

PLANNING COMMISSION AGENDA
City Commission Chambers - City Hall
625 Center Street, Oregon City, Oregon 97045
March 22, 2010 at 7:00 p.m.

The Planning Commission agendas, including staff reports, memorandums, and minutes are available from the Oregon City Web site home page under meetings. (www.orcity.org)

1. CALL TO ORDER

2. PUBLIC COMMENT ON ITEMS NOT LISTED ON AGENDA

3. ADOPTION OF PLANNING COMMISSION MINUTES

- a. Adoption of February 22, 2010 Planning Commission Minutes

4. PLANNING COMMISSION HEARING

- a. Reduce the Planning Commission from seven (7) members to five (5) members.

5. GENERAL BUSINESS

- a. Resolution 10-01: A Resolution Supporting the City of Oregon City Application for a Transportation and Growth Management Grant to Update the Oregon City Transportation System Plan.

6. WORK SESSION

- a. What is Sustainability? Presented by Duke Castle of The Natural Step Network.

7. ADJOURN

Video Streaming & Broadcasts: The meeting is streamed live on Internet on the Oregon City's Web site at www.orcity.org and available on demand following the meeting. The meeting can be viewed live on Willamette Falls Television on Channels 23 and 28 for Oregon City and Gladstone residents; Channel 18 for Redland residents; and Channel 30 for West Linn residents. The meetings are also rebroadcast on WFTV. Please contact WFTV at 503-650-0275 for a programming schedule.

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**CITY OF OREGON CITY
PLANNING COMMISSION HEARING**

February 22, 2010, 7:00 P.M.
City Commission Chambers - City Hall

1. CALL TO ORDER

Roll Call:

Chair Tim Powell

Commissioner Dan Lajoie

Commissioner Carter Stein

Commissioner

Groener

Staff Present:

Tony Konkol, Community Development

Director

Laura Butler, Assistant Planner

Christina Robertson Gardiner, Associate
Planner

Pete Walter, Associate Planner

Jennifer Bragar, Deputy City Attorney

Chair Powell called the meeting to order at 7 p.m.

2. PUBLIC COMMENT ON ITEMS NOT LISTED ON AGENDA

There was no public comment on items not listed on the agenda.

ADOPTION OF PLANNING COMMISSION MINUTES

February 8, 2010 Planning Commission Hearing Minutes

Motion by Commissioner Chris Groener, second by Commissioner Carter Stein to approve the minutes of the February 8, 2010 minutes as written.

A roll call was taken and the motion passed with Chair Tim Powell, Commissioner Dan Lajoie, Commissioner Carter Stein, Commissioner Chris Groener voting aye. [4:0:0]

4. PLANNING COMMISSION HEARING

**Oregon City Code Amendments: 6-month update
(Planning File L 08-01).**

Commission Report

Staff Report

Proposed Municipal Code Amendments by Chapter

Ordinance 10-03

Memo Describing Proposed Amendments

L 08-1014 Ordinance

Dan Berge letter to be entered 2/22/2010

Curb Cut Code to be entered 2/22/2010

City Attorney corrections to be entered 2/22/2010

Christina Robertson-Gardiner, Associate Planner, entered Exhibits A-C into the record which were proposed changes to Chapter 12.04.25, grammatical edits to Chapter 17.49, and a letter from Dan Berge dated February 22, 2010. She updated the Commission on outstanding issues. Regarding temporary structures, membrane structures and metal accessory buildings would be included. The Code changes would be sent to the Citizen Involvement Committee (CIC) for comments as well. Regarding archeological resources, the Archeological Sensitivity Map would need to be done through a consultant and would be a separate project. She proposed Code changes that would require an archeological recommendation letter from SHPO as a completeness requirement in subdivisions, partitions, site plan and design review, and historic review. The Commission wanted to give applicants 45 days for the required letter. They would also like to review the map at some point.

The legislative projects that were put on hold were upzoning commercial land in the South End area, the Sign Code update, and regulation of trees on private property.

Pete Walter, Associate Planner, discussed the changes to Chapters 17.41 and 17.49. These were modification of dimensional standards in the Tree Protection Code and changes to the Natural Resource Overlay District.

Ms. Robertson Gardiner explained additions to 17.65 regarding offsite impacts and 17.80 regarding creating an option for support facilities

underground. Through this Code amendment process, the Planning Commission received three requests for rezoning. Staff thought these zoning amendments did not fit within the scope of the current legislative review process and had pre-existing reasons for their current zoning, or had outstanding issues in regard to future redevelopment should be reviewed as applicant-initiated amendments.

Mr. Walter said staff had been working with Dan Berge and AKS Engineering on a partition or subdivision of the land which Mr. Berge owned. The City did not consider this land divided or partitioned yet, however a tax lot was created and a house on the property was sold and it was an illegal land division. Mr. Berge had proposed at a previous Planning Commission meeting to incorporate language that allowed lot validation into the City Code. Staff recommended not creating a process that superseded the Land Division Ordinance and thought it should go through an applicant-initiated process rather than be dealt with in the current legislative review.

Ms. Robertson Gardiner said the Planning Commission could choose to forward a recommendation to the City Commission of L 08-01 six month update proposal as amended. This would go to the City Commission in March. There would be a workshop of the City Commission and Planning Commission on March 9 for discussion.

Chair Powell reopened the public hearing.

Dan Berge of Oregon City said he could not put in an application without the neighbor, and the neighbor was not willing. He could not sell or divide the property and the tax assessor reduced the value of the property because it was not buildable. He also discussed another property he owned on Highway 213 which had been rezoned to industrial use and he had trouble getting permits for the commercial building on the property.

Chair Powell closed the public hearing.

Chair Powell wanted to further discuss Mr. Berge's issues, but separate from the Code amendment process. The Commission agreed.

Chair Powell said a lot of work had been done on the Code amendments and it was a good package to forward on to the City Commission.

Motion by Commissioner Carter Stein, second by Commissioner Dan Lajoie to recommend approval of the Municipal Code Text Amendments L 08-01 as amended in the record.

A roll call was taken and the motion passed with Chair Tim Powell, Commissioner Dan Lajoie, Commissioner Carter Stein, Commissioner Chris Groener voting aye. [4:0:0]

5. COMMUNICATION

Mr. Konkol gave an update on upcoming pre-applications for the Cove apartments, Housing Authority of Clackamas County, and Danielsons. There had been discussion about looking into Eastham School for a new library site. The Park Place annexation would be going to a vote on May 18, 2010. Mr. Konkol also discussed the City Manager recruitment process, South End Concept Plan, and upcoming meetings.

ADJOURN

Chair Powell adjourned the meeting at approximately 8:10 p.m.



Agenda Item No. 4a
Meeting Date: 22 Mar 2010

COMMISSION REPORT: CITY OF OREGON CITY

TO:	Planning Commission
FROM:	Tony Konkol, Community Development Director
PRESENTER:	Tony Konkol, Community Development Director
SUBJECT:	Reduce the Planning Commission from seven (7) members to five (5) members.
Agenda Heading: Public Hearing	
Approved by: Larry Patterson, City Manager	

RECOMMENDED ACTION (Motion):

Staff recommends approval of this application based on satisfaction of all required criteria for a Legislative action.

BACKGROUND:

The Oregon City Municipal Code subsection 2.24.020 shall be amended to reduce the size of the Planning Commission from 7 to 5 members. The proposed amendment to the Chapter 2.24 of the Oregon City Municipal Code would impact the following section of the Oregon City Municipal Code:

OCMC Chapter 2.24.020 Membership

The planning commission shall consist of ~~seven~~ five members to be appointed by the mayor:

- A. The members of the planning commission shall be appointed for four years.*
- B. Any vacancy shall be filled by the mayor for the unexpired portion of the term.*
- C. No member of the planning commission shall serve for more than eight consecutive years.*

The revised language will not affect any Planning Commission procedures or alter the scope of work for the Planning Commission.

BUDGET IMPACT:

FY(s): 0

Funding Source: N/A

ATTACHMENTS:



Community Development – Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045

Ph (503) 722-3789 | Fax (503) 722-3880

FILE NO.: L 10-01 – Planning Commission Members

HEARING DATE: March 22, 2010 - 7:00 p.m., City Hall
625 Center Street
Oregon City, OR 97045

APPLICANT: Community Development Division
City of Oregon City
221 Molalla Avenue, Suite 200
Oregon City, OR 97045

REQUEST: Reduce the Planning Commission from seven (7) members to five (5) members.

LOCATION: City of Oregon City

REVIEWER: Laura Butler, AICP, Assistant Planner

RECOMMENDATION: Staff recommends approval of this application based on satisfaction of all required criteria for a Legislative action.

Legislative actions involve the adoption or amendment of the city's land use regulations, comprehensive plan, maps, inventories and other policy documents that affect the entire city or large portions of it. Legislative actions which affect land use must begin with a public hearing before the planning commission.

B. Planning Commission Review.

1. Hearing Required. The planning commission shall hold at least one public hearing before recommending action on a legislative proposal. Any interested person may appear and provide written or oral testimony on the proposal at or prior to the hearing. The planning manager shall notify the Oregon Department of Land Conservation and Development (DLCD) as required by the post-acknowledgment procedures of ORS 197.610 to 197.625, as applicable.
2. Planning Manager's Report. Once the planning commission hearing has been scheduled and noticed in accordance with Section 17.50.090(C) and any other applicable laws, the planning manager shall prepare and make available a report on the legislative proposal at least seven days prior to the hearing.
3. Planning Commission Recommendation. At the conclusion of the hearing, the planning commission shall adopt a recommendation on the proposal to the city commission. The planning commission shall make a report and recommendation to the city commission on all legislative proposals. If the planning commission recommends adoption of some form of the proposal, the planning commission shall prepare and forward to the city commission a report and recommendation to that effect.

C. City Commission Review.

1. City Commission Action. Upon a recommendation from the planning commission on a legislative action, the city commission shall hold at least one public hearing on the proposal. Any interested person may provide written or oral testimony on the proposal at or prior to the hearing. At the conclusion of the hearing, the city commission may adopt, modify or reject the legislative proposal, or it may remand the matter to the planning commission for further consideration. If the decision is to adopt at least some form of the proposal, and thereby amend the city's land use regulations, comprehensive plan, official zoning maps or some component of any of these documents, the city commission decision shall be enacted as an ordinance.
2. Notice of Final Decision. Not later than five days following the city commission final decision, the planning manager shall mail notice of the decision to DLCD in accordance with ORS 197.615(2). (Ord. 98-1008 §1(part), 1998)

IF YOU HAVE ANY QUESTIONS ABOUT THIS APPLICATION, PLEASE CONTACT LAURA BUTLER IN THE PLANNING DIVISION OFFICE AT 722-3789.

I. PROPOSED PROJECT

The Oregon City Municipal Code subsection 2.24.020 shall be amended to reduce the size of the Planning Commissioners from 7 to 5 members. The Planning Commission has operated successfully with 4 to 5 members for over 7 years and has consistently demonstrated their ability to make sound decisions and effectively function as a group. Despite extensive advertising for additional Planning Commission members (on television, at public facilities, online and in newspapers), the Planning Commission has not filled all open positions for more than 7 years.

A five member commission is consistent with the size of a majority of Oregon City's appointed boards and committees. Currently, the Commission is operating with four members and would continue to search for a fifth member.

The proposed amendment to the Chapter 2.24 of the Oregon City Municipal Code would impact the following section of the Oregon City Municipal Code (Exhibit 1).

OCMC Chapter 2.24.020 Membership

The planning commission shall consist of ~~seven~~ five members to be appointed by the mayor:

A. The members of the planning commission shall be appointed for four years.

B. Any vacancy shall be filled by the mayor for the unexpired portion of the term.

C. No member of the planning commission shall serve for more than eight consecutive years.

The revised language will not affect any Planning Commission procedures or alter the scope of work for the Planning Commission.

II. FACTS

A. Public Comment

Notice of the Planning Commission and City Commission public hearings for the proposal were published in the Clackamas Review and emailed to the Citizen Involvement Council and all neighborhood associations. Notices were additionally posted at City Hall and sent to the Library as well. No comments were received.

III. DECISION-MAKING CRITERIA:

Oregon City Municipal Code (OCMC) Chapter 17.68 – Zoning Changes and Amendments

17.68.020 – Criteria

A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

Findings: Complies as Proposed. The reduction of Planning Commission members would result in a Planning Commission which remains consistent with the following Comprehensive Plan goals and policies.

Goal 1.1 Citizen Involvement Program

Implement a Citizen Involvement Program that will provide an active and systematic process for citizen participation in all phases of the land-use decision making process to enable citizens to consider and act upon a broad range of issues affecting the livability, community sustainability, and quality of neighborhoods and the community as a whole.

Goal 1.2 Community and Comprehensive Planning

Ensure that citizens, neighborhood groups, and affected property owners are involved in all phases of the comprehensive planning program.

Policy 1.2.1

Encourage citizens to participate in appropriate government functions and land-use planning.

Goal 1.3 Community Education

Provide education for individuals, groups, and communities to ensure effective participation in decision-making processes that affect the livability of neighborhoods.

Goal 1.4 Community Involvement

Provide complete information for individuals, groups, and communities to participate in public policy planning and implementation of policies.

Goal 1.8 Advisory Committees

Establish and support citizen advisory committees and commissions.

Policy 1.8.1

Identify the areas of City government in which the counsel of a formal citizen advisory committee or commission is warranted if funding is available to provide appropriate staff support.

Policy 1.8.2

Solicit and support citizen participation on citizen advisory committees and commissions. Identify desirable expertise from the Portland metro area as needed to best serve the interests of Oregon City.

The aforementioned policies encourage participation of Oregon City citizens. The proposed amendment to reduce the size of the Planning Commission from 7 to 5 members would not eliminate the Planning Commission or reduce the number of boards or commissions available to citizens. Citizens are encouraged to participate in a variety of open positions on city boards and commissions that influence planning in Oregon City including the Planning Commission, City Commission, Citizen Involvement Council, and Neighborhood Associations. The City struggles to fill all open positions despite continuing recruitment through a variety of outreach methods. Given the minimal interest from the public in becoming a Planning Commissioner, it is not expected that the proposed change would result in a rejection of a qualified candidate.

The Planning Division will continue to educate the public and encourage involvement of the public in planning-related issues. Oregon City citizens would continue to be provided the opportunity to participate in the government process by joining any of the following boards or commissions:

Active Boards/Commissions:

- Budget Committee
- Citizen Involvement Council
- Oregon City Civic Improvement Trust
- Clackamas Cable Access Board
- Historic Review Board
- Library Board
- Metro Enhancement Committee
- Parks and Recreation Advisory Committee
- Planning Commission
- South Fork Water Board
- South Fork Water Board Budget Committee
- Transportation Advisory Committee
- Urban Renewal Commission
- Urban Renewal Budget Committee
- Tateshina Sister City Committee

Inactive Committees:

- Arts Commission
- Civil Service Board
- Hazard Mitigation Coordinating Committee
- Historic Trails Committee
- Joint Housing and Fire Appeals Board
- Natural Resource Committee
- Parking Advisory Committee
- Rate and Fee Review Committee
- Tree Committee

B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed by the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

Findings: Not Applicable. This standard is not applicable to this application. The proposed change to Chapter 2.24 of the Oregon City Municipal Code will not impact the level of service of the existing public facilities and services.

C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.

Findings: Not Applicable. This standard is not applicable. The proposed amendments to Chapter 2.24 of the Oregon City Municipal Code will not change the land uses authorized in the underlying zone and will not change the level of service of the transportation system.

D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment. (Ord. 91-1007 §1 (part), 1991: prior code §11-12-2)

Findings: Complies as Proposed. The Oregon City Comprehensive Plan was adopted in June of 2004 and is consistent with the Statewide Planning Goals. The proposed amendment would not reduce the number of committees available to join in Oregon City.

IV. RECOMMENDATION

Staff recommends that the Planning Commission recommend approval of the amendment to Chapter 2.24 of the Oregon City Municipal Code to the City Commission for their consideration at the April 7, 2010 public hearing.

V. EXHIBITS

1. Amended OCMC Chapter 2.24 Planning Commission



Agenda Item No. 5a
Meeting Date: 22 Mar 2010

COMMISSION REPORT: CITY OF OREGON CITY

TO:	Planning Commission
FROM:	Tony Konkol, Community Development Director
PRESENTER:	Tony Konkol, Community Development Director
SUBJECT:	Resolution 10-01: A Resolution Supporting the City of Oregon City Application for a Transportation and Growth Management Grant to Update the Oregon City Transportation System Plan.
Agenda Heading: General Business	
Approved by: Larry Patterson, City Manager	

RECOMMENDED ACTION (Motion):

Staff recommends that the Planning Commission adopt Resolution 10-01.

BACKGROUND:

The City is applying for a Transportation and Growth Management grant for funding to update the Oregon City Transportation System Plan (TSP). A resolution of support from the Planning Commission acknowledging the need for the TSP update and that the revised TSP will need to be adopted as an ancillary document to the Comprehensive Plan is a benefit to the application when reviewed by the Oregon Department of Transportation.

BUDGET IMPACT:

FY(s): 0
Funding Source: N/A

ATTACHMENTS:

**PLANNING COMMISSION
RESOLUTION NO. 10-01**

A RESOLUTION SUPPORTING THE CITY OF OREGON CITY APPLICATION FOR A
TRANSPORTATION AND GROWTH MANAGEMENT GRANT TO UPDATE THE OREGON CITY
TRANSPORTATION SYSTEM PLAN

Whereas, the City's mission is to build a sustainable community that promotes public health and safety, economic growth, and protects our livability, environment, and uniqueness depends on a cost-feasible, efficient, and multimodal transportation system; and

Whereas, Oregon Statewide Planning Goal 12 requires the City to adopt and update a TSP as an amendment to the City's Comprehensive Plan to respond to Oregon City's changing economic, social and environmental conditions as well as meet all statewide land use goals; and

Whereas, the updated TSP will return the City to full compliance with State laws and administrative rules that govern the requirements and will achieve consistency with state, regional and local land use and transportation plans; and

Whereas, the City's vision will be integrated into the policies enacted to implement the new TSP and the City's mission "to build a sustainable community" will be included on every aspect of the plan; and

Whereas, the updated TSP will guide the coordinated growth and efficient transportation investments that will support local and statewide economies; and

Whereas, updating the City's TSP will align our transportation plan with our land use plan, our economic development plan, our fiscal resources and will provide for a balanced, multimodal transportation system, will preserve or enhance state facilities, will increase convenience and availability of alternative modes of transportation, will provide alternatives to major infrastructure investments, will increase the use of available lands and will reduce emissions through reduced automobile vehicle miles travelled.

NOW, THEREFORE BE IT RESOLVED by the Oregon City Planning Commission as follows:

The Planning Commission supports the City of Oregon City application for a Transportation and Growth Management grant to update the Oregon City Transportation System Plan.

Read at a regular meeting of the Planning Commission held on the 22nd day of March, 2010.

ATTESTED this 22nd day of March, 2010

Tim Powell
Planning Chairperson



Agenda Item No. 6a
Meeting Date: 22 Mar 2010

COMMISSION REPORT: CITY OF OREGON CITY

TO:	Planning Commission
FROM:	Tony Konkol, Community Development Director
PRESENTER:	Tony Konkol, Community Development Director
SUBJECT:	What is Sustainability? Presented by Duke Castle of The Natural Step Network.
Agenda Heading: General Business	
Approved by: Larry Patterson, City Manager	

RECOMMENDED ACTION (Motion):

Information / Discussion

BACKGROUND:

The City Commission's adopted mission statement is "to build a sustainable community that promotes public health and safety, economic growth, and protects the livability, environment, and uniqueness of Oregon City." Goal 1 is "to build a sustainable future."

The Natural Step Network provides training to elected and appointed government officials and senior staff within Clackamas County and the county cities to help define sustainability and develop a coordinated, long term sustainability thrust within Clackamas County and its communities.

This process consists of conducting separate work session with officials and staff in each participating Clackamas County governmental entity. The initial training will encompass:

- An understanding of what sustainability means and how it is more than being "green"
- the importance of having a scientifically sound framework to guide a sustainability effort and measure its results
- what tools and frameworks exist to guide a sustainability initiative and how do they compliment each other
- knowledge of the best practices other communities and organizations have used in developing successful sustainability initiatives.

Materials will be provided at the worksession. For more information on The Natural Step please visit www.naturalstep.org/

BUDGET IMPACT:

FY(s): N/A
Funding Source:

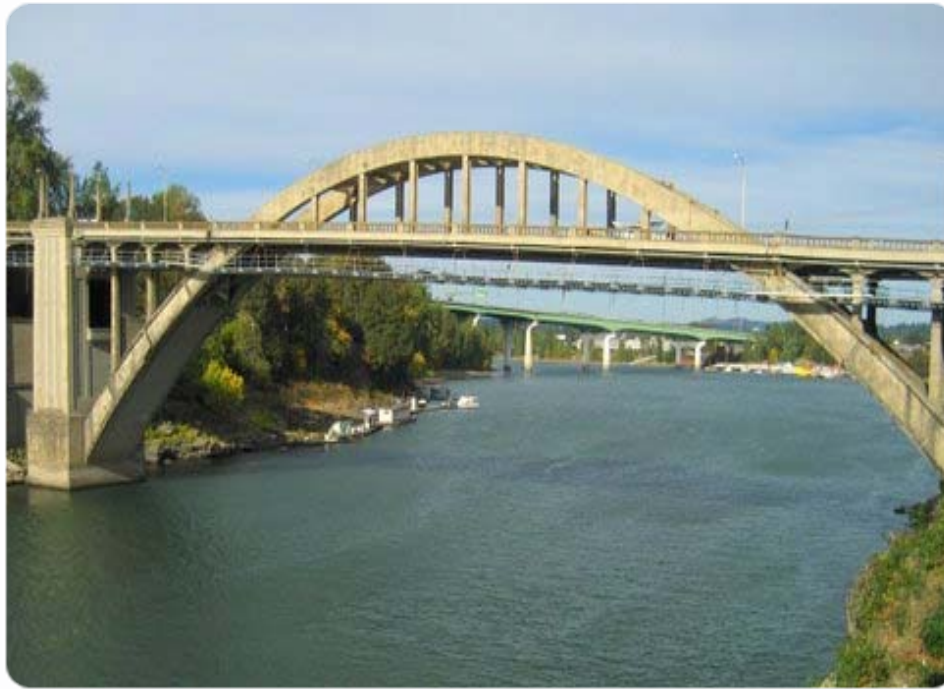
ATTACHMENTS:

Biography Of Duke Castle

Duke Castle was part of a group that introduced the Natural Step sustainability framework to Oregon in 1997. The group's goal was to show business and community organizations how they could move toward creating a sustainable society while maintaining a healthy economy. Since then he has been prominent in teaching organizations how to effectively integrate the Natural Step sustainability framework into their business planning and strategic operations.

He has conducted close to 400 sustainability trainings and briefings throughout the State of Oregon and other parts of the Pacific Northwest. In 2000 he was asked to train Oregon state leaders on sustainability and The Natural Step as part of Governor Kitzhaber's sustainability executive order.

Duke's business experience includes ten years as a marketing manager at Hewlett Packard and fifteen years as a strategic planning and marketing consultant. He has a BS degree in electrical engineering from Cornell University and an MBA in marketing from Stanford.



Sustainability Using The Natural Step Framework

Oregon City Planning Commission

March 22, 2010

Definitions of Sustainability

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

- *UN Brundtland Commission, Rio Earth Summit 1992*

Sustainability means using, developing, protecting resources at a rate and in a manner that enables people to meet their current needs and also provides that future generations can meet their own needs. Sustainability requires simultaneously meeting environmental, economic, and community needs.

