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EXHIBIT NO. 145.

June 15, 2012

Mr. Greg Krabbe
KKBL Ventures 575 LTD
335 Park Place Center, Suite G111
Kirkland, WA 98033

Subject: Presentation at City of Sammamish Planning Commission meeting on June 14, 2012

Dear Gregg:

Enclosed please find the presentation I delivered as public testimony at the above referenced meeting on Environmentally Critical Areas Regulations. The purpose of this presentation is to provide a scientific analysis of current and relevant information on the effects of watershed development on the water quality of Lake Sammamish. King County scientist Debra Bouchard compiled the water quality data for this presentation, and the urban land cover data were obtained from an article published in 2008 in Landscape Ecology: "Predicting land cover change and avian community responses in rapidly urbanizing environments" by J.A. Hepinstall, M. Alberti, and J.M. Marzluff.

Stormwater phosphorus loading (input) is the primary cause of primary productivity and other water quality concerns in Lake Sammamish. Total phosphorus concentrations in the lake have not exceeded the lake management goal and have exhibited a statistically significant ($p<0.05$) decline since the period of record began in 1994, with the most significant decline occurring over the past 5 years. These observations clearly indicate that stormwater phosphorus loading to the lake has significantly decreased in recent years. The coincident increase in urban cover during this period strongly suggests that stormwater best management practices (BMPs) have been increasingly effective at reducing stormwater phosphorus loading due to implementation of improvements to the King County Surface Water Manual and NPDES regulations.

My presentation concludes with a list of variables that have been shown to significantly impact stormwater phosphorus loading from urban development. It also notes that neither the proximity of a development to the lake nor the width of a vegetated buffer have an appreciable effect on stormwater phosphorus loading from developments.

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Thank you for providing me with the opportunity to evaluate this interesting set of data. Please feel free to contact me if you have any questions or need further assistance.

Sincerely,

Herrera Environmental Consultants, Inc.

Rob Zisette
Water Quality Principal

Enclosure: Lake Sammamish Water Quality Response to Watershed Development

Lake Sammamish Water Quality Response to Watershed Development

Rob Zisette

June 14, 2012

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Cultural Eutrophication

Primarily caused by increased phosphorus loading in stormwater runoff that:

- Increases algae biomass
- Decreases transparency and aesthetic quality
- Increases frequency of toxic algae (cyanobacteria) blooms and beach closures
- Decreases dissolved oxygen in hypolimnion
- Decreases salmonid habitat quality and area

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Trophic State Index (TSI)

Average of three parameters:

- Total Phosphorus (summer epilimnetic or whole lake mean)
- Chlorophyll *a* (summer epilimnetic mean algae)
- Secchi Depth (summer mean transparency)

Three classifications on log scale:

- Oligotrophic (good): TSI < 40
- Mesotrophic (moderate): TSI = 40 - 50
- Eutrophic (poor): TSI > 50

