Scoping workshop to bring together key stakeholders to discuss scoping of proposed Sensitive Waterways Project VG09041

Richard Mulcahy AUSVEG Ltd

Project Number: VG09162

VG09162

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Scoping workshop to bring together key stakeholders to discuss scoping of proposed Sensitive Waterways Project

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Project number: VG09162 (Completion date: 04/12/2009)

VG09162

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This report explains the outcomes of a workshop held to discuss and further develop an appropriate approach to address the research area of sensitive waterways management within the vegetable industry. The project was necessary to fulfill the request made by the Vegetable IAC to investigate the development of a sensitive waterway project that integrates the three research submissions considered in the research priority assessment process in 2009.

This project was funded by Vegetable Levies, facilitated by HAL, with matched funds from the Australian Government.



Know-how for Horticulture™

4 December 2009

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Sensitive Waterways Workshop Report 17th November, Novotel, Brisbane

Attendees:

Stephen Harper Qld Department of Employment, Economic Development & Innovation

(Gatton/Bowen Project)

Sue Heisswolf Qld Department of Employment, Economic Development & Innovation

(Gatton/Bowen Project)

Executive Officer, Bundaberg Fruit and Vegetable Growers Peter Peterson

(Bundaberg Project)

Geoff Chivers Bundaberg Fruit and Vegetable Growers, Director (Bundaberg Project)

Robert Premier Premier Consulting (Watsons Creek Project)

Luis Gazzola President, Vegetables Victoria (Watsons Creek Project)

MP and WP Biosphere Reserve Foundation Ltd (Watsons Creek Project) Janet Borley

David DePaoli Horticulture Australia Limited Industry Advisory Committee

Alison Turnbull Horticulture Australia

Chair, AUSVEG Board (16th November dinner only) John Brent

Hugh Tobin **AUSVEG**

Siwan Lovett Lovett Clarke Consulting Pty Ltd (Facilitator)

Phil Price Mackellar Consulting Group Pty Ltd (Facilitator)

Media summary:

Sensitive waterway management has been identified as a priority by the Vegetable Industry Advisory Committee (IAC). To explore this possibility, a workshop was held on the 17th of November 2009 to bring together three research teams who had submitted separate project proposals so that they could share information and investigate opportunities for collaboration.

Following the presentation and discussion of the three proposals, the group decided that a consortium approach was the preferred way forward. The new project would have a focus on making vegetable growers more aware about these issues and encouraging them to work with other stakeholders such as regional NRM bodies and water agencies in their region to improve sensitive waterway management.

A revised proposal will be developed for consideration by the IAC in 2010. Stephen Harper of the Gatton project team will coordinate the revised proposal, with Robert Premier (Watson's Creek) and Peter Peterson (Bundaberg Fruit and Vegetable Growers) responsible for the contributions from their project teams.

Purpose of meeting:

In the latest round of HAL funding applications, sensitive waterway management was identified as a priority by the Industry Advisory Committee (IAC). Three projects were selected by the IAC for further funding consideration, and a notional allocation of \$621,000 made. However, the Committee wished to see a consortium approach that 'pooled' the resources, expertise and links to growers that each of the three projects brought to the issue of sensitive waterway management. To explore this possibility, a workshop was held on the 17th of November to bring together the three research teams so that they could share information and investigate opportunities for collaboration. The sum of \$20,000 was allocated for the workshop out of the \$621,000 available. The workshop was facilitated by AUSVEG on behalf of HAL.

Approach:

Each of the research teams prepared material prior to the meeting that addressed four key questions in relation to sensitive waterway management in their region (See Attachment B – Preparatory Questions and Attachment C - Project Summaries). This material was circulated ahead of time, as well as the name and contact details of all those attending, so that people could get in touch with other research groups to discuss possible opportunities for collaboration if they wanted to. (See Attachment A – Contacts List). A dinner was held the night before the event so that the research teams could meet informally and get to know each other before the workshop.

The workshop was formally structured to enable the IAC representative to discuss the reasons why it was felt a consortium approach would be of more benefit to vegetable growers than funding one of the three projects on their own. Each research team presented their project objectives, outputs and outcomes, with discussion about the synergies and differences between the three proposals (see Attachment D – Agenda).

