A Review

Post-Flood Reservoir Drawdown Fugitive Dust

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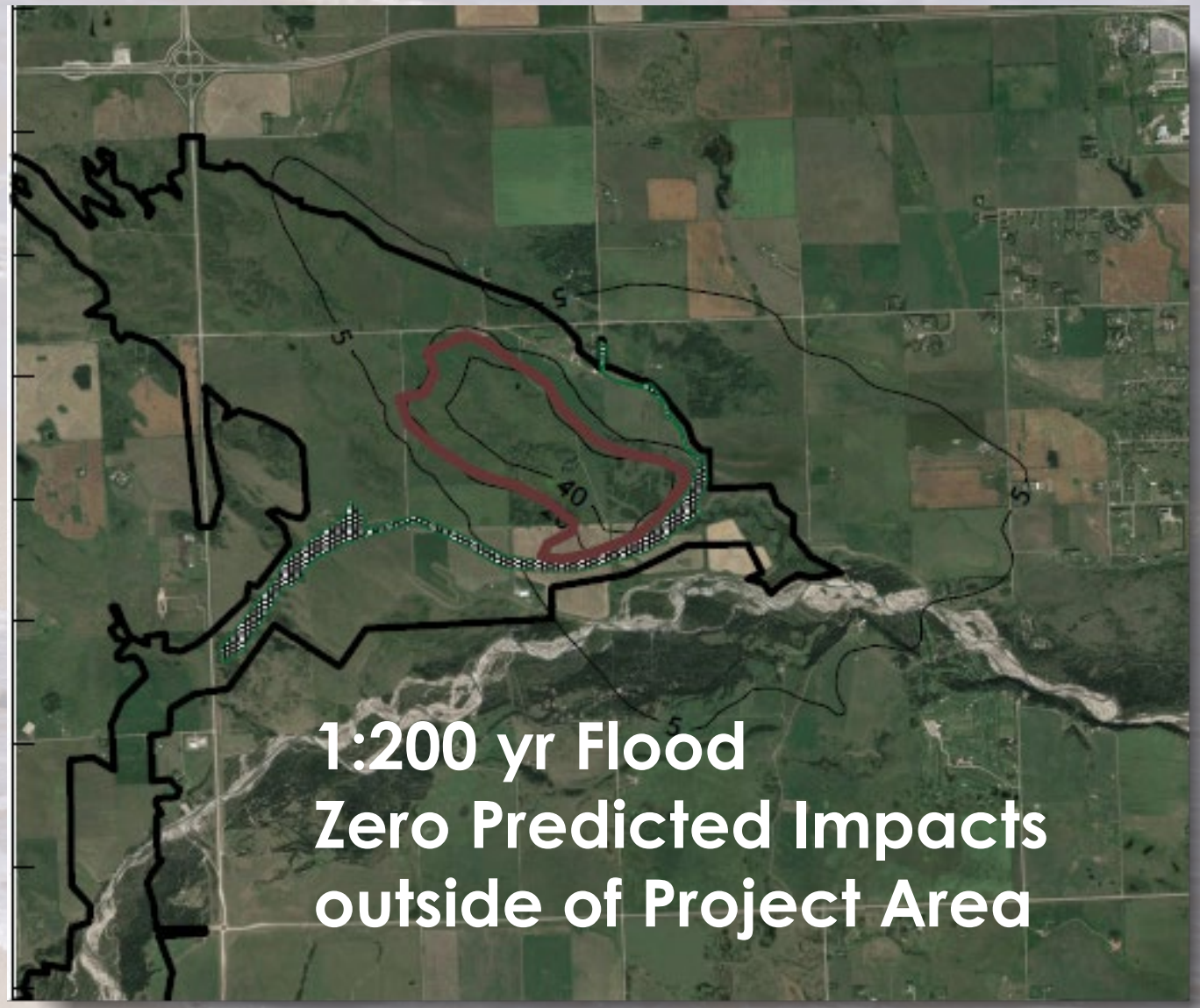
PRIMARY CONCERNS