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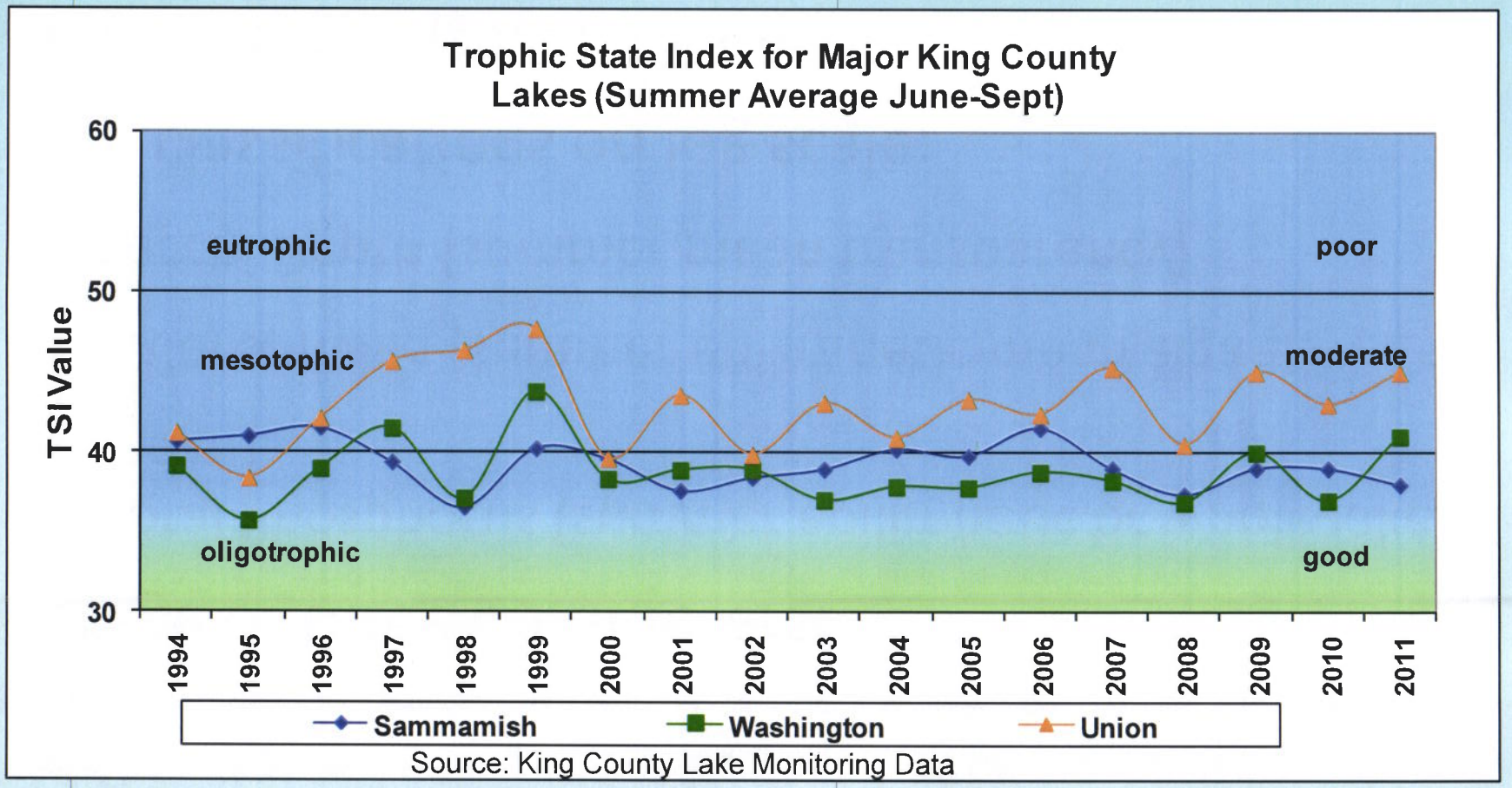
TSI for Major King County Lakes



Lake Sammamish TSI decreasing from mesotrophic to oligotrophic and between Lake Washington and Lake Union

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Lake Sammamish Water Quality Management Plan (1996)

- Goals
  - Total phosphorus ≤ 22 µg/L (annual whole lake mean)
  - Chlorophyll *a* ≤ 2.8 µg/L (summer epilimnetic mean)
  - Secchi depth ≥ 4.0 meters (summer mean)
- Stormwater Management Requirements
  - Regional treatment
  - Source controls
  - Sensitive lake protection standards (WQS)
  - Forest management controls
  - Future funding initiative