- *Executive order signed by Gov. Kitzhaber, 2000*

Green vs. Sustainability

Green

- Detail focused
- Tactical
- Ecological
- Focus on being less “bad”
- Lacks common definition of success

Sustainability

- Whole systems focus
- Strategic
- Triple bottom line
- Focus on aligning with nature’s cyclical processes
- Capable of defining success

Sustainability goes Mainstream



Variations of the Earth's surface temperature: year 1000 to year 2100

Departures in temperature in °C (from the 1990 value)

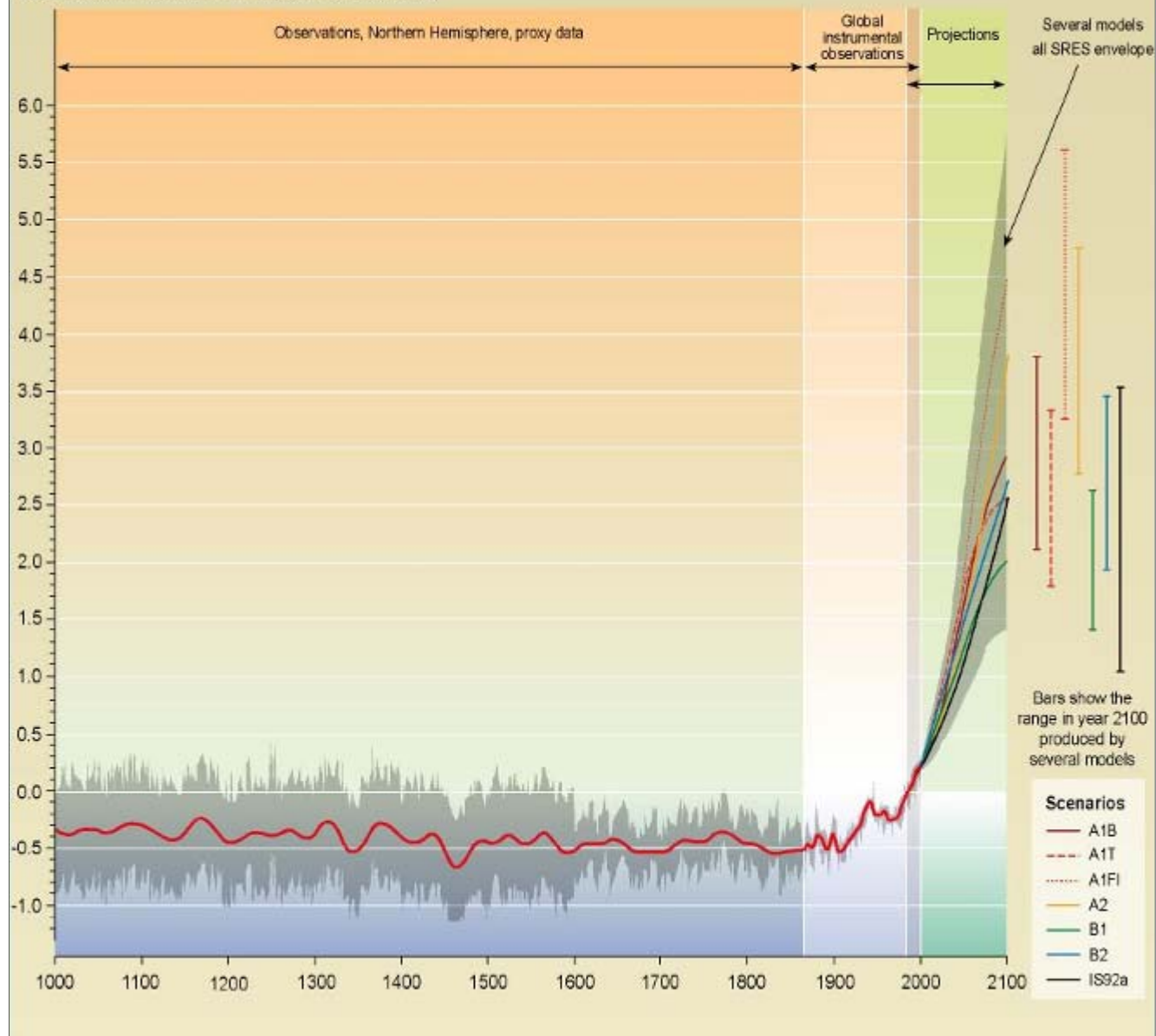
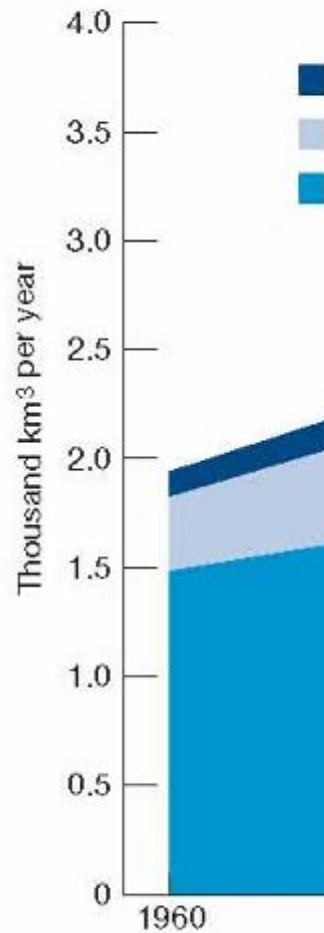


Fig. 17: GLOBAL



FRIDAY
APRIL 6, 2007

The Oregonian

SUNRISE
EDITION

PORTLAND, OREGON

VOICE OF THE NORTHWEST SINCE 1850

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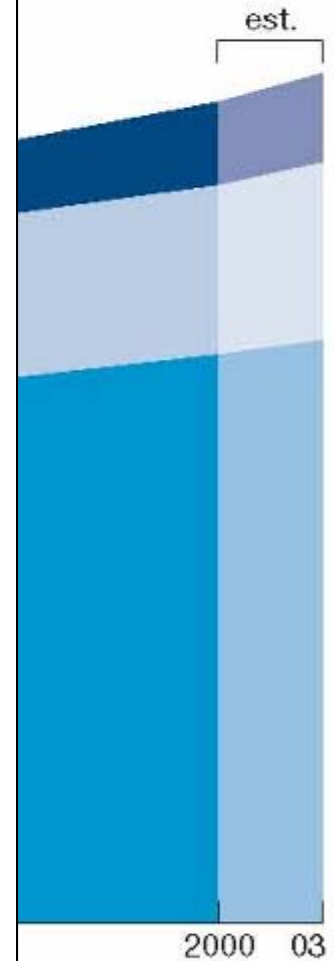
Water may split state into haves, have-nots



Photos by ROB FINCH/THE OREGONIAN/2006 and ASSOCIATED PRESS/2001

A warming climate may produce conflicts in coming years between wetter western Oregon and the drier eastern parts of the state as snowpacks that supply crucial summer water melt earlier, causing scarcities.

A global warming report predicts NW crises with snowpacks, coastlines and wildfires



US F

SATURDAY
APRIL 7, 2007

The Oregonian

SUNRISE
EDITION

PORTLAND, OREGON

VOICE OF THE NORTHWEST SINCE 1838

50c

Lines drawn for ocean fishing

The southern salmon season gets a green light, but restrictions bite hard to the north



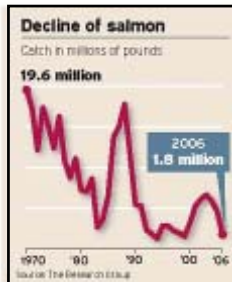
DOUG BECHTEL/THE OREGONIAN

Profitable commercial fishing grounds keep getting harder to find for veterans such as Dan Power, sitting on his boat, the Bonanza. With the area north of Cape Falcon, near Manzanita, closed to protect fish stocks until May, Power will head from Ilwaco, Wash., to waters south of Cape Falcon for salmon next week.

U.S. landings

Fish resource

http



By PETER SLEETH
THE OREGONIAN

ILWACO, Wash. — Mixed news for commercial salmon fishermen and those who dine on wild-caught fish: The U.S. government severely clipped the length of the trolling season from north of Manzanita to the Canadian border for 2007, while leaving it mostly wide open off most of Oregon's coast and south into California.

The clampdown in the north delays an opening until May 1 and is designed to protect endangered runs of chinook salmon returning to the Columbia River and its tributaries after years at sea. The decision, made Friday, means fewer of the Columbia River fish will be caught, helping to assure another life

cycle. But more Klamath River chinook should reach dinner tables, after an unexpectedly strong recovery this year.

Consumers stand to gain from the opening in the south. The fishing season for fall chinook south of Cape Falcon, near Manzanita, will open Tuesday and run through the summer — meaning a likely bounty of fresh, ocean-caught fish in stores this spring and summer.

Prices per pound this week in Astoria for river-run spring chinook were stratospheric — near \$30 a pound for fillets — but that price is bound to drop below \$20 a pound as ocean-caught salmon begin coming to port in

Please see **SALMON**, Page A8



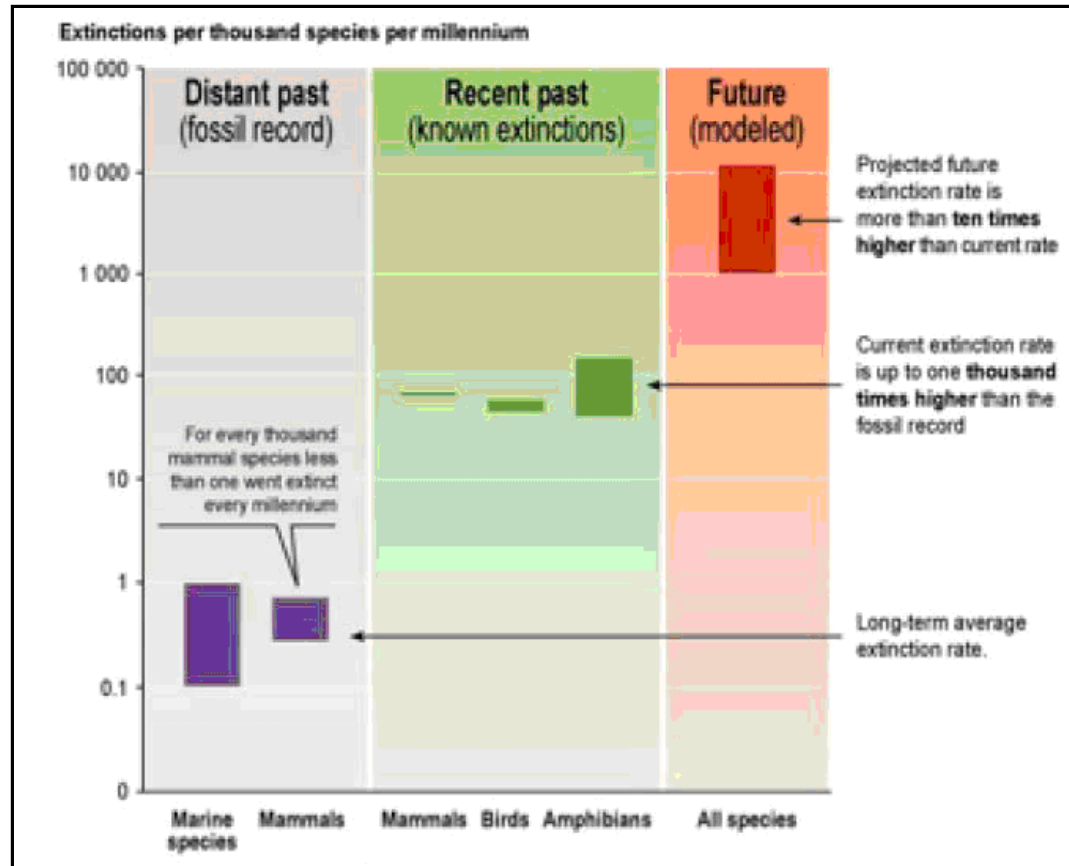
1990

1993

fisheries.

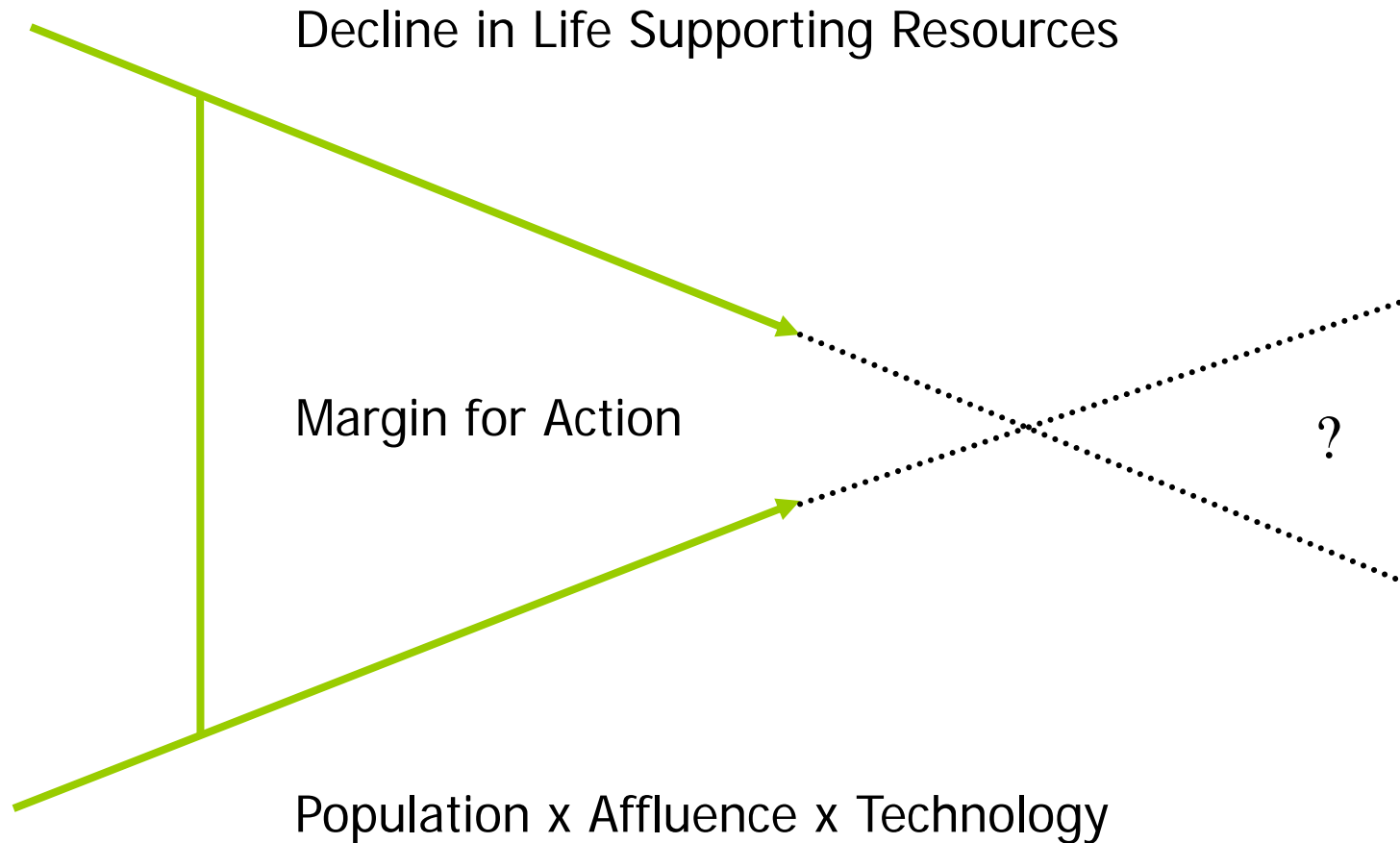
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Species Extinction



“Approximately 20-30% of plant and animal species ... are likely to be at increased risk of extinction if increases in global average temperature exceed 2.5-4.5°F” – **UN IPCC Report 4-6-07**

Global Perspective



The Character of Environmental Problems has changed:



Local ----- Global

Few Large Sources ----- Diffuse

Short Time Delay ----- Long Time Delay

Low Complexity ----- High Complexity

A Systems Perspective Emphasizes:



- Focusing "upstream"
- Principles rather than details
- Shared framework and a common language
- Unalterable system conditions

Which sustainability tools should I use?

- Triple bottom line
- Natural Capitalism
- Natural Step
- Cradle-to-cradle
- Precautionary principle
- Zero Waste
- Factor X
- Eco-footprint
- Life Cycle Assessment
- Environmental Management Systems – ISO14001, EMAS, SMS

Strategic sustainable development — selection, design and synergies of applied tools

K.-H. Robert^{a,b,*}, B. Schmidt-Bleek^h, J. Aloisi de Lardere^c, G. Basile^{d,e},
J.L. Jansen^f, R. Kuehr^g, P. Price Thomas^c, M. Suzuki^g, P. Hawken^j, M. Wackernagel^j

^a *Physical Resource Theory, Chalmers University of Technology and Göteborg University, S-41296, Göteborg, Sweden*

^b *The Natural Step Foundation, Wallingatan 22, Stockholm, Sweden*

^c *UNEP/Division of Technology, Industry and Economics, Paris, France*

^d *Environmental Health Sciences, School of Public Health, University of California, Berkeley, CA, 94720, USA*

^e *The Natural Step, Thoreau Center for Sustainability, PO Box 29372, San Francisco, CA, USA*

^f *Sustainable Technology Development, PO Box 6063, 2600 JA Delft, Netherlands*

^g *United Nations University, Zero Emissions Forum (UNU/ZEF), 53-70 Jingumae 5-chome, Shibuya-ku, Tokyo 150-8925, Japan*

^h *Factor Ten Institute, La Rabassière, 83660 Carnoules, France*

ⁱ *Natural Capital Institute, PO Box 2938, Sausalito, CA, 94965 USA*

^j *Redefining Progress, 1904 Franklin Street, Oakland, CA, 94612, USA*

Received 12 June 2001; accepted 8 October 2001

Abstract

The number of tools and approaches to develop sustainability is growing rapidly. Sometimes they are presented as if they are contradictory or in competition. However, a systems approach consistent with basic principles and the requirements of sustainability shows that these tools are complementary and can be used in parallel for strategic sustainable development. In fact, it is only when using these approaches outside of the systemic context of sustainability that they become contradictory. This paper is a collective effort of scientists who have pioneered some of these tools and approaches.

The paper maps essential elements for developing sustainability and documents how these elements relate to the application of the respective tools. The objective is to show how these tools and approaches relate to each other and build on each other when used for planning for sustainability. © 2002 Elsevier Science Ltd. All rights reserved.

Keywords: Sustainable development; Sustainability; Systems thinking; Backcasting; Upstream thinking; Strategic planning; Factor X; Factor 10; Ecological footprinting; ISO 14001; EMAS; EMS; System conditions; Life cycle assessment (LCA); The natural step (TNS); Zero emissions (ZE); Cleaner production (CP); Sustainable technological development (STD); Natural capitalism

Five Level Model



Game of Chess

Chessboard, rules of the game

Capturing King - *Checkmate*

Strategies for opening, middle and end game

Tactics for moving pieces

Books, classes, computer programs

Five Level Model

Sustainability Game

Nature's laws & science
Social and economic principles



Basic Science of Sustainability

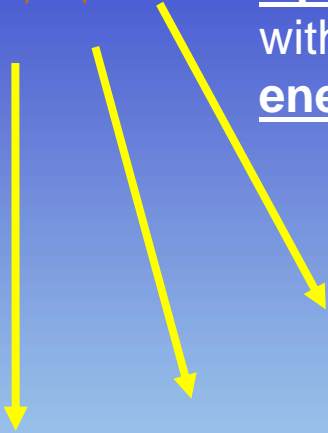
- Matter and energy do not disappear
- Matter and energy tend to disperse
- Value of matter is in its concentration and structure
- Photosynthesis is principal process by which net order is produced



Earth as a System

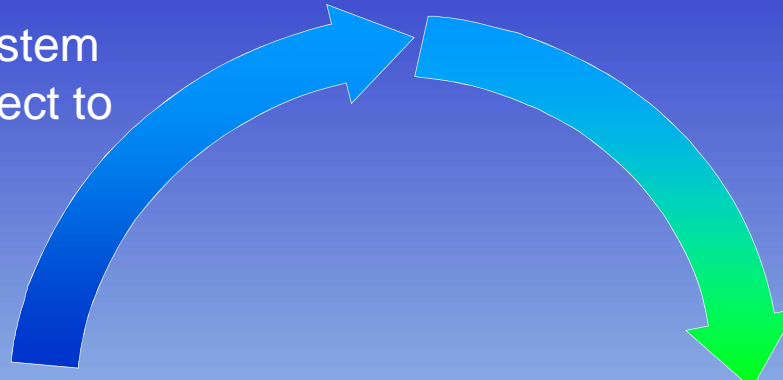


Open System
with respect to
energy

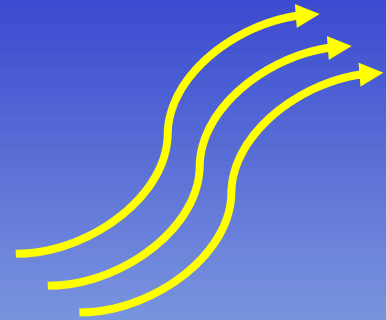


“Photosynthesis pays
the bills”

Slow geological
cycles - materials
from the Earth’s
crust

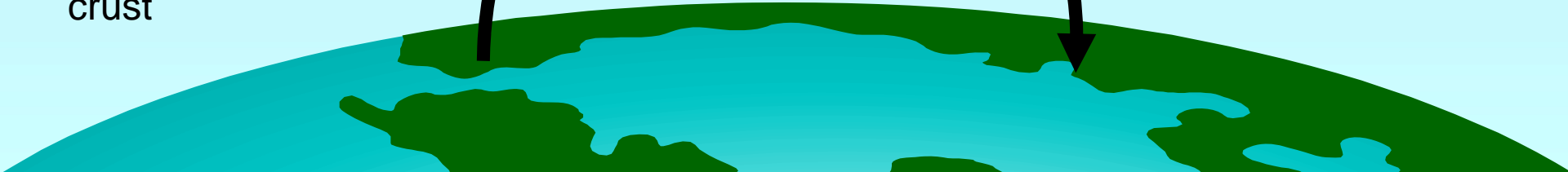
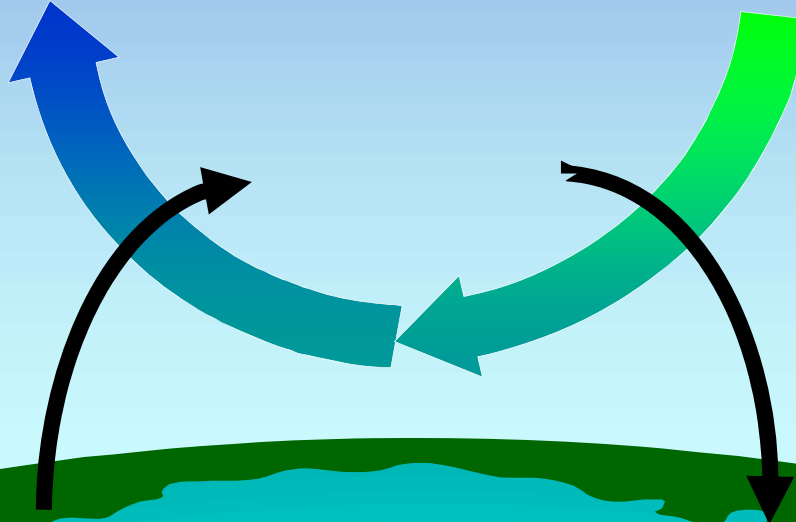


Closed System
with respect to
matter

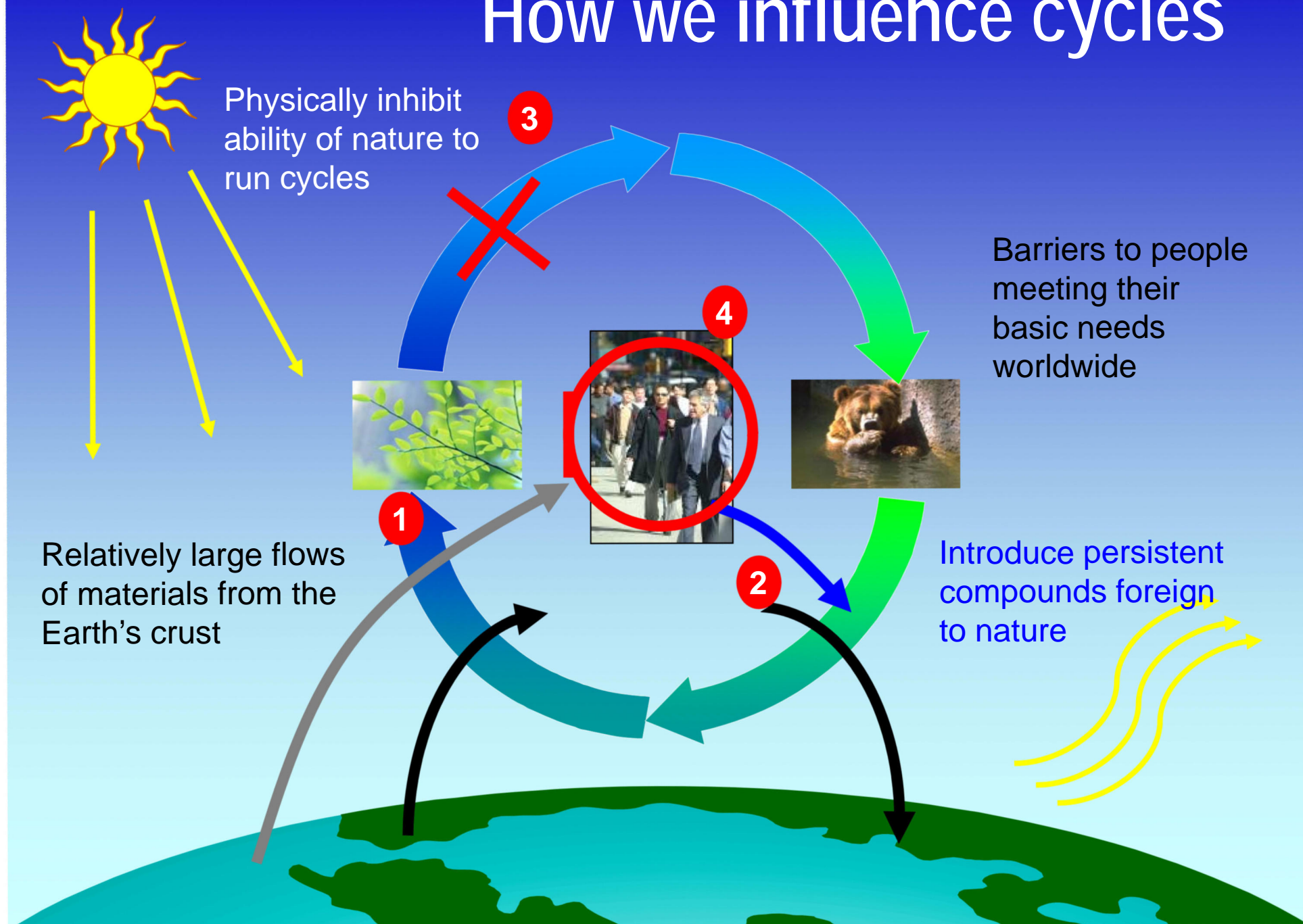


- 1) Nothing disappears
- 2) Everything disperses

Sustainability is
about the ability of
these cycles to run
forever.



How we influence cycles



Sustainability defined: *The four System Conditions*

In a sustainable society, nature is not subject to systematically increasing:



- ① Concentrations of substances extracted from the earth's crust
- ② Concentrations of substances produced by society
- ③ Degradation by physical means
- ④ and, in that society, people are not subject to
- ④ Conditions that systematically undermine their capacity to meet their needs.

Four System Conditions

In a sustainable society, nature is not subject to systematically increasing...

