



NSW SHELLFISH PROGRAM

18 May 2022

NSW SHELLFISH PROGRAM HISTORY

- Setup in response to oyster related illness outbreaks in the 1970s – 1990s.
- Significant reduction in number and magnitude of outbreaks since implementation early 2000s.
- Program meets accepted international practice – export market access.
- NSW oysters very rarely implicated in illness outbreaks.

Successful in prevent illness. Closures costly.

Can we maintain safety and reduce impost on industry?

NSWSP – OPERATIONAL STATS

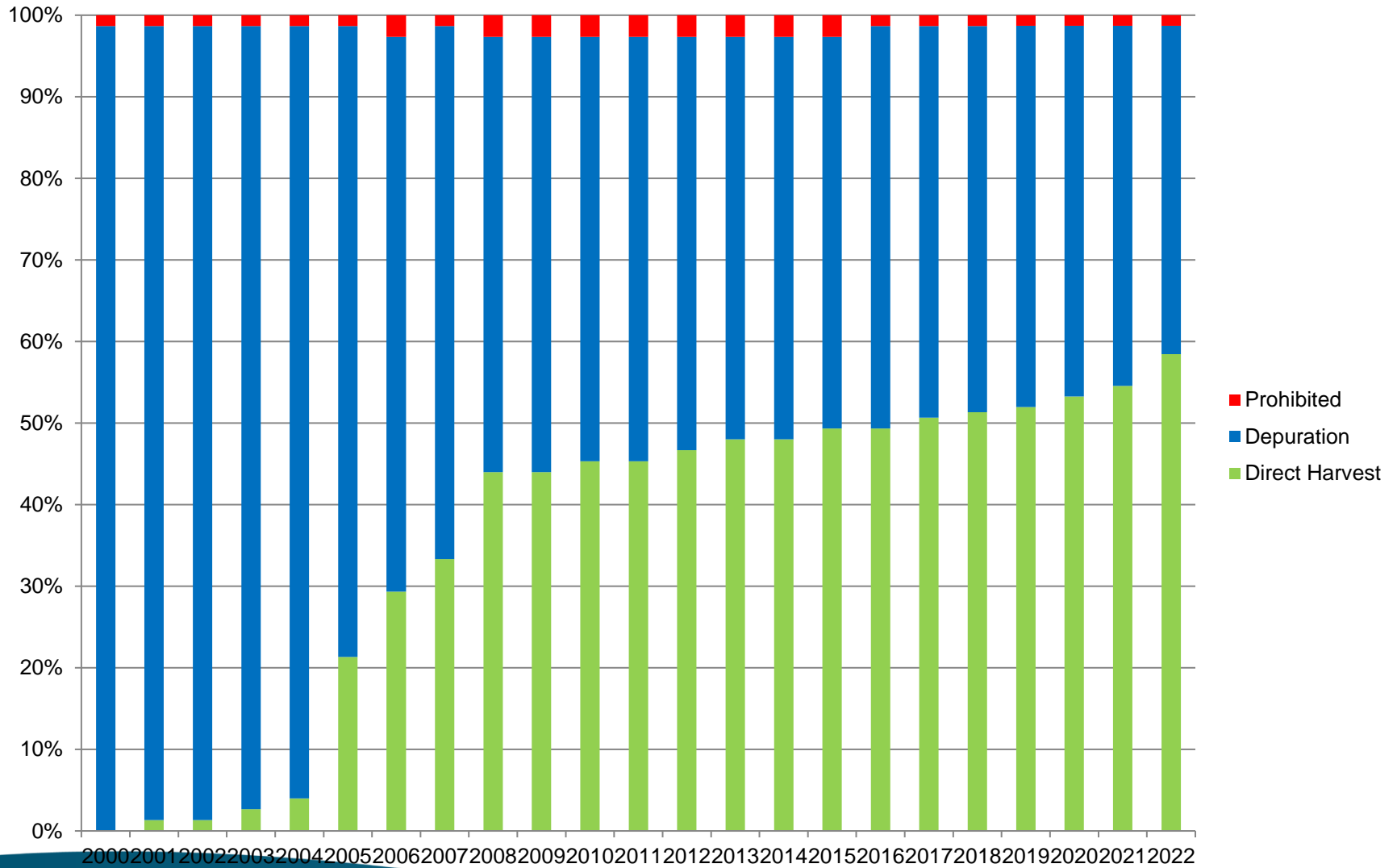
| | 2018/19 | 2019/20 | 2020/21 | 2021/22 (to 9/5/22) |
|-----------------------------|---------|---------|----------------------|----------------------|
| Closures | 374 | 446 | 667 | 525 |
| Sewage Reports | 81 | 85 | 150 ₍₄₂₂₎ | 162 ₍₃₃₃₎ |
| Laboratory Results | 8877 | 8064 | 9336 | 7263 |
| Adverse Sampling Compliance | 87.5% | 88.2% | 88.3% | 84.9% |

