

Preventing Phosphorus (P) and Pathogen Loss Lough Ennell Dysart Stream PAA

David Webster ASSAP Advisor



Farming for
Water Quality





Q 4 (Good)

Dysart (Lough Ennell)_010

Lough Ennell

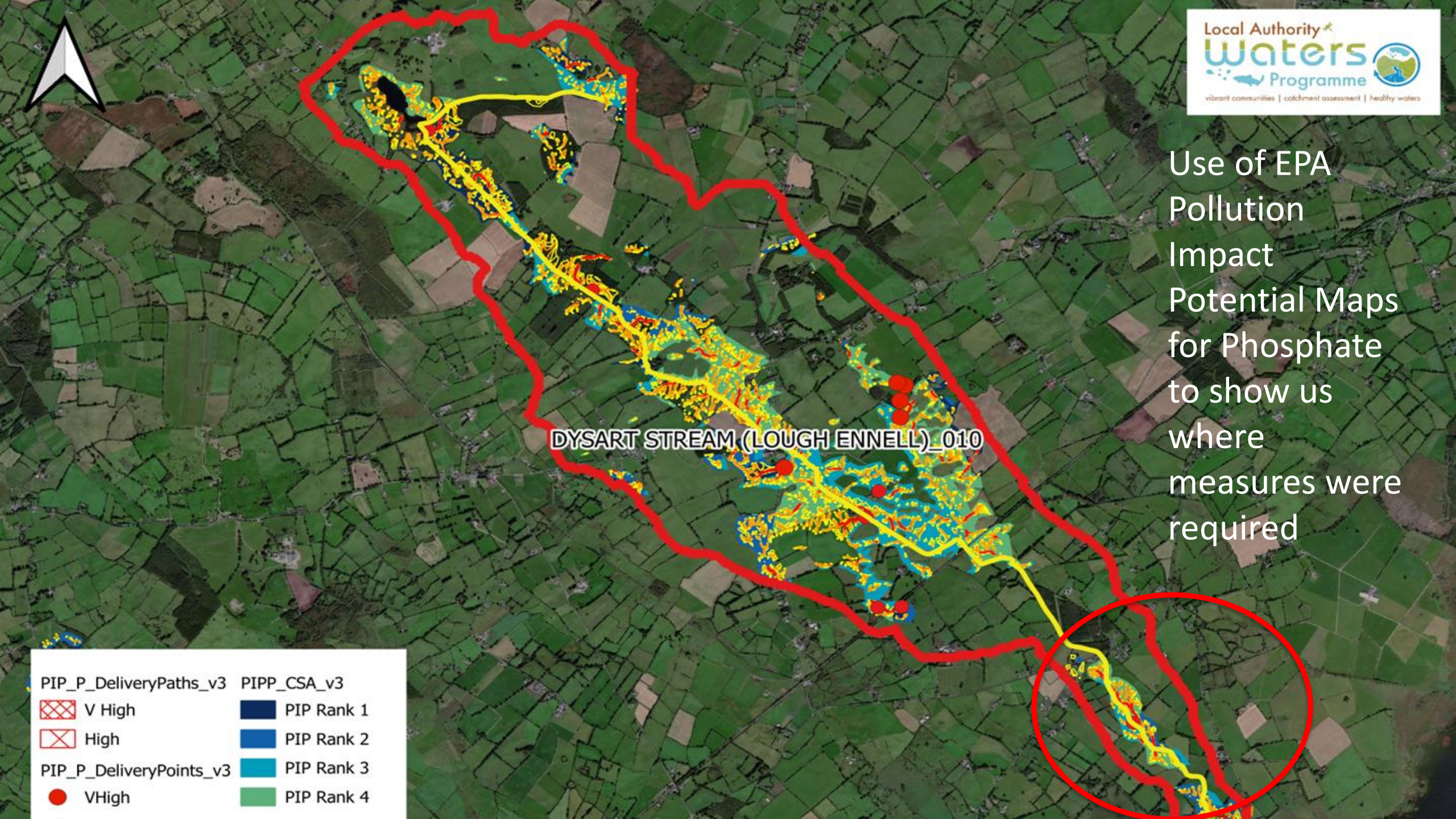
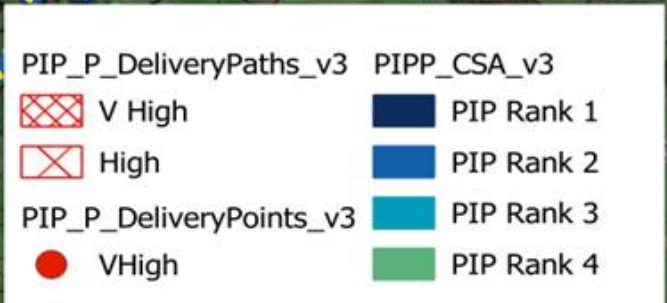
Q3-4
(Moderate)