- 1. ... concentrations of substances extracted from the earth's crust;**
- 2. ... concentrations of substances produced by society;**
- 3. ... degradation by physical means;**

and in that society,

- 4. people are not subject to conditions that systematically undermine their capacity to meet their needs .**

Five Level Model



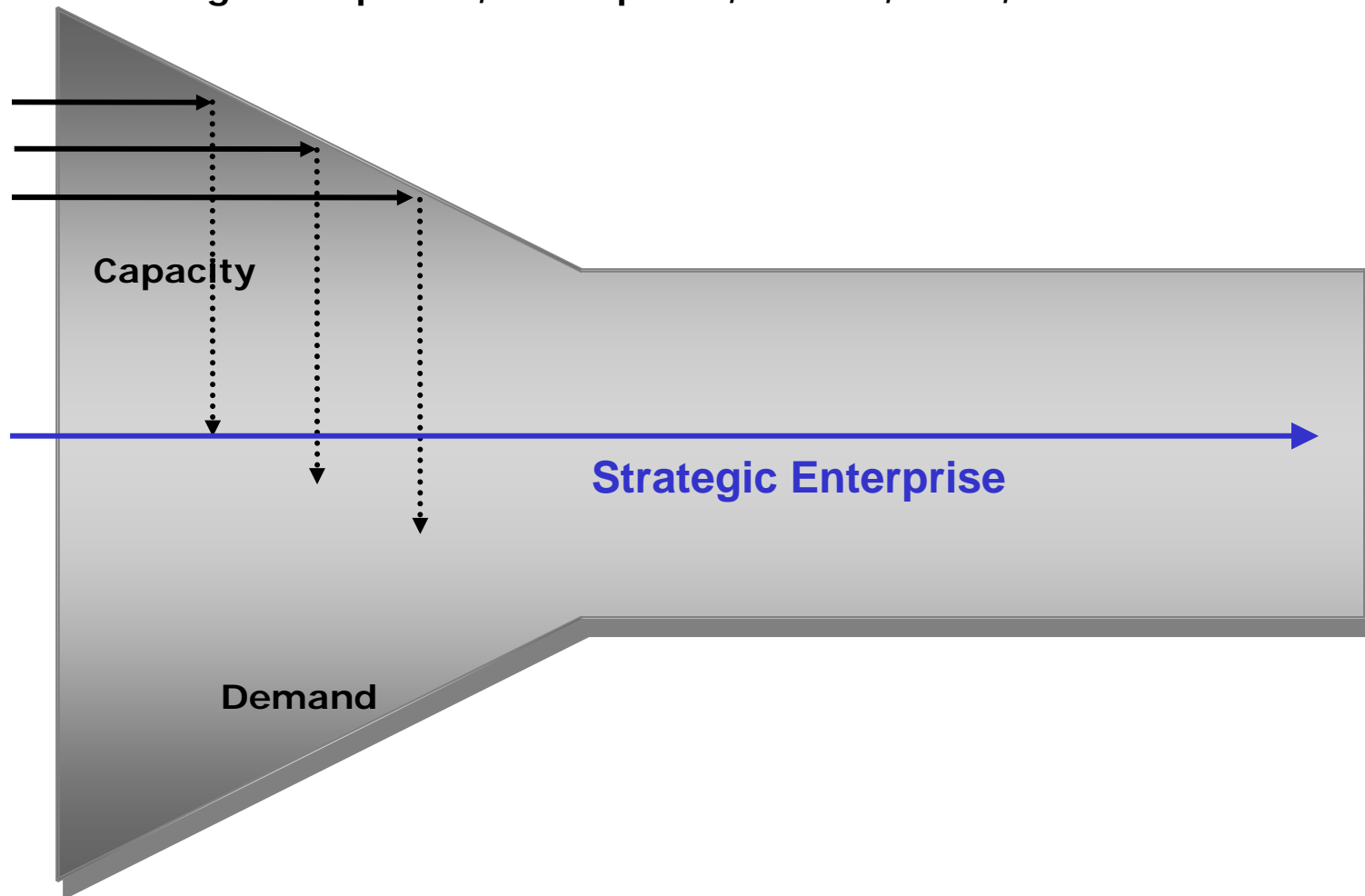
Sustainability Game

Nature's laws & science
Social and economic principles

Natural Step system conditions +
economic (Triple Bottom Line)

Hitting the Wall

- Ecological - species, atmosphere, oceans, land ,water

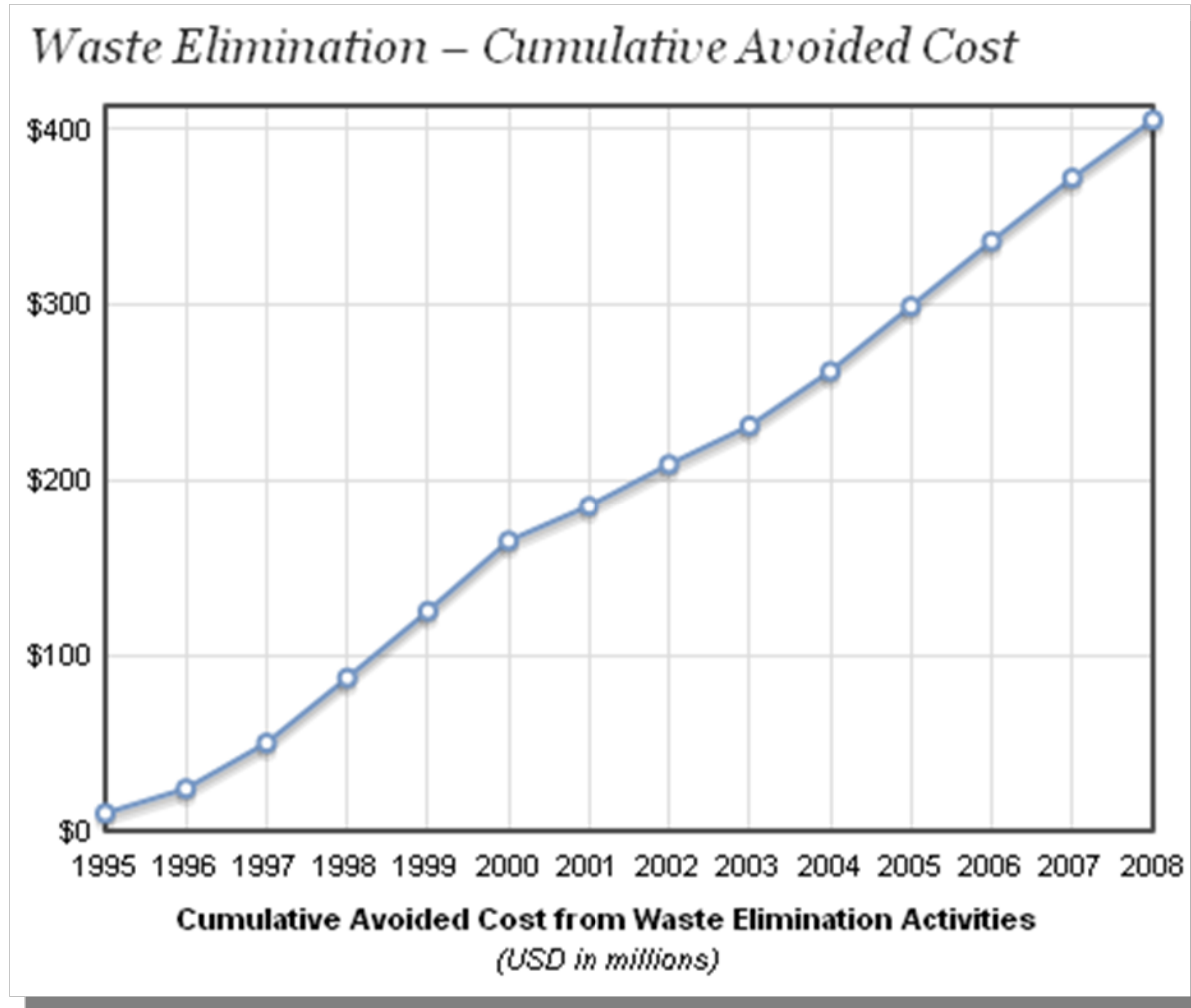


Interface, Inc.



- World's largest commercial floor covering company
- First U.S. company to adopt TNS principles
- "Mission Zero" - eliminate negative impact by 2020
- Finance long term investments with short term savings

Interface, Inc.



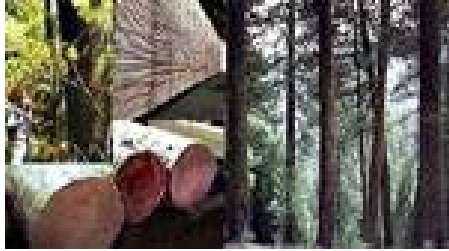
- from Interface web site

Interface, Inc.



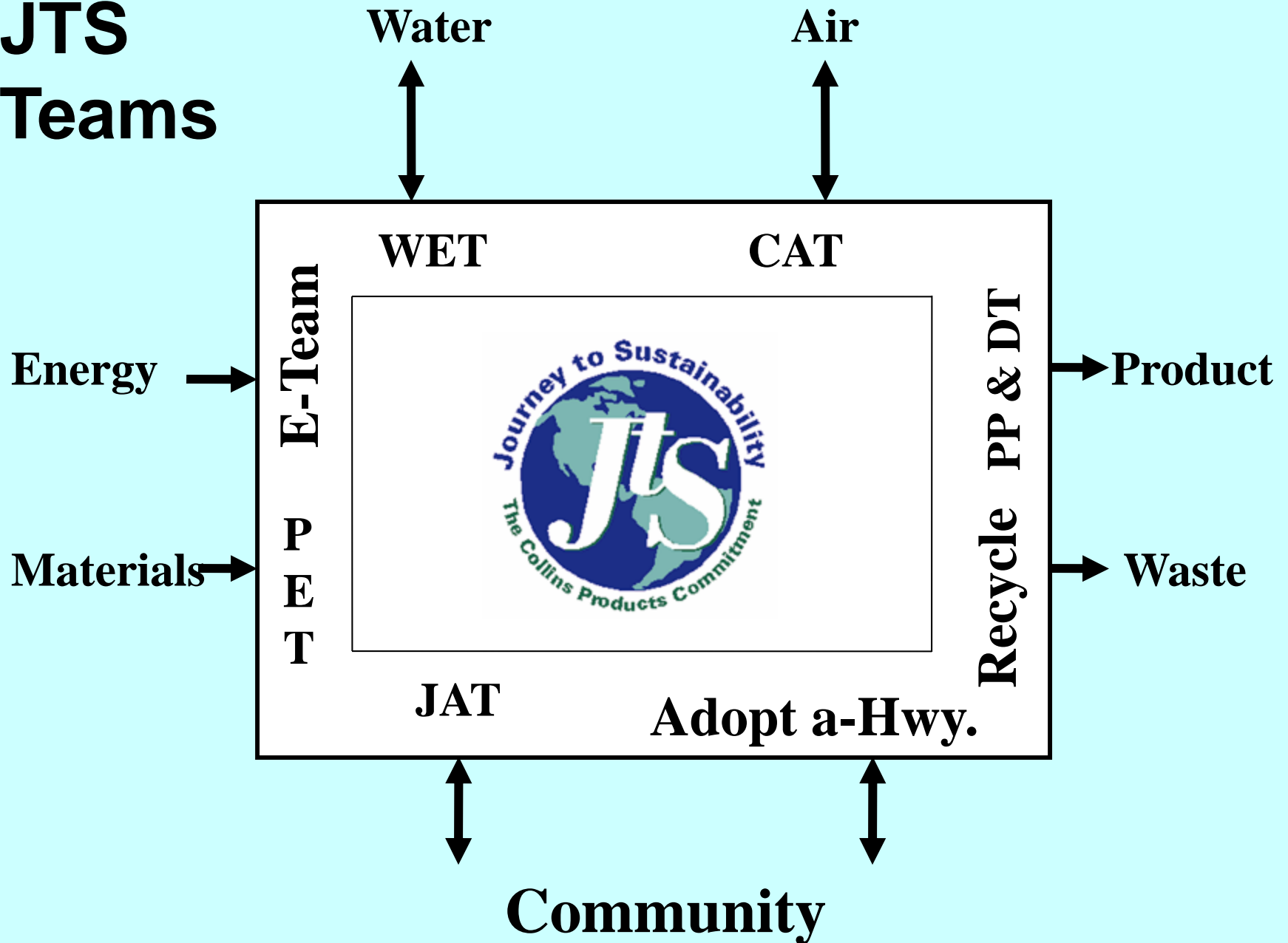
1. Eliminate waste
2. Eliminate toxic emissions
3. Use renewable energy
4. Close the loop: *create circular material flows*
5. Resource efficient transportation
6. Sensitivity hookup: *educate local community*
7. Redesign commerce: *Evergreen Lease*

Collins Pine

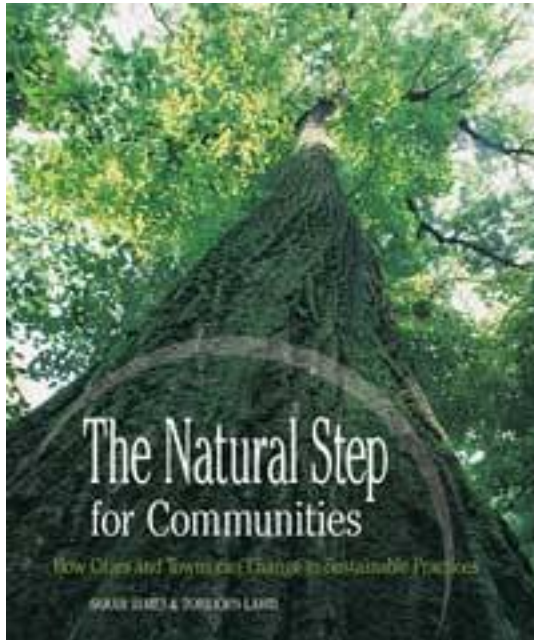


- NW forest products firm founded in 1855
- Long history of sustainable forestry practices
- Trained 600 Klamath Falls employees
- Using TNS principles for all capital purchases

JTS Teams



Communities Using The Natural Step



Wisconsin

City of Ashland
City of Baraboo
City of Bayfield
Town of Bayfield
City of Beloit
Village of Cottage Grove
Douglas County
Dunn County
Village of Johnson Creek
City of La Crosse
La Crosse County
City of Madison
City of Marshfield
City of Manitowoc
City of Menasha
City of Neenah
City of Sheboygan
Village of Spring Green
City of Stevens Point
City of Washburn

Oregon

City of Corvallis
City of Lake Oswego
Clackamas County
Metro

Minnesota

City of Duluth

New Hampshire

City of Portsmouth

New Jersey

Lawrence Township

Canada

Resort Municipality of Whistler, BC
Municipality of Canmore, BC
Halifax Regional Municipality, NS
City of St. John, NB
Town of Stratford, PEI
Town of Wolfville, NS

City of Lake Oswego

Sustainability History

- 2002 – City council adopted sustainability goal
- 2005 – Created position of sustainability coordinator
- 2006 – Established a sustainability steering committee
- 2007 – Council adopted sustainability plan based on the Natural Step
- 2008 – Created citizen Sustainability Advisory Board
- 2009 – Proposed that comprehensive plan incorporate principles of the Natural Step



City of Lake Oswego Sustainability Plan

November 21, 2007

A sustainable Lake Oswego is a community that meets the vital human needs of the present without compromising our ability to meet future needs.

This requires consideration of both long-term and short-term effects on ecological, economic, and community systems.

Operating sustainably means that we are leaving a legacy for the community of Lake Oswego and the planet.

*From Lake Oswego Sustainable City
Vision and Guiding Principles*

Table of Contents

Executive Summary.....	1
Context for Planning for Sustainability.....	2
Sustainable City Vision and Guiding Principles.....	3
Sustainability Action Areas.....	5
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Water Conservation.....	11
Procurement – Purchasing and Contracting.....	14
Waste Reduction and Recycling.....	16
Employee Involvement and Education.....	19
Water Management – Stormwater and Sanitary Sewer.....	21
Pollution Prevention / Toxics Reduction.....	22
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Appendices (included in separate document):

- Appendix A - City of Lake Oswego Resource Flow Map, November 2006/February 2007
- Appendix B - SCORE Report, January 2007
- Appendix C - Policy Guide on Planning for Sustainability, American Planning Association, April 2000
- Appendix D - The Natural Step Framework Guidebook, 2000
- Appendix E - U.S. Mayor's Climate Protection Agreement, June 2005
- Appendix F - ICLEI Cities for Climate Protection Campaign Resolution, July 2007
- Appendix G - City of Lake Oswego Water Management and Conservation Plan, Final Draft, June 2007
- Appendix H - Glossary of Terms and Abbreviations



Energy and Transportation

The Energy and Transportation Action Area Team's primary task is to examine and inventory the City's energy consumption and look for opportunities to minimize use and reduce the City's carbon footprint. The Team identified measures to increase energy and fuel efficiency, reduce emissions of

greenhouse gases (GHG) and criterion air pollutants, and increase use of renewable energy within City operations.

Sustainable End Points/Goals – By 2027...

- Zero net increase of carbon and other greenhouse gas emissions (GHG) (climate neutral)
- Energy sources are 100% renewable

Milestones (Targets) – By 2012...

- Reduce greenhouse gas (GHG) emissions to 7% below 2000 levels, in keeping with the US Mayors' Climate Protection Agreement (see Appendix E)
- Decrease overall energy consumption by 10% from 2006 levels, in keeping with the national Energy Star challenge
- 100% of energy used is from renewable sources (on-site and from electric utility)
- 50% of City fleet is fueled by alternative fuels / technology
- Increase overall vehicle miles per gallon (MPG) by 10% across entire fleet
- New construction and major remodels of City-owned facilities meet or obtain Leadership in Energy and Environmental Design (LEED) Gold certification
- Increase the number of City employees commuting by alternative commute options (non-single occupancy vehicle modes) by 50%

Current State:

- Signed Mayor's Climate Protection Agreement and joined Cities for Climate Protection Campaign (see Appendix F); received software and tools to conduct greenhouse gas emissions and criterion air pollutants inventory; data collection for City operations inventory is in progress.
- Water Treatment Plant purchases renewable, "Clean Wind" electricity from PGE equal to about half of the annual power that is required to run the Plant, and has made equipment and lighting upgrades and operational changes to improve efficiency.
- High-efficiency pumps are specified when sewer lift station pumps are replaced
- New water pump stations have high efficiency pumps and motors to meet future capacity in a more energy efficient manner
- Traffic signal bulbs have been replaced with energy conserving light emitting diode (LED) bulbs (red and green)
- Lighting standards ordinance has been drafted
- Heating and air conditioning controls for the City Hall building have been upgraded to operate more efficiently
- City fleet includes eight (8) hybrid gas/ electric vehicles
- City fleet diesel vehicles and equipment are fueled with 5% biodiesel (B5), including Lake Oswego School District/ Laidlaw bus fleet



Energy and Transportation

Current State (continued):

- Some employees commuting by alternative options (e.g. TriMet, vanpool, carpool, bike, etc.); no centralized tracking system. Employee Commute Options (ECO) survey data for City Hall available from 2006 to 2002.
- City provides employee transit benefit equivalent to 100% of monthly bus pass.
- City sponsors an employee vanpool program which has one route; contract with Flexcar as vanpool provider includes daytime use of carsharing vehicle by City staff
- City participates in annual Carefree Commuter Challenge and Bike Commute Challenge
- Some automated City functions, e.g. electronic pay stubs, electronic billing, on-line applications, etc.
- Waste reduction and recycling efforts in place (see Waste Reduction section below for details)

Milestones (Proposed Actions) – By 2008...

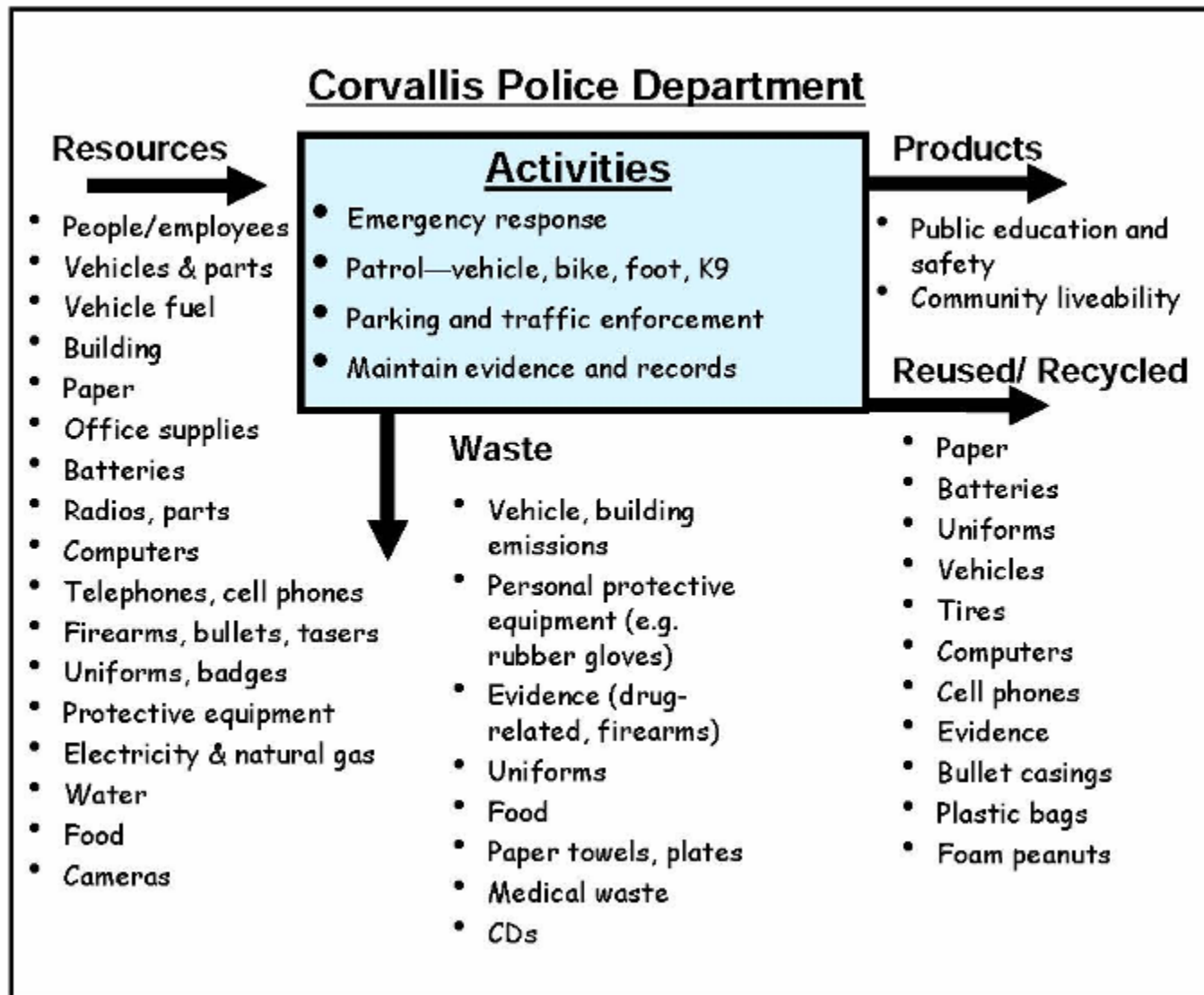
- Inventory greenhouse gas (GHG) and criterion air pollutants emissions from City operations and develop emissions reduction action plan
- Evaluate costs of switching additional City facilities to PGE Clean Wind power, and develop proposal
- Switch from B5 (5% biodiesel) to B20 (20% biodiesel) for all vehicles and stationary equipment for summertime use (continue to use petrodiesel for generators); coordinate with Laidlaw/ Lake Oswego School District. Identify older vehicles and establish off-site fueling location. Spot test B50 (50% biodiesel) with select vehicles for summer-time use.
- Conduct a fleet needs assessment and develop a green fleets plan to increase vehicle MPG, reduce GHG and criterion air pollution emissions, improve overall maintenance efficiency and vehicle longevity, and establish systematic roll-down. Consider anti-idling issues and diesel equipment/vehicle retrofits.
- Develop green building policy and adopt LEED as the standard for new City buildings (Gold) and major remodels (Silver)
- Develop formal policy requiring deconstruction and construction debris recycling for City building projects
- Identify needed building upgrades and associated costs to support alternate commute options, e.g. showers and covered, secure bike racks
- Set up a system for better tracking employee transit benefit usage
- Expand next Employee Commute Options survey to include all City employees or conduct an independent web-based survey to determine current commuting patterns
- Adopt policy on compressed work week and flexible schedules to minimize employee commuting, encourage use of transportation options (e.g. transit, carpooling, biking, walking), and allow shifts that minimize on-peak travel, where feasible
- Conduct carsharing feasibility study in downtown Lake Oswego
- Identify energy efficiency standards for equipment, appliances, and vehicles and include in environmentally preferable purchasing policy (EPP) (coordinate with Procurement Team)

City of Corvallis

- History
 - Early 2000's – Citizen sustainability discussions
 - 2003 – 2005 – City Council focus & city assessment
 - 2007 – 2008 – Corvallis Sustainability Coalition
- Adoption of Community Sustainability Action Plan
 - Participation by 600 community members
 - Areas of focus:
 - Community Inclusion
 - Economic Vitality
 - Education
 - Energy
 - Food
 - Health and Human Services
 - Housing
 - Land Use
 - Natural Areas & Wildlife
 - Transportation
 - Waste
 - Water
- Installing a sustainability management system