2

1



1 CLASSIFICATION HISTORY



1

ADVERSE SAMPLING

High number of adverse samples & low results = Happy Days.

Demonstrates that the area meets classification requirements.

| Date | Status - 2009 Review | Rainfall | | Water Site | | | | Shellfish Site | | | Salinity |
|------------|-----------------------------------|----------|-----|------------|------|------|------|----------------|------|------|----------|
| | | 24h | 7d | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 2 |
| 1/09/2008 | Open | 1 | 12 | | | | | | | | |
| 4/09/2008 | Adverse Sample - Rainfall 24h | 25 | 36 | 19 | 18 | 22 | 60 | 9 | 7 | 3.5 | 32.7 |
| 6/09/2008 | Closed - Rainfall | 35 | 83 | | | | | | | | |
| 15/09/2008 | opening | 8 | 19 | 6 | 4 | 2 | 5 | 0.5 | 1 | 2 | 26.5 |
| 16/09/2008 | Open | 0 | 11 | | | | | | | | |
| 24/10/2008 | Adverse Sample - Rainfall 24h | 29 | 29 | 15 | 21 | 36 | 55 | 4 | 0.5 | 3 | 32.7 |
| 15/12/2008 | Adverse Sample - Spring tide | 1 | 20 | 2 | 6 | 4 | 22 | 0.49 | 1 | 0.49 | 34.1 |
| 29/12/2008 | Adverse Sample - Holiday | 0 | 3 | 0.99 | 0.99 | 0.99 | 0.99 | 0.49 | 0.49 | 0.49 | 34.7 |
| 16/02/2009 | Closed - Rainfall | 109 | 115 | | | | | | | | |
| 24/02/2009 | opening | 4 | 4 | 1 | 2 | 1 | 7 | 0.49 | 2 | 4 | 23.7 |
| 26/02/2009 | Open | 0 | 4 | | | | | | | | |
| 31/03/2009 | Adverse Sample - Rainfall 24 & 7d | 21 | 65 | 8 | 21 | 12 | 24 | 0.5 | 0.49 | 0.5 | 17.9 |
| 1/04/2009 | Closed - Salinity | 0 | 65 | | | | | | | | |
| 7/04/2009 | opening | 11 | 19 | 32 | 30 | 14 | 61 | 0.5 | 1 | 0.5 | 22.4 |
| 8/04/2009 | Open | 0 | 8 | | | | | | | | |
| 11/05/2009 | Adverse Sample - Rainfall 24h | 25 | 25 | 63 | 26 | 66 | 103 | 9 | 8 | 8 | 26.5 |
| 13/05/2009 | Closed - Water | 3 | 33 | | | | | | | | |
| 18/05/2009 | opening | 0 | 10 | 2 | 1 | 5 | 0.99 | 0.49 | 0.49 | 0.49 | 32.7 |
| 20/05/2009 | Open | 0 | 3 | | | | | | | | |
| 31/05/2009 | Closed - Rainfall | 45 | 45 | | | | | | | | |
| 2/06/2009 | opening | 0 | 45 | 7 | 7 | 4 | 7 | 0.49 | 0.5 | 0.49 | 25.4 |
| 4/06/2009 | Open | 0 | 45 | | | | | | | | |
| 22/06/2009 | Adverse Sample - Rainfall 7d | 19 | 60 | 39 | 18 | 6 | 35 | 4 | 8.5 | 7.5 | 27.8 |



1

ADVERSE SAMPLING

Opening samples only = Flying blind.