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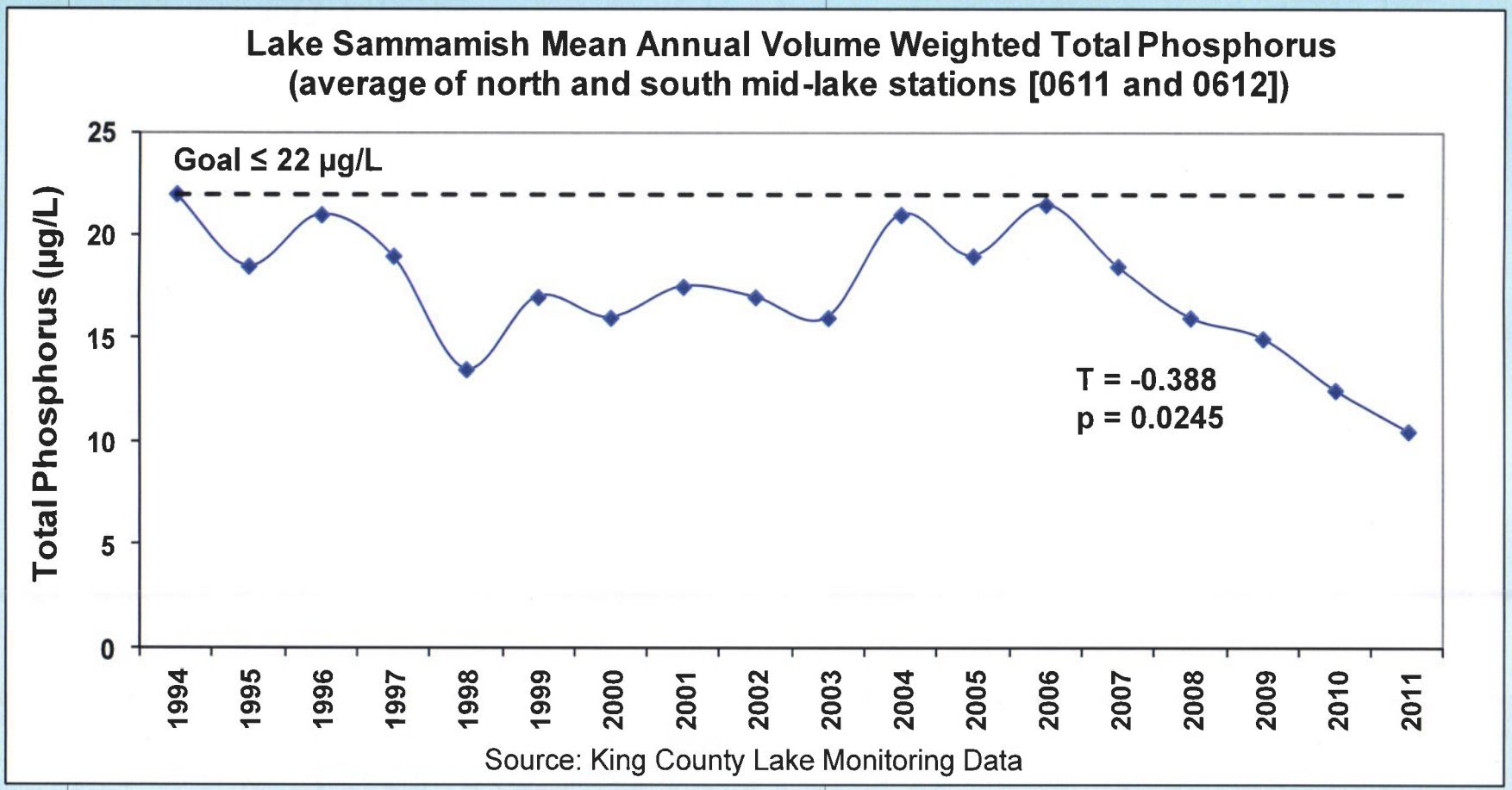
Total Phosphorus in Lake Sammamish



Significant decreasing trend in total phosphorus based on Kendall Tau correlation; TP meets goal

