Vegetation harvesting as a means of removing nutrients from ponds

Case study: La Costa pond

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La Costa pond

- Retention pond on Interstate 5, California
- 3 year water quality monitoring program
- Established vegetation, including *Typha*
- Annual programme of *Typha* harvesting

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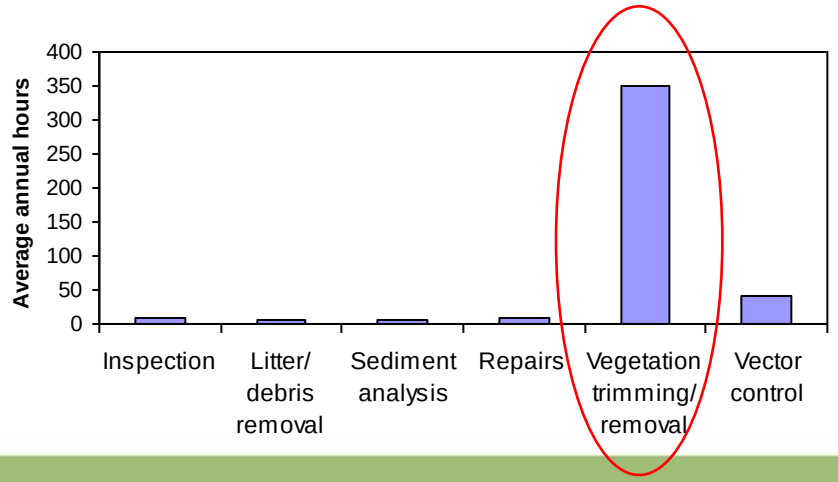
La Costa pond



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La Costa pond

Why include vegetation?

- Aesthetics/amenity
- Safety
- Habitat
- Vector
- Pollutant removal

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La Costa pond

	% constituent removed				
	N	**P**	**Cu**	**Pb**	**Zn**
All mechanisms	44	48	58	93	61
Harvested vegetation	5-7	3-8	0.3	0.2	2

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La Costa pond

Improving pollutant removal?

- Timing harvest
- Plant species

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ReBALAN:CE

Recycling **B**iomass to **A**gricultural **LAN**d: **C**apitalising on **E**utrophication

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ReBALAN:CE

Recycling **B**iomass to **A**gricultural **LAN**d: **C**apitalising on **E**utrophication

- Interesting project
- Strong project team
- Positive applications

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What message?

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ReBALAN:CE

Recycling **B**iomass to **A**gricultural **LAN**d:

Capitalising on **E**utrophication

Key SEPA messages:

- WFD targets/compliance
- Prevention before cure
- Reduce inputs

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ReBALAN:CE

Recycling **B**iomass to **A**gricultural **LAN**d: **C**apitalising on **E**utrophication

Non-nutrient DP pollutants

- sediment
- FIO's
- pesticides

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ReBALAN:CE

Recycling **B**iomass to **A**gricultural **LAN**d: **C**apitalising on **E**utrophication

Impact of harvesting process

- Loch ecology
  - Sediment disturbance
    - P-release

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