Lilliput Bathing Waters



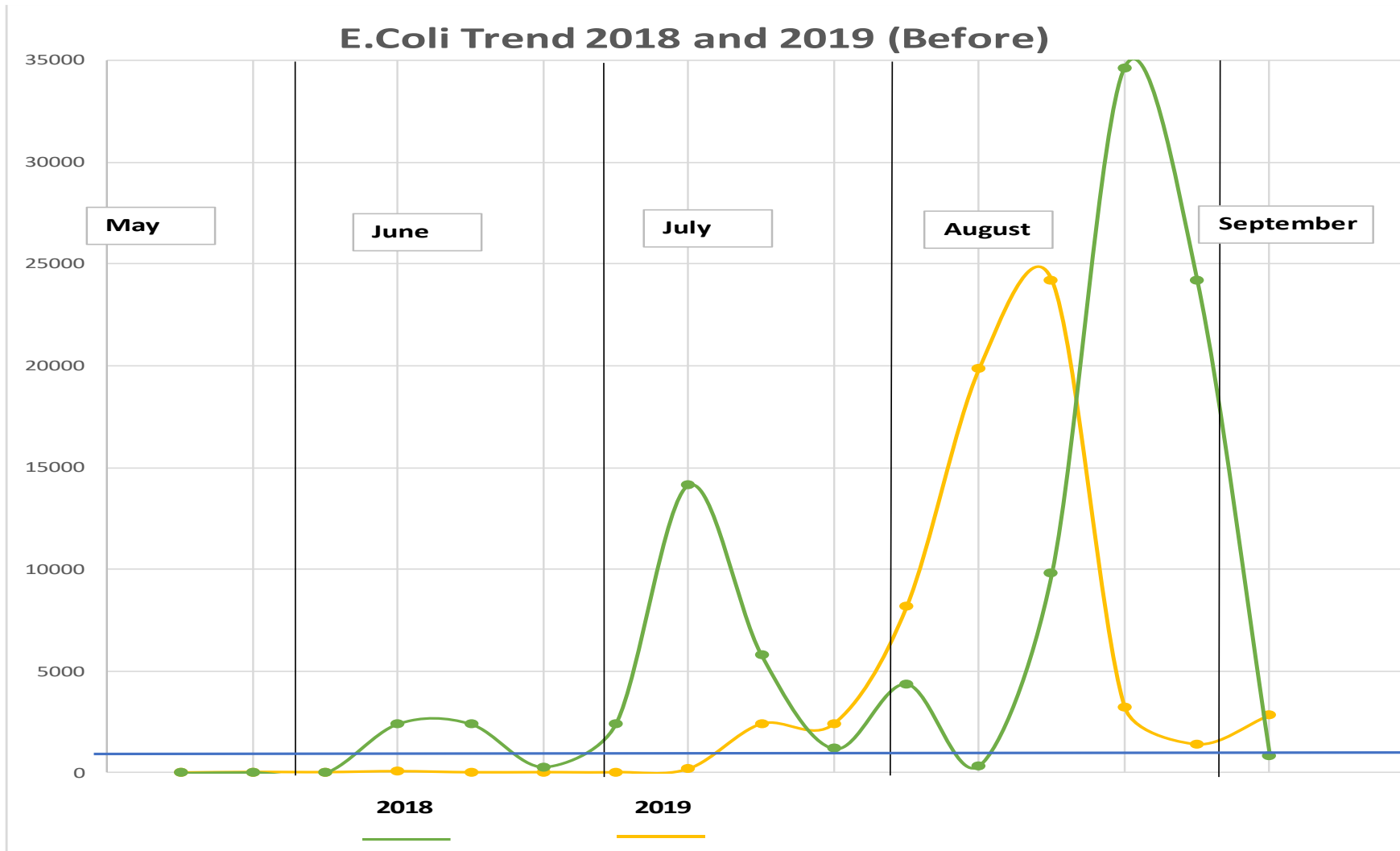
Use of EPA
Pollution
Impact
Potential Maps
for Phosphate
to show us
where
measures were
required