Impossible to tell if area meets classification. At risk of downgrade to classification and/or management plan.

| Date | Status - 2009 Review | Rainfall | | Water Site | | | | Shellfish Site | | | Salinity |
|------------|----------------------|----------|----|------------|----|----|------|----------------|------|------|----------|
| | | 24h | 7d | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 15/09/2008 | opening | 8 | 19 | 6 | 4 | 2 | 5 | 0.5 | 1 | 2 | 26.5 |
| 24/02/2009 | opening | 4 | 4 | 1 | 2 | 1 | 7 | 0.49 | 2 | 4 | 23.7 |
| 7/04/2009 | opening | 11 | 19 | 32 | 30 | 14 | 61 | 0.5 | 1 | 0.5 | 22.4 |
| 18/05/2009 | opening | 0 | 10 | 2 | 1 | 5 | 0.99 | 0.49 | 0.49 | 0.49 | 32.7 |
| 2/06/2009 | opening | 0 | 45 | 7 | 7 | 4 | 7 | 0.49 | 0.5 | 0.49 | 25.4 |



1

ADVERSE SAMPLING

High number of adverse samples & high results = Concerned but manageable.

Can adjust management plan closure triggers to maintain classification.

| Date | Status - 2009 Review | Rainfall | | Water Site | | | | Shellfish Site | | | Salinity |
|------------|-----------------------------------|----------|----|------------|------|------|------|----------------|------|------|----------|
| | | 24h | 7d | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 2 |
| 4/09/2008 | Adverse Sample - Rainfall 24h | 25 | 36 | 95 | 150 | 78 | 220 | 55 | 7 | 19 | 32.7 |
| 24/10/2008 | Adverse Sample - Rainfall 24h | 29 | 29 | 15 | 21 | 36 | 72 | 8 | 11 | 7 | 32.7 |
| 15/12/2008 | Adverse Sample - Spring tide | 1 | 20 | 2 | 6 | 4 | 22 | 0.49 | 1 | 0.49 | 34.1 |
| 29/12/2008 | Adverse Sample - Holiday | 0 | 3 | 0.99 | 0.99 | 0.99 | 0.99 | 0.49 | 0.49 | 0.49 | 34.7 |
| 31/03/2009 | Adverse Sample - Rainfall 24 & 7d | 21 | 65 | 8 | 68 | 12 | 102 | 0.5 | 0.49 | 0.5 | 17.9 |
| 11/05/2009 | Adverse Sample - Rainfall 24h | 25 | 25 | 85 | 26 | 91 | 145 | 32 | 21 | 8 | 26.5 |
| 22/06/2009 | Adverse Sample - Rainfall 7d | 19 | 60 | 39 | 19 | 6 | 35 | 4 | 8.5 | 7.5 | 27.8 |

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ADVERSE SAMPLING

Low number of adverse samples & a few high results = On shaky ground.

Fails classification criteria – classification at risk.

| Date | Status - 2009 Review | Rainfall | | Water Site | | | | Shellfish Site | | | Salinity |
|------------|-----------------------------------|----------|-----|------------|------|------|------|----------------|------|------|----------|
| | | 24h | 7d | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 1/09/2008 | Open | 1 | 12 | | | | | | | | |
| 4/09/2008 | Missed Adverse Sample - 24hr | 25 | 36 | | | | | | | | 32.7 |
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| 15/09/2008 | opening | 8 | 19 | 6 | 4 | 2 | 5 | 0.5 | 1 | 2 | 26.5 |
| 16/09/2008 | Open | 0 | 11 | | | | | | | | |
| 24/10/2008 | Missed Adverse Sample -24hr | 29 | 29 | | | | | | | | 32.7 |
| 15/12/2008 | Adverse Sample - Spring tide | 1 | 20 | 2 | 6 | 4 | 22 | 0.49 | 1 | 0.49 | 34.1 |
| 29/12/2008 | Adverse Sample - Holiday | 0 | 3 | 0.99 | 0.99 | 0.99 | 0.99 | 0.49 | 0.49 | 0.49 | 34.7 |
| 16/02/2009 | Closed - Rainfall | 109 | 115 | | | | | | | | |
| 24/02/2009 | opening | 4 | 4 | 1 | 2 | 1 | 7 | 0.49 | 2 | 4 | 23.7 |
| 26/02/2009 | Open | 0 | 4 | | | | | | | | |
| 31/03/2009 | Missed Adverse Sample - 24hr & 7d | 21 | 65 | | | | | | | | 17.9 |
| 1/04/2009 | Closed - Salinity | 0 | 65 | | | | | | | | |
| 7/04/2009 | opening | 11 | 19 | 32 | 30 | 14 | 61 | 0.5 | 1 | 0.5 | 22.4 |
| 8/04/2009 | Open | 0 | 8 | | | | | | | | |
| 11/05/2009 | Adverse Sample - Rainfall 24h | 25 | 25 | 90 | 79 | 115 | 200 | 19 | 15 | 31 | 26.5 |
| 13/05/2009 | Closed - Water | 3 | 33 | | | | | | | | |
| 18/05/2009 | opening | 0 | 10 | 2 | 1 | 5 | 0.99 | 0.49 | 0.49 | 0.49 | 32.7 |
| 20/05/2009 | Open | 0 | 3 | | | | | | | | |
| 31/05/2009 | Closed - Rainfall | 45 | 45 | | | | | | | | |
| 2/06/2009 | opening | 0 | 45 | 7 | 7 | 4 | 7 | 0.49 | 0.5 | 0.49 | 25.4 |
| 4/06/2009 | Open | 0 | 45 | | | | | | | | |
| 22/06/2009 | Adverse Sample - Rainfall 7d | 19 | 60 | 39 | 18 | 6 | 35 | 4 | 8.5 | 7.5 | 27.8 |