1. Under-Estimated Emissions
2. Potential impacts extend into residential and First Nations lands



PRIMARY CONCERNS

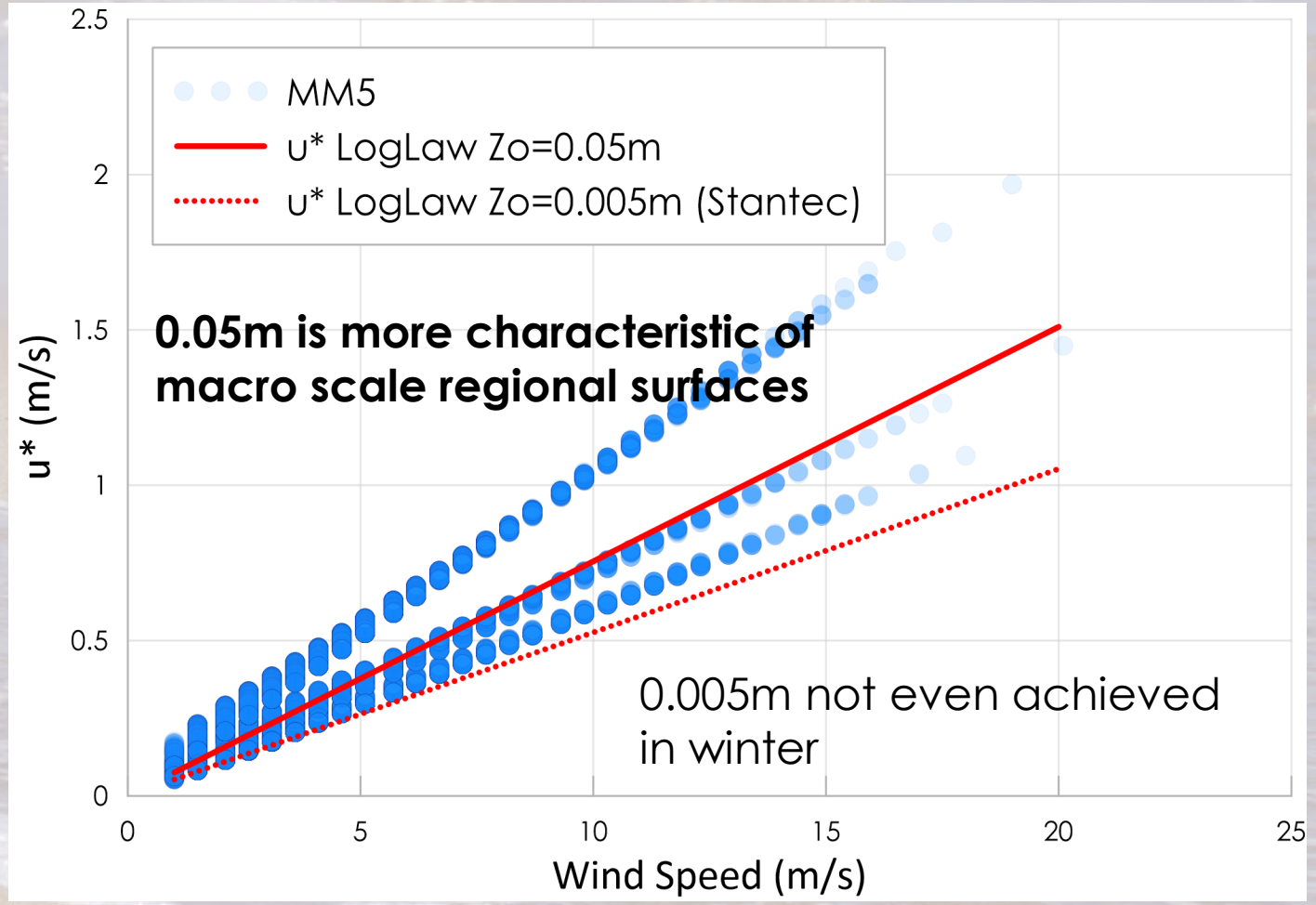
1. **Under-Estimated Emissions**
2. Potential impacts extend into residential and First Nations lands

- 1. Emissions under-estimated
  - Selected surface roughness **0.005m**
  - Meteorological data **MM5 Model**
  - Area of emissions **Area >10cm**
  - Particulate Size Distribution **Generic**
  - Emissions model **Threshold Friction Velocity**

PRIMARY CONCERNS

1. **Under-Estimated Emissions**
2. Potential impacts extend into residential and First Nations lands

