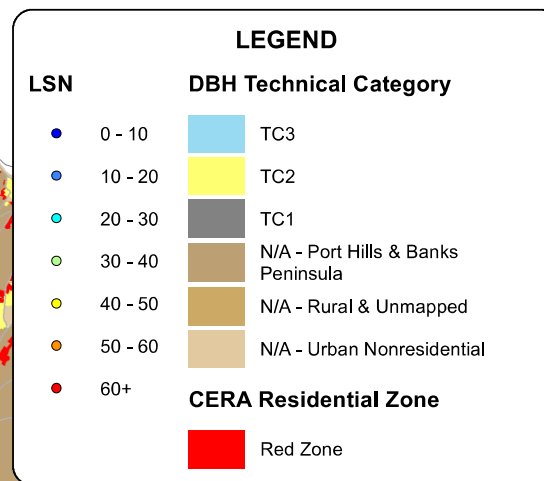
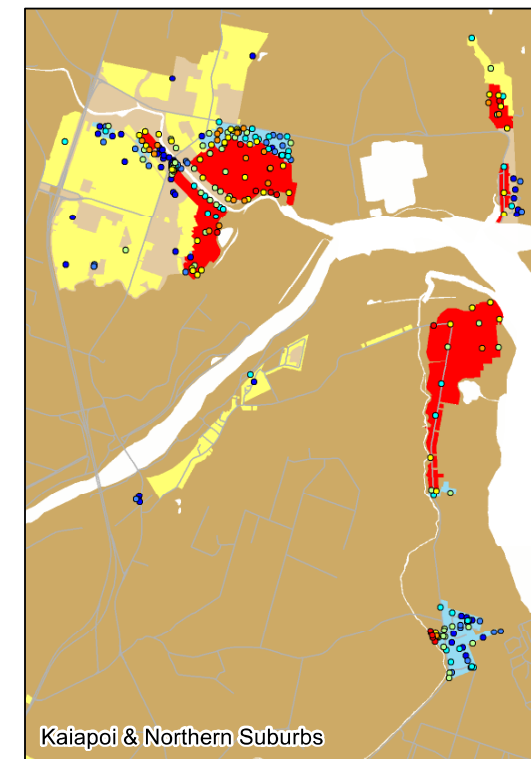
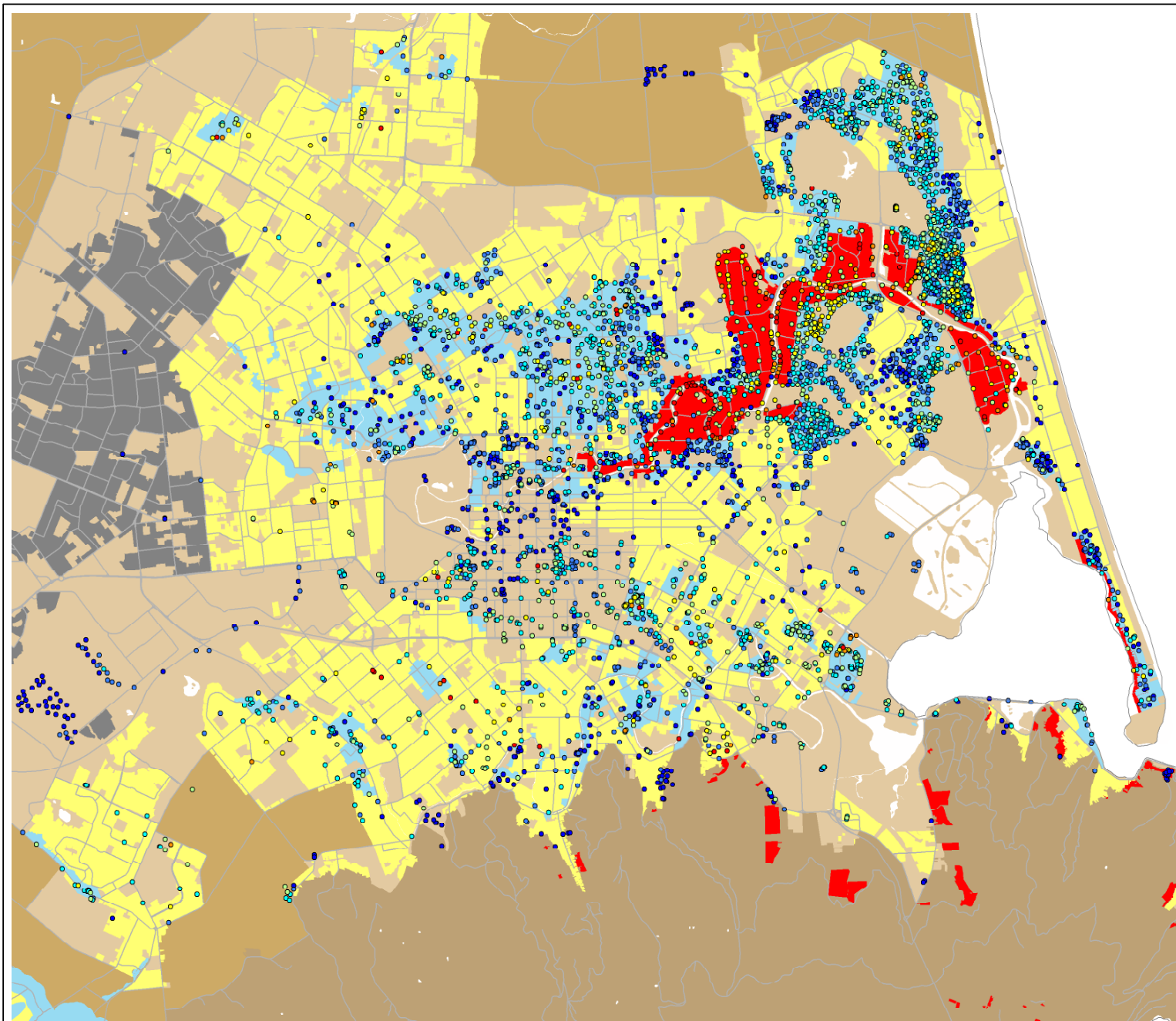