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| 29/12/2008 | Adverse Sample - Holiday | 0 | 3 | 0.99 | 0.99 | 0.99 | 0.99 | 0.49 | 0.49 | 0.49 | 34.7 |
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| 31/03/2009 | Adverse Sample - Rainfall 24 & 7d | 21 | 65 | 8 | 21 | 12 | 24 | 0.5 | 0.49 | 0.5 | 17.9 |
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| 8/04/2009 | Open | 0 | 8 | | | | | | | | |
| 11/05/2009 | Adverse Sample - Rainfall 24h | 25 | 25 | 90 | 79 | 115 | 200 | 19 | 15 | 31 | 26.5 |
| 13/05/2009 | Closed - Water | 3 | 33 | | | | | | | | |
| 18/05/2009 | opening | 0 | 10 | 2 | 1 | 5 | 0.99 | 0.49 | 0.49 | 0.49 | 32.7 |
| 20/05/2009 | Open | 0 | 3 | | | | | | | | |
| 31/05/2009 | Closed - Rainfall | 45 | 45 | | | | | | | | |
| 2/06/2009 | opening | 0 | 45 | 7 | 7 | 4 | 7 | 0.49 | 0.5 | 0.49 | 25.4 |
| 4/06/2009 | Open | 0 | 45 | | | | | | | | |
| 22/06/2009 | Adverse Sample - Rainfall 7d | 19 | 60 | 39 | 18 | 6 | 35 | 4 | 8.5 | 7.5 | 27.8 |

Compliance (%)
Meets 90th Percentile

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| Yes | Yes | Yes | Yes | Yes | Yes | Yes |



2

IMPROVED ASSESSMENT OF SEWAGE SPILLS

- Problem: Currently lack detailed information on transport/dilution of sewage/pollution in oyster growing estuaries.
- **Result = Conservative assessment of impact area = more harvest areas closed.**
- Solution = More accurate assessment = can reduce safety factor in assessment.