Following the presentation and discussion of the three proposals, the group decided that a consortium approach was the preferred way forward. While there would be some savings from sharing the tasks (e.g. one team could would take the lead in reviewing literature or in developing national-level management guidelines), there would also be additional costs in working across all regions and sites, and in developing outputs that could be used by the whole industry nationally, as well as meeting specific regional needs. The three teams would need to meet (at least once each year face-to-face, and by teleconference) to ensure a strong and regular flow of data and information between the project regions and team members. HAL might be approached for additional funds beyond the notional allocation; these would most likely be required in years three and four.

It was agreed that the single, revised project would include all three teams, and would include work at all the proposed sites, although the details of what would be undertaken at each site would be determined by the total funds available. It was recognised that two of the project components (Bundaberg and Watsons Creek) were planned to operate for up to two years only, while the Gatton/Bowen project would operate for up to four years to enable three growing seasons' data to be captured and analysed. This could be accommodated within a single project, as components could commence and complete at different times. With this as the basis for discussion, the group then moved into the development of outcomes, outputs and key activities of a new project that incorporated the strengths of the three individual proposals.

Revised Project Outcomes:

- 1. Vegetable growers are aware of, and able to demonstrate the contribution of their industry to maintaining good water quality.
- 2. Vegetable growers adjacent to sensitive waterways are aware of, and have access to, a Good Agricultural Practice (GAP) that can be accredited if the need arises (for example to meet future regulation, product labelling).
- 3. Vegetable growers can measure the effects of adopting a GAP on-farm.
- 4. Vegetable growers are perceived to be proactive, and good managers of sensitive waterways by (a) the wider community and (b) governments (Federal, State, Local) and (c) regional NRM bodies.
- 5. Vegetable growers are more aware about, and are working with, other stakeholders such as regional NRM bodies and water agencies in their region to improve sensitive waterway management.

Revised Project Outputs and Activities

All research teams:

- Conduct a context analysis in each region (Bowen, Gatton, Bundaberg, Watsons Creek). This analysis will cover all other activities that might be underway in the region and which relate to the Community / Source / Movement / Impact framework. It reviews what is already known about management of sensitive waterways, and links the project into related regional activities and external support.
- 2. Conduct an attitude survey to find out the perceptions of the wider community in each region (Bowen, Gatton, Bundaberg, Watsons Creek) about the role/impact of vegetable growers on sensitive waterways. The attitude survey needs to be conducted at the beginning and the end of the project to measure how perceptions change over the life of the project.
- 3. Work with key natural resources management agencies in the local region to gain agreement about the content for a vegetable grower's sensitive waterway GAP, and prepare a national-level GAP that can be used throughout the vegetable industry.
- 4. Prepare a tailored, regional GAP for sensitive waterway management by vegetable growers in Bowen, Gatton, Bundaberg, Watsons Creek. This GAP needs to be endorsed and distributed by all regional agencies so that vegetable growers get a consistent and supported message about sensitive waterway management (e.g. co-badging of local NRM agency with vegetable grower peak body)
- 5. Based on the findings from the regional work, prepare a template for other vegetable growing regions to use to improve sensitive waterway management by vegetable growers.

Gatton project team:

- » Full nutrient budgets provided for Gatton and Bowen from experimental work (covering N and P), as well as partial budgets based on surveys. At Bowen the experimental work will focus on different soil types, at Gatton on different vegetables and cropping systems.
- » Partial nutrient budgets provided for Watsons Creek and Bundaberg following refinement of method in Bowen and Gatton. This may involve developing a process and tool to assist growers in Watsons Creek and Bundaberg do partial nutrient budgeting on their farms. The tool could include some pointers on how much N & P key vegetable crops remove.
- » Following assessment of the usefulness of the Safe Gauge tool in the sugarcane industry, development of a modified Safe Gauge tool for nutrient management by vegetable growers.
- » Nutrient rate response data and application options provided for vegetable growers in an easy to use 'tool'.
- » Coordinate and manage the combined project to ensure integration across all three regions and teams occurs, and opportunities maximised for findings to be developed into products and approaches that can be used in vegetable growing regions across Australia.