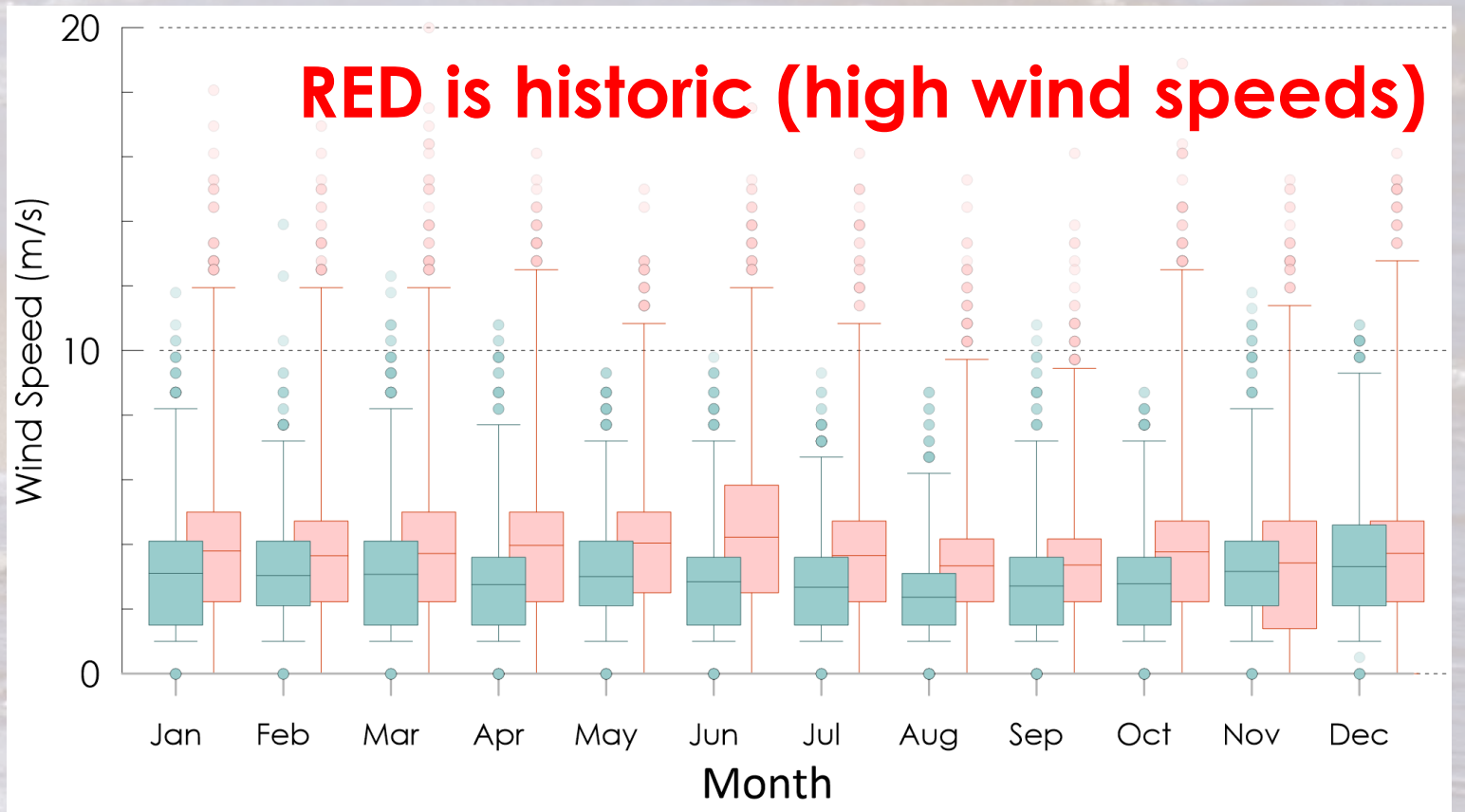
- Selected surface roughness **0.005m**



PRIMARY CONCERNS

1. **Under-Estimated Emissions**
2. Potential impacts extend into residential and First Nations lands

- Meteorological data **MM5 Model**



GREEN is MM5 (low wind speeds)

PRIMARY CONCERNS

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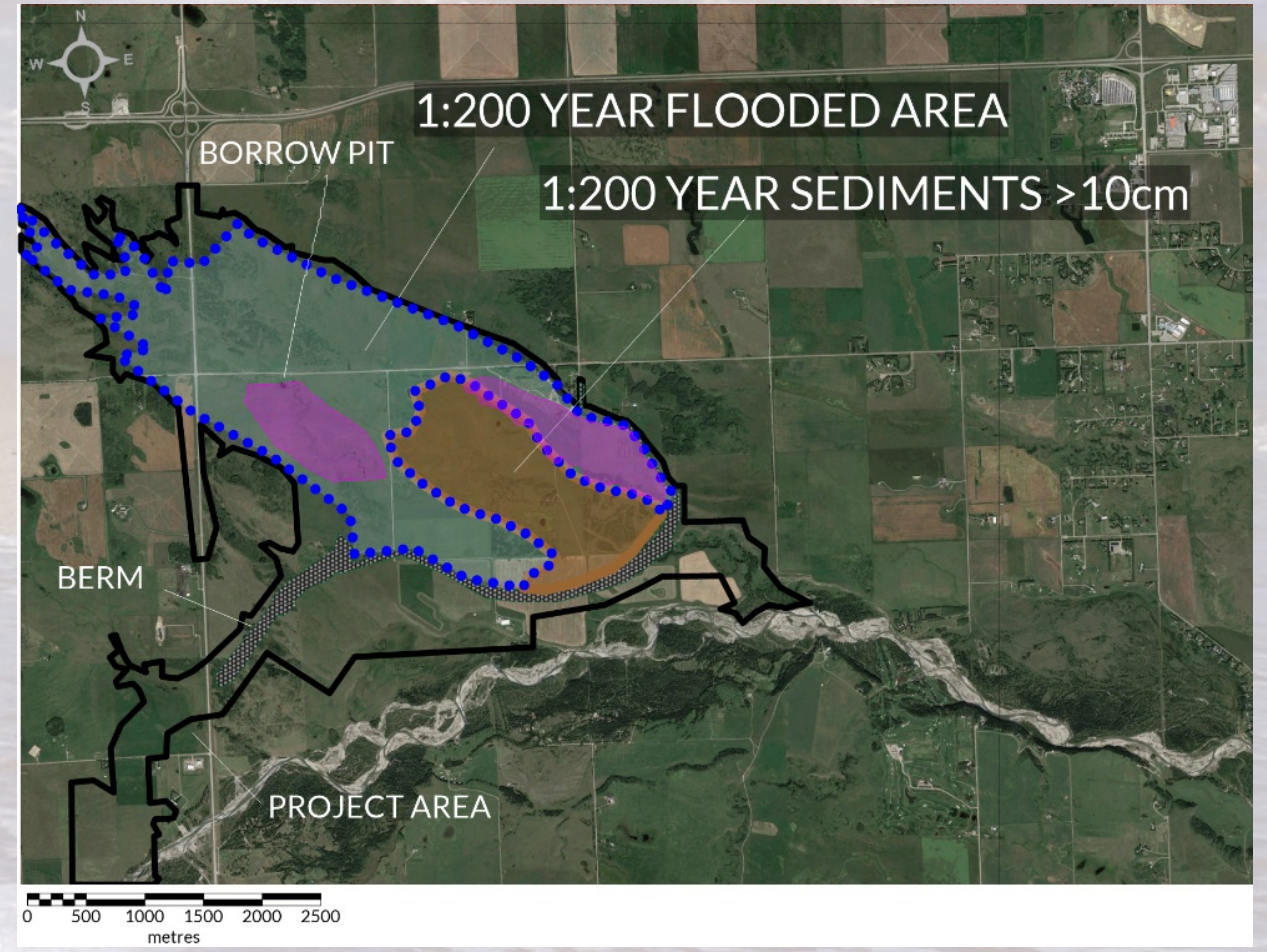
- Area of emissions **Area >10cm**