DYSART STREAM (LOUGH ENNELL)_010



The Problem: Gross Pollution of Lilliput Bathing Waters

- Lilliput E.coli trend in 2018 and 2019



Blue line indicates 'Sufficient' water quality.

Anything above this line is 'Poor'

LAWPRO / ASSAP Engagement 2019 to date

- LAWPRO – Catchment Science Team started assessments in PAA
- Identified issues in PAA
- Sent Referral to ASSAP (Engage with land owners and bring improvements to Dysart stream and Lough Ennell).
- Public / farmer meetings held informing work of LAWPRO / ASSAP
- ASSAP began farm visits

Dysart_010 ASSAP Farmer Engagement & Mitigation Actions

ASSAP advisors visited 33 farms based on LAWPRO referrals

29 Beef Farms

4 Dairy Farms

Issues identified - diffuse P and sediment losses

Surface runoff leading to P and sediment losses on poorly draining land

Cattle access to watercourse for drinking

Adherence to Buffers & organic manure management

Drainage maintenance

175 High Risk mitigation actions *recommended*

124 mitigations '*On-going*'

17 mitigations '*Completed*'

11 mitigations '*Commenced*'

23 mitigations '*Not started*'

	Mitigation Actions	Risk 1	Risk 1 – Agreed	Risk 1 – Not Agreed	Risk 1 – Agreed/Not Agreed - not	Not Started	Not Proceeding	Commenced	Complete	Ongoing
Slurry Storage	Informing and educating farmers	1	1	0	0	0	0	0	1	0
Slurry Storage	Separation of clean, grey, soiled and dirty water in farmyard	1	1	0	0	0	0	1	0	0
Silage Pits and Effluent Storage	Additional storage for farm wastes required	1	1	0	0	0	0	0	1	0
Silage Pits and Effluent Storage	Improved management of collection and storage of farm wastes	5	5	0	0	0	0	0	1	4
Silage Pits and Effluent Storage	Separation of clean, grey, soiled and dirty water in farmyard	1	1	0	0	0	0	0	0	1
Loose Housing and FYM Storage	Additional storage for farm wastes required	3	3	0	0	0	0	1	1	1
Loose Housing and FYM Storage	Improved management of collection and storage of farm wastes	2	2	0	0	0	0	1	0	1
Round Bale storage	Improved management of collection and storage of farm wastes	2	2	0	0	0	0	0	1	1
Round Bale storage	Informing and educating farmers	2	2	0	0	0	0	0	0	1
Cattle &/or Sheep handling facilities	Improved management of collection and storage of farm wastes	1	1	0	0	0	0	0	0	0
Clean & Grey Water management	Improved management of collection and storage of farm wastes	1	1	0	0	0	0	1	0	0
Clean & Grey Water management	Separation of clean, grey, soiled and dirty water in farmyard	1	1	0	0	1	0	0	0	0
Drain Connection from Yard to Water	Separation of clean, grey, soiled and dirty water in farmyard	1	1	0	0	0	0	1	0	0
P Loss Through Overland Flow	Improved farm road/tracks design and location	1	1	0	0	0	0	0	0	1
P Loss Through Overland Flow	In field grass buffers	1	1	0	0	0	0	0	0	1