Bundaberg project team:

» Prepare a case study of the approach used in the Macadamia industry to improve sensitive waterway management and evaluate success of the approach in achieving water quality outcomes.

- Based on the Macadamia Industry case study findings convene a group of vegetable growers to undertake a similar project to determine the impact of vegetable growing on water quality.
- » Work at a sub-catchment scale with the local NRM body to determine the relative contribution to water quality issues of vegetable growing in comparison with other land uses. This will involve monitoring in one or more selected sub-catchments where the effects (if any) of vegetable growing can be separated from other factors.
- » Based on findings of water quality monitoring develop a regionally tailored GAP to assist vegetable growers to improve sensitive waterway management.

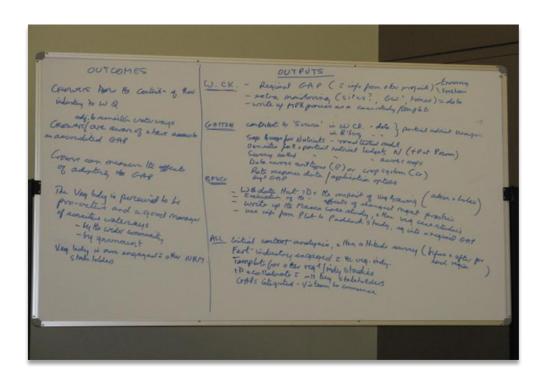
Watson's Creek project team:

- » Prepare a case study of the approach used to develop the Watsons Creek Agreement and evaluate the success of the approach in achieving water quality outcomes. Make this case study available for modification and use by other vegetable growing regions.
- » Develop GAP for sensitive waterway management with input from EnviroVeg, Freshcare, Local NRM Regional bodies, growers and other experts as required. Test the GAP with local vegetable growers to ensure applicability, relevance and ease of use. Seek approval by local NRM and water management agencies to endorse GAP as key document for vegetable growers to use in their management of sensitive waterways
- » Undertake for the project an analysis of current knowledge relevant to management of sensitive waterways and prepare a written summary in collaboration with other project teams.

Conduct extra surface and groundwater monitoring along Watson's Creek to determine relative contribution of different land uses (eg urban, grazing, vegetable growing) to water quality.



Workshop Participants (Photo Janet Borley)



Workshop Outcomes and Outputs (Photo Janet Borley)

Indicative budgets:

\$450,000 over 3-4 years (Consortium leader and project manager) Gatton

\$185,000 over 2 years Bundaberg

Watson's Creek \$130,000 over 2 years

\$24,000 (over 3-4 years) **Coordination Costs**

TOTAL: \$789,000

Next Steps:

Advise HAL that a revised proposal could be developed for consideration by the IAC by the middle of January 2010. Stephen Harper of the Gatton project team will coordinate the revised proposal, with Robert Premier (Watson's Creek) and Peter Peterson (Bundaberg Fruit and Vegetable Growers) responsible for the contributions from their project teams.

Report prepared by Dr Siwan Lovett and Dr Phil Price, workshop facilitators on behalf of AUSVEG. All workshop participants have reviewed and provided comments that have been incorporated into this report.

24th November 2009

Attachment A: Attendees for Sensitive Waterway Workshop

Name/Organisation	Contact Details
Qld Dept Primary Industries and Fisheries, Gatton	
Stephen Harper Qld Dept Primary Industries and Fisheries www.dpi.qld.gov.au	P: 07 5466 2222 F: 07 5462 3223 M: 0417 006 482 Email Stephen.Harper@dpi.qld.gov.au
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Bundaberg Fruit & Vegetable Growers	
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Geoff Chivers Director, Bundaberg Fruit & Vegetable Growers	P: 07 4159 8203 F: (07) 4159 8203 M: 0427 062 234 Email: <u>mpebundy@bigpond.com</u>
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Other representatives	
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Name/Organisation	Contact Details
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Dr Phil Price Mackellar Consulting Group Pty Ltd	P: 02 6251 4669 M: 0419 122 572 Email: <u>mackellarcg@bigpond.com.au</u>
Dr Siwan Lovett Lovett Clarke Consulting Pty Ltd (for AUSVEG)	P: 02 6247 7997 M: 0422 939 583 Email: <u>siwan.lovett@ausveg.com.au</u>

Attachment B: Pre-Workshop Preparatory Questions

Could you please answer the following questions as they relate to the industry and region you are working in, and return them to Siwan by the 4th of November so that they can be circulated to all those attending the workshop prior to our get together. Short answers, maybe in dot points, returned to me in an email will be fine. We don't want to ask you to do more writing, but your brief responses will help us all to better understand the three proposals we are discussing, and to get the most out of our day in Brisbane.