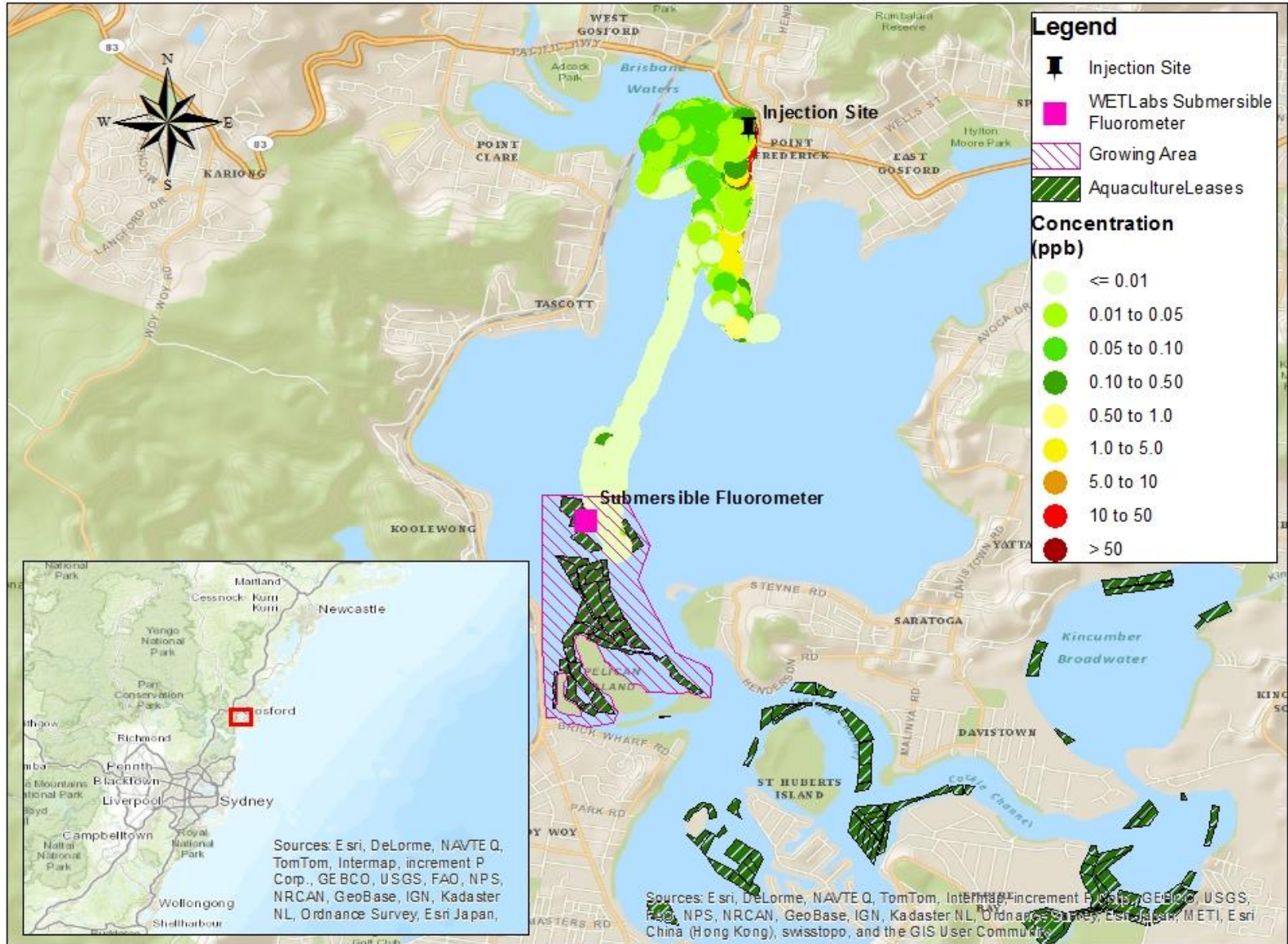
2 IMPROVED ASSESSMENT OF SEWAGE SPILLS

Brisbane Water Pilot Study 2013

Simulated 71,760 litre spill at a common spill site using a tracing dye (Rhodamine WT).

