



Columbia River Gorge Air Quality Project

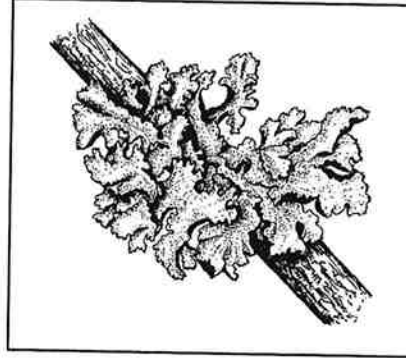
Work Plan

July 30, 2001

**Developing a Regional Air Quality Strategy for the Columbia
River Gorge National Scenic Area**

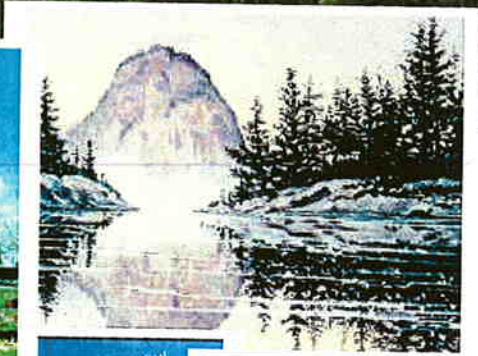
Special Thanks To

- Alexander Mikulin for his drawings of Pacific Northwest Lichen species. Lichen are an important indicator species. They are susceptible to impacts from air pollution, and their study can provide a valuable early warning of unwanted ecosystem impacts and a decline in other natural resources. Alexander's drawings are used several times in this document.



- The Dalles Mural Society: The mural "Where Wheat is King" by Robert Thomas is used on page 10 of this document.
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Columbia River Gorge National Scenic Area



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Work Plan

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River Gorge National Scenic Area

Volume 1

July 2001

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Table of Contents

<u>Section</u>	<u>Page</u>
Preface	iv
History of the National Scenic Area	1
Columbia River Gorge Commission	1
Regional Air Quality Strategy	2
Work Plan Development Process	3
Funding Strategy	3
Profile of National Scenic Area	5
Resources Protected Under the Act	8
Columbia Gorge Economies-Oregon & Washington	9
Process for Developing a Regional Air Quality Strategy	13
Three-Step Approach to Air Quality Project (Summary)	14
Project Chronology	15
Public Outreach and Involvement	17
Science and Technical Assessment Summary	20
Summary of Scientific Investigation	27
Economic Analysis	33
Regional Strategy Development: Public, Stakeholder, Tribal Involvement	34
Advisory Committee – First Steps	36
Advisory Committee – Membership	36
Advisory Committee-Collaborative Decision-making Process	38
Evaluating Strategy Options-Selection of Strategy Recommendations	42
Developing Air Quality Strategy Options	43
Goal Setting	44
Selection of Recommended Air Quality Strategy	45
Strategy Implementation	46
Continued Study of Scenic Area	46
Estimated Funding Needs	47
Figures	
Map of Columbia River Gorge National Scenic Area	7
Chart - Process for Developing a Regional Air Quality Strategy	13
Project Chronology	15
Building a Base of Air Quality Knowledge	22
General Chronology of Technical Study Phases	26
Chart – Process for Evaluation of Strategy Options	44
Appendix	
Columbia River Gorge Visibility and Air Quality Study: Working Draft - Existing Knowledge and Additional Recommended Scientific Assessment to Consider.	Appendix A

Preface

The Columbia River Gorge is an area of astounding beauty and diversity. It is also an area that over 70,000 residents of Oregon and Washington call home. The National Scenic Area Act of 1986 lays out a unique challenge. Namely, to protect and enhance the scenic, natural, cultural, and recreational resources of this National Scenic Area while at the same time supporting the local economies so vital to the area's future prosperity. Meeting these two goals is not always an easy task.

Achieving the goals of the Scenic Area Act will require us to look both locally and regionally at sources influencing air quality in the Gorge, and to develop an air quality strategy that closely involves stakeholders and the public. It is vital to our work that those who care deeply about this area have a voice in making these choices.

We are at the very beginning of this work. There is much we have yet to discover about air quality in the Gorge. We must evaluate its current condition; and identify sources of pollution (both inside and outside the Gorge) that affect air quality. We are still taking our first steps in answering these questions. We must also understand the economic conditions that support so many Gorge communities. Both environmental and economic information will be vital to making informed and equitable decisions about Gorge air quality.

Our first step is to develop this work plan. It is essentially a "road map" that lays out how we will answer important questions about air quality in the Gorge and establishes an open and fair process for decision-making. The work plan does not recommend strategies now. The work plan does lay out a multi-step process for increasing our scientific understanding of air quality in the Gorge and for engaging the public in the development of a regional air quality strategy. This work plan lays out the "Big Picture" view of how we will do this work. Ultimately, the Columbia Gorge Commission will be asked to decide if the strategy options developed through this collaborative process meet the objectives of the Gorge Management Plan and the National Scenic Area Act.