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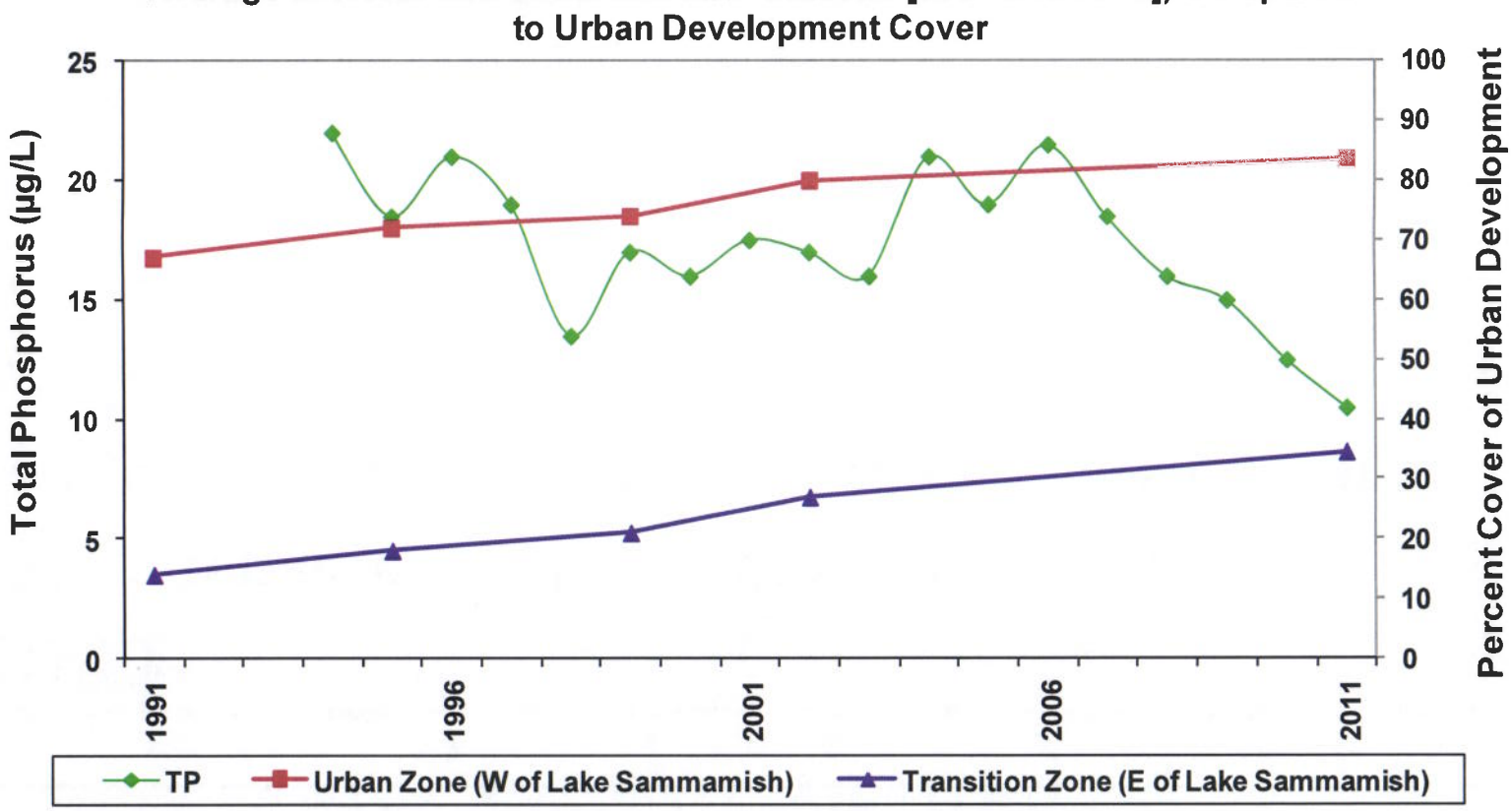
Watershed Development



Source: King County Lake Monitoring Data (TP), Hepinstall et al. 2008 (urban cover)

TP decreasing while development increasing

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Improvements to the 1990 King County Surface Water Design Manual

1998 SWDM

- Smaller drainage review threshold for hazard areas
- New tightline requirement and flow control standards for hazard areas

2005 SWDM

- Smaller drainage review threshold for impervious surfaces
- Expanded flow control areas using forest rather than existing for predevelopment condition
- Added erosion and sediment control measures for dewatering and flow control at construction sites
- Added cover, perimeter protection, traffic stabilization, sediment retention, and surface water collection measures

2009 SWDM

- Updated drainage review thresholds and erosion and sediment control measures equivalent to Ecology Manual

Improvements to General Construction Stormwater NPDES Permit

1992 Permit

- General permit covering construction sites > 5 acres (combined with industrial general permit)

1995 and 2000 Permits

- Separate construction and industrial general permits

2005 Permit

- Reduced site area threshold from 5 acres to 1 acre
- New monitoring and reporting requirements
- New contractor education requirements

2010 Permit

- Minor changes

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Improvements to Municipal Stormwater NPDES Permit

1995 Permit for Cedar/Green Water Quality Management Area

- Required a general program to control runoff from new development, redevelopment, and construction sites that included ordinances, BMPs, permits, inspections, and enforcement
- Inspection frequency and other details not specified

2007 Phase I and II Permits

- Applies to sites > 1 acre and includes pre-construction, during construction, and post-construction inspections
- Annual inspections of permitted stormwater treatment and flow control facilities

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Development Variables Affecting Stormwater Phosphorus Loading

- Construction planning and engineering design
- Post-construction source control and treatment
- Flow control to reduce in-stream erosion
- Infiltration and other LID techniques
- Monitoring and corrective actions
- Regulation compliance and enforcement
- Not significantly affected by proximity to lake or width of buffer