Flow Chart of Corvallis Police Department



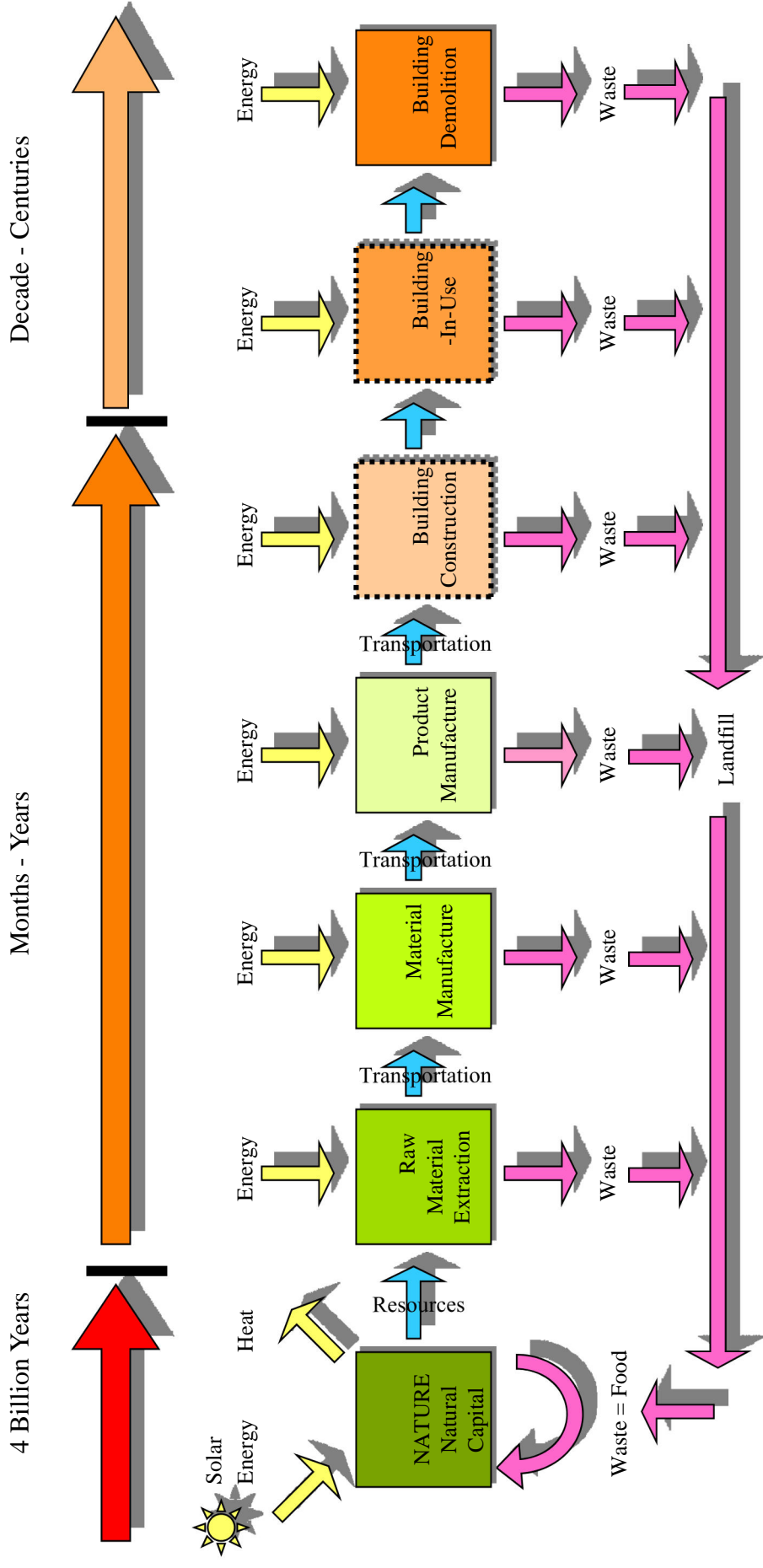
Corvallis Sustainability Action Plan

TOPIC AREA: WATER

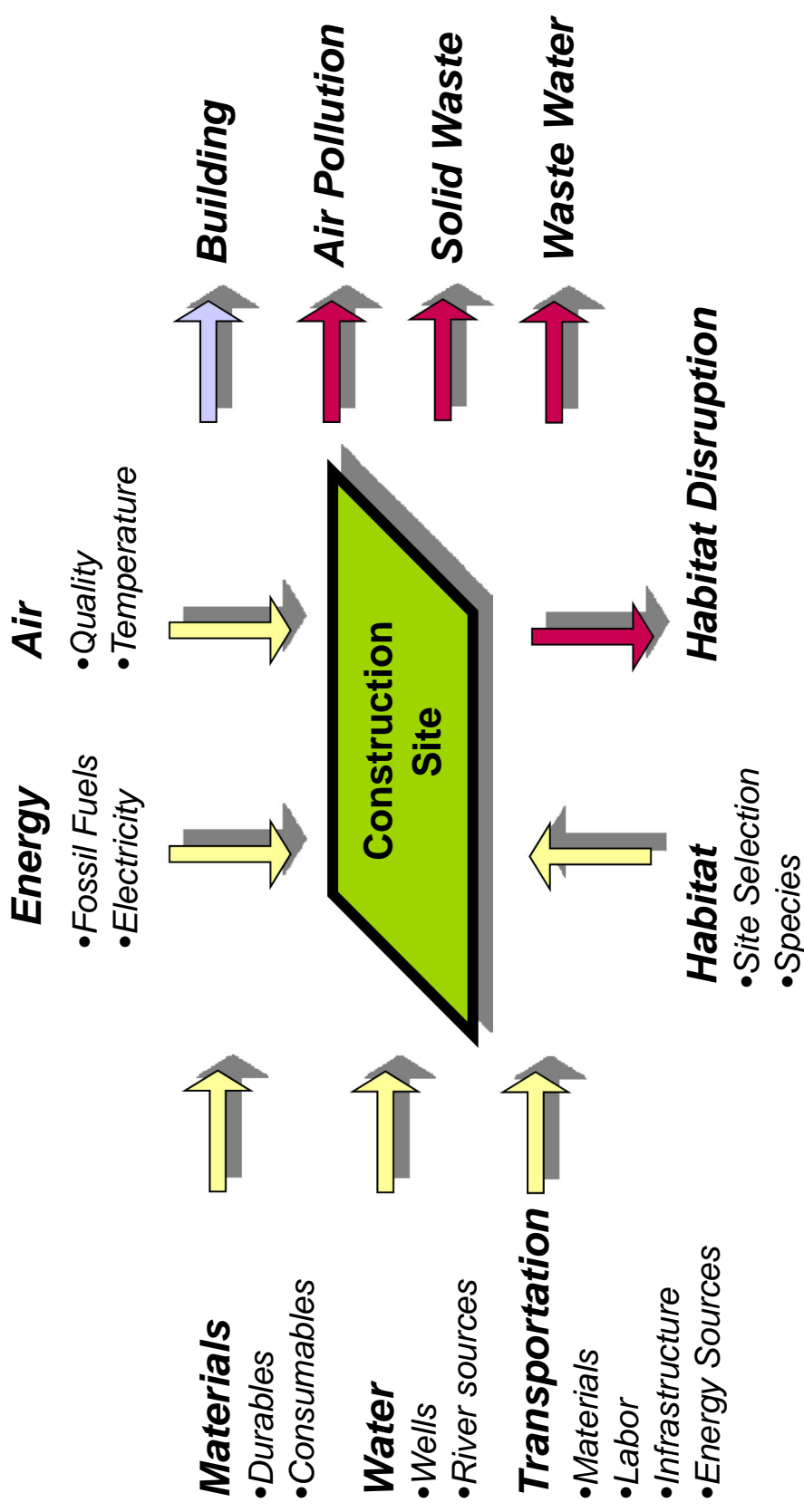
VISION: Water conservation efforts decrease the amount of water city residents' use, and streams and creeks are clean and clear.

				Potential Key Organizations (bold = confirmed)	Timeline
<p>Goal 1: By 2050, there will be a 50% reduction in the water flow (quantity) from 2008 annual levels through the Corvallis municipal water systems (currently including the Taylor and Rock Creek Water Treatment Plants, the Wastewater Treatment Plant, and the storm water drainage system).</p> <p><i>Interim Goal:</i> Reduce water flow from 2008 annual levels through the Corvallis municipal water systems 25% by 2020. Develop a community water center for public demonstration in a publicly accessible location.</p>	<p>Metrics: Gallons/year total volume, not adjusted for population growth or any other factor.</p>	<p>Strategy 1: Develop programs to reduce water level flows by addressing individual and organizational water/wastewater use patterns.</p>	<p>Action 1: Adopt individual plans and goals to reduce drinking, sewer and storm water flow levels resulting from personal water/wastewater use patterns.</p> <p>Action 2: Provide recognition and economic incentive programs for reduced usage of the three municipal water systems.</p> <p>Action 3: Evaluate both residential and institutional usage patterns of the three municipal water systems and current water use reduction programs. Recommend new programs targeting lowering water-use patterns.</p>	<p>First Alternative Co-op; League of Women Voters of Corvallis; Emerald Forest Architecture; Willamette Disc Golf Club; Willamette Watershed Productions; First United Methodist Church, Corvallis; Seventh Generation Building Guild; City of Corvallis; OSU</p>	<p>0-2 years</p>
	<p>Baseline: Annual flows: Waste water treatment plant = 4 billion gallons. Storm water through the treatment plant = 0.76 billion gallons. Storm water directly into water ways = 1.52 billion gallons. Drinking water = 2.76 billion gallons.</p>	<p>Strategy 2: Implement technologies that reduce annual flow through drinking, sanitary and storm water systems.</p>	<p>Action 1: Low-flow Technologies – Promote to all property owners and require low flow technologies on all water-related systems during the permitting phase.</p> <p>Action 2: Alternative Sewer Technologies – Promote state-sanctioned alternative sewer technologies that safely reduce municipal sewer flow for all existing buildings and require reductions for all relevant building permits. These technologies could include gray-water re-use, composting toilets, and Living Machines®.</p> <p>Action 3: Low Impact Development Storm Water Runoff Reduction Technologies – Promote Low Impact Development techniques for all properties and require when issuing building permits. These techniques could include minimizing pavement/building footprint, rain gardens, infiltration trenches, permeable pavers, rainwater harvesting, green roofs, vertical gardens, drought-tolerant/layered vegetation, and permaculture.</p>	<p>First Alternative Co-op; League of Women Voters of Corvallis; Emerald Forest Architecture; Willamette Watershed Productions; T. Gerding Construction; City of Corvallis</p>	<p>0-2 years</p>
		<p>Strategy 3: Develop alternative water sources that will reduce current flow levels in the municipal systems.</p>	<p>Action 1: Plan and install a community Sustainable Water Demonstration Site in a high-traffic and accessible existing enterprise that will demonstrate large-scale usage of alternative water sources, such as rainwater and gray-water.</p> <p>Action 2: Develop a system for using municipal treated wastewater for state-approved functions within the City of Corvallis.</p>	<p>Willamette Watershed Productions; First Alternative Co-op; Seventh Generation Building Guild; Emerald Forest Architecture; City of Corvallis</p>	<p>0-2 years</p>
					<p>6-10 years</p>
<p>Goal 2: By 2026, the Corvallis watersheds will be revived to conditions that provide healthy habitat characteristics that support reproducing populations of cold water native fish in Corvallis principal streams.</p> <p><i>Interim Goal:</i> Set back 25% of piped stormwater outfalls by 2013. Construct velocity-dispersing wetlands and/or buffers on all stormwater outfalls set back in Action B by 2023.</p>	<p>Metrics: The presence of self-sustaining cold water native fish populations.</p>	<p>Strategy 1: Evaluate current stream habitat characteristics and develop a plan to meet the designated standards.</p>	<p>Action 1: Evaluate the presence and conditions of cold water native fish in the waterways.</p> <p>Action 2: Engage property owners adjacent to principle streams in the evaluation of the healthy habitat characteristics.</p> <p>Action 3: Engage property owners adjacent to principle streams in the planning process to remediate stream characteristics.</p>	<p>Benton Soil and Water Conservation District; Marys Peak Group Sierra Club; Native Plant Society of Oregon; Willamette Watershed Productions</p>	<p>3-5 years</p>
	<p>Baseline: Current watershed conditions providing healthy habitat characteristics for cold water native fish. The baseline will be determined by completion of Strategy 1 by 2012.</p>	<p>Strategy 2: Eliminate direct draining of stormwater from the municipal storm drain outfalls into existing stream channels.</p>	<p>Action 1: Evaluate the number and impact of direct storm drain outfalls on local waterways.</p> <p>Action 2: Open and set back 50% of piped stormwater outfalls.</p> <p>Action 3: Construct velocity-dispersing wetlands and/or buffers between all outfalls and stream channels.</p>	<p>Benton Soil and Water Conservation District; Marys Peak Group Sierra Club; First Alternative Co-op; Willamette Watershed Productions; City of Corvallis; Corvallis property owners</p>	<p>0-2 years</p>
		<p>Strategy 3: Improve and protect Corvallis urban stream corridors to provide habitat characteristics that support cold water native fish.</p>	<p>Action 1: Pursue acquisition or easement to protect land along principle stream corridors.</p> <p>Action 2: Implement plans to improve conditions of streams, native riparian vegetation and stream flows.</p> <p>Action 3: Evaluate and develop plans to increase sufficient vegetation throughout the Corvallis watersheds that will provide ecological and hydrological support to cold-water native fish in the streams.</p>	<p>Benton Soil and Water Conservation District; Emerald Forest Architecture; Greenbelt Land Trust; Marys Peak Group Sierra Club; OSU Extension, Benton County; Native Plant Society of Oregon; T. Gerding Construction; Willamette Watershed Productions; Corvallis property owners</p>	<p>3-10 years</p>
					<p>3-10 years</p>

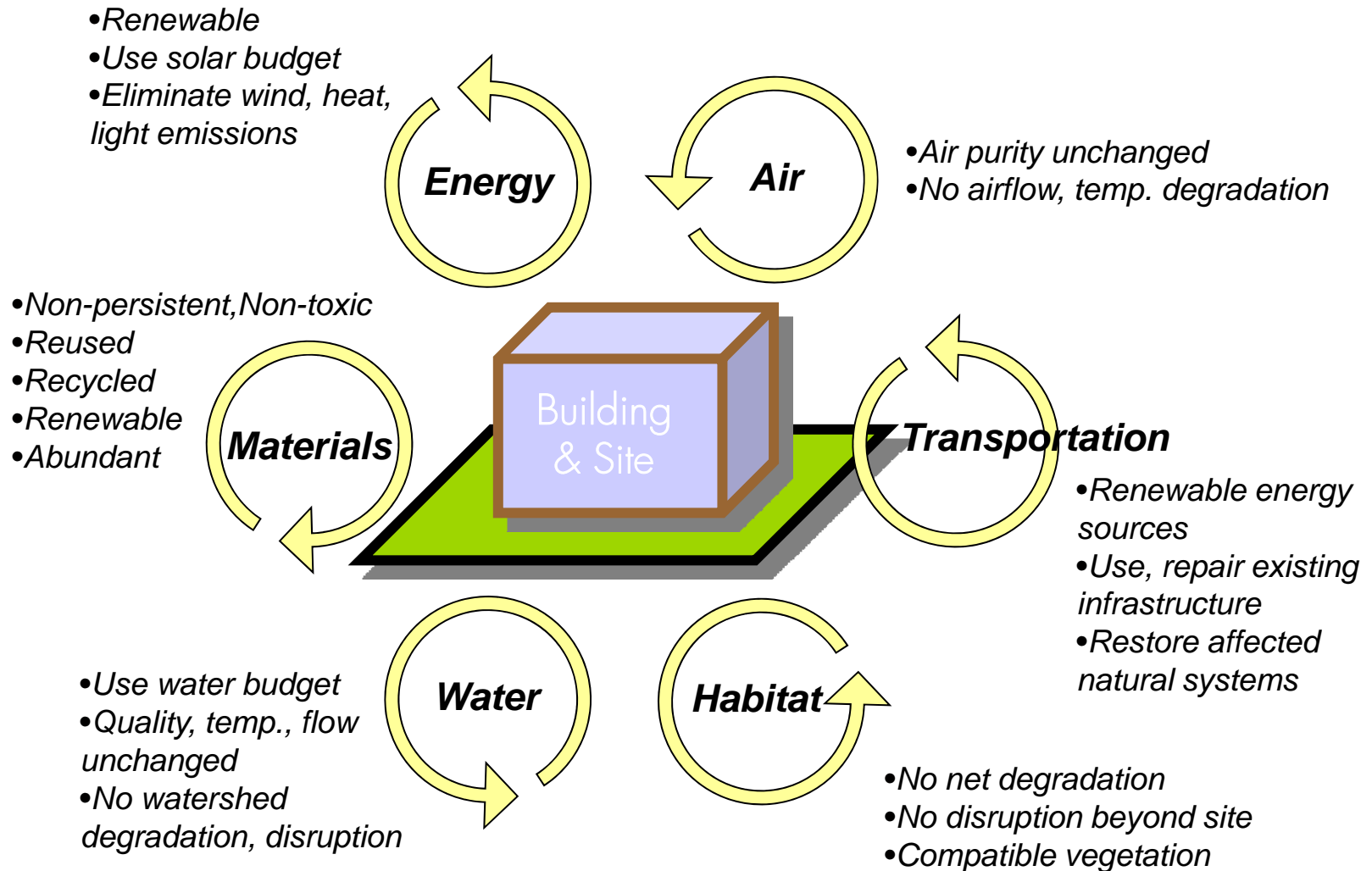
Typical Building Production Life Cycle



Construction Flow Chart



"Full Alignment" Flow Chart





Using The Natural Step As A Framework Toward The Construction and Operation of Fully Sustainable Buildings

By the Oregon Natural Step Construction Industry Group¹

Introduction

Interest in green building practices has existed for many years. These are ecologically oriented practices that focus on conserving energy and natural resources, protecting human health, preserving biodiversity and environmental quality while preserving or increasing a building's and site's long term value.

However, as the overall environment continues to deteriorate there is a growing awareness that “green” or environmental practices need to reach a level of environmental sustainability, a place where nature's ability to provide for the needs of both the current and future generations is not compromised.

A useful tool for determining sustainability is The Natural Step, a set of four, scientifically-based, system conditions developed by Swedish oncologist, Dr. Karl Henrik Robèrt. A construction industry task force, organized by the Oregon Natural Step

<http://www.naturalstep.org/en/system/files/TNSConstructionPaper.pdf>

South Waterfront - Portland

• OHSU Center for Health and Healing

- 60% energy savings
- 100% on-site waste water treatment
- Stormwater reuse for irrigation and toilets
- microturbines, PVs, Trombe wall
- LEED Platinum
- no cost premium after incentives + \$600k annual operating cost savings



• Project Description

- 130 acre urban redevelopment
- Integrated mixed use
- 5,000,000 SF office
- 400,000 SF retail
- 8000 residential units
- All LEED certified

• District-wide

- 40% of private land dedicated to open space
- 100% of public stormwater treated naturally
- In stream habit restoration for salmon
- Street car transportation



Oregon Sustainability Center



Key Features based on *Living Building Challenge*:

- Zero net energy
- Zero net water
- Living Machine to treat waste water
- Green roofs to treat excess stormwater
- Geothermal water-to-water heat pump
- Injection wells with regenerative turbines
- Heat recovery ventilators
- Triple glazing

Eco-District

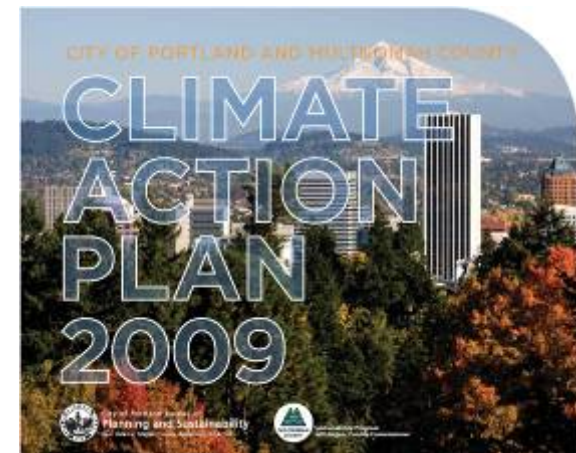
A neighborhood that ...

- needs no outside energy for heating and cooling
- produces a significant share of its own electricity and fresh water
- manages all of its own organic waste and sewage
- produced significant amounts of fresh foods
- and, is home to a diversity of species that thrive in an urban habitat



Portland – Multnomah GHG Plan

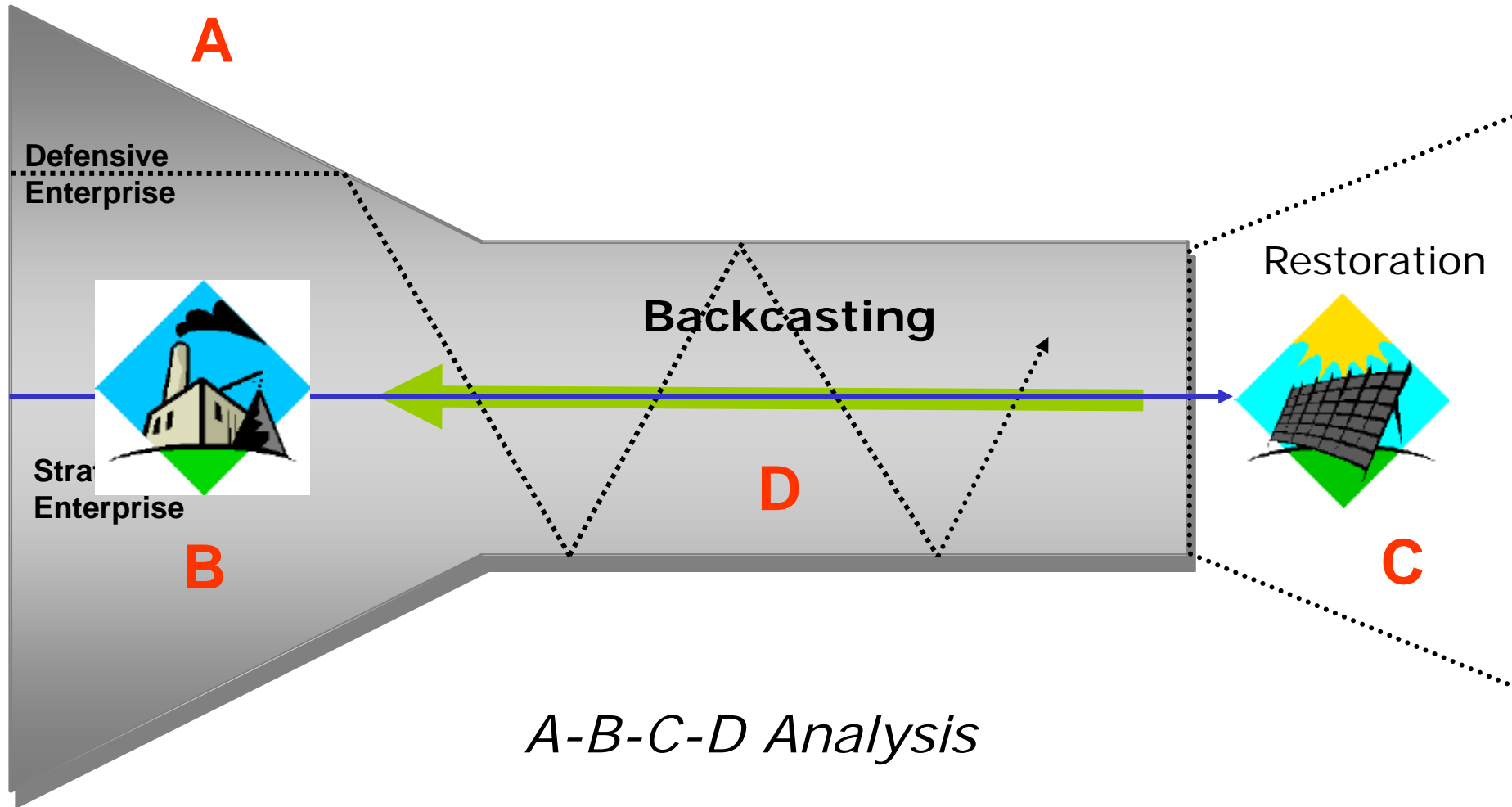
- Net zero GHG emissions in new homes and buildings;
- Energy use in current buildings reduced 25%;
- Neighborhoods designed so 80% of county residents (90% of city residents) can walk or bicycle to meet daily needs.
- Miles driven per day reduced 30% per person.
- Solid waste reduced 25%; 90% of waste reused or recycled
- Locally grown food increased significantly
- Urban forest expanded to cover a third of Portland



Other Examples

- **Multnomah County** – 1M sq ft solar energy below PGE rates
- **Boulder County, Colorado** – requires net-zero energy for homes that exceed 5000 sq ft.
- **AIA 2030 Challenge** – zero fossil fuel use in new buildings
- **City of San Francisco** – instituted mandatory composting with goal of zero waste to landfill within ten years
- **Ft. Lewis Army Base** – zero discharge of waste water into Puget Sound by 2025

Sustainability Planning Process



Sustainability Planning Process

A - Awareness

What do you know about sustainability and why it matters?

B - Baseline Mapping

What does your organization look like today?

C - Clear and Compelling Vision

What does your organization look like in a sustainable society?

D - Down to action

How will you manage and prioritize steps to sustainability?

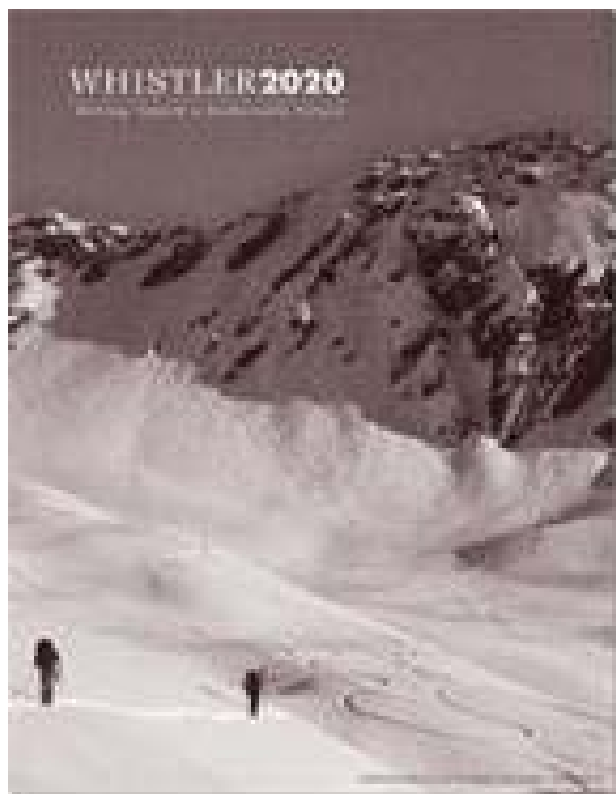
Whistler, B.C.