P Loss Through Overland Flow	Management of Critical Source Areas (CSA's)	5	5	0	0	0	0	0	0	5
P Loss Through Overland Flow	Riparian Buffers – Fenced/Unfenced	22	22	0	0	0	0	0	0	20
Sediment Loss	Improved farm road/tracks design and location	1	1	0	0	0	0	0	0	1
Sediment Loss	Riparian Buffers – Fenced/Unfenced	6	5	1	0	2	0	0	0	4
Drinking Points & Stream Fencing								1	0	0
Drinking Points & Stream Fencing								2	9	2
River Bank Erosion								0	0	0
Drain Cleaning & Maintenance								0	0	12
Culverts/River Crossings								0	0	1
Drinking Troughs								1	0	0
Drinking Troughs								0	0	1
Drinking Troughs								0	1	0
Farm Roads and Gateways and underpass								1	0	1
Farm Roads and Gateways and underpass								0	0	1
Field Boundary Management	Establish field boundaries and heages	1	1	0	0	0	0	0	1	0
Outwintering	Appropriate use of feeders/troughs/out-wintering	3	3	0	0	0	0	1	0	1
Herbicide / Pesticide and Sheep dip Use	Adhere to buffer zones and safeguard zones	9	9	0	0	0	0	0	0	9
Protection of Abstraction Points and Wells	Adhere to buffer zones and safeguard zones	1	1	0	0	0	0	0	0	1
Buffers	Adhere to buffer zones and safeguard zones	22	22	0	0	0	0	0	0	21
Buffers	Avoid application at high risk times	2	2	0	0	0	0	0	0	2
Buffers	Informing and educating farmers	2	2	0	0	0	0	0	0	1
Preparation and implementation of NMP	Informing and educating farmers	5	5	0	0	5	0	0	0	0
Identify and Mange Critical Source Areas	Avoid application at high risk times	3	3	0	0	0	0	0	0	3
Identify and Mange Critical Source Areas	Informing and educating farmers	1	1	0	0	0	0	0	0	1
Organic Manure Timing, Location & Method	Adequate collection and storage of farm wastes	1	1	0	0	0	0	0	0	1
Organic Manure Timing, Location & Method	Avoid Application at high risk places	3	3	0	0	0	0	0	1	2
Organic Manure Timing, Location & Method	Avoid application at high risk times	1	1	0	0	0	0	0	0	1
Organic Manure Timing, Location & Method	Informing and educating farmers	5	5	0	0	0	0	0	0	5
Weather and Fertiliser Management	Avoid application at high risk places (CSA's)	5	5	0	0	0	0	0	0	5
Weather and Fertiliser Management	Avoid application at high risk times	1	1	0	0	0	0	0	0	1
Weather and Fertiliser Management	Riparian buffers – fenced/unfenced	11	11	0	0	0	0	0	0	11

- P loss through overland flow = 29 issues
- Drinking points and stream fencing = 26 issues
- Buffers = 26 issues
- Weather & fertiliser management = 17 issues
- Drain cleaning & maintenance = 12 issues

ASSAP – Mitigation Actions



Dysart_010 PAA

- 2.6 km length of stream
- 6 farmers involved
- 16 Drinking points closed off
- 3 Solar pumps and 16 troughs
- Buffer margins complied with including dry drains
- Buffer margins increased 50m @lake shore