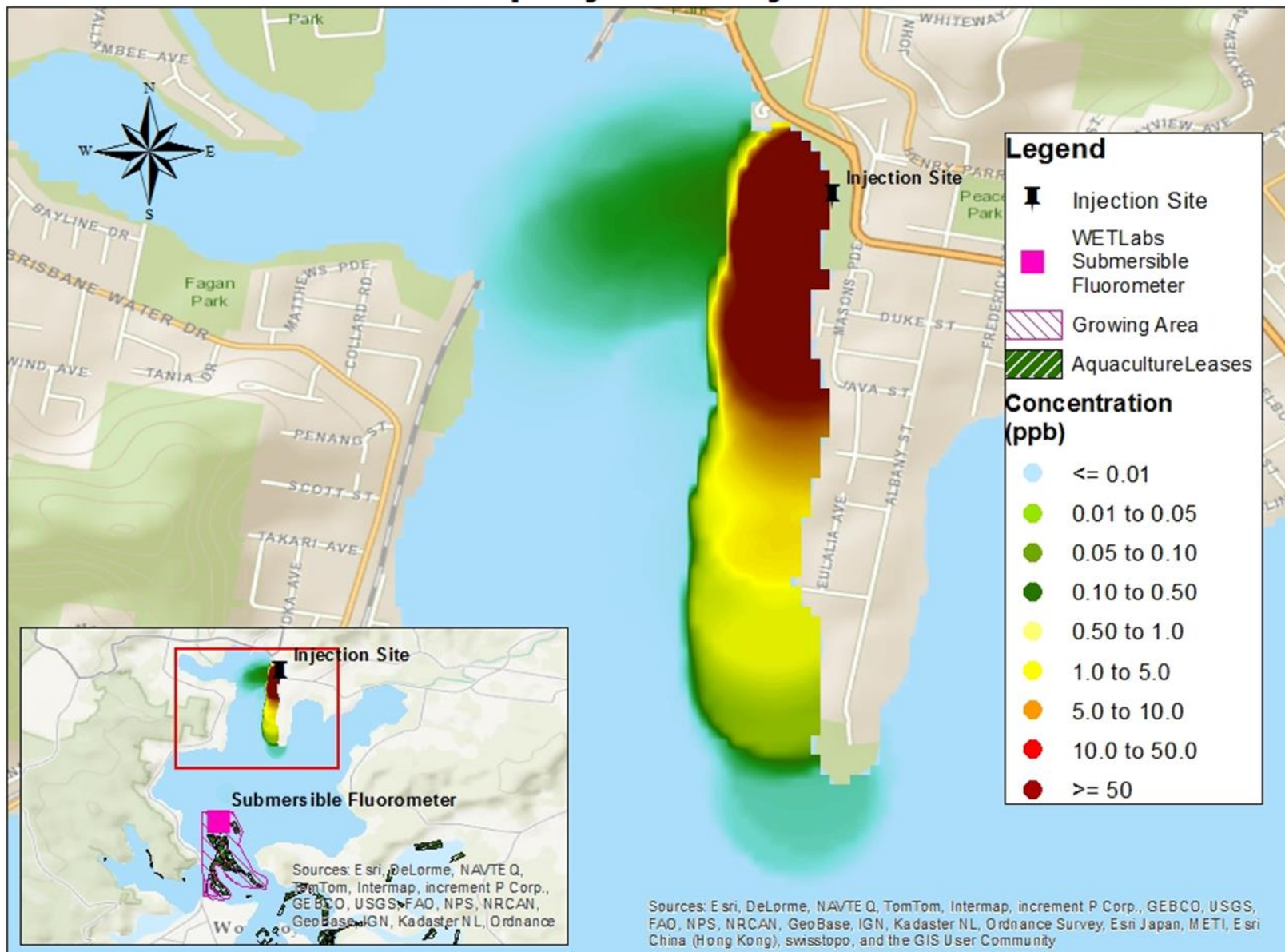


Murphy's Bay



Cartographer: Joshua Clayton
Source: FDA

Murphy's Bay



2

IMPROVED ASSESSMENT OF SEWAGE SPILLS

- Impact of Brisbane Water study = 25 three week closures avoided 2014 – 2021. Working to undertake studies in other sewage impacted areas.
- Hastings River – study funded (\$105K: PMHC and Coastal Grants Program).
- Port Stephens – Hunter Water funded first stage (\$49K).
- Funding application submitted for studies in:
 - Tweed River
 - Nambucca River
 - Hastings River (Funded)
 - Camden Haven
 - Wallis Lake
 - Port Stephens
 - Shoalhaven/Crookhaven Rivers
 - Clyde River
 - Wagonga Inlet
 - Merimbula Lake
 - Pambula Lake

Total Project Cost = \$1,708,500
(\$154,000 funded)



NSW SHELLFISH COMMITTEE

New committee appointed April 2022 – April 2025

Industry Members:

- Brandon Armstrong
- Sam Gordon
- Shane Buckley
- Pippa Boyton
- Andy Myers (NSW Farmers rep)

Meets 4 times a year (February, May, August, November).

<https://www.foodauthority.nsw.gov.au/industry/shellfish/nsw-shellfish-committee>

Thank you to outgoing committee – Ian Crisp, Stephen Verdich, Sally Ritchie, Shane Buckley and Todd Graham.



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THANK YOU

QUESTIONS?

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