- International ski resort
- Effective community diffusion
 - Early Adopters
 - Supported by business, government and nonprofit
 - Community Roll Out
- Whistler 2020 Sustainability Plan
 - Goal to be fully sustainable by 2060
 - Move toward 100% renewable energy & zero waste
 - Provide affordable local housing to 75% of work force
- Won award as "... one of the most liveable communities and best in the world in planning for the future." (Nov 2005)



Whistler Sustainability Background

- Started in 1997 as Whistler 2002 community plan
- Early Adopter program in 2001
 - Resort Municipality of Whistler
 - Fairmont Chateau
 - Tourism Whistler
 - Whistler-Blackcomb Ski Company
 - Whistler's Fotosource
 - Association of Whistler Area Residents for the Environment (AWARE)
- Public speaker series
- Developed sustainability tool kits for home and business
- Launched Whistler Centre for Sustainability



Strategies



Arts, Culture & Heritage



Built Environment



Economic



Energy



Finance



Health & Social



Learning



Materials & Solid Waste



Natural Areas



Partnership



Recreation & Leisure



Resident Affordability



Resident Housing



Transportation



Visitor Experience



Water

Whistler 2020 Partners

- [Astrid's Fine Foods](#)
- [AWARE](#)
- [BC Hydro](#)
- [BC Transit](#)
- [Capilano College](#)
- [Community Foundation of Whistler](#)
- [Carney's Waste Systems](#)
- [Healthy Communities](#)
- [Hill Trip](#)
- [Hostelling International - Whistler](#)
- [lululemon athletica](#)
- [LUNA - Late & Unique Nighttime Alternatives](#)
- [Mature Action Committee](#)
- [McDonalds - Whistler / Pemberton](#)
- [MY Place \(Maurice Young Millennium Place\)](#)
- [Mountain Youth Society](#)
- [Naturally Clean](#)
- [Nester's Market-Whistler](#)
- [Resort Municipality of Whistler](#)
- [S2S Canadian Home Builders' Association \(CHBA\)](#)
- [School District #48](#)
- [Slow Food Cycle Sunday](#)
- [Terasen Gas](#)
- [Tourism Whistler](#)
- [Vancouver Coastal Health](#)
- [VANOC - Vancouver Organizing Committee for the 2010 Winter Games](#)
- [The Westin Resort & Spa - Whistler](#)
- [Whistler 2020 Development Corporation](#)
- [Whistler Adaptive Sports Program](#)
- [Whistler Arts Council](#)
- [Whistler Blackcomb](#)
- [Whistler Centre for Sustainability](#)
- [Whistler Chamber of Commerce](#)
- [Whistler Community Services Society](#)
- [Whistler Cooks](#)
- [Whistler Cycling Committee](#)
- [Whistler Fisheries Stewardship Council](#)
- [Whistler Film Festival Society](#)
- [Whistler Forum](#)
- [Whistler Health Care Foundation](#)
- [Whistler Housing Authority](#)
- [Whistler Museum and Archives](#)
- [Whistler Naturalists](#)
- [WORCA \(Whistler Off Road Cycling Association\)](#)
- [Whistler Public Library](#)
- [Ziptrek Ecotours](#)

[Home](#)

Action browser

 [Export to Excel](#)

Action status Progress status **Strategy** ☒ Strategy Links Priority Sustainability Objectives Lead
 Assist RMOw Lead dept. **Year** ☒ Reference

[Refine, finalize and Implement the business plan for the Whistler Centre for Sustainability](#)

Jan 2006 - Dec 2008 (Whistler 2020)

Status for: Apr - Jun 2008 **INITIATED - In Progress**

Ref: 324

Strategy: [Energy](#) - [Built Environment](#) - [Transportation](#)Strategy Links: [Materials & Solid Waste](#) - [Natural Areas](#) - [Water](#)Priority: [Enriching Community Life](#) - [Enhancing the Resort Experience](#) - [Ensuring Economic Viability](#) - [Protecting the Environment](#) - [Partnering for Success](#)Sustainability Objectives: [SO1](#) - [SO2](#) - [SO3](#) - [SO4](#)Explorer Strategy links: [Built Environment](#)Lead: [RMOw](#) Assist: [AWARE](#) - [Whistler Chamber of Commerce](#) - [Fairmont Chateau](#) - [Tourism Whistler](#) - [WB](#) RMOw Lead dept.: [Policy and Program Development](#)

[Provide financial or permitting incentives for new/renovated single family dwellings that meet Whistler Green guidelines.](#)

Jan 2008 - Dec 2008 (Whistler 2020)

Ref: 662

Strategy: [Energy](#) - [Built Environment](#)Strategy Links: [Materials & Solid Waste](#) - [Water](#) - [Resident Affordability](#) - [Resident Housing](#)Priority: [Enriching Community Life](#) - [Protecting the Environment](#)Sustainability Objectives: [SO1](#) - [SO2](#) - [SO3](#)Lead: [RMOw](#) RMOw Lead dept.: [Community Life](#)

[Initiate a Whistler ski area climate change plan and share with our community and the global four season resort community.](#)

Jan 2008 - Dec 2008 (Whistler 2020)

Status for: Jan - Jun 2008 **ACHIEVED - Full Outcome**

Ref: 681

Strategy: [Energy](#)Strategy Links: [Learning](#) - [Visitor Experience](#)Priority: [Enhancing the Resort Experience](#) - [Ensuring Economic Viability](#) - [Protecting the Environment](#) - [Partnering for Success](#)Sustainability Objectives: [SO1](#) - [SO2](#) - [SO3](#) - [SO4](#)Lead: [Whistler Blackcomb](#)

Five Level Model



Sustainability Game

Nature's laws & science
Social and economic principles

Natural Step system conditions +
economic (Triple Bottom Line)

“Backcasting”, ABCD Planning Process

Recycling, green building, renewable energy,
water conservation, etc.

Natural Capitalism, Cradle-to-Cradle,
Env Mgt Sys, Life Cycle Analysis, LEED

Impressions of Successful Communities

- Most successful have fully engaged community leaders well before a general community wide effort
- Built support over time with a variety of activities
- Successfully demonstrated the interlocking nature of ecology, society and the economy
- Developed a long term community wide plan based on a sound sustainability framework
- Developed a system to manage the plan over several years/decades

McMinnville 2009 GHG Action Plan Savings

- Fire Hall: *43% electricity reduction*
- Information Services: *60% server energy reduction, 70% heat reduction, 80% maintenance and replacement savings*
- Parks and Recreation: *\$13,000 electricity savings*
- Waste Water Services: *1,500,000 kWh savings, reduced hauling costs of \$54,000, \$11K annual return on \$44K motor investment.*

Other Savings Examples

- Energy
 - Lock in electricity rates with a solar utility; i.e., SunEdison
 - Use wastewater methane to generate electricity
- Vehicles
 - Onboard MPG meters
 - Eliminate idling with batteries, solar panels
 - Hybrid/electric cars and trucks – *potential 5 year payback*
- Facilities
 - 40-50% energy usage
 - Oregon BETC credits for LEED
 - Biggest return is improved employee productivity

Sustainability: *Keys to Success*



- Importance of a solid framework - *shared mental model*
- Backcasting – *Making decisions from a vision of a fully sustainable organization*
- Strategic cultural shift – *embedded at all levels in operations, products, services, business planning, etc.*

Community Development Department, 221 Molalla Avenue, Suite 200, P.O. Box 3040, Oregon City, OR 97045, (503) 722.3789
www.orcity.org

ENTERED INTO THE RECORD

DATE RECEIVED: 3/22/2010

SUBMITTED BY: TONY KONKOL

SUBJECT: L 10-01

Tony Konkol

From: Tom O'Brien [tom.obrien4@comcast.net]
Sent: Saturday, March 20, 2010 4:14 AM
To: Alice Norris; Doug Neeley; James Nicita; Rocky Smith, Jr.; Daphne Wuest
Cc: Tony Konkol
Subject: Planning Commission - reduction of members

Dear Mayor and Commission Members,

I am quite dismayed to see an item on the planning commission agenda calling for a reduction in the size of the planing commission. It is on the agenda for this coming Monday March 22, 2010.

Any such discussion and decision should await the installation of our new city manager.

The justification given by staff is:

"The Planning Commission has operated successfully with 4 to 5 members for over 7 years and has consistently demonstrated their ability to make sound decisions and effectively function as a group."

While there are elements of truth to that statement is is certainly not a completely truthful statement. City code states:

Chapter 2.24 PLANNING COMMISSION

2.24.020 Membership.

The planning commission shall consist of seven members to be appointed by the mayor:

- A. The members of the planning commission shall be appointed for four years.
- B. Any vacancy shall be filled by the mayor for the unexpired portion of the term.
- C. No member of the planning commission shall serve for more than eight consecutive years. (Prior code §2-1-2)

Since the beginning of Mayor Norris' first term, the planning commission has never had more than 5 members.

There have been numerous occasions when decisions have been made without a quorum being present or a decision has had to be tabled due to a lack of quorum. I have personally witnessed these events.

Regarding sound decisions, that is purely subjective. I would concur that in most all instances the planning commission has rubber stamped the items brought before it by staff. I would argue that some of the decisions made were not in the best interest of the city or it's taxpaying citizens but rather in the best interest of a select group of developers. This is understandable when some members of the planning commission enjoy employment associated with the building trades.

I would agree that the current members appear to work well together but that has not been the case during the first three of the 7 1/2 years mentioned.

As stated above I believe any such discussion and decision should await the installation of our new

city manager.

Since our current mayor has been unable to fulfill her responsibilities in regard to appointing members to this commission, I'd further suggest that we keep the status quo until we have a new mayor who may wish to appoint members who provide a more balanced view toward planning issues.

Since this issue has been brought up and approved by our outgoing city manager it seems to me that a last minute attempt is being made to tie the hands of the new city manager in regard to this area.

Respectfully submitted,

Tom O'Brien

Laura Butler

From: Tony Konkol
Sent: Monday, March 22, 2010 4:15 PM
To: Laura Butler; Pete Walter
Subject: FW: Planning Commission - reduction of members

P.C. Exhibit 2
ENTERED INTO THE RECORD
DATE RECEIVED: 3/22/2010
SUBMITTED BY: TONY KONKOL
SUBJECT: L 10-01

FYI.

Laura, please add to record.

Thanks,
tk

From: Alice Norris
Sent: Monday, March 22, 2010 4:10 PM
To: Tom O'Brien; Doug Neeley; James Nicita; Rocky Smith, Jr.; Daphne Wuest
Cc: Tony Konkol; Larry Patterson
Subject: RE: Planning Commission - reduction of members

Hi Tom:

Thank you for your memo on the Planning Commission. This proposed action was actually embraced at our Commission retreat by Commissioner Nicita and we all wanted it added to the city commission agenda for consideration. The history is: even during John Williams' term as Mayor, he found it difficult to keep 7 on the Planning Commission and often just had 5. I appointed 7 for a about a year but due to "life experiences such as moving away and some demanding new jobs" the 7 was reduced to 5. Commissioner Tom Lemons had insisted on 7 and we simply could not recruit additional people for this demanding and time-consuming position. He tried to help me find qualified people also. When we analyzed the size of the PC at the time, we found that most cities match the number of Planning Commission members with their city council numbers, i.e. a 7 person city council would have a 7 person PC, etc. So subsequent OC city commissions agreed with leaving the PC at 5.

Another assertion you made was that some of the PC members are connected to developers because of their professional careers. That is simply not true. Dan Lajoie is an architect but works entirely in Portland. The others are not even remotely connected to developers. Your statement is false and obviously intended to accuse me of making biased appointments. If you examine my record of city appointments, you will find that I often appoint citizens that I have never previously met. Imagine that? I actually make appointments based on the qualifications and experience of the individuals who apply! It hasn't always been that way in Oregon City, I assure you.

The size of the PC really has no relationship to the responsibilities of the city manager. Most managers have served with city councils of varying size as well as PC's of varying size. Making a decision on this in no way "ties the hands of the city manager." However, running this by our new city manager would likely be a good idea, as we are attempting to increase our communications.

Thanks again for taking the time to write with your views.

-Alice

From: Tom O'Brien [tom.obrien4@comcast.net]
Sent: Saturday, March 20, 2010 4:13 AM
To: Alice Norris; Doug Neeley; James Nicita; Rocky Smith, Jr.; Daphne Wuest
Cc: Tony Konkol
Subject: Planning Commission - reduction of members

ENTERED INTO THE RECORD
DATE RECEIVED: 3/22/2010
SUBMITTED BY: TONY KONKOL
SUBJECT: L 10-01
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Respectfully submitted,

Tom O'Brien

**OREGON CITY PLANNING COMMISSION
TALLY OF VOTES**

PLANNING COMMISSION MEETING DATE: 3/22/10

BOARD MEMBER ABSENT

STAFF PRESENT

Konkol
Walter

ITEM: 2/22/10 minutes

MEMBERS:

	AYE	NAY	ABSTAIN	COMMENTS
1) Stein <u>2</u>	<u>✓</u>	_____	_____	_____
Sum	_____	_____	_____	_____
2) Groener <u>2</u>	<u>✓</u>	_____	_____	_____
4) Chair Powell	<u>✓</u>	_____	_____	_____
3) Lajoie <u>1</u>	<u>✓</u>	_____	_____	_____
	_____	_____	_____	_____

MOTION: to approve

ITEM: 10-01

MEMBERS:

	AYE	NAY	ABSTAIN	COMMENTS
1) Stein <u>2</u>	<u>✓</u>	_____	_____	_____
Sum	_____	_____	_____	_____
2) Groener <u>1</u>	<u>✓</u>	_____	_____	_____
4) Chair Powell	<u>✓</u>	_____	_____	_____
3) Lajoie	<u>✓</u>	_____	_____	_____
	_____	_____	_____	_____

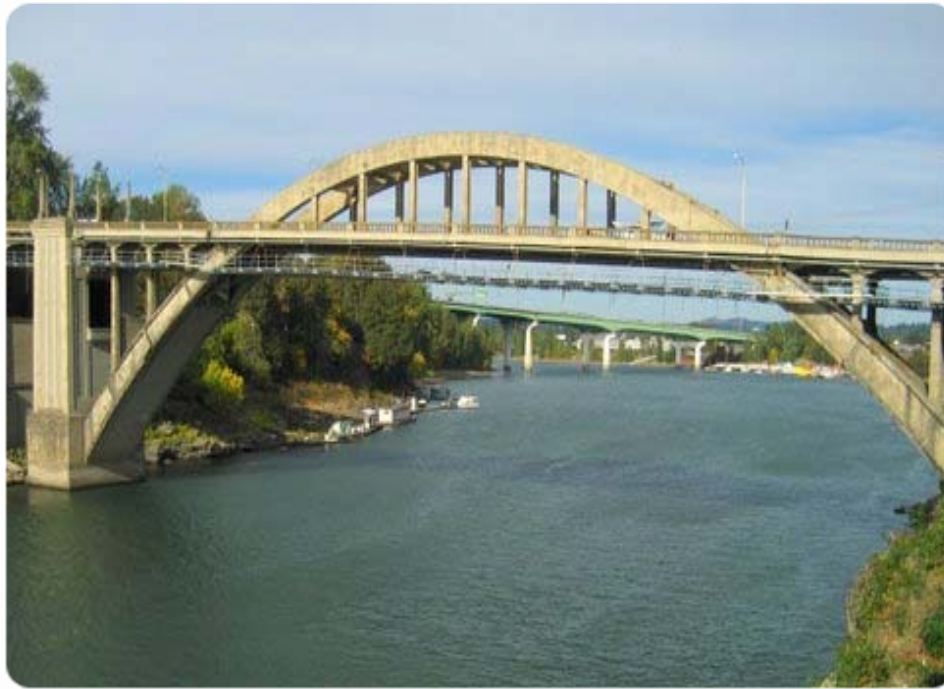
MOTION: to approve

ITEM: Resolution 10-01

MEMBERS:

	AYE	NAY	ABSTAIN	COMMENTS
1) Stein <u>2</u>	<u>✓</u>	_____	_____	_____
Sum	_____	_____	_____	_____
2) Groener	<u>✓</u>	_____	_____	_____
4) Chair Powell	<u>✓</u>	_____	_____	_____
3) Lajoie <u>1</u>	<u>✓</u>	_____	_____	_____
	_____	_____	_____	_____

MOTION: To adopt



Sustainability Using The Natural Step Framework

Oregon City Planning Commission

March 22, 2010

Definitions of Sustainability

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

- *UN Brundtland Commission, Rio Earth Summit 1992*

Sustainability means using, developing, protecting resources at a rate and in a manner that enables people to meet their current needs and also provides that future generations can meet their own needs. Sustainability requires simultaneously meeting environmental, economic, and community needs.

- *Executive order signed by Gov. Kitzhaber, 2000*

Green vs. Sustainability

Green

- Detail focused
- Tactical
- Ecological
- Focus on being less “bad”
- Lacks common definition of success

Sustainability

- Whole systems focus
- Strategic
- Triple bottom line
- Focus on aligning with nature’s cyclical processes
- Capable of defining success

Sustainability goes Mainstream



Variations of the Earth's surface temperature: year 1000 to year 2100

Departures in temperature in °C (from the 1990 value)

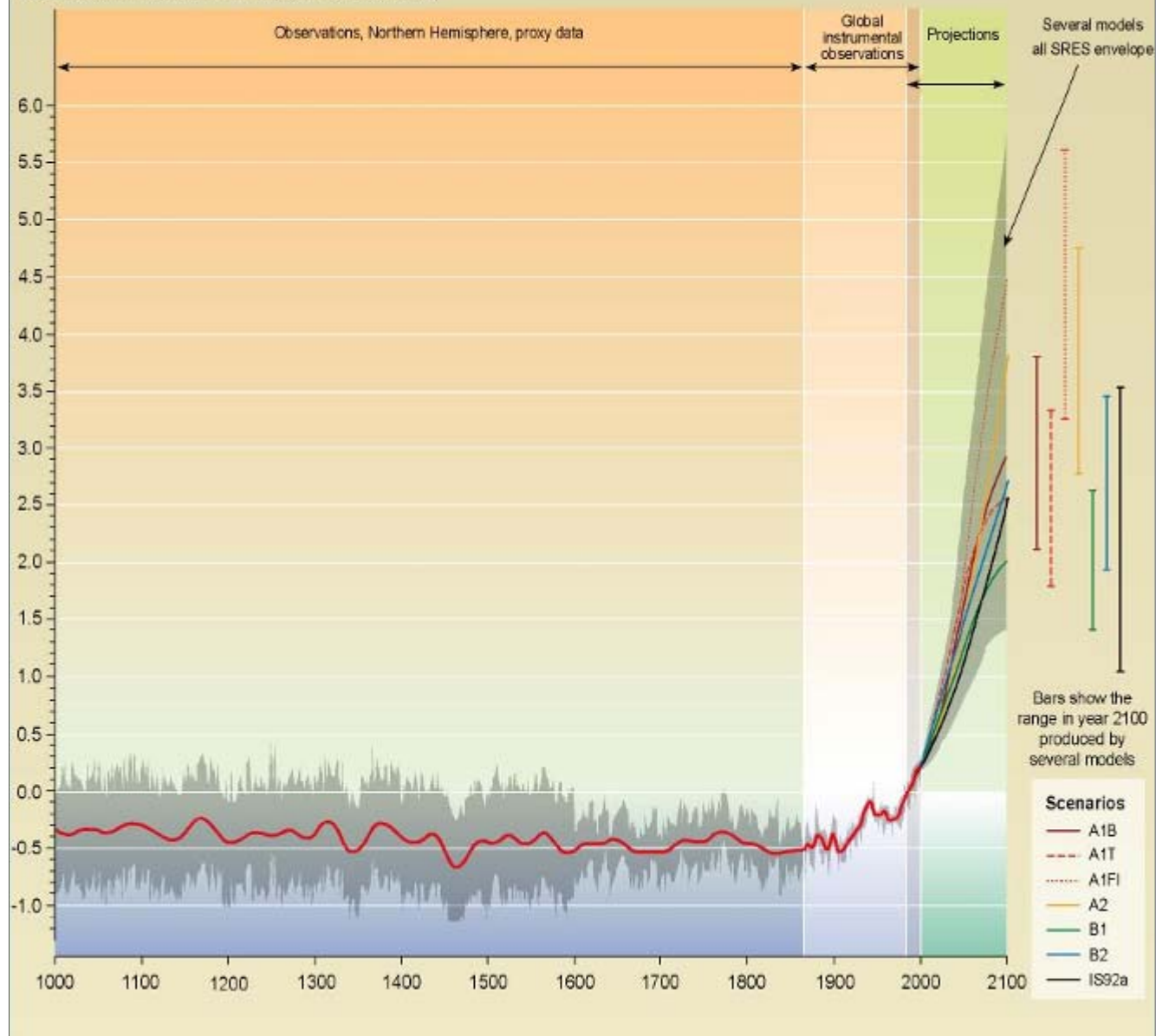
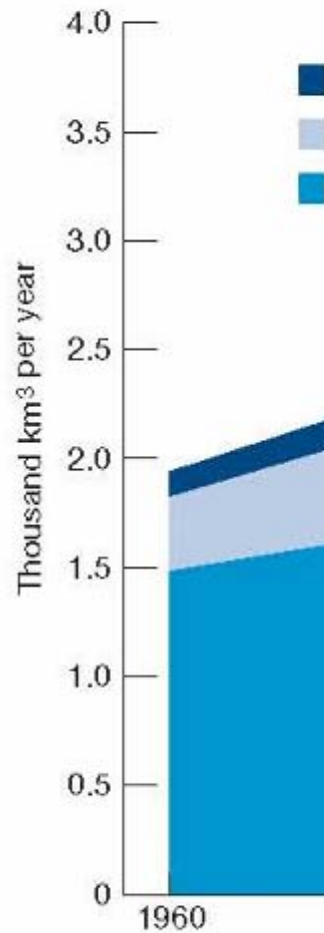


Fig. 17: GLOBAL



FRIDAY
APRIL 6, 2007

The Oregonian

SUNRISE
EDITION

PORTLAND, OREGON

VOICE OF THE NORTHWEST SINCE 1850

50¢

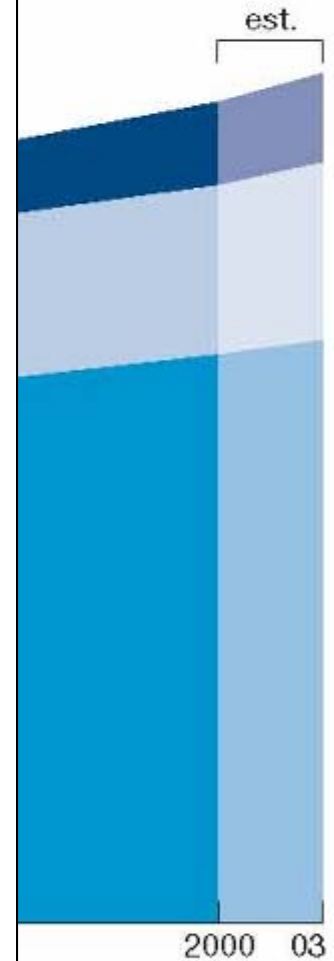
Water may split state into haves, have-nots



Photos by ROB FINCH/THE OREGONIAN/2006 and ASSOCIATED PRESS/2001

A warming climate may produce conflicts in coming years between wetter western Oregon and the drier eastern parts of the state as snowpacks that supply crucial summer water melt earlier, causing scarcities.

A global warming report predicts NW crises with snowpacks, coastlines and wildfires



US F

SATURDAY
APRIL 7, 2007

The Oregonian

SUNRISE
EDITION

PORTLAND, OREGON

VOICE OF THE NORTHWEST SINCE 1858

50c

Lines drawn for ocean fishing

The southern salmon season gets a green light, but restrictions bite hard to the north



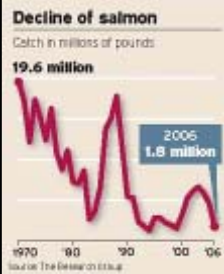
DOUG BECHTEL/THE OREGONIAN

Profitable commercial fishing grounds keep getting harder to find for veterans such as Dan Power, sitting on his boat, the Bonanza. With the area north of Cape Falcon, near Manzanita, closed to protect fish stocks until May, Power will head from Ilwaco, Wash., to waters south of Cape Falcon for salmon next week.

U.S. landings

Fish resource

http



By PETER SLEETH
THE OREGONIAN

ILWACO, Wash. — Mixed news for commercial salmon fishermen and those who dine on wild-caught fish: The U.S. government severely clipped the length of the trolling season from north of Manzanita to the Canadian border for 2007, while leaving it mostly wide open off most of Oregon's coast and south into California.

The clampdown in the north delays an opening until May 1 and is designed to protect endangered runs of chinook salmon returning to the Columbia River and its tributaries after years at sea. The decision, made Friday, means fewer of the Columbia River fish will be caught, helping to assure another life

cycle. But more Klamath River chinook should reach dinner tables, after an unexpectedly strong recovery this year.

Consumers stand to gain from the opening in the south. The fishing season for fall chinook south of Cape Falcon, near Manzanita, will open Tuesday and run through the summer — meaning a likely bounty of fresh, ocean-caught fish in stores this spring and summer.

Prices per pound this week in Astoria for river-run spring chinook were stratospheric — near \$30 a pound for fillets — but that price is bound to drop below \$20 a pound as ocean-caught salmon begin coming to port in

Please see **SALMON**, Page A8



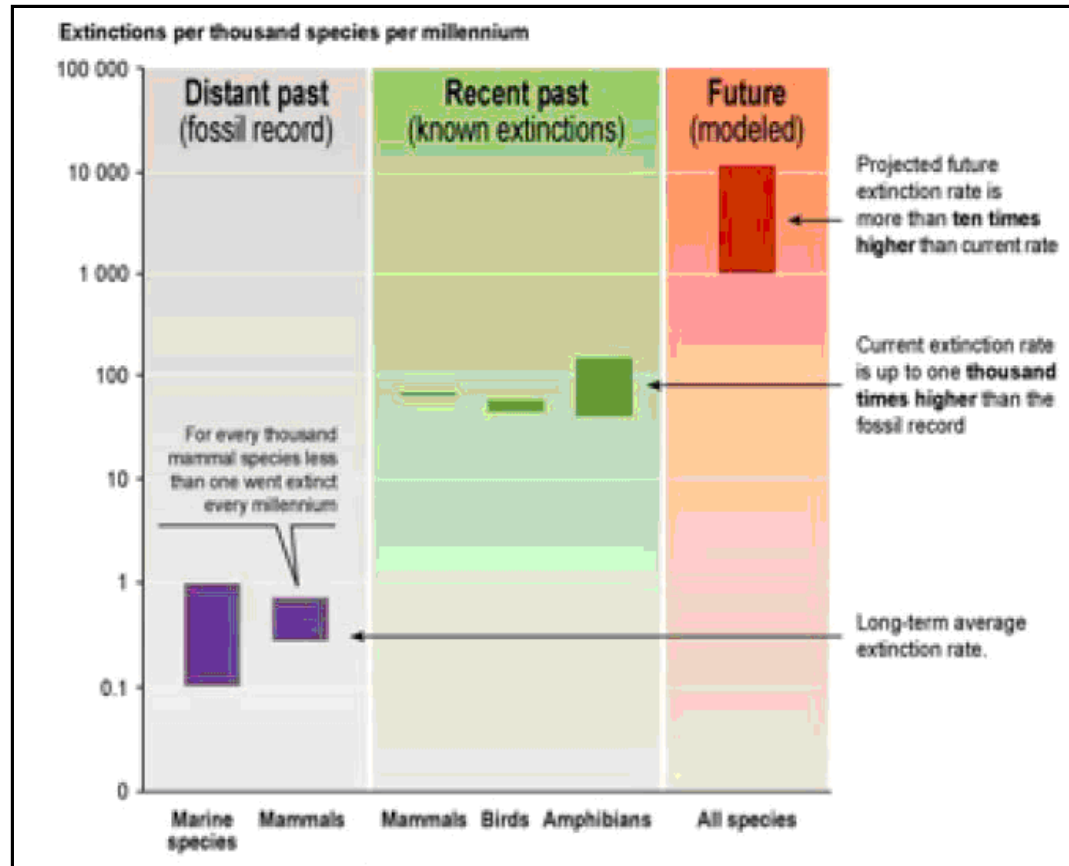
1990

1993

fisheries.