BROWN is only~ 20% of total flooded area

PRIMARY CONCERNS

1. **Under-Estimated Emissions**
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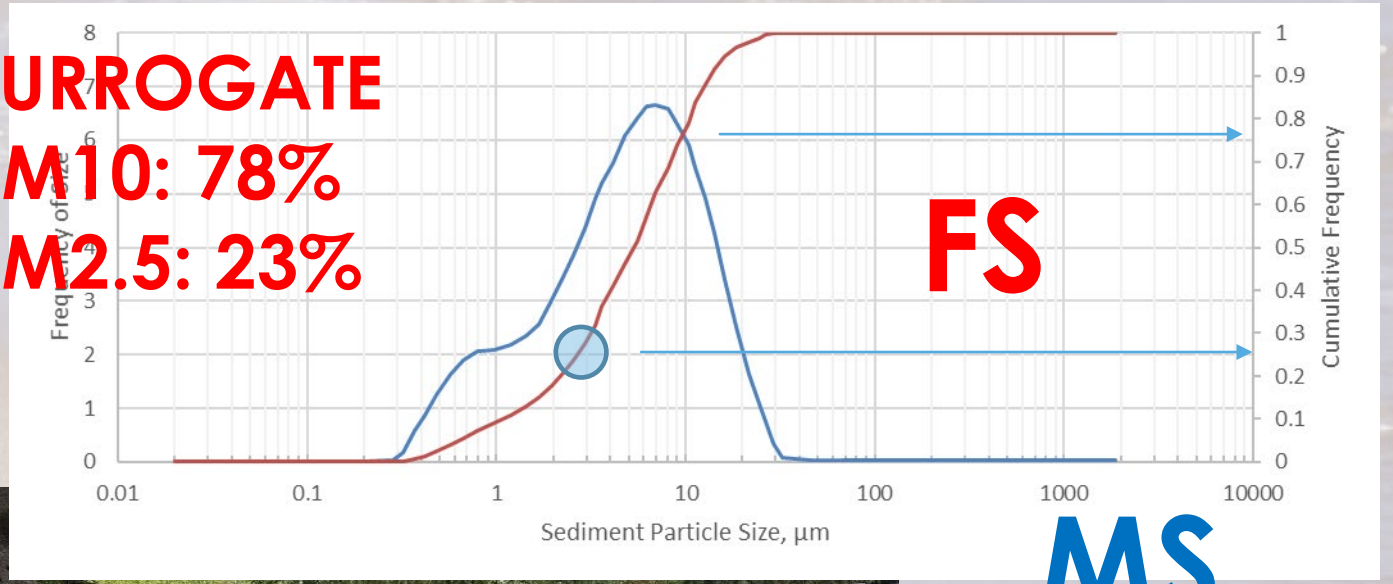
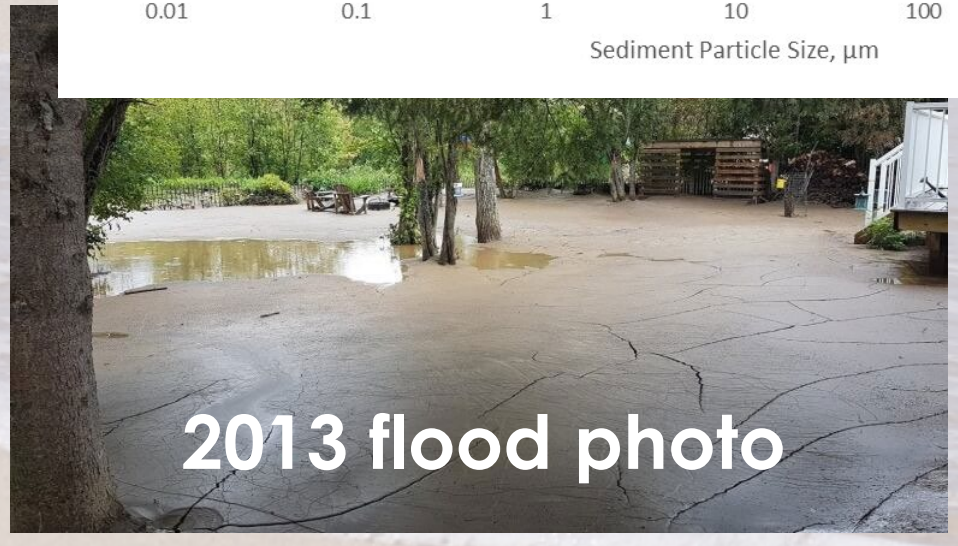
- Particulate Size Distribution **Generic**