With your help today and in the future, decision-makers will develop an air quality strategy based on sound science that reflects a truly collaborative approach to making decisions about the future of air quality in the Gorge.

Thank You.

Andy Ginsburg
Air Quality Division Administrator
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History of the National Scenic Area Act

The 292,500 acre Columbia River Gorge National Scenic Area (NSA) was created by act of Congress in 1986 (PL92-663, 1986). The purposes of the Act are –

- (1) to establish a national scenic area to protect and provide for the enhancement of the scenic, cultural, recreational, and natural resources of the Columbia River Gorge; and
- (2) to protect and support the economy of the Columbia River Gorge area by encouraging growth to occur in existing urban areas and by allowing future economic development in a manner that is consistent with paragraph (1).

The special beauty and value of the Columbia River Gorge has been recognized for centuries. Efforts to provide some special protection for this area began as early as 1937 and continued throughout the following decades. In 1986, President Ronald Reagan signed the Columbia River Gorge National Scenic Area Act, establishing this nation's only National Scenic Area.

Other national legislation such as the Clean Air Act complement the Columbia River Gorge National Scenic Area Act in that emission reduction strategies adopted to protect public health can have the secondary benefit of improving other valued resources. However, the Columbia River Gorge National Scenic Area Act calls for an independent effort to protect and enhance key resources in the Gorge NSA while supporting local economies.

To achieve its purposes, the National Scenic Area Act called for a new partnership between the USDA Forest Service, a bi-state regional planning agency (the Columbia River Gorge Commission), the states of Oregon and Washington, the Southwest Clean Air Agency (SWCAA), and the six counties with land in the Scenic Area. The Act also calls for interagency and tribal cooperation and coordination. The regional air quality strategy process described in this work plan is designed to meet the purposes of the Columbia River Gorge National Scenic Area Act.

Columbia River Gorge Commission

The Columbia River Gorge Commission was authorized by the 1986 Columbia River Gorge National Scenic Area Act (Act) and created through a bi-state compact between Oregon and Washington in 1987. The Commission was established to develop and enforce policies and programs that carry out the purposes of the Act.

The Commission works in partnership with a number of entities to develop and implement a regional Management Plan. Partners include the states of Oregon and Washington, the Southwest Clean Air Agency, the USDA Forest Service, four treaty Indian Tribes -- the Nez Perce, Umatilla, Warm Springs, and Yakama Indian Nations,

Clark, Klickitat, and Skamania counties in Washington, and Hood River, Multnomah, and Wasco counties in Oregon.

Regional Air Quality Strategy

In May 2000, the Gorge Commission approved an air quality amendment to the National Scenic Area Management Plan. The amendment language states that:

“Air quality shall be protected and enhanced, consistent with the purposes of the Scenic Area Act. The States of Oregon and Washington shall: (1) continue to monitor air pollution and visibility levels in the Gorge; (2) conduct an analysis of monitoring and emissions data to identify all sources, both inside and outside the Scenic Area that significantly contribute to air pollution. Based on this analysis, the States shall develop and implement a regional air quality strategy to carry out the purposes of the Scenic Area Act, with the U.S. Forest Service, the Southwest Air Pollution Control Authority [now the Southwest Clean Air Agency] and in consultation with affected stakeholders.

The States and the Forest Service together shall provide annual reports to the Commission on progress made regarding implementation of this policy. The first report shall include a work plan and timeline for gathering/analyzing data and developing and implementing the strategy. The work plan shall be submitted to the Commission for approval at the next annual update (August 2001).”¹

The Gorge Commission adopted the air quality language as regional policy because air quality monitoring indicates some threat to scenic, natural, cultural, and recreational resources in the Scenic Area². There was recognition by the Gorge Commission in passing this policy that while a Class I designation is not appropriate for the Gorge, there is some potential risk to the resources that must be protected under the National Scenic Area Act. The new air quality amendment language reflects both purposes of the National Scenic Area Act.

The Columbia River Gorge Commission has responsibility under the Scenic Area Management Plan to protect natural, scenic, cultural, and recreational resources. It is recognized that the Commission does not have expertise in air quality planning and that they will rely on the three state air quality agencies to develop an air quality strategy for the NSA (these agencies chose to develop this strategy through an Advisory Committee). However, as the regional policy-making body for the Scenic Area, the Gorge Commission must ensure that any proposed air quality strategy meets the purposes of the Scenic Area Act. Therefore, in its review of the strategy, the Gorge Commission must find that it is consistent with those purposes.

¹ Management plan amendment language adopted by the Columbia River Gorge Commission on May 9, 2000. SMA Natural Resources Policy 12[pages I-123]

² Air quality impacts measured to date in the Scenic Area are summarized in Appendix A, Working Draft: Existing Knowledge and Additional Recommended Scientific Assessment to Consider (June 2001). Additional reports are available from the Oregon Department of Environmental Quality, Washington Department of Ecology, and U.S. Forest Service. Reports on lichen species in the Scenic Area are available through the U.S. Forest Service.