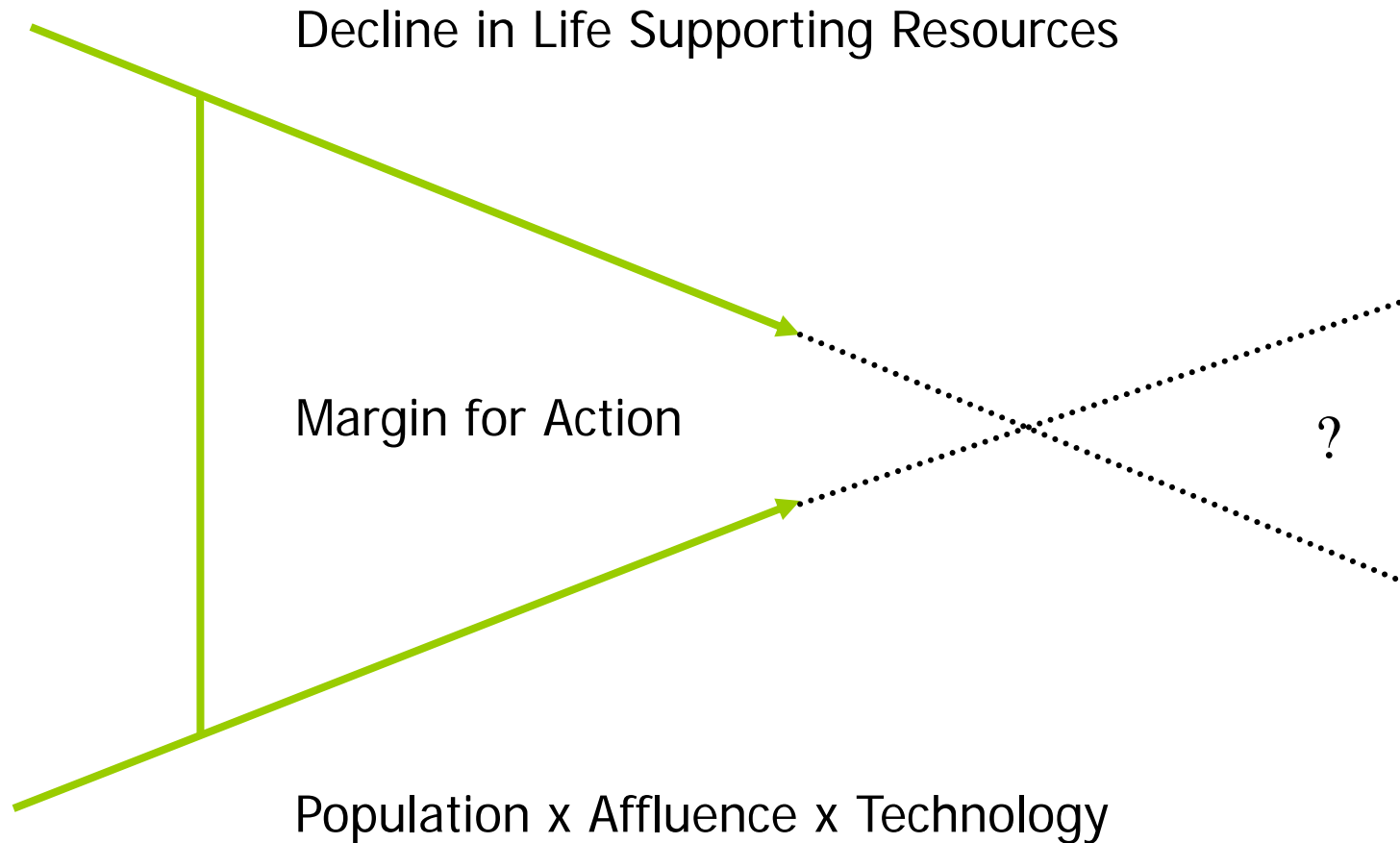
df

Species Extinction



“Approximately 20-30% of plant and animal species ... are likely to be at increased risk of extinction if increases in global average temperature exceed 2.5-4.5°F” – **UN IPCC Report 4-6-07**

Global Perspective



The Character of Environmental Problems has changed:



Local ----- Global

Few Large Sources ----- Diffuse

Short Time Delay ----- Long Time Delay

Low Complexity ----- High Complexity

A Systems Perspective Emphasizes:



- Focusing "upstream"
- Principles rather than details
- Shared framework and a common language
- Unalterable system conditions

Which sustainability tools should I use?

- Triple bottom line
- Natural Capitalism
- Natural Step
- Cradle-to-cradle
- Precautionary principle
- Zero Waste
- Factor X
- Eco-footprint
- Life Cycle Assessment
- Environmental Management Systems – ISO14001, EMAS, SMS

Strategic sustainable development — selection, design and synergies of applied tools

K.-H. Robert^{a,b,*}, B. Schmidt-Bleek^h, J. Aloisi de Larderel^c, G. Basile^{d,e},
J.L. Jansen^f, R. Kuehr^g, P. Price Thomas^c, M. Suzuki^g, P. Hawken^j, M. Wackernagel^j

^a *Physical Resource Theory, Chalmers University of Technology and Göteborg University, S-41296, Göteborg, Sweden*

^b *The Natural Step Foundation, Wallingatan 22, Stockholm, Sweden*

^c *UNEP/Division of Technology, Industry and Economics, Paris, France*

^d *Environmental Health Sciences, School of Public Health, University of California, Berkeley, CA, 94720, USA*

^e *The Natural Step, Thoreau Center for Sustainability, PO Box 29372, San Francisco, CA, USA*

^f *Sustainable Technology Development, PO Box 6063, 2600 JA Delft, Netherlands*

^g *United Nations University, Zero Emissions Forum (UNU/ZEF), 53-70 Jingumae 5-chome, Shibuya-ku, Tokyo 150-8925, Japan*

^h *Factor Ten Institute, La Rabassière, 83660 Carnoules, France*

ⁱ *Natural Capital Institute, PO Box 2938, Sausalito, CA, 94965 USA*

^j *Redefining Progress, 1904 Franklin Street, Oakland, CA, 94612, USA*

Received 12 June 2001; accepted 8 October 2001

Abstract

The number of tools and approaches to develop sustainability is growing rapidly. Sometimes they are presented as if they are contradictory or in competition. However, a systems approach consistent with basic principles and the requirements of sustainability shows that these tools are complementary and can be used in parallel for strategic sustainable development. In fact, it is only when using these approaches outside of the systemic context of sustainability that they become contradictory. This paper is a collective effort of scientists who have pioneered some of these tools and approaches.

The paper maps essential elements for developing sustainability and documents how these elements relate to the application of the respective tools. The objective is to show how these tools and approaches relate to each other and build on each other when used for planning for sustainability. © 2002 Elsevier Science Ltd. All rights reserved.

Keywords: Sustainable development; Sustainability; Systems thinking; Backcasting; Upstream thinking; Strategic planning; Factor X; Factor 10; Ecological footprinting; ISO 14001; EMAS; EMS; System conditions; Life cycle assessment (LCA); The natural step (TNS); Zero emissions (ZE); Cleaner production (CP); Sustainable technological development (STD); Natural capitalism

Five Level Model



Game of Chess

Chessboard, rules of the game

Capturing King - *Checkmate*

Strategies for opening, middle and end game

Tactics for moving pieces

Books, classes, computer programs

Five Level Model

Sustainability Game

Nature's laws & science
Social and economic principles



Basic Science of Sustainability

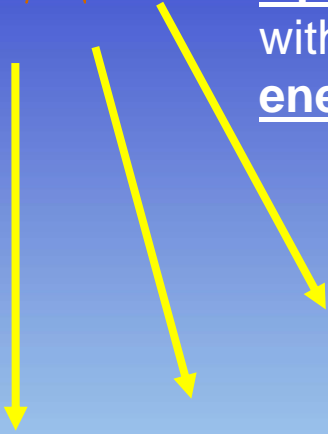
- Matter and energy do not disappear
- Matter and energy tend to disperse
- Value of matter is in its concentration and structure
- Photosynthesis is principal process by which net order is produced



Earth as a System

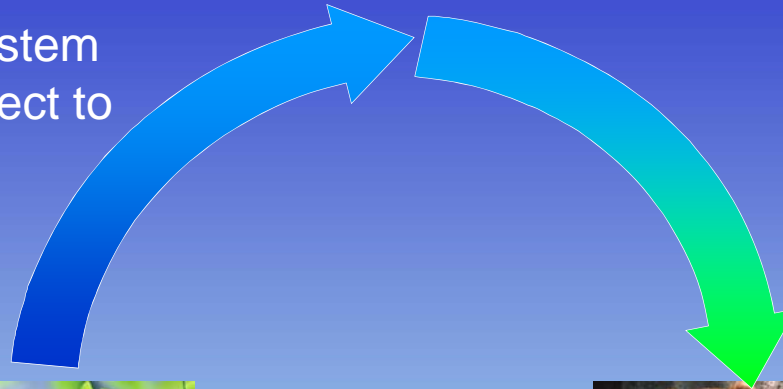


Open System
with respect to
energy

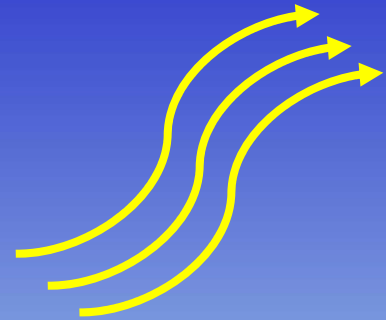


“Photosynthesis pays
the bills”

Slow geological
cycles - materials
from the Earth’s
crust

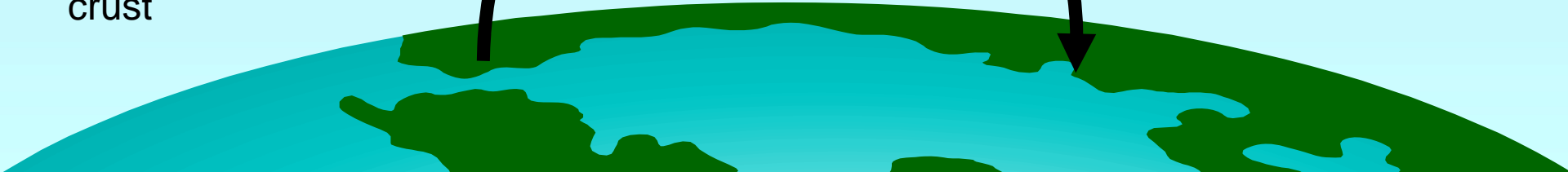
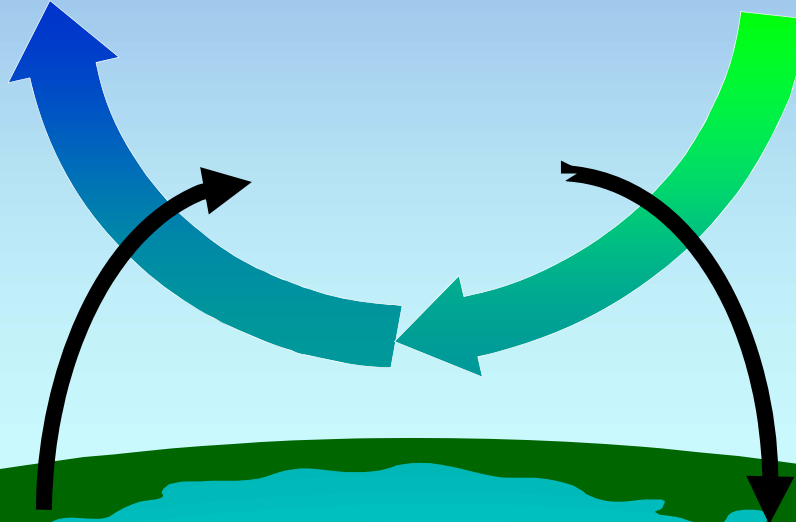


Closed System
with respect to
matter

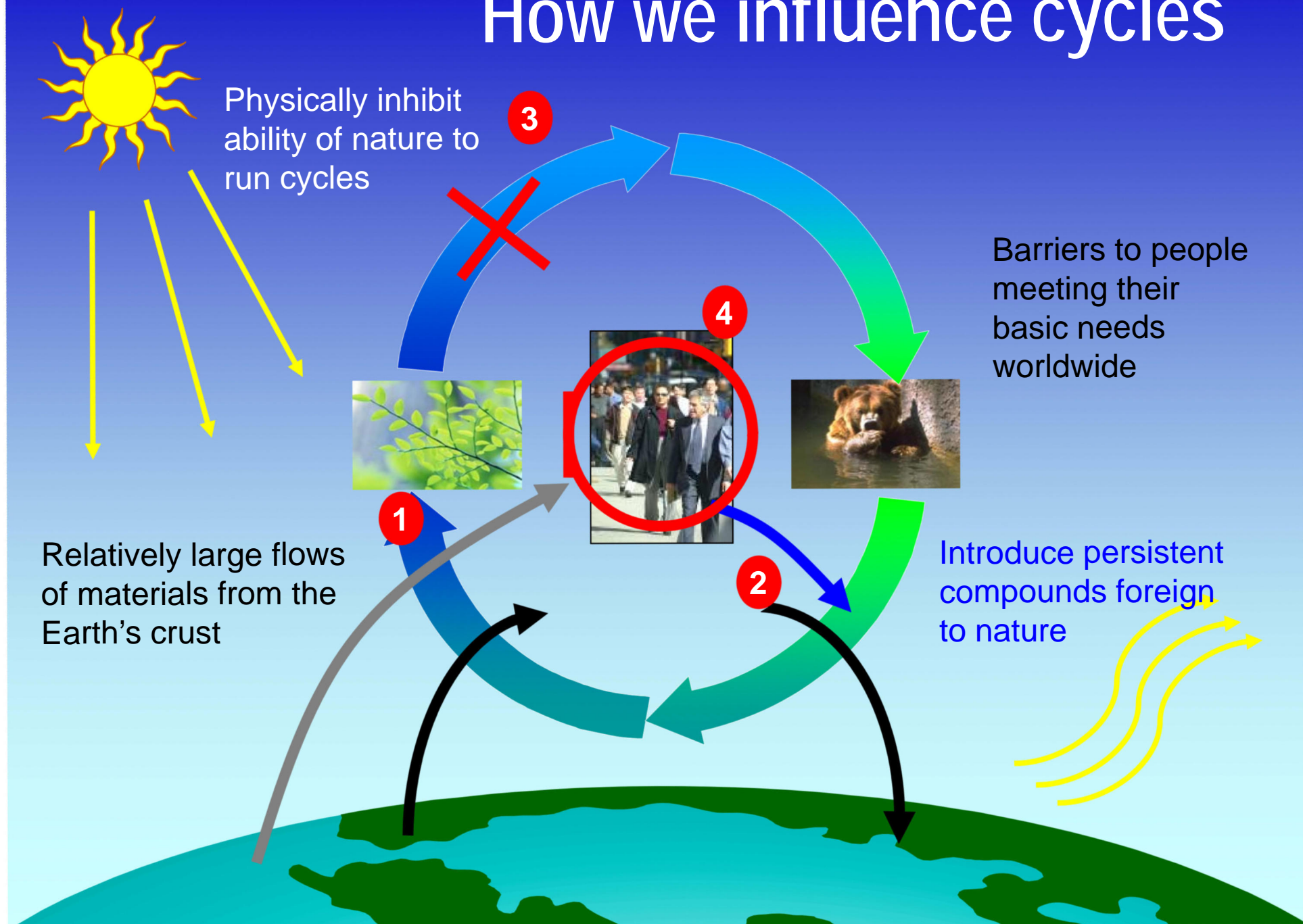


- 1) Nothing disappears
- 2) Everything disperses

Sustainability is
about the ability of
these cycles to run
forever.

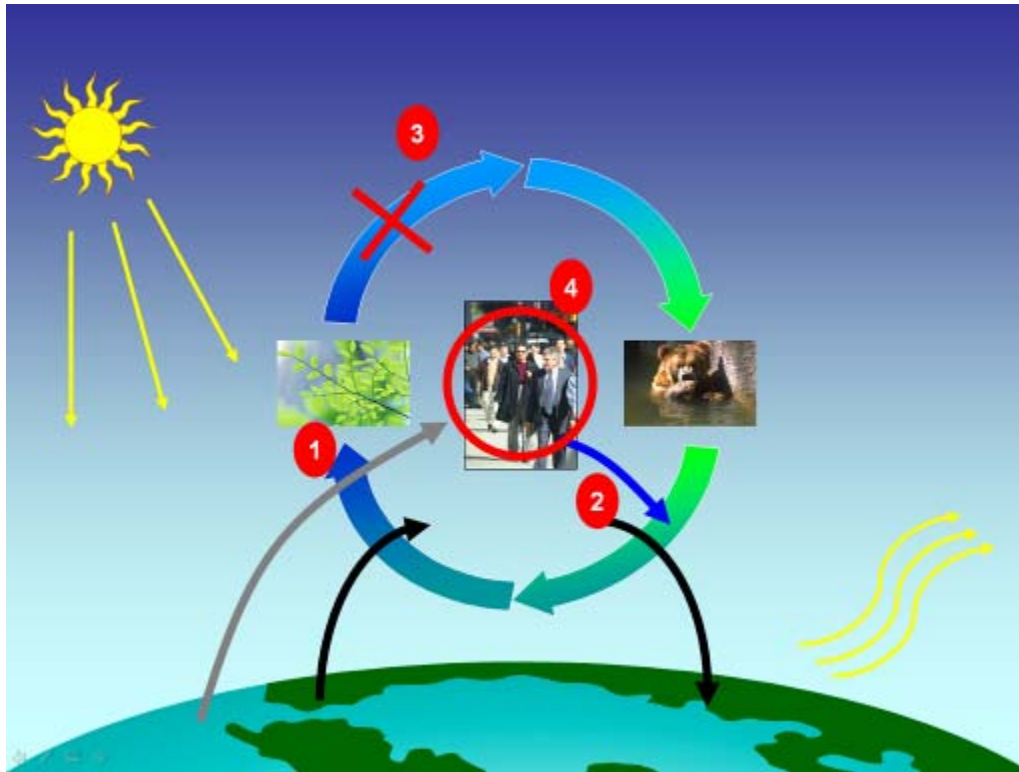


How we influence cycles



Sustainability defined: *The four System Conditions*

In a sustainable society, nature is not subject to systematically increasing:



- ① Concentrations of substances extracted from the earth's crust
 - ② Concentrations of substances produced by society
 - ③ Degradation by physical means
- and, in that society, people are not subject to
- ④ Conditions that systematically undermine their capacity to meet their needs.

Four System Conditions

In a sustainable society, nature is not subject to systematically increasing...

- 1. ... concentrations of substances extracted from the earth's crust;**
- 2. ... concentrations of substances produced by society;**
- 3. ... degradation by physical means;**

and in that society,

- 4. people are not subject to conditions that systematically undermine their capacity to meet their needs .**

Five Level Model



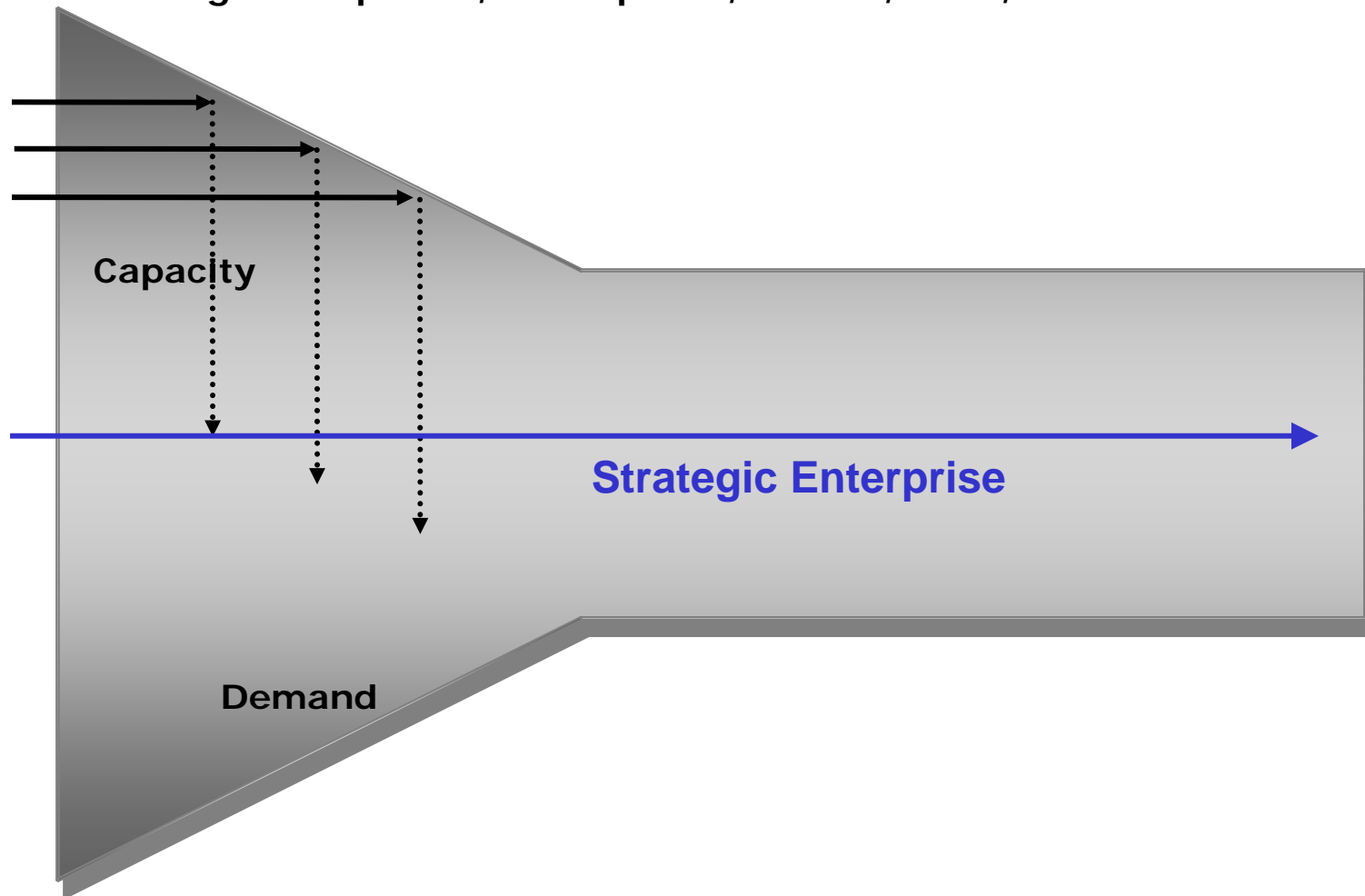
Sustainability Game

Nature's laws & science
Social and economic principles

Natural Step system conditions +
economic (Triple Bottom Line)

Hitting the Wall

- Ecological - species, atmosphere, oceans, land ,water

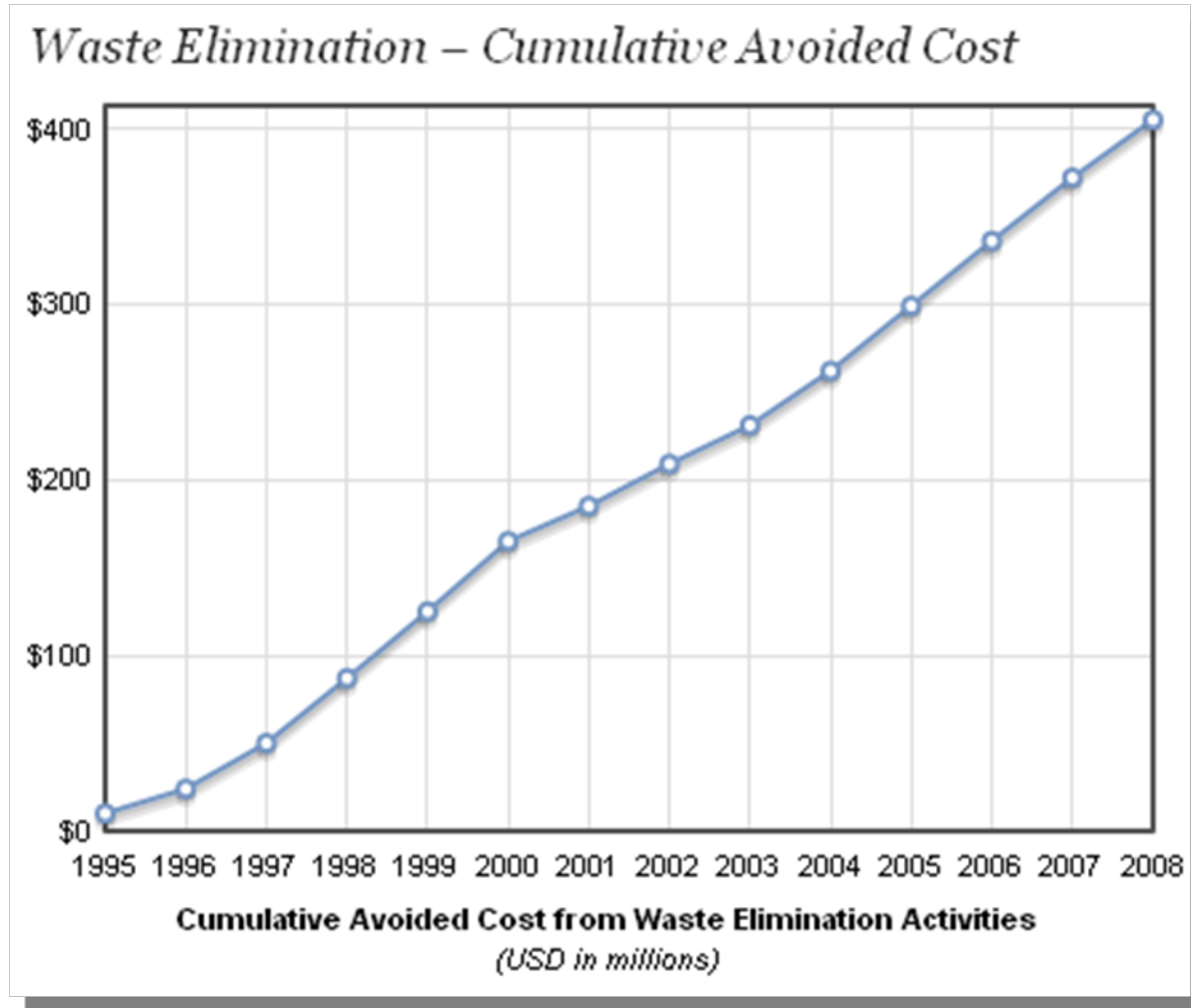


Interface, Inc.