SURROGATE
PM10: 78%
PM2.5: 23%





MS
GENERIC
TSP: 100%
PM10: 50%
PM2.5: 7.5%

PRIMARY CONCERNS

1. Under-Estimated Emissions
2. **Potential impacts extend into residential and First Nations lands**

- 2. Potential Impacts
  - What they didn't show you
  - **Same Assessment but NO CONTROLS**

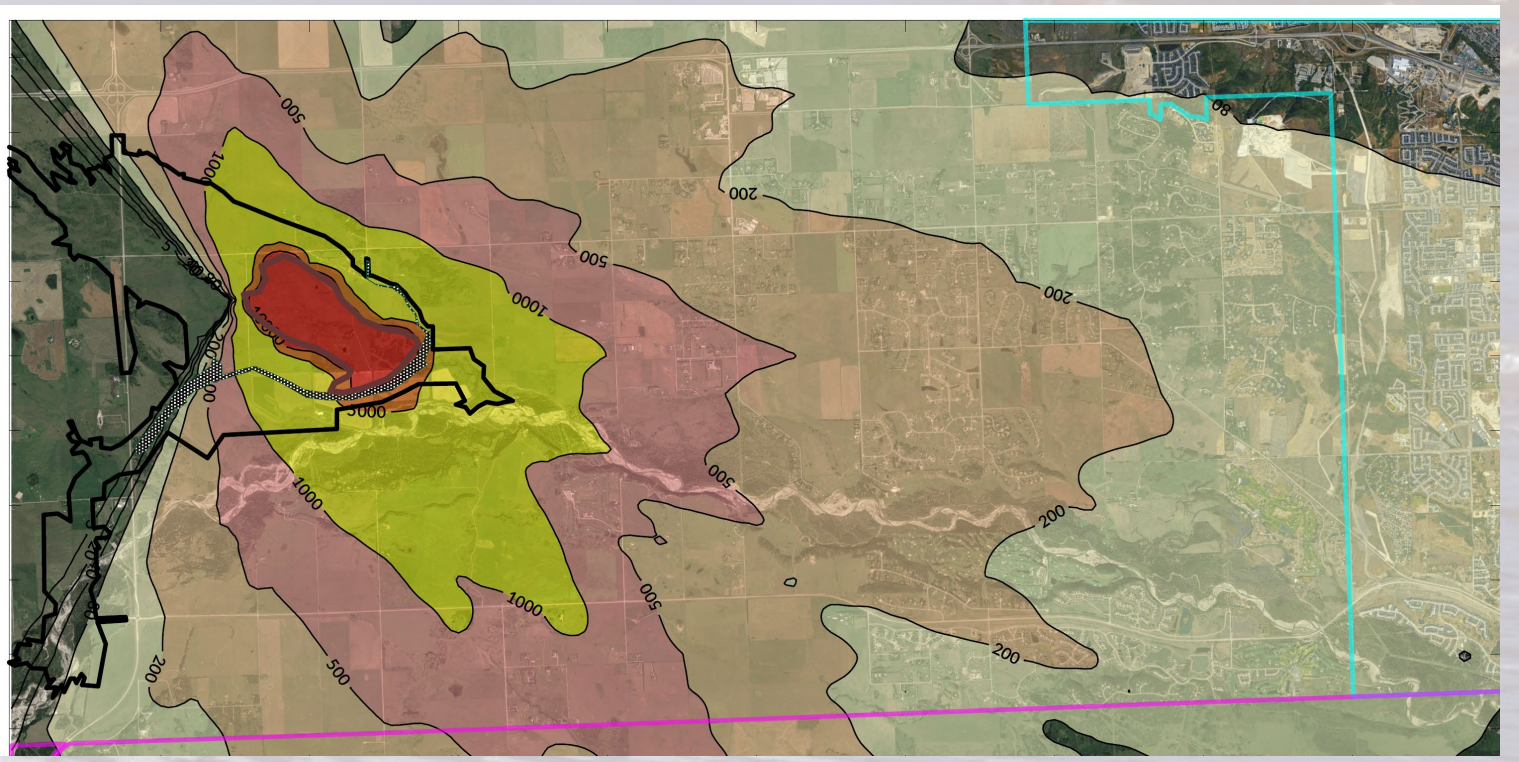


Figure A6: 1hr 99.9th PM2.5 1:200yr

PRIMARY CONCERNS

1. Under-Estimated Emissions
2. **Potential impacts extend into residential and First Nations lands**

- 2. Potential Impacts – Revised Assessment
  - **Best Case Scenario (with controls)**

