

Draft Outline for Strategic Science Plan  
December 9, 2008

**I. INTRODUCTION**

I.A. Context and Recent History.

I.A.1. The Science Panel's Role in the Partnership

I.A.2. The Role of Science in Meeting Partnership Goals

I.A.3. The application and use of scientific knowledge

I.B. Overall Science Plan Goals

I.B.1. Scientific Capabilities applied to Partnership Goals.

I.B.2. Restoration Goals

I.B.3. Adaptive Management

I.B. 4. Relationship between SP, LC, ECB, and broader scientific community

I.C. Responsibilities and Role of the Science Plan

**II. PRINCIPLES GUIDING THE USE OF SCIENCE IN PUGET SOUND RESTORATION**

II.A. Introduction

II.B. Adaptive Management

II.C. Assumptions, Drivers, and Principles

**II.D. (Lead: John, 2<sup>nd</sup> Trina and Jan; Staff: Mary and J. Knauer)**

II.D1. Physical Characteristics of the Puget Sound

II.D2. Salt Water Characteristics

II.D3. Climate Effects

II.D.4 Watershed – Landscapes

II.D.5 Society and Economics

Technology and Infrastructure:

(1) Transportation

(2) Energy

(3) Wastewater and Solid Waste

(4) Drinking Water and Stormwater

Solutions

**III. SCIENTIFIC INFORMATION REQUIRED TO ACHIEVE THE SIX PS PARTNERSHIP GOALS.** (6-9 pages, Lead: Jan; 2<sup>nd</sup> Joel)

III.A-F1. Evaluation of the adequacy\* of current scientific information and/or new research/analyses needed to achieve the goal.

➤ Priority observations are required to describe the current situation

➤ Priority tools required to guide policy to meet this goal by 2020

III.A-F2. Evaluation of the adequacy\* of science-policy linkage information and strategies.

➤ Priority tools required to assess the efficacy of these policies

III.A-F3. Evaluation of where most effectiveness is to be gained (an indication of prioritization).

**IV. FOUNDATIONS OF A RIGOROUS, DURABLE, AND RESPONSIVE PUGET SOUND SCIENCE PROGRAM**

**IV.A. Analysis: (4-6 pages, Lead: Joel, 2<sup>nd</sup> Trina; Staff: Mary)**

IV.A1. How is the Puget Sound ecosystem, including social and economic systems, structured and how does it work?

- a. Why this question is important to PSP goals:
- b. What is required:
- c. Current state of capacity to address this question:
- d. Roadblocks and opportunities:

IV.A2. How has the Puget Sound ecosystem and social and economic systems changed and what will it look like in 2020?

- a. Why this question is important to PSP goals:
- b. What is required:
- c. Current state of capacity to address this question:
- d. Roadblocks and opportunities:

IV.A3. What are the individual and cumulative effects of actions?

- a. Why this question is important to PSP goals:
- b. What is required:
- c. Current state of capacity to address this question:
- d. Roadblocks and opportunities:

**IV.B. Required Capacity and Competency (1-2 pages, Lead: Joel, 2<sup>nd</sup> Trina; Staff: Scott and Ken).**

IV.B1. Integration, synthesis, and application of existing information

IV.B2. Observations of current status and trends

IV.B3. Exploration of ecosystem structure and function

IV.B4. Exploration of social and economic systems

IV.B5. Ecosystem-scale prediction

IV.B6. Anticipatory science (getting ahead of the curve)

IV.B7. Development of new tools including decision tools and integrated ecosystem/economic systems models

IV.B8. A healthy scientific community in Puget Sound also requires investments in:

- a. Training/education
- b. Infrastructure
- c. Communication (conferences, publications, outreach)

**IV.C. Peer Review. (1-2 pages: Lead: Guy, 2<sup>nd</sup> Usha; Staff: Mary)**

IV.C1. Peer review of scientific results from funded research

IV.C2. Peer review of proposals for evaluation for funding

IV.C3. Peer review of science messages from the PSP

IV.C4. Larger-scale programmatic peer review

**V. IMPLEMENTATION (12-16 + 1 pages)**

V.A Integration of information and efforts. **(1 page, Lead: Joel, 2<sup>nd</sup> Jan; Staff: Scott and Mary)**

V.B. Modeling

V.C Research Funding Program

Tactical

Strategic

I. Research Scale

II. Process for Funding Research

III. Topics for Research

Introduction

Specific Topics

A. Species and Food Webs

B. Pollutants/Pathogens

C. Landscape Ecology

D. Restoration Science

E. Ecosystem Services and Human Health & Well Being

F. Integrated Ecosystem Assessment

V.D Monitoring.

1. Assessment Objectives.

2. Statistical Designs.

3. Variables and Indicators.

4. Monitoring and Sampling Protocols.

5. Data Quality.

6. Sharing Data.

7. Analysis and Reporting.

8. Adequate Funding.

V.E. Data Management Capabilities Needed to Support the Puget Sound Partnership Science Program

Short range tasks to be implemented during the 2009-2010 Biennium include:

1 Establish IM working group

2 Develop IM detailed work plan

3 Participate in IM working group

4 Develop data exchange for key data sets

5 Implement information exchange network

Longer Term Suggested Actions (Tetta 2008)

**VI. SCIENCE EDUCATION AND OUTREACH PLAN**

Background  
Purpose  
Definitions  
Goals and Approach  
Conclusion

**VII. REPORTING:**

**VIII. RESEARCH FELLOWSHIP PROGRAM:**