- World's largest commercial floor covering company
- First U.S. company to adopt TNS principles
- "Mission Zero" - eliminate negative impact by 2020
- Finance long term investments with short term savings

Interface, Inc.



- from Interface web site

Interface, Inc.



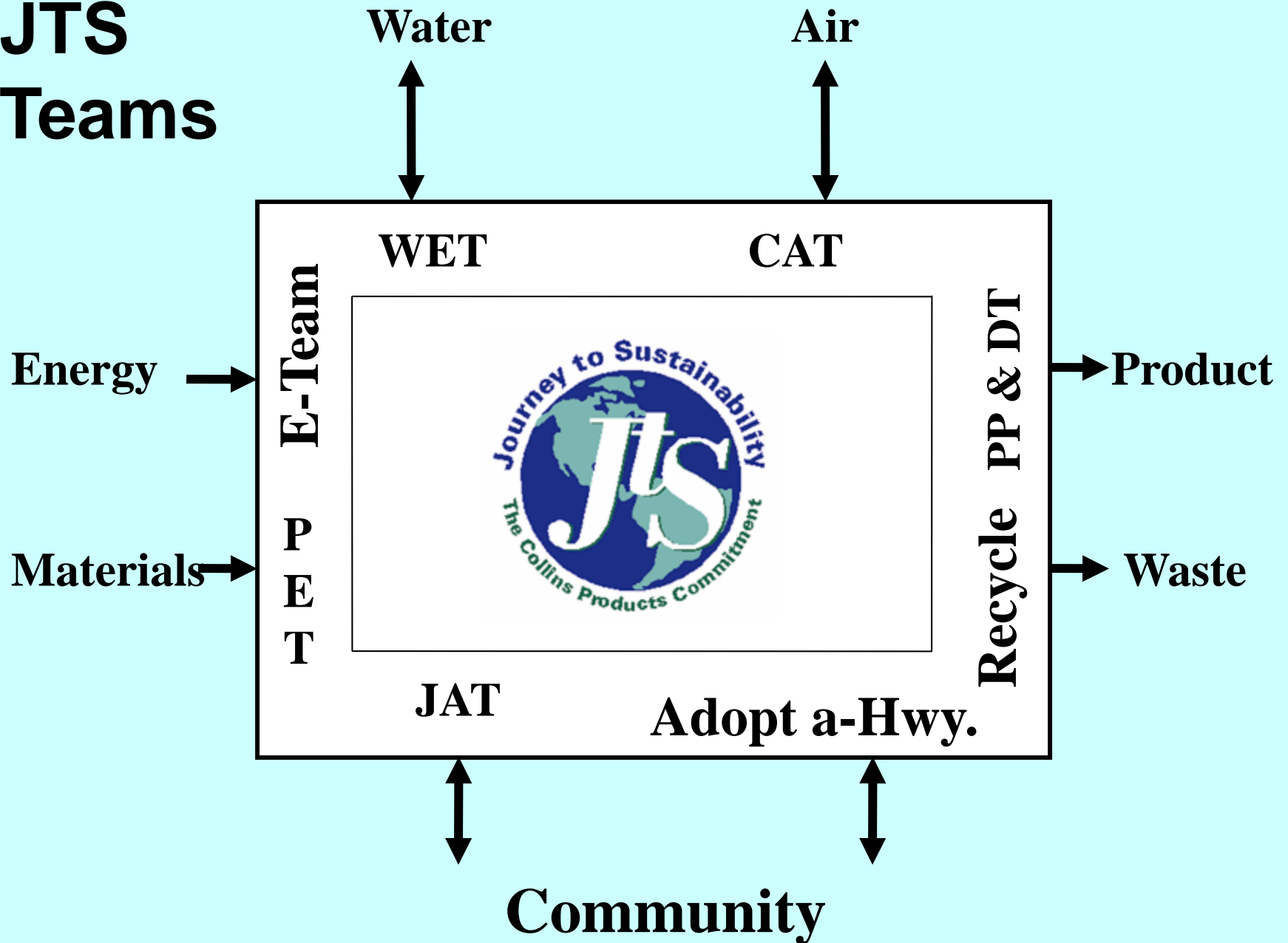
1. Eliminate waste
2. Eliminate toxic emissions
3. Use renewable energy
4. Close the loop: *create circular material flows*
5. Resource efficient transportation
6. Sensitivity hookup: *educate local community*
7. Redesign commerce: *Evergreen Lease*

Collins Pine

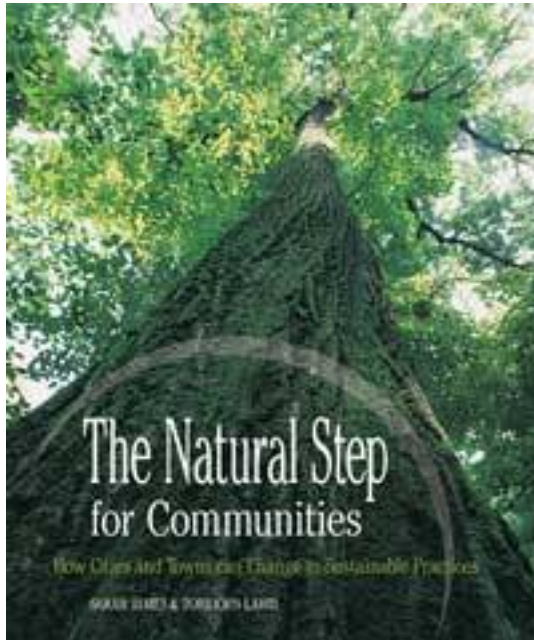


- NW forest products firm founded in 1855
- Long history of sustainable forestry practices
- Trained 600 Klamath Falls employees
- Using TNS principles for all capital purchases

JTS Teams



Communities Using The Natural Step



Wisconsin

City of Ashland
City of Baraboo
City of Bayfield
Town of Bayfield
City of Beloit
Village of Cottage Grove
Douglas County
Dunn County
Village of Johnson Creek
City of La Crosse
La Crosse County
City of Madison
City of Marshfield
City of Manitowoc
City of Menasha
City of Neenah
City of Sheboygan
Village of Spring Green
City of Stevens Point
City of Washburn

Oregon

City of Corvallis
City of Lake Oswego
Clackamas County
Metro

Minnesota

City of Duluth

New Hampshire

City of Portsmouth

New Jersey

Lawrence Township

Canada

Resort Municipality of Whistler, BC
Municipality of Canmore, BC
Halifax Regional Municipality, NS
City of St. John, NB
Town of Stratford, PEI
Town of Wolfville, NS

City of Lake Oswego

Sustainability History

- 2002 – City council adopted sustainability goal
- 2005 – Created position of sustainability coordinator
- 2006 – Established a sustainability steering committee
- 2007 – Council adopted sustainability plan based on the Natural Step
- 2008 – Created citizen Sustainability Advisory Board
- 2009 – Proposed that comprehensive plan incorporate principles of the Natural Step



City of Lake Oswego Sustainability Plan

November 21, 2007

A sustainable Lake Oswego is a community that meets the vital human needs of the present without compromising our ability to meet future needs.

This requires consideration of both long-term and short-term effects on ecological, economic, and community systems.

Operating sustainably means that we are leaving a legacy for the community of Lake Oswego and the planet.

*From Lake Oswego Sustainable City
Vision and Guiding Principles*

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Waste Reduction and Recycling.....	16
Employee Involvement and Education.....	19
Water Management – Stormwater and Sanitary Sewer.....	21
Pollution Prevention / Toxics Reduction.....	22
Next Steps.....	23

Appendices (included in separate document):

Appendix A - City of Lake Oswego Resource Flow Map, November 2006/February 2007
Appendix B - SCORE Report, January 2007
Appendix C - Policy Guide on Planning for Sustainability, American Planning Association, April 2000
Appendix D - The Natural Step Framework Guidebook, 2000
Appendix E - U.S. Mayor's Climate Protection Agreement, June 2005
Appendix F - ICLEI Cities for Climate Protection Campaign Resolution, July 2007
Appendix G - City of Lake Oswego Water Management and Conservation Plan, Final Draft, June 2007
Appendix H - Glossary of Terms and Abbreviations



Energy and Transportation

The Energy and Transportation Action Area Team's primary task is to examine and inventory the City's energy consumption and look for opportunities to minimize use and reduce the City's carbon footprint. The Team identified measures to increase energy and fuel efficiency, reduce emissions of

greenhouse gases (GHG) and criterion air pollutants, and increase use of renewable energy within City operations.

Sustainable End Points/Goals – By 2027...

- Zero net increase of carbon and other greenhouse gas emissions (GHG) (climate neutral)
- Energy sources are 100% renewable

Milestones (Targets) – By 2012...

- Reduce greenhouse gas (GHG) emissions to 7% below 2000 levels, in keeping with the US Mayors' Climate Protection Agreement (see Appendix E)
- Decrease overall energy consumption by 10% from 2006 levels, in keeping with the national Energy Star challenge
- 100% of energy used is from renewable sources (on-site and from electric utility)
- 50% of City fleet is fueled by alternative fuels / technology
- Increase overall vehicle miles per gallon (MPG) by 10% across entire fleet
- New construction and major remodels of City-owned facilities meet or obtain Leadership in Energy and Environmental Design (LEED) Gold certification
- Increase the number of City employees commuting by alternative commute options (non-single occupancy vehicle modes) by 50%

Current State:

- Signed Mayor's Climate Protection Agreement and joined Cities for Climate Protection Campaign (see Appendix F); received software and tools to conduct greenhouse gas emissions and criterion air pollutants inventory; data collection for City operations inventory is in progress.
- Water Treatment Plant purchases renewable, "Clean Wind" electricity from PGE equal to about half of the annual power that is required to run the Plant, and has made equipment and lighting upgrades and operational changes to improve efficiency.
- High-efficiency pumps are specified when sewer lift station pumps are replaced
- New water pump stations have high efficiency pumps and motors to meet future capacity in a more energy efficient manner
- Traffic signal bulbs have been replaced with energy conserving light emitting diode (LED) bulbs (red and green)
- Lighting standards ordinance has been drafted
- Heating and air conditioning controls for the City Hall building have been upgraded to operate more efficiently
- City fleet includes eight (8) hybrid gas/ electric vehicles
- City fleet diesel vehicles and equipment are fueled with 5% biodiesel (B5), including Lake Oswego School District/ Laidlaw bus fleet



Energy and Transportation

Current State (continued):

- Some employees commuting by alternative options (e.g. TriMet, vanpool, carpool, bike, etc.); no centralized tracking system. Employee Commute Options (ECO) survey data for City Hall available from 2006 to 2002.
- City provides employee transit benefit equivalent to 100% of monthly bus pass.
- City sponsors an employee vanpool program which has one route; contract with Flexcar as vanpool provider includes daytime use of carsharing vehicle by City staff
- City participates in annual Carefree Commuter Challenge and Bike Commute Challenge
- Some automated City functions, e.g. electronic pay stubs, electronic billing, on-line applications, etc.
- Waste reduction and recycling efforts in place (see Waste Reduction section below for details)

Milestones (Proposed Actions) – By 2008...

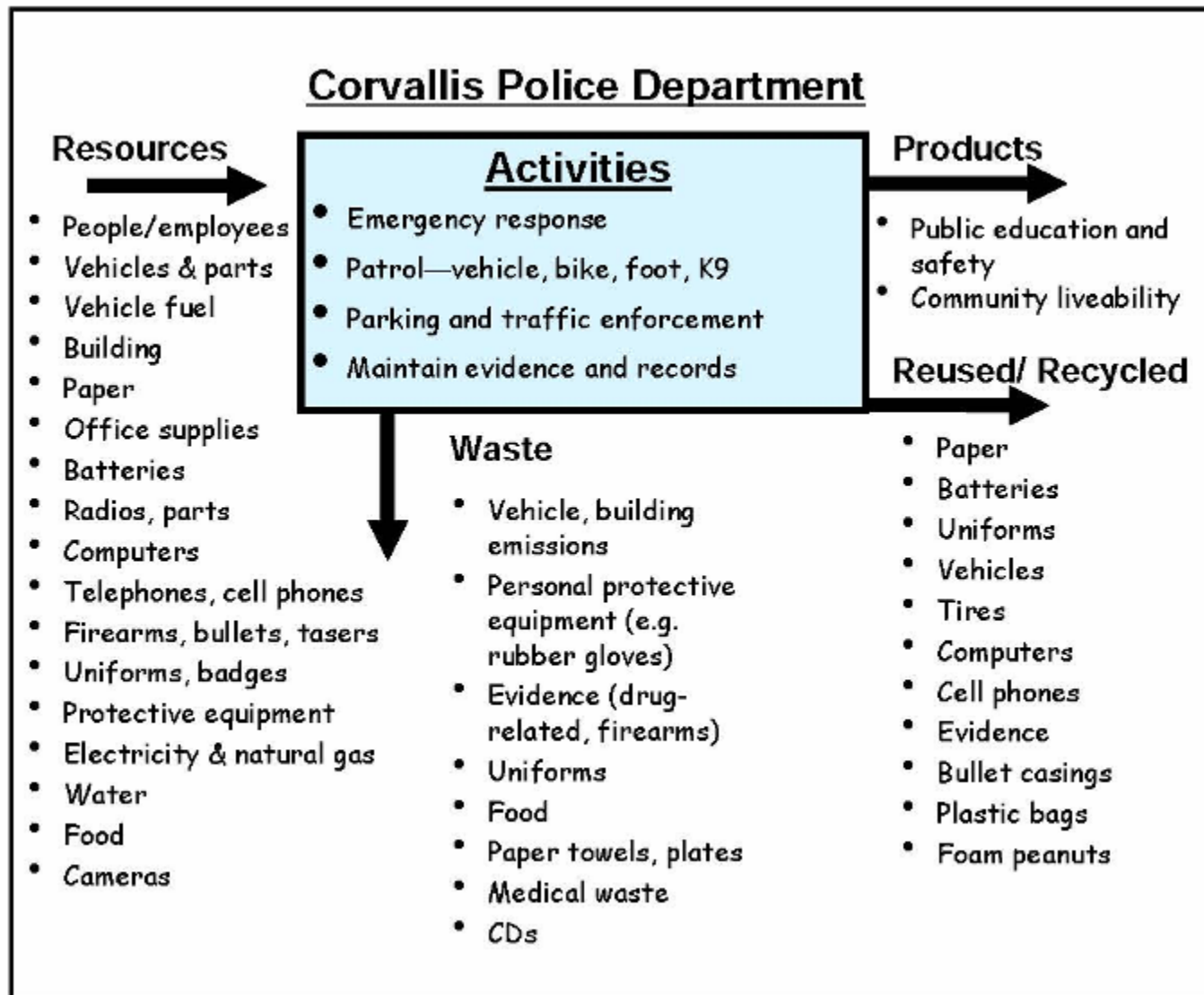
- Inventory greenhouse gas (GHG) and criterion air pollutants emissions from City operations and develop emissions reduction action plan
- Evaluate costs of switching additional City facilities to PGE Clean Wind power, and develop proposal
- Switch from B5 (5% biodiesel) to B20 (20% biodiesel) for all vehicles and stationary equipment for summertime use (continue to use petrodiesel for generators); coordinate with Laidlaw/ Lake Oswego School District. Identify older vehicles and establish off-site fueling location. Spot test B50 (50% biodiesel) with select vehicles for summer-time use.
- Conduct a fleet needs assessment and develop a green fleets plan to increase vehicle MPG, reduce GHG and criterion air pollution emissions, improve overall maintenance efficiency and vehicle longevity, and establish systematic roll-down. Consider anti-idling issues and diesel equipment/vehicle retrofits.
- Develop green building policy and adopt LEED as the standard for new City buildings (Gold) and major remodels (Silver)
- Develop formal policy requiring deconstruction and construction debris recycling for City building projects
- Identify needed building upgrades and associated costs to support alternate commute options, e.g. showers and covered, secure bike racks
- Set up a system for better tracking employee transit benefit usage
- Expand next Employee Commute Options survey to include all City employees or conduct an independent web-based survey to determine current commuting patterns
- Adopt policy on compressed work week and flexible schedules to minimize employee commuting, encourage use of transportation options (e.g. transit, carpooling, biking, walking), and allow shifts that minimize on-peak travel, where feasible
- Conduct carsharing feasibility study in downtown Lake Oswego
- Identify energy efficiency standards for equipment, appliances, and vehicles and include in environmentally preferable purchasing policy (EPP) (coordinate with Procurement Team)

City of Corvallis

- History
 - Early 2000's – Citizen sustainability discussions
 - 2003 – 2005 – City Council focus & city assessment
 - 2007 – 2008 – Corvallis Sustainability Coalition
- Adoption of Community Sustainability Action Plan
 - Participation by 600 community members
 - Areas of focus:
 - Community Inclusion
 - Economic Vitality
 - Education
 - Energy
 - Food
 - Health and Human Services
 - Housing
 - Land Use
 - Natural Areas & Wildlife
 - Transportation
 - Waste
 - Water
- Installing a sustainability management system



Flow Chart of Corvallis Police Department



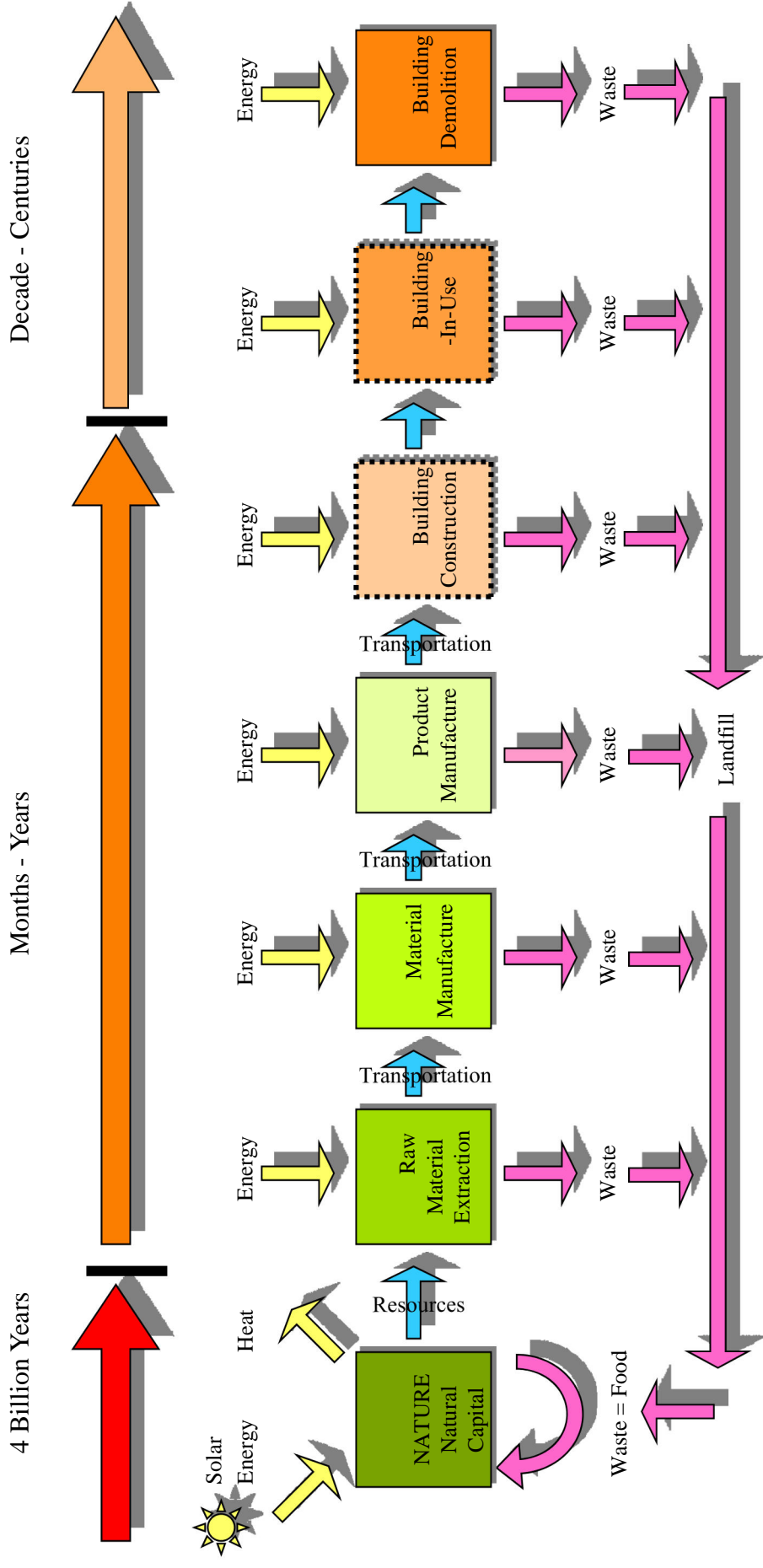
Corvallis Sustainability Action Plan

TOPIC AREA: WATER

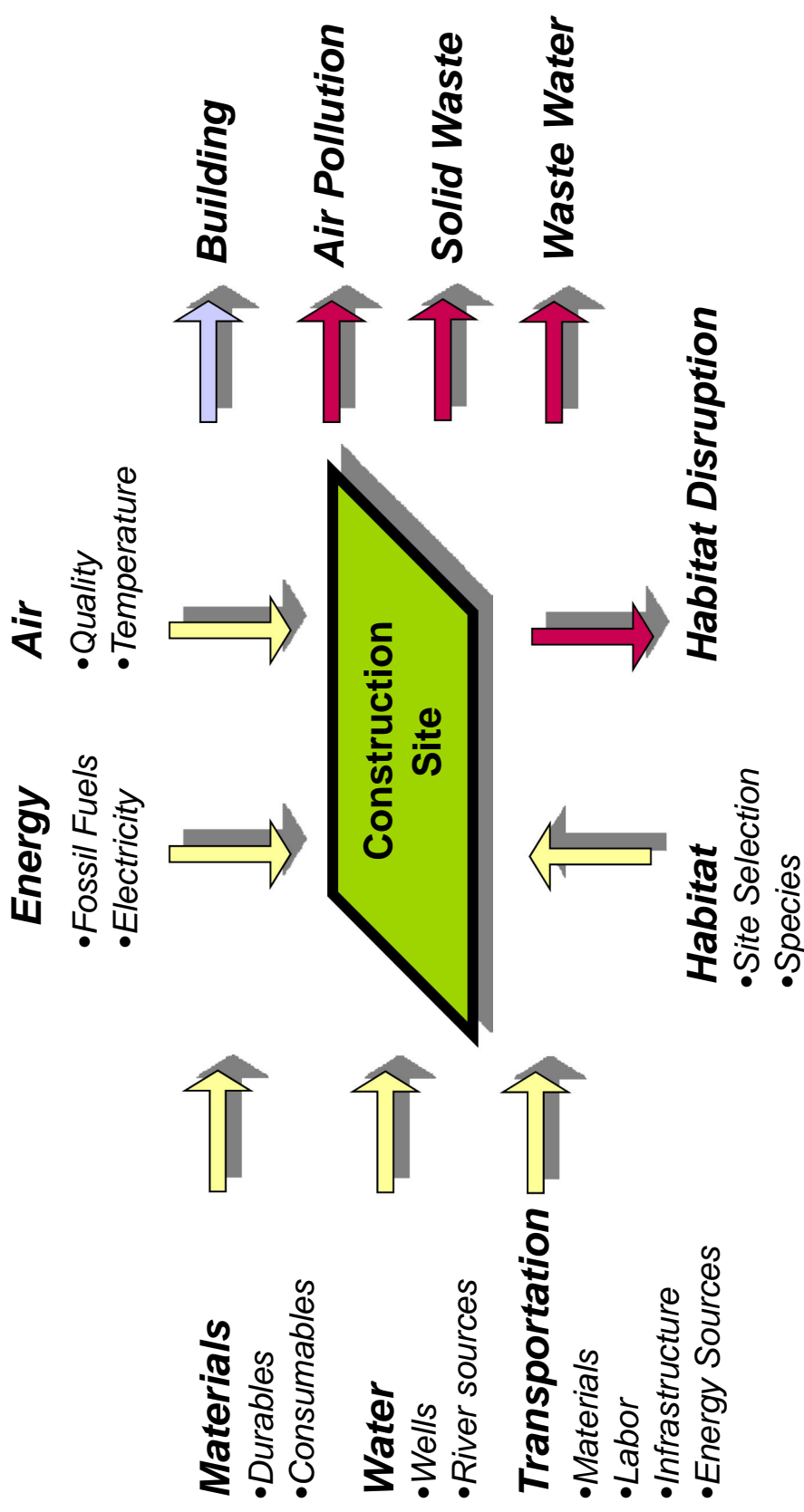
VISION: Water conservation efforts decrease the amount of water city residents' use, and streams and creeks are clean and clear.