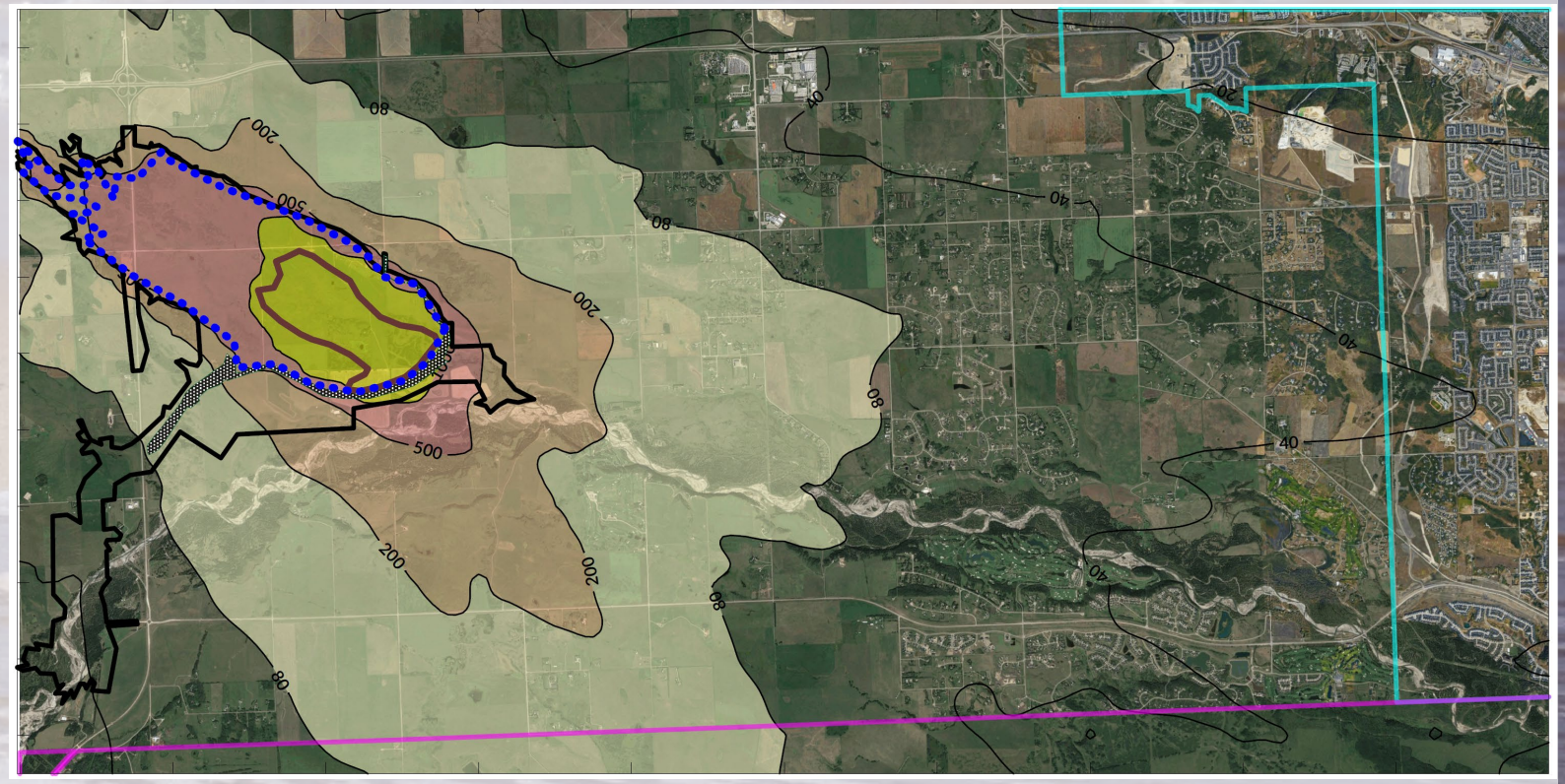


Figure A9.1: 1hr 99.9th PM2.5 **1:200yr**

Same Control Level 86% on deep sediments and 98% !!! assumed on other areas

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  - **Best Case Scenario (with controls)**