Phil has attempted to compare the three proposals received by HAL in the attached table (page 2-3). At our meeting we will ask each team to present their proposal in detail, and we can then correct/complete the comparison - this will help us to formulate a single proposal, or three interlinked proposals, that will offer the maximum benefit for the vegetable industry nationally and that could then be submitted to HAL

- 1. Why is the vegetable industry concerned about managing sensitive waterways? (what are the drivers/motivation behind your project?)
- 2. What makes a waterway 'sensitive', and how do growers know if a waterway requires special management? (who/what constitutes a 'sensitive' waterway, and where do growers go for information to find out which waterways in their region are 'sensitive'?)
- 3. What are the challenges/problems for growers in relation to management of sensitive waterways in your region? (are they confined to the quantity and quality of surface run-off or do they include groundwater and other aspects of waterway condition?)
- 4. What is needed to assist growers to better manage sensitive waterways new information, demonstration of best management practices, training, monitoring, evaluation? (what do growers in your region say they need to improve their management of sensitive waterways)

Sensitive Waterway Proposals	VG09041 QDEEDI	VG09083 Global FS	VG09100 BFVG
	Gatton	Watsons Ck	Bundaberg
Types of activity proposed			
General review of mgmt issues related to sensitive waterways	No	Yes, local area only	Not clear
Review of scientific literature	Yes , nutrient demand, uptake and balances	No	Not clear, focus is discharge water quality
Industry survey for practices, data	Yes, nutrient mgmt	Yes, current practices	Not mentioned
Field experiments	Yes, 3 yrs 2010-2012	Monitoring 'before and after', 1 yr ?	Yes, discharge measurements, 1 yr only?
Field sites	Lockyer Valley Bowen Gatton Research Station	Watson's Creek area	Not clear, farms in Bundaberg area?
Field studies scale	Paddock	Farm?	Farm
Purpose of field studies	N & P mgmt, off-site losses	Assess impact of changed practices	Assess discharge water quality
Can respond to drought	Yes , irrigated trials	Not Clear	Difficult due to scale, contingency plan?
Event sampling	Yes	Not clear but essential	Yes
Addresses surface and groundwater movement	Yes	Surface only	Surface only
Aim to separate vegetable industry effects from those of other land uses	N/A	Yes	Yes
Compare effects of vegetable production with natural reference condition, and other industries	Not clear	Yes	Not clear
Collect/collate data on industry and mgmt impacts	Yes, N/P, sediment	Yes, water quality	Yes, water quantity and quality
Includes waterway indicators other than water quantity/quality (eg banks, rip veg)	No	No	No
Demonstration of improved mgmt practices	Yes	Yes	Yes
Collect cost:benefit data including	No?	No?	No?

financial data			
Sensitive Waterway Proposals (Cont.)	VG09041 QDEEDI Gatton	VG09083 Global FS Watsons Ck	VG09100 BFVG Bundaberg
Types of activity proposed			
Local grower involvement throughout project	Yes	Yes	Yes
Engage the wider industry in project from commencement	Yes	No, local focus	Not clear, local focus?
How applicable are results to the industry as a whole	Widely potentially	Local focus	Regional
Will develop new BMPs, guide or industry updates	Yes	Yes	Yes
Decision support or other tool developed	Yes	No	No
Industry training activities proposed	Yes	Yes	Not clear
Interaction with catchment bodies or other NRM groups	Not mentioned	Yes	Not mentioned
Methods developed to enable growers and/or the industry to monitor effects of changed practices	Not directly	Yes	Yes

Attachment C: Pre-Workshop Preparatory Questions

Project VG 09041 – Gatton, Queensland

1. Why is the vegetable industry concerned about managing sensitive waterways? (What are the drivers/motivation behind your project?)