				Potential Key Organizations (bold = confirmed)	Timeline
<p>Goal 1: By 2050, there will be a 50% reduction in the water flow (quantity) from 2008 annual levels through the Corvallis municipal water systems (currently including the Taylor and Rock Creek Water Treatment Plants, the Wastewater Treatment Plant, and the storm water drainage system).</p> <p><i>Interim Goal:</i> Reduce water flow from 2008 annual levels through the Corvallis municipal water systems 25% by 2020. Develop a community water center for public demonstration in a publicly accessible location.</p>	<p>Metrics: Gallons/year total volume, not adjusted for population growth or any other factor.</p>	<p>Strategy 1: Develop programs to reduce water level flows by addressing individual and organizational water/wastewater use patterns.</p>	<p>Action 1: Adopt individual plans and goals to reduce drinking, sewer and storm water flow levels resulting from personal water/wastewater use patterns.</p> <p>Action 2: Provide recognition and economic incentive programs for reduced usage of the three municipal water systems.</p> <p>Action 3: Evaluate both residential and institutional usage patterns of the three municipal water systems and current water use reduction programs. Recommend new programs targeting lowering water-use patterns.</p>	<p>First Alternative Co-op; League of Women Voters of Corvallis; Emerald Forest Architecture; Willamette Disc Golf Club; Willamette Watershed Productions; First United Methodist Church, Corvallis; Seventh Generation Building Guild; City of Corvallis; OSU</p>	<p>0-2 years</p>
	<p>Baseline: Annual flows: Waste water treatment plant = 4 billion gallons. Storm water through the treatment plant = 0.76 billion gallons. Storm water directly into water ways = 1.52 billion gallons. Drinking water = 2.76 billion gallons.</p>	<p>Strategy 2: Implement technologies that reduce annual flow through drinking, sanitary and storm water systems.</p>	<p>Action 1: Low-flow Technologies – Promote to all property owners and require low flow technologies on all water-related systems during the permitting phase.</p> <p>Action 2: Alternative Sewer Technologies – Promote state-sanctioned alternative sewer technologies that safely reduce municipal sewer flow for all existing buildings and require reductions for all relevant building permits. These technologies could include gray-water re-use, composting toilets, and Living Machines®.</p> <p>Action 3: Low Impact Development Storm Water Runoff Reduction Technologies – Promote Low Impact Development techniques for all properties and require when issuing building permits. These techniques could include minimizing pavement/building footprint, rain gardens, infiltration trenches, permeable pavers, rainwater harvesting, green roofs, vertical gardens, drought-tolerant/layered vegetation, and permaculture.</p>	<p>First Alternative Co-op; League of Women Voters of Corvallis; Emerald Forest Architecture; Willamette Watershed Productions; T. Gerding Construction; City of Corvallis</p>	<p>0-2 years</p>
		<p>Strategy 3: Develop alternative water sources that will reduce current flow levels in the municipal systems.</p>	<p>Action 1: Plan and install a community Sustainable Water Demonstration Site in a high-traffic and accessible existing enterprise that will demonstrate large-scale usage of alternative water sources, such as rainwater and gray-water.</p> <p>Action 2: Develop a system for using municipal treated wastewater for state-approved functions within the City of Corvallis.</p>	<p>Willamette Watershed Productions; First Alternative Co-op; Seventh Generation Building Guild; Emerald Forest Architecture; City of Corvallis</p>	<p>0-2 years</p>
					6-10 years
<p>Goal 2: By 2026, the Corvallis watersheds will be revived to conditions that provide healthy habitat characteristics that support reproducing populations of cold water native fish in Corvallis principal streams.</p> <p><i>Interim Goal:</i> Set back 25% of piped stormwater outfalls by 2013. Construct velocity-dispersing wetlands and/or buffers on all stormwater outfalls set back in Action B by 2023.</p>	<p>Metrics: The presence of self-sustaining cold water native fish populations.</p>	<p>Strategy 1: Evaluate current stream habitat characteristics and develop a plan to meet the designated standards.</p>	<p>Action 1: Evaluate the presence and conditions of cold water native fish in the waterways.</p> <p>Action 2: Engage property owners adjacent to principle streams in the evaluation of the healthy habitat characteristics.</p> <p>Action 3: Engage property owners adjacent to principle streams in the planning process to remediate stream characteristics.</p>	<p>Benton Soil and Water Conservation District; Marys Peak Group Sierra Club; Native Plant Society of Oregon; Willamette Watershed Productions</p>	<p>3-5 years</p>
	<p>Baseline: Current watershed conditions providing healthy habitat characteristics for cold water native fish. The baseline will be determined by completion of Strategy 1 by 2012.</p>	<p>Strategy 2: Eliminate direct draining of stormwater from the municipal storm drain outfalls into existing stream channels.</p>	<p>Action 1: Evaluate the number and impact of direct storm drain outfalls on local waterways.</p> <p>Action 2: Open and set back 50% of piped stormwater outfalls.</p> <p>Action 3: Construct velocity-dispersing wetlands and/or buffers between all outfalls and stream channels.</p>	<p>Benton Soil and Water Conservation District; Marys Peak Group Sierra Club; First Alternative Co-op; Willamette Watershed Productions; City of Corvallis; Corvallis property owners</p>	<p>0-2 years</p>
		<p>Strategy 3: Improve and protect Corvallis urban stream corridors to provide habitat characteristics that support cold water native fish.</p>	<p>Action 1: Pursue acquisition or easement to protect land along principle stream corridors.</p> <p>Action 2: Implement plans to improve conditions of streams, native riparian vegetation and stream flows.</p> <p>Action 3: Evaluate and develop plans to increase sufficient vegetation throughout the Corvallis watersheds that will provide ecological and hydrological support to cold-water native fish in the streams.</p>	<p>Benton Soil and Water Conservation District; Emerald Forest Architecture; Greenbelt Land Trust; Marys Peak Group Sierra Club; OSU Extension, Benton County; Native Plant Society of Oregon; T. Gerding Construction; Willamette Watershed Productions; Corvallis property owners</p>	<p>3-10 years</p>
					3-10 years

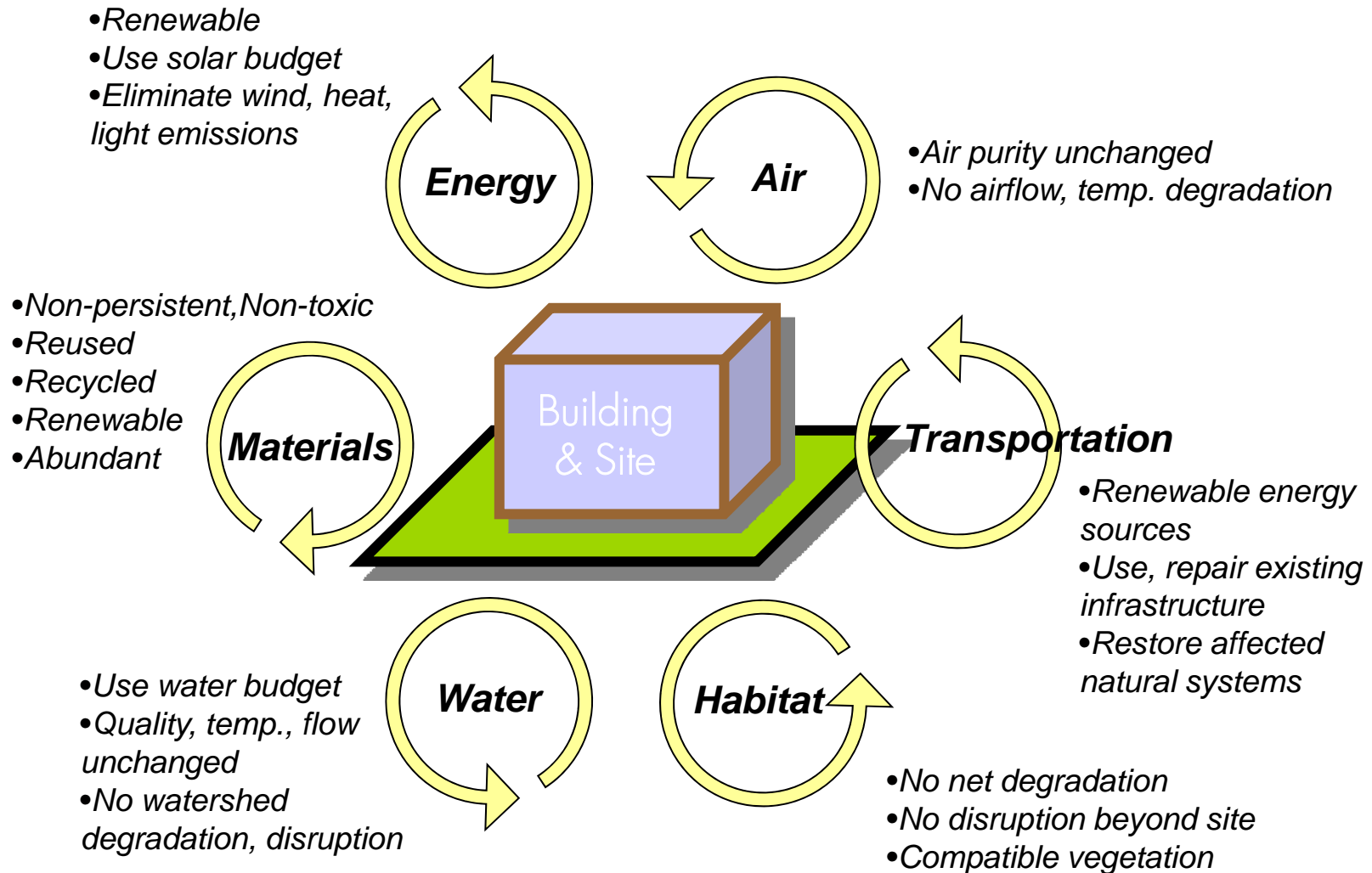
Typical Building Production Life Cycle



Construction Flow Chart



"Full Alignment" Flow Chart





Using The Natural Step As A Framework Toward The Construction and Operation of Fully Sustainable Buildings

By the Oregon Natural Step Construction Industry Group¹

Introduction

Interest in green building practices has existed for many years. These are ecologically oriented practices that focus on conserving energy and natural resources, protecting human health, preserving biodiversity and environmental quality while preserving or increasing a building's and site's long term value.

However, as the overall environment continues to deteriorate there is a growing awareness that “green” or environmental practices need to reach a level of environmental sustainability, a place where nature's ability to provide for the needs of both the current and future generations is not compromised.

A useful tool for determining sustainability is The Natural Step, a set of four, scientifically-based, system conditions developed by Swedish oncologist, Dr. Karl Henrik Robèrt. A construction industry task force, organized by the Oregon Natural Step

<http://www.naturalstep.org/en/system/files/TNSConstructionPaper.pdf>

South Waterfront - Portland

• OHSU Center for Health and Healing

- 60% energy savings
- 100% on-site waste water treatment
- Stormwater reuse for irrigation and toilets
- microturbines, PVs, Trombe wall
- LEED Platinum
- no cost premium after incentives + \$600k annual operating cost savings



• Project Description

- 130 acre urban redevelopment
- Integrated mixed use
- 5,000,000 SF office
- 400,000 SF retail
- 8000 residential units
- All LEED certified

• District-wide

- 40% of private land dedicated to open space
- 100% of public stormwater treated naturally
- In stream habit restoration for salmon
- Street car transportation



Oregon Sustainability Center



Key Features based on *Living Building Challenge*:

- Zero net energy
- Zero net water
- Living Machine to treat waste water
- Green roofs to treat excess stormwater
- Geothermal water-to-water heat pump
- Injection wells with regenerative turbines
- Heat recovery ventilators
- Triple glazing

Eco-District

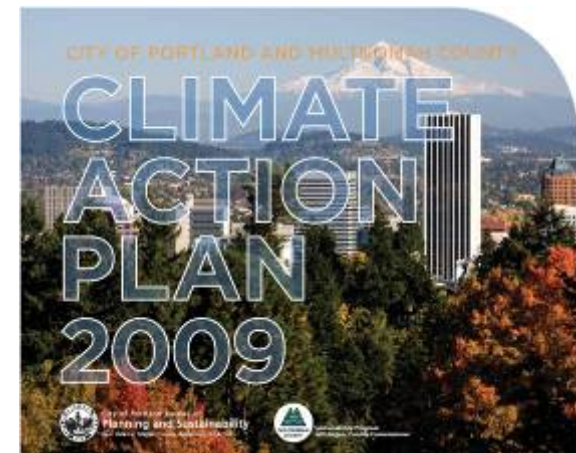
A neighborhood that ...

- needs no outside energy for heating and cooling
- produces a significant share of its own electricity and fresh water
- manages all of its own organic waste and sewage
- produced significant amounts of fresh foods
- and, is home to a diversity of species that thrive in an urban habitat



Portland – Multnomah GHG Plan

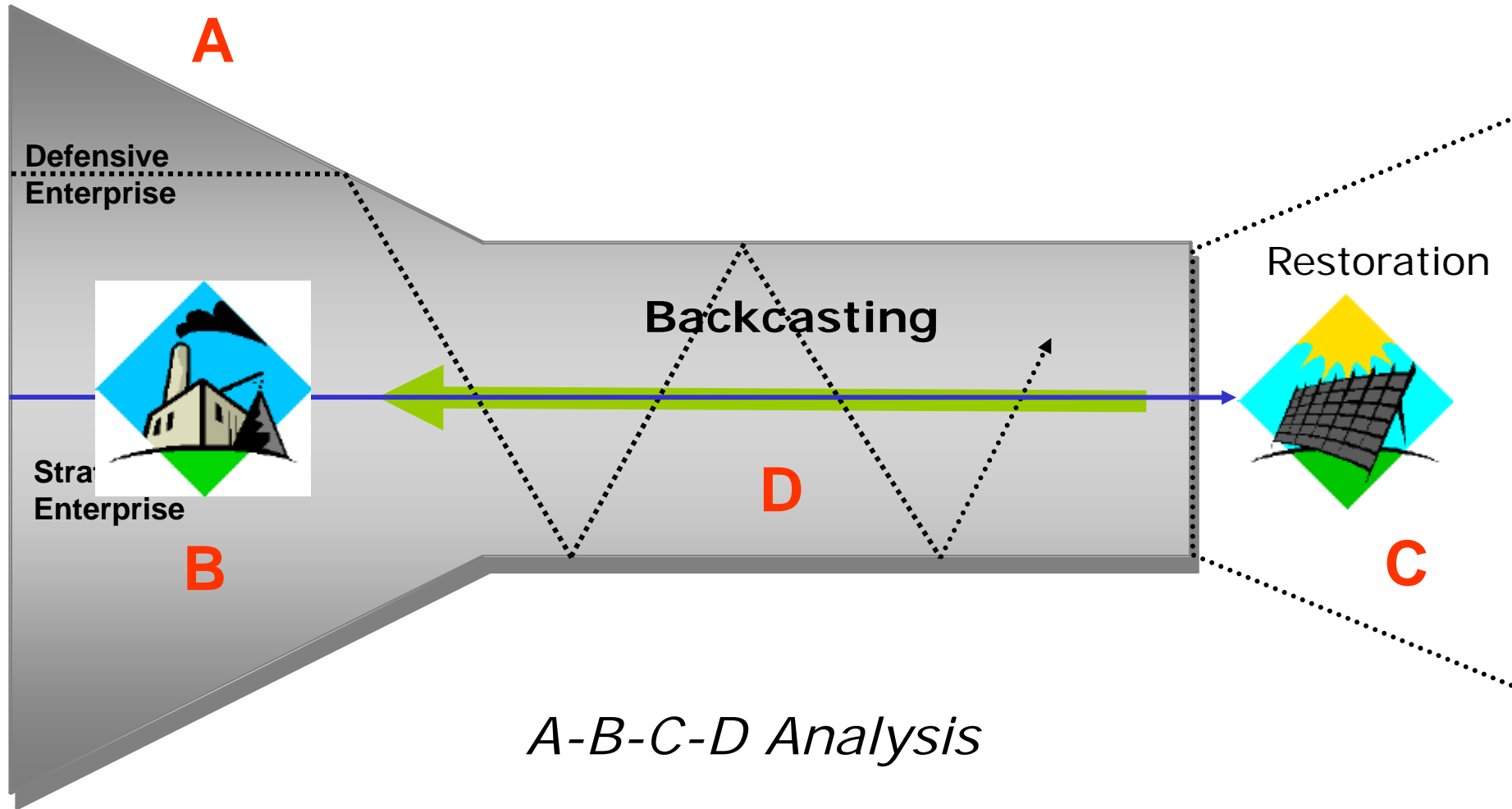
- Net zero GHG emissions in new homes and buildings;
- Energy use in current buildings reduced 25%;
- Neighborhoods designed so 80% of county residents (90% of city residents) can walk or bicycle to meet daily needs.
- Miles driven per day reduced 30% per person.
- Solid waste reduced 25%; 90% of waste reused or recycled
- Locally grown food increased significantly
- Urban forest expanded to cover a third of Portland



Other Examples

- **Multnomah County** – 1M sq ft solar energy below PGE rates
- **Boulder County, Colorado** – requires net-zero energy for homes that exceed 5000 sq ft.
- **AIA 2030 Challenge** – zero fossil fuel use in new buildings
- **City of San Francisco** – instituted mandatory composting with goal of zero waste to landfill within ten years
- **Ft. Lewis Army Base** – zero discharge of waste water into Puget Sound by 2025

Sustainability Planning Process



Sustainability Planning Process

A - Awareness

What do you know about sustainability and why it matters?

B - Baseline Mapping

What does your organization look like today?

C - Clear and Compelling Vision

What does your organization look like in a sustainable society?

D - Down to action

How will you manage and prioritize steps to sustainability?

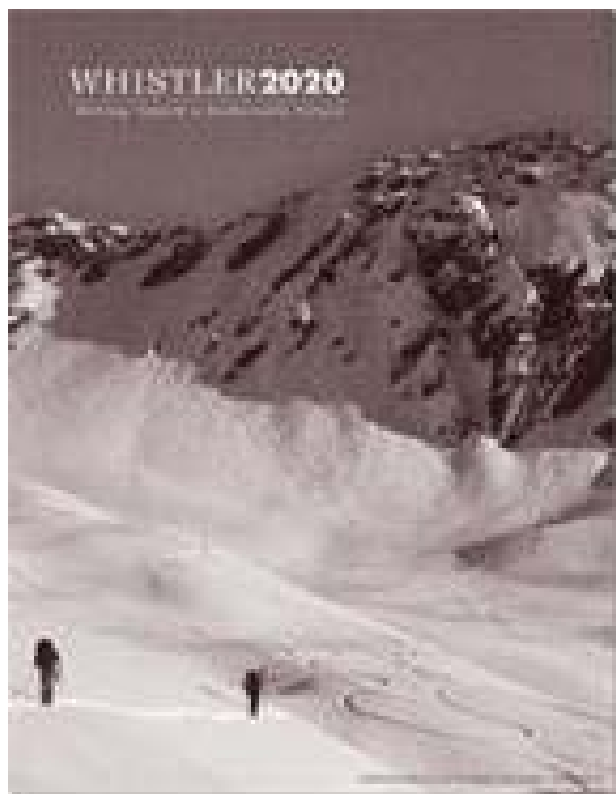
Whistler, B.C.

- International ski resort
- Effective community diffusion
 - Early Adopters
 - Supported by business, government and nonprofit
 - Community Roll Out
- Whistler 2020 Sustainability Plan
 - Goal to be fully sustainable by 2060
 - Move toward 100% renewable energy & zero waste
 - Provide affordable local housing to 75% of work force
- Won award as "... one of the most liveable communities and best in the world in planning for the future." (Nov 2005)



Whistler Sustainability Background

- Started in 1997 as Whistler 2002 community plan
- Early Adopter program in 2001
 - Resort Municipality of Whistler
 - Fairmont Chateau
 - Tourism Whistler
 - Whistler-Blackcomb Ski Company
 - Whistler's Fotosource
 - Association of Whistler Area Residents for the Environment (AWARE)
- Public speaker series
- Developed sustainability tool kits for home and business
- Launched Whistler Centre for Sustainability



Strategies



Arts, Culture & Heritage



Built Environment



Economic



Energy



Finance



Health & Social



Learning



Materials & Solid Waste



Natural Areas



Partnership



Recreation & Leisure



Resident Affordability



Resident Housing



Transportation



Visitor Experience



Water

Whistler 2020 Partners

- [Astrid's Fine Foods](#)
- [AWARE](#)
- [BC Hydro](#)
- [BC Transit](#)
- [Capilano College](#)
- [Community Foundation of Whistler](#)
- [Carney's Waste Systems](#)
- [Healthy Communities](#)
- [Hill Trip](#)
- [Hostelling International - Whistler](#)
- [lululemon athletica](#)
- [LUNA - Late & Unique Nighttime Alternatives](#)
- [Mature Action Committee](#)
- [McDonalds - Whistler / Pemberton](#)
- [MY Place \(Maurice Young Millennium Place\)](#)
- [Mountain Youth Society](#)
- [Naturally Clean](#)
- [Nester's Market-Whistler](#)
- [Resort Municipality of Whistler](#)
- [S2S Canadian Home Builders' Association \(CHBA\)](#)
- [School District #48](#)
- [Slow Food Cycle Sunday](#)
- [Terasen Gas](#)
- [Tourism Whistler](#)
- [Vancouver Coastal Health](#)
- [VANOC - Vancouver Organizing Committee for the 2010 Winter Games](#)
- [The Westin Resort & Spa - Whistler](#)
- [Whistler 2020 Development Corporation](#)
- [Whistler Adaptive Sports Program](#)
- [Whistler Arts Council](#)
- [Whistler Blackcomb](#)
- [Whistler Centre for Sustainability](#)
- [Whistler Chamber of Commerce](#)
- [Whistler Community Services Society](#)
- [Whistler Cooks](#)
- [Whistler Cycling Committee](#)
- [Whistler Fisheries Stewardship Council](#)
- [Whistler Film Festival Society](#)
- [Whistler Forum](#)
- [Whistler Health Care Foundation](#)
- [Whistler Housing Authority](#)
- [Whistler Museum and Archives](#)
- [Whistler Naturalists](#)
- [WORCA \(Whistler Off Road Cycling Association\)](#)
- [Whistler Public Library](#)
- [Ziptrek Ecotours](#)

[Home](#)

Action browser

 [Export to Excel](#)

Action status Progress status **Strategy** ☒ Strategy Links Priority Sustainability Objectives Lead
 Assist RMOw Lead dept. **Year** ☒ Reference

[Refine, finalize and Implement the business plan for the Whistler Centre for Sustainability](#)

Jan 2006 - Dec 2008 (Whistler 2020)

Status for: Apr - Jun 2008 **INITIATED - In Progress**

Ref: 324

Strategy: [Energy](#) - [Built Environment](#) - [Transportation](#)Strategy Links: [Materials & Solid Waste](#) - [Natural Areas](#) - [Water](#)Priority: [Enriching Community Life](#) - [Enhancing the Resort Experience](#) - [Ensuring Economic Viability](#) - [Protecting the Environment](#) - [Partnering for Success](#)Sustainability Objectives: [SO1](#) - [SO2](#) - [SO3](#) - [SO4](#)Explorer Strategy links: [Built Environment](#)Lead: [RMOw](#) Assist: [AWARE](#) - [Whistler Chamber of Commerce](#) - [Fairmont Chateau](#) - [Tourism Whistler](#) - [WB](#) RMOw Lead dept.: [Policy and Program Development](#)

[Provide financial or permitting incentives for new/renovated single family dwellings that meet Whistler Green guidelines.](#)

Jan 2008 - Dec 2008 (Whistler 2020)

Ref: 662

Strategy: [Energy](#) - [Built Environment](#)Strategy Links: [Materials & Solid Waste](#) - [Water](#) - [Resident Affordability](#) - [Resident Housing](#)Priority: [Enriching Community Life](#) - [Protecting the Environment](#)Sustainability Objectives: [SO1](#) - [SO2](#) - [SO3](#)Lead: [RMOw](#) RMOw Lead dept.: [Community Life](#)

[Initiate a Whistler ski area climate change plan and share with our community and the global four season resort community.](#)

Jan 2008 - Dec 2008 (Whistler 2020)

Status for: Jan - Jun 2008 **ACHIEVED - Full Outcome**

Ref: 681

Strategy: [Energy](#)Strategy Links: [Learning](#) - [Visitor Experience](#)Priority: [Enhancing the Resort Experience](#) - [Ensuring Economic Viability](#) - [Protecting the Environment](#) - [Partnering for Success](#)Sustainability Objectives: [SO1](#) - [SO2](#) - [SO3](#) - [SO4](#)Lead: [Whistler Blackcomb](#)

Five Level Model



Sustainability Game

Nature's laws & science
Social and economic principles

Natural Step system conditions +
economic (Triple Bottom Line)

“Backcasting”, ABCD Planning Process

Recycling, green building, renewable energy,
water conservation, etc.

Natural Capitalism, Cradle-to-Cradle,
Env Mgt Sys, Life Cycle Analysis, LEED

Impressions of Successful Communities

- Most successful have fully engaged community leaders well before a general community wide effort
- Built support over time with a variety of activities
- Successfully demonstrated the interlocking nature of ecology, society and the economy
- Developed a long term community wide plan based on a sound sustainability framework
- Developed a system to manage the plan over several years/decades

McMinnville 2009 GHG Action Plan Savings

- Fire Hall: *43% electricity reduction*
- Information Services: *60% server energy reduction, 70% heat reduction, 80% maintenance and replacement savings*
- Parks and Recreation: *\$13,000 electricity savings*
- Waste Water Services: *1,500,000 kWh savings, reduced hauling costs of \$54,000, \$11K annual return on \$44K motor investment.*

Other Savings Examples

- Energy
 - Lock in electricity rates with a solar utility; i.e., SunEdison
 - Use wastewater methane to generate electricity
- Vehicles
 - Onboard MPG meters
 - Eliminate idling with batteries, solar panels
 - Hybrid/electric cars and trucks – *potential 5 year payback*
- Facilities
 - 40-50% energy usage
 - Oregon BETC credits for LEED
 - Biggest return is improved employee productivity

Sustainability: *Keys to Success*



- Importance of a solid framework - *shared mental model*
- Backcasting – *Making decisions from a vision of a fully sustainable organization*
- Strategic cultural shift – *embedded at all levels in operations, products, services, business planning, etc.*