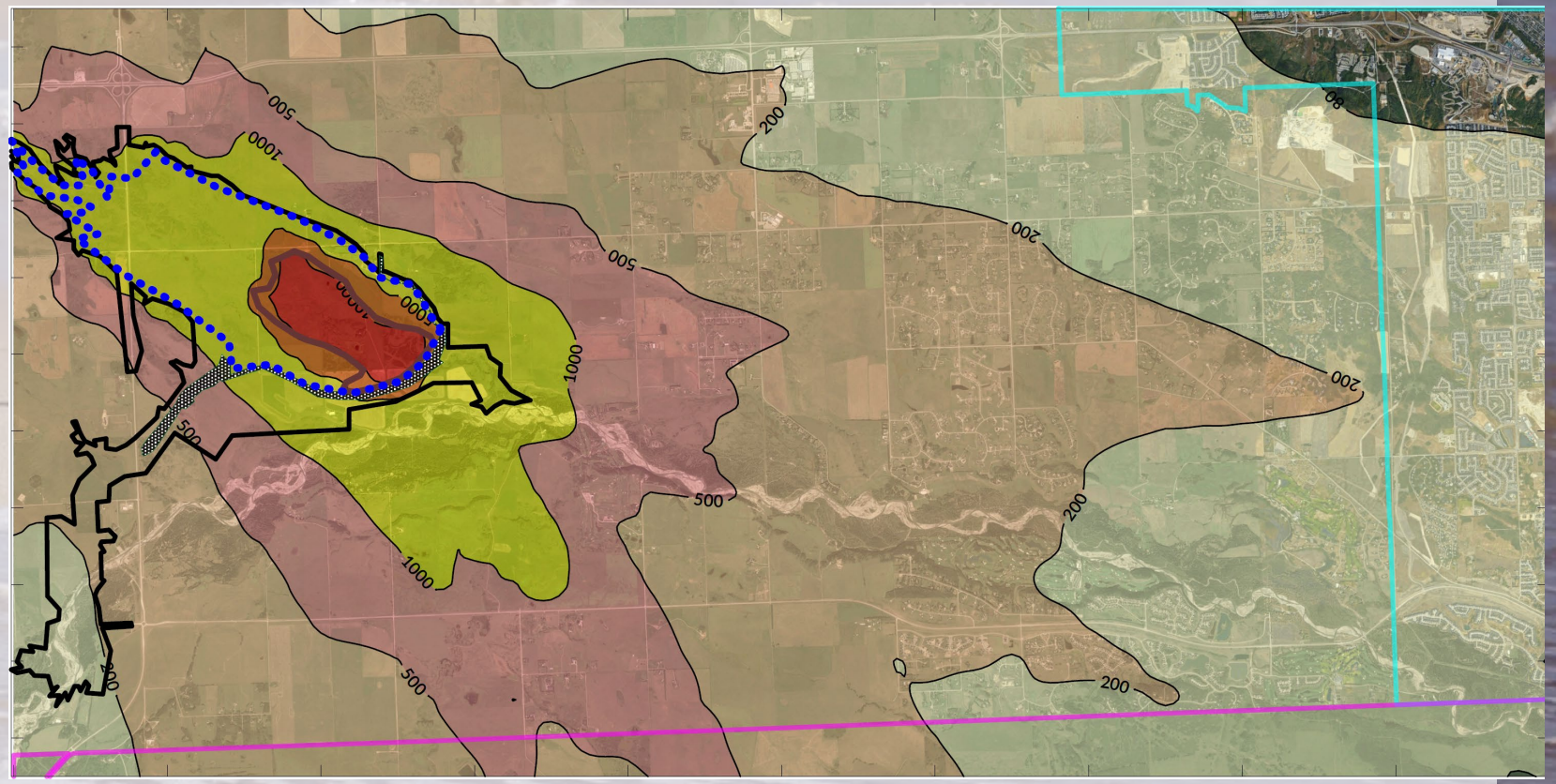

Figure A9.1: 1hr 99.9th TSP **1:200yr**

Same Control Level 86% on deep sediments and 98% !!! assumed on other areas

PRIMARY CONCERNS

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- 2. Potential Impacts – Revised Assessment
  - **Best Case Scenario (with controls)**