In Queensland, legislation has been enacted to ensure that graziers and cane producers in coastal catchments associated with the Great Barrier Reef (GBR) lagoon are having minimal environmental impact on the GBR. The legislation defines what agricultural environmentally relevant activities (ERA) are, and how this definition would apply to individual land holdings. Currently, this legislation is applied to the grazing and cane industries of the Wet Tropics catchment, the Mackay-Whitsunday catchment and the Burdekin dry tropics catchment. However, an amendment to the legislation to cover horticultural production and other catchments that impact on environmentally sensitive waterways would seriously impact on horticultural industries. For example, with regard to fertiliser use, the current legislation would require growers to develop an Environmental Risk Management Plan by a qualified professional; conduct soil and nutrient analysis; and ultimately, to not apply nutrients at rates above an optimal level. The broader application of this legislation across Australia would present a serious challenge to vegetable production if steps are not taken to address critical limitations in our knowledge base.

There is existing evidence that government will act on this, since across Australia state governments (through COAG) have agreed and committed to protecting marine environments through the National Representative System of Marine Protected Areas (NRSMPA). The Australian Inter-government Agreement on the Environment (1992) commits each state and territory to NRSMPA.

2. What makes a waterway 'sensitive', and how do growers know if a waterway requires special management? (who/what constitutes a 'sensitive' waterway, and where do

growers go for information to find out which waterways in their region are 'sensitive'?)

Within the D8 section of the reef water quality protection plan (Reef Plan – a joint initiative of the Australian and Queensland governments), nutrient sensitive zones are defined as areas of land that contribute significant quantities of nutrients to waterways entering the reef and that can influence sensitive marine ecosystems. More broadly it infers areas that contribute nutrients to sensitive water ecosystems. These areas are well mapped.

- 3. What are the challenges/problems for growers in relation to management of sensitive waterways in your region? (are they confined to the quantity and quality of surface run-off or do they include groundwater and other aspects of waterway condition?)
 - » Geographical disjunct between where nutrients are applied and where environmental effects are experienced. Difficulty in attributing impacts to specific uses, practices and industries within the catchments ie. diffuse sources vs point sources.
 - » Diversity in nature of major nutrient and sediment loss events (episodic vs annual inundation).
 - Documented need in some crops to apply N and P rates greatly in excess of crop total requirement in order to maximise yield.
 - Lack of science based data and tools for objectively assessing and facilitating improved best practice nutrient management on a soil-, site- and crop-specific basis in many vegetable cropping areas and for a range of vegetable crops. Currently fertiliser recommendations are based on empirical data rather than calibrated soil and plant tissue diagnostic indices.
- 4. What is needed to assist growers to better manage sensitive waterways new information, demonstration of best management practices, training, monitoring, evaluation? (what do growers in your region say they need to improve their management of sensitive waterways)
 - » A better understanding of crop nutrient requirements across a range of soil types, locations and vegetable crops.

- » A better understanding of mechanisms and tools for assessing and monitoring environmental risks of nutrient practices on their farms
- » System nutrient recycling mechanisms, (rotations, sources of nutrients, losses of nutrients, pathways for loss etc)
- » Confidence in using and applying nutrient budgets to their farming systems.
- » Development of best practices for a range of crops, sites, soils that can be demonstrated on farm.

Project VG 09083 – Watson's Creek, Victoria

1. Why is the vegetable industry concerned about managing sensitive waterways? (what are the drivers/motivation behind your project?)

The principal driver for the growers is that they feel that they are increasingly being blamed for the degradation of Watson's Creek which originates upstream from the grower's properties and winds through their property into the Yaringa Marine National Park in Western Port Bay. The growers have sunk a large amount of capital into their farms over the years, and these are located close to the markets in Melbourne - ceasing their farming operations at the moment is not possible. The growers would like to gain a better understanding of their contribution to the problem and the contribution of other players to the problem. The growers are prepared to change their farming practices if a solution is available, but they also want other stake holders that may be contributing to the problem to play their part. At the moment growers are trying to manage fertiliser inputs as these are thought to be a major source of nutrient run off. The issue is that the growers need more information and monitoring to be more effective.