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APPROVED		
ARCFILE	52020-0200-LSN074	
SCALE (AT A3 SIZE)	1:60,000	
Prepared by	Tonkin & Taylor Ltd.	
Ref:	52020.0200	

EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 LSN (Median Groundwater
 Depth, M7.5, PGA 0.35g)

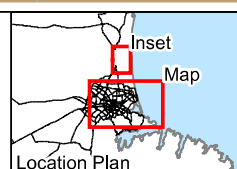
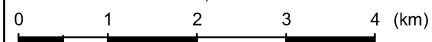
FIGURE No. Figure L21

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A3 SCALE 1:60,000



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ARCFILE	52020-0200-LSN133	
SCALE (AT A3 SIZE)	1:60,000	
Prepared by	Tonkin & Taylor Ltd.	
Ref:	52020.0200	

EARTHQUAKE COMMISSION
CHRISTCHURCH CITY & KAIAPOI
 LSN (Groundwater Depth
 20% Above Median, M7.5, PGA 0.35g)

FIGURE No. Figure L22

Rev. 0

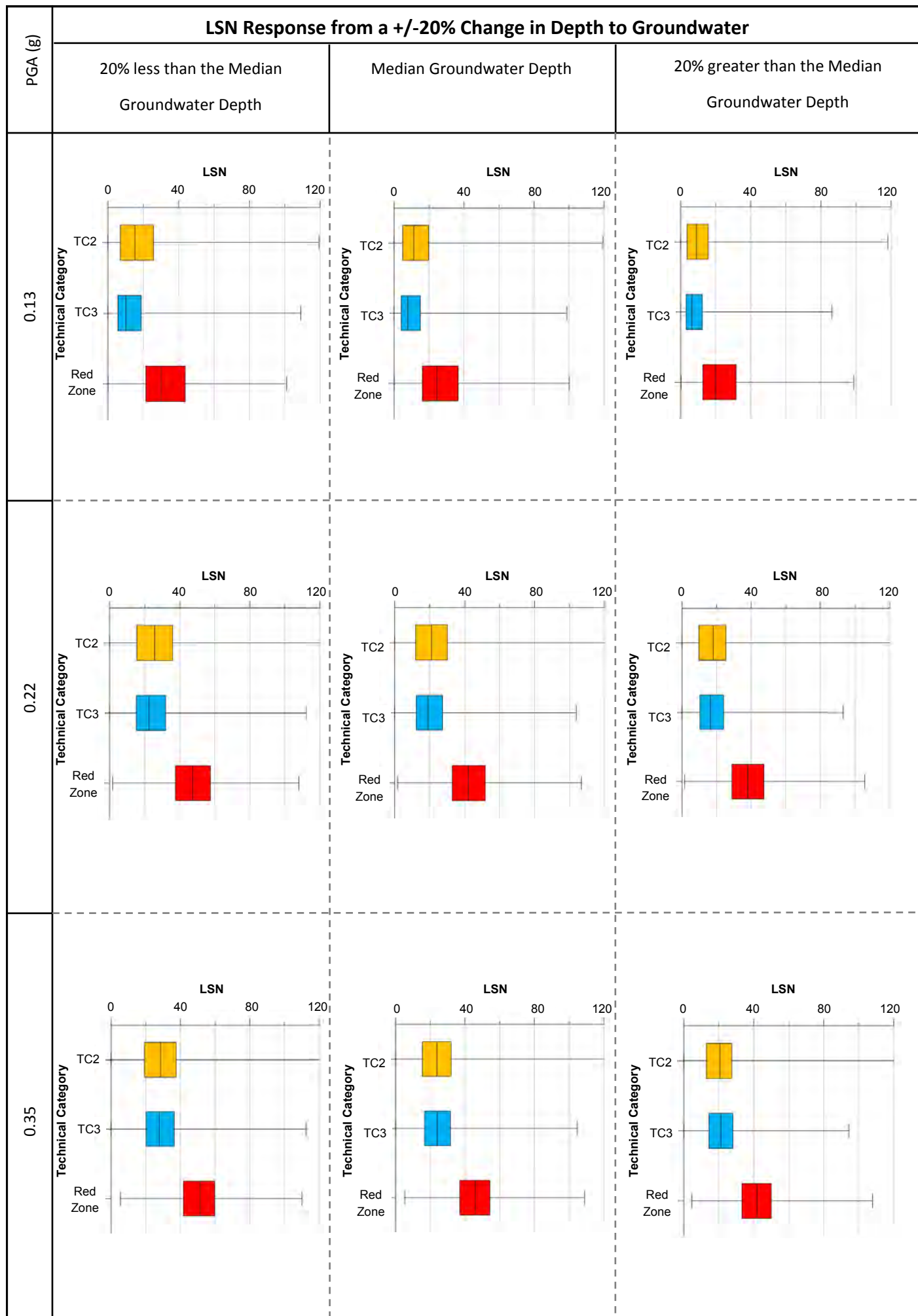


Figure L23

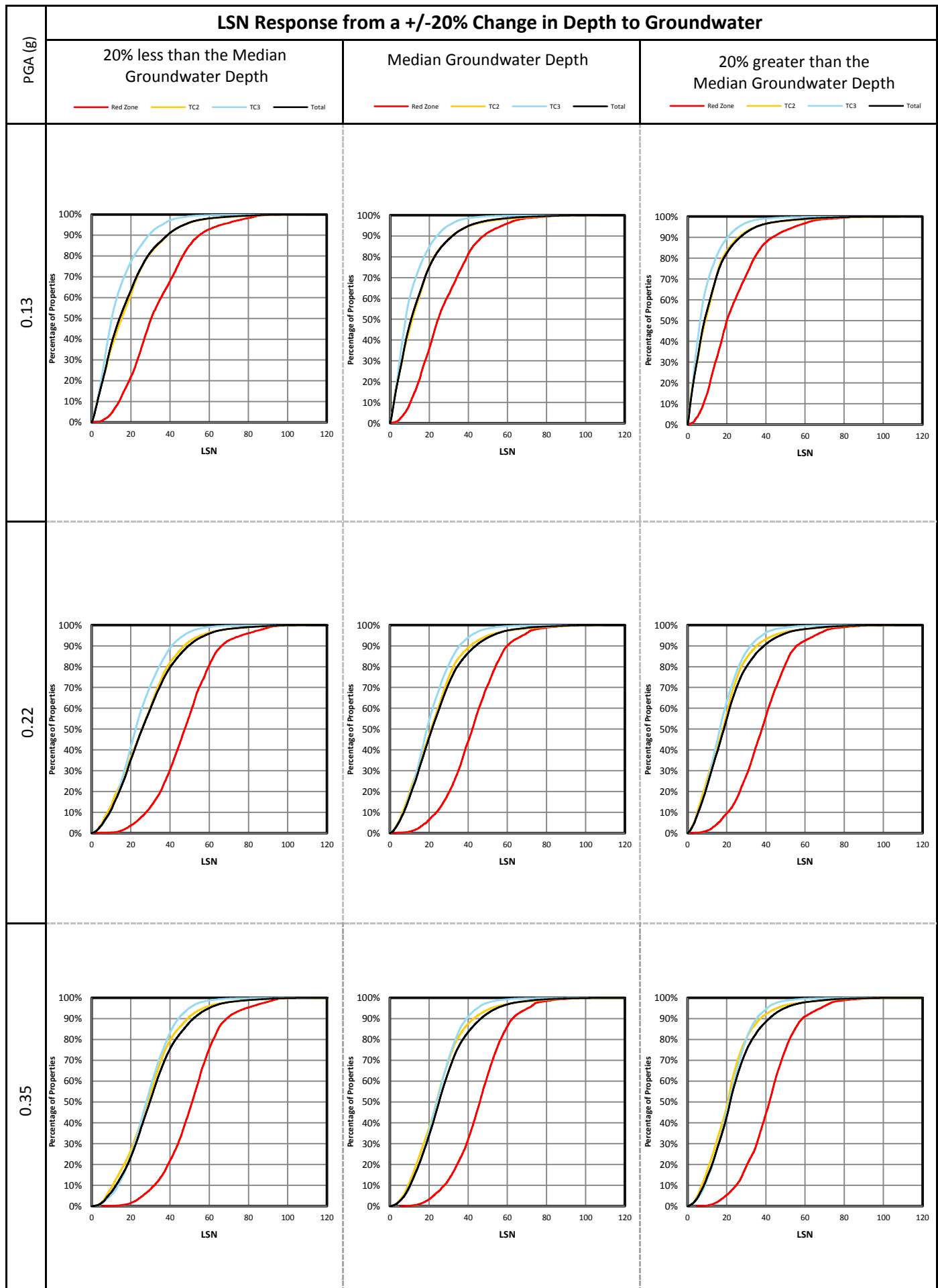


Figure L24

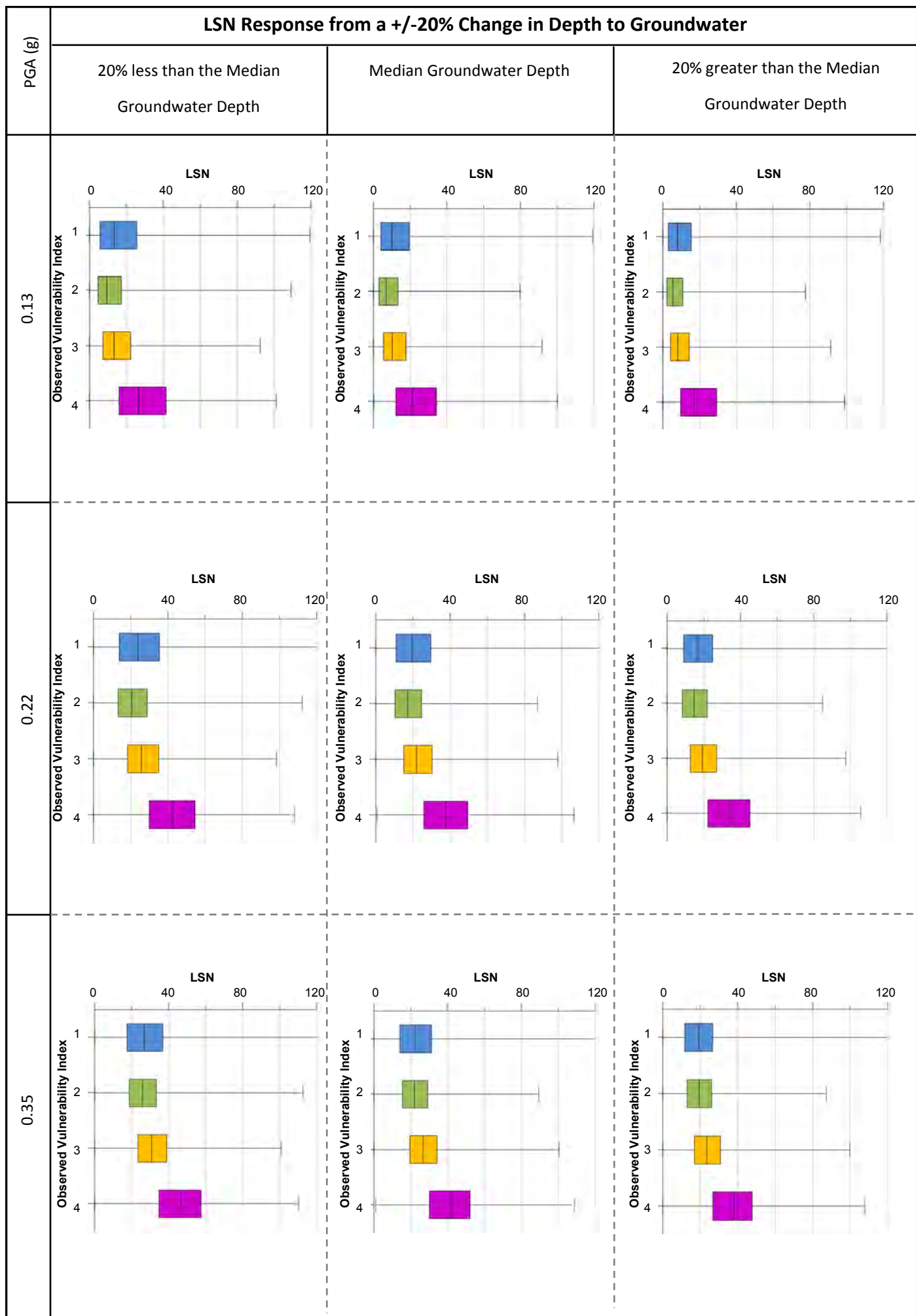


Figure L25

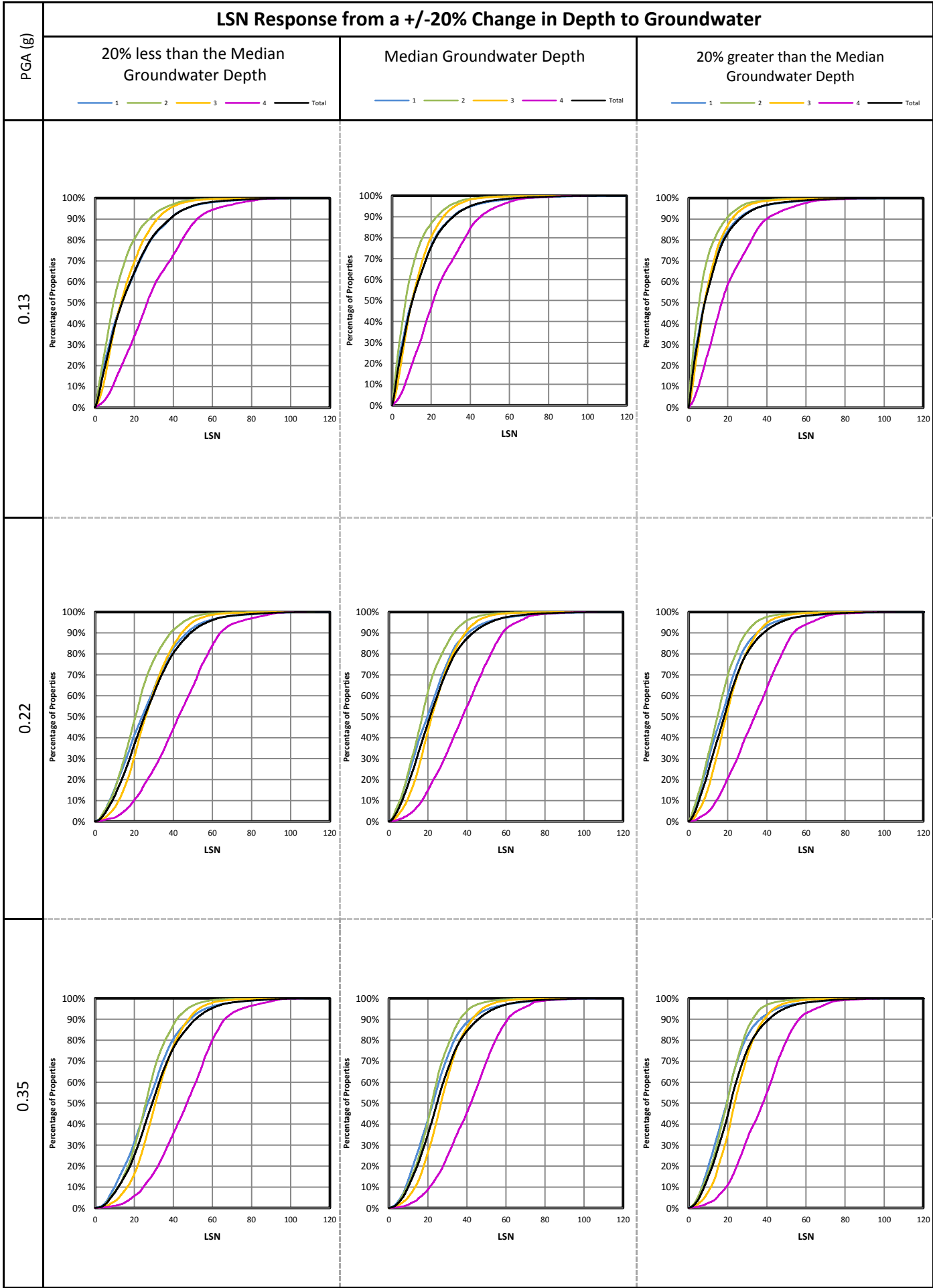


Figure L26