**Inland Fisheries
LAWPRO
Lough Ennell Trout
Preservation Society
Westmeath Co. Co.**

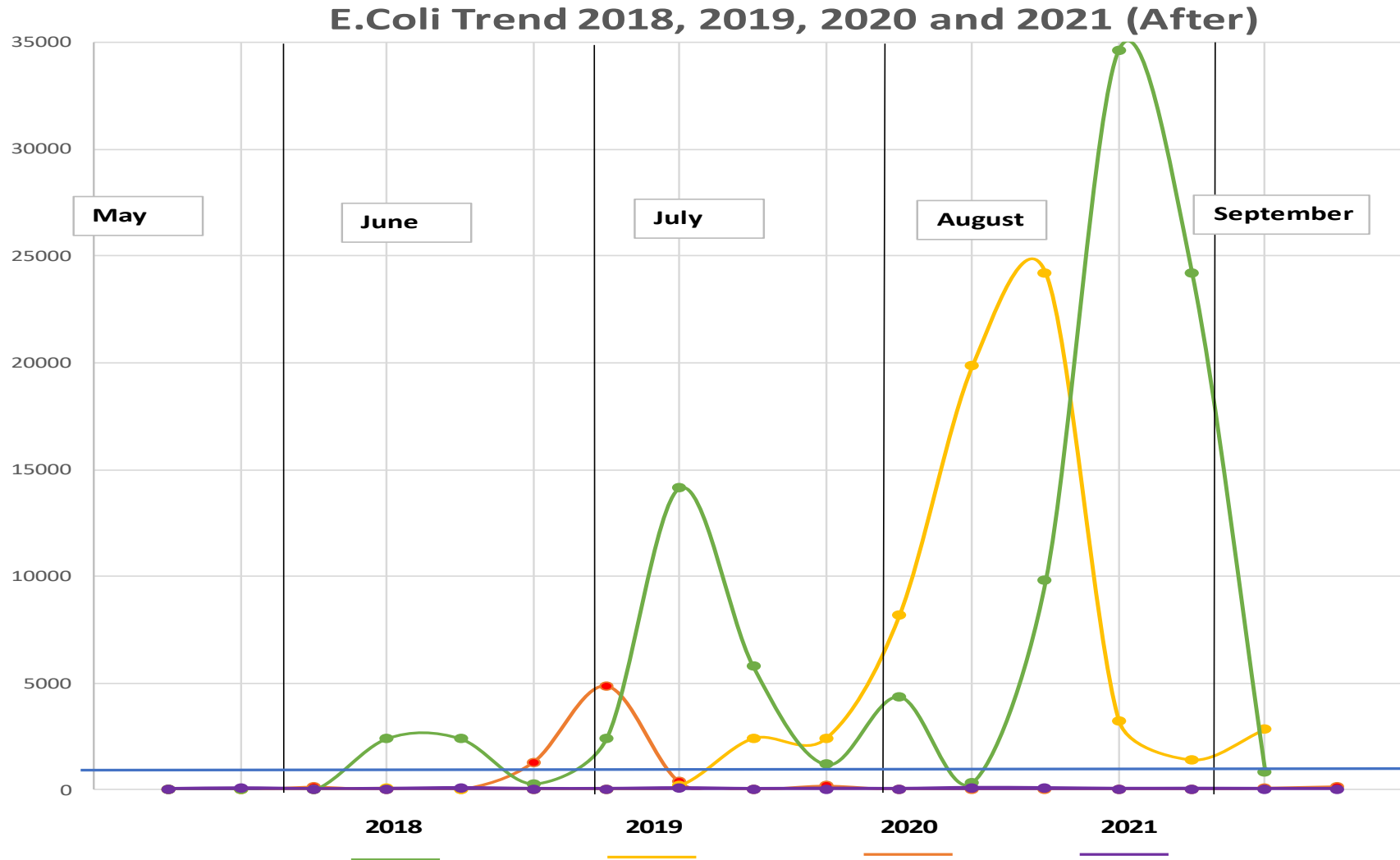
Lough Ennell

Lilliput Bathing Waters



Lough Ennell

Lilliput E.coli Trend from 2018 to 2021 – All samples in 2021 all in Excellent Category



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Recommendations

- Continued farmer engagement
- Continued improved land management practices
- Closing off of drinking points in remainder of stream
- Water EIP will aid delivery of improvement of issues
- Two farmers engaged in Water EIP to date
 - Closed off 8 drinking points
 - Install solar pumps
 - Improvement management of critical source areas
 - Stream fencing

Thank You

Any Questions ?



Farming for
Water Quality