2. What makes a waterway 'sensitive', and how do growers know if a waterway requires special management? (who/what constitutes a 'sensitive' waterway, and where do growers go for information to find out which waterways in their region are 'sensitive'?)

Watson's Creek empties into the Yaringa Marine National Park; it has come under close scrutiny in recent years as the quality of the water that enters the National Park is closely monitored.

3. What are the challenges/problems for growers in relation to management of sensitive waterways in your region? (are they confined to the quantity and quality of surface run-off or do they include groundwater and other aspects of waterway condition?)

There are many challenges/problems facing the growers in this localised region. Availability of water for irrigation is perhaps the greatest issue, ground water is high in salinity, some water from the creek is used but the major problem is that the creek does not run all year and is flowing only after rain. The stagnant nature of the creek means that decomposition of organic matter may perhaps add to the nutrient level noticed in the creek during stagnant periods. Also, there is a lot of urban development upstream from the growers properties and this is an unknown factor in the nutrient level of the water way. So the use of water from the creek will always carry nutrients that can flow back into the creek as surface run off. In addition ground water is high in salinity and surface run off after irrigation will carry some of this salt back into the creek.

4. What is needed to assist growers to better manage sensitive waterways - new information, demonstration of best management practices, training, monitoring, evaluation? (what do growers in your region say they need to improve their management of sensitive waterways)

The growers need more information as to the nature of the nutrients, they need a mass balance study of where the nutrients are coming from, water sampling at the moment has been focused downstream, and very little information is available on upstream contribution. The growers also need more studies on their direct contributions to the salinity and nutrient load over a period of two years to take into consideration rain/weather/different farm inputs. They need a better understanding of how the soil type they are confined to reacts with different nutrients/metals/salt.

Irrespective of the results of sampling and due to the sensitivity of the water way, the growers need best practice solutions to irrigation (volumes/methods/times), nutrient application, chemical usage/pesticide application suitable for use in a declared sensitive environment like the one they are farming in.

Growers understand this, but at the moment they have no practical solutions as to what exactly is required to satisfy the requirements/community expectations. They also would like to work to an agreed standard developed by the Vegetable Industry for farming in sensitive environmental areas.

Project VG 09100 - Bundaberg, Queensland

- Why is the vegetable industry concerned about managing (not so much managing but health of) sensitive waterways? (what are the drivers/motivation behind your project?)
 - » Fear of regulation / legislation (eg new Reef Regs);
 - » Community concerns and perceptions (myth vs fact);
 - » Desire to be a valued part of the community
 - » Opportunities to increased market access clean, "green" produce;
 - » Opportunity to improve profitability through reduced inputs;
 - » Accessing water of good quality;
- 2. What makes a waterway 'sensitive', and how do growers know if a waterway requires special management? (who/what constitutes a 'sensitive' waterway, and where do growers go for information to find out which waterways in their region are 'sensitive'?) (need to determine definition of waterway)
 - » What makes it sensitive? regional NRM identified areas of environmental significance which may include waterways; currently all QLD reef catchments are declared as sensitive; in-stream ecology may or may not be resilient to stream health fluctuations; if key breeding area for fauna and flora (including microbes etc); community perception (i.e. recreational and appearance);
 - » How do growers know? local knowledge and experience (change of time); general appearance (if extreme); advised by authorities as a result of studies carried out by Govt or NRM groups (studies not necessarily conclusive or accurate)
 - » Where do they go for information? WWW; NRM bodies; Govt departments (eg DERM); landcare groups; water authorities; unlikely industry.