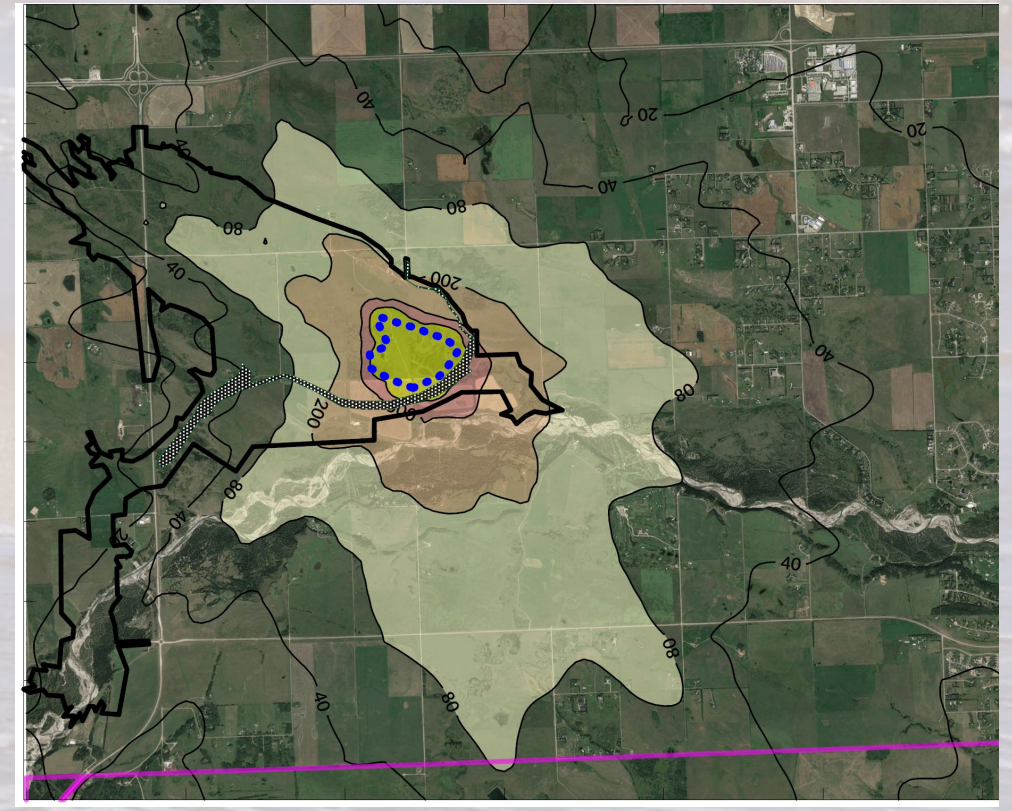

Figure A7.3: 1hr 99.9th TSP **1:10yr**

Same Control Level 86% on deep sediments and 98% !!! assumed on other areas

PRIMARY CONCERNS

1. Under-Estimated Emissions
2. **Potential impacts extend into residential and First Nations lands**

- 2. Potential Impacts
  - **Natural Mitigation – strong likelihood for dry weather**

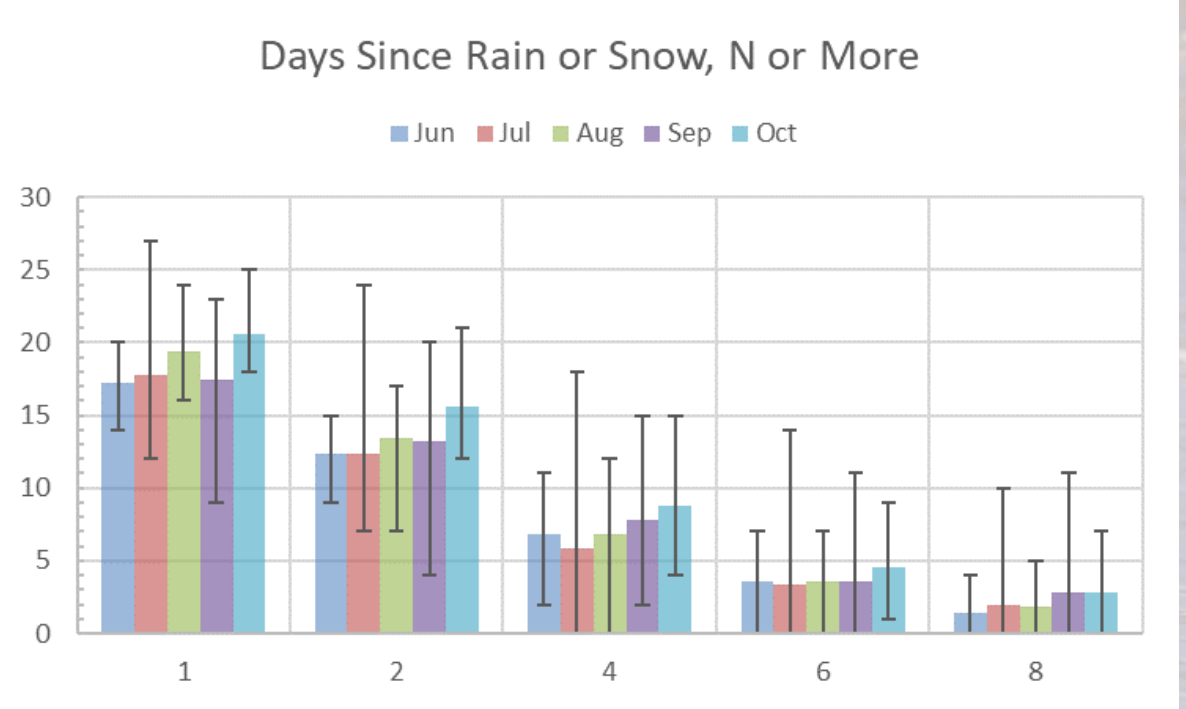

Figure 11

CONCLUSIONS

1. Strong bias under-estimating the emissions
2. Potential impacts extend into residential and First Nations lands
3. Dry weather is common occurrence with high frequency of high winds

- **1. Strong Bias Under-Estimating the Emissions**
  - Selected surface roughness **0.005m < 0.05m**
  - Meteorological data **MM5 Model vs Local Actual**
  - Area of emissions **Area >10cm vs Flooded Area**
  - Particulate Size Distribution **Generic vs Likely Surrogate**
  - Emissions model **Threshold Friction Velocity vs Critical Threshold Friction Velocity**
    - **The correction reduces emissions but is more accurate**
- **2. Impacts extend well beyond project area**
- **3. Windy and dry weather is normal**

Thank you

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