- 3. What are the challenges/problems for growers in relation to management of sensitive waterways in your region? (are they confined to the quantity and quality of surface run-off or do they include groundwater and other aspects of waterway condition?)
 - » Lack of good scientific data that is representative of their subcatchment/waterway/region; this data is also lacking in an acceptable and realistic benchmark of 'virgin' land use, often leading to misinterpretation of data and misrepresentation of conclusions (eg. In a natural state, there will still be sediment and nutrient contributions to ANY stream environment)
 - » Complexities of stream environment in ambient and flow situations raises more questions than current available data provides answers for;
 - » In many cases, any data available for sediment does not show particulate size distribution – so growers don't know which aspect of soil structure is the primary concern; any data available for nutrients is listed as 'TOTAL X' – this does not indicate appropriately what is the primary cause of increased nutrients in the stream environment
 - » Unable to take data/results/leanings from one catchment to another;
 - » Current focus on modelling rather than monitoring is an inadequate approach to providing answers on the potential impacts of farming practices to stream environment;
 - » Managing the actual stream environment is difficult as it is Crown land, not accessible for individual mediation (bed and banks), therefore growers are 'technically' only permitted to tend to their land practices and NOT directly manage anything within the stream environment (bed & banks)
 - » Groundwater is included; little information/data on the relationship between stream and groundwater recharge/discharge;
 - » Technologies not available to effectively and economically monitor water quality and quantity (discharge in total loads – PH picture);
 - » No benchmarks of what is "healthy" for a particular waterway;

- » Information provided on water quality is typically based only on pollutant concentrations, while discharge is modelled – most inappropriate as no two flows are the same;
- » Any total loads are measured/modelled on major river systems only, not the upstream tributaries; this leads to poor information as industry is often blamed for spikes in pollutants, yet no monitoring stations are available to identify the actual sub-catchment source of the pollutant;
- » Very few streams or rivers in Australia have a constant flow year round, therefore this ephemeral characteristic of streams could have more significant on "health" than pollutants from land use;
- » Most water quality information is centred around sediment, nutrients and pesticides which by pure nature implicates the agriculture sector; water quality parameters need to consider all aspects of water quality (e.g. urban, hydrocarbons);
- » Monitoring activities can be equipment and time intensive, especially during flow events which in sub-tropical and tropical which are unpredictable, localised and often nocturnal;
- » Must compare "apples with apples" e.g. NATA accredited labs
- 4. What is needed to assist growers to better manage sensitive waterways new information, demonstration of best management practices, training, monitoring, evaluation? (what do growers in your region say they need to improve their management of sensitive waterways)
 - » Provision of unbiased and accurate scientific evidence of issues to convince growers of a need to change where necessary;
 - » Collaborative approach with growers to link identify issues with current farm practices and subsequently work with growers on finding suitable solutions;
 - » Provision of information sessions that are provided in "plain" English;
 - » Commodity groups wishing to know how they compare to other commodities and industries;
 - » Identifying leaders within the industry and promoting the good work done and the benefits of improving waterways;

- » Information must be portrayed in profitability (e.g. losing nutrients off farm is wasting money);
- » Message from industry is that it is being proactive and positive, a message to be directed to both growers, Govt and the community;

AUSVEG

On behalf of Horticulture Australia Limited – Industry Advisory Committee **Sensitive Waterways Workshop** 17th November, Novotel, Brisbane

16th November

Dinner for all attendees, meet in foyer at Novotel at 6.30pm

17th November

8.45am	Tea and coffee on arrival	
9.00am	Welcome and purpose of workshop	Siwan Lovett and Phil Price (Facilitators)
9.10am	Potential funding arrangements for work on Sensitive Waterways	Alison Turnbull (HAL)
9.30am	Gatton proposal overview; Objectives and Outcomes, Sites and work proposed, Outputs to be delivered	Stephen Harper (QDPI)
10.00am	Bundaberg proposal overview, ditto above	Peter Peterson (BFVG)
10.30am	Victoria proposal overview, ditto above	Robert Premier
11.00am	Morning tea	
11.20	 Discussion of how the three proposals could be recast to optimise outcomes for the industry What does the industry want to achieve from an investment in improving management near sensitive waterways? What skills and outputs are needed to do this? What else does the industry need to do to better manage sensitive waterways? 	Siwan Lovett and Phil Price
1.00pm	Lunch	
1.45pm	What process could we use to develop either one joint proposal or three closely interelated ones?	Siwan Lovett and Phil Price
2.30pm	Scope of revised proposal to go back to the Industry Advisory Committee for consideration • Action list, what, who and when	Siwan Lovett and Phil Price
3.30pm	Wrap up and meeting close	Hugh Tobin/Alison Turnbull

	(AUSVEG/HAL)