Work Plan Development Process

This work plan has been developed over many months through the collaborative efforts of the states of Oregon and Washington; the Southwest Clean Air Agency; Klickitat, Wasco, Skamania, Hood River, Multnomah, and Clark Counties; the U.S Forest Service; local and national experts in the fields of air science; interested stakeholder groups, and the public. The Yakama, Umatilla, Warm Springs, and Nez Perce Indian Nations were also invited to participate on the Coordination Team. The tribes were unable to actively participate due to resource limitations, but did provide some comment on the draft work plan. Active tribal involvement is hoped for in the near future. The inter-agency project coordination team has relied heavily on stakeholder and public input in developing the work plan. The work plan reflects, to the greatest extent possible, the values, priorities, and preferences of these groups for a fair and equitable process leading to a regional air quality strategy that satisfies the two purposes of the Scenic Area Act. The work plan will be submitted to the Columbia Gorge Commission for their approval in August 2001.

Funding Strategy

Funding to develop this work plan has been provided by the states of Oregon and Washington. The U.S. Environmental Protection Agency has also generously provided initial grant funding to begin the scientific study of Gorge air quality. The U.S. Forest Service will continue to provide support for on-going air monitoring.

Significant additional funding will be required for the various elements described in this work plan. In the short-term, funding will be necessary to continue the initial study of Gorge air quality and characterization of emission sources. The Technical Foundation Study described in this work plan is the first in a series of studies to characterize the physical and chemical processes influencing air quality in the Gorge. The Foundation Study will lay important groundwork for future phases of the technical study program, and will require approximately one million dollars in funding over the next two years. The states, in cooperation with the Southwest Clean Air Agency, the U.S Forest Service, and other partners such as the U.S Environmental Protection Agency will work to secure funding for the Foundation Study as soon as possible.

Later technical phases will also require significant funding. These phases will provide a more refined and detailed study of chemistry and physical processes in the NSA, including refinement of source apportionment. Later phases will also lead to the development of predictive modeling tools to be used in strategy development. Over the next few years, the results of the Technical Foundation Study will be evaluated and a second-phase technical study designed. At that time, we will have a clearer picture of the funding level needed to support the full technical study program.

Additional funding will also be needed to perform econometric analysis as part of the cost-benefit evaluation of strategy options, and to support the overall stakeholder advisory committee and public and stakeholder outreach process. The funding levels described in this work plan reflect an estimated range of costs for economic analysis and

for supporting the decision-making process. Costs for economic analysis will vary depending on the number of air quality strategy options evaluated. An initial estimate for economic analysis ranges from \$60,000 to \$150,000. Securing funding for this work is a vital part of the projects overall fund raising effort.

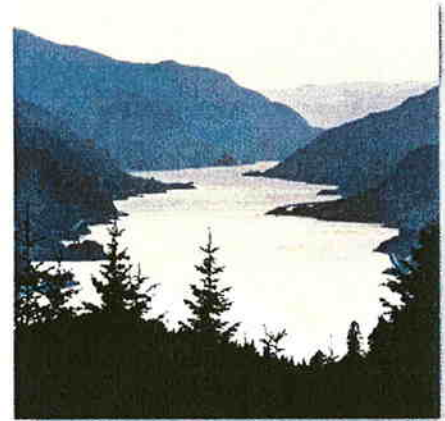
Fund Raising

A critical early role for the Advisory Committee will be to work with the states to evaluate funding sources, and how to proceed if full funding does not become available. The states and Advisory Committee will have to weigh many important issues regarding funding, science, and the efficient use of limited resources. It is very important to develop the science and technical tools needed to make informed decisions about air quality in the Gorge. It is also important to invest limited resources as efficiently and wisely as possible.

Once approved, this work plan will serve as a fund raising tool for the states and Advisory Committee to use in developing specific funding strategies. The states will continue to seek initial funding over the next several months. The states and Advisory Committee will then work with the Oregon and Washington state legislatures and governor's offices, as well as with other state and federal agencies to develop a comprehensive fundraising strategy and pursue the necessary resources. Funding strategies may also involve the U.S. Congress, the Columbia River Gorge Commission, and private business.

Profile of the Columbia Gorge National Scenic Area

The Columbia River Gorge National Scenic Area (CRGNSA) is a unique area in which resource-dependent communities exist within an area of great natural beauty. The Columbia River Gorge is a spectacular river canyon, 80 miles long and up to 4,000 feet deep. The Scenic Area is one of the most unique natural systems in the world and includes parts of Clark, Skamania, and Klickitat Counties on the Washington side, and Multnomah, Hood River, and Wasco Counties on the Oregon side (a map of the Scenic Area is on page 6). Carved over 40 million years, the Columbia River Gorge cuts the only sea level route through the Cascade Mountain Range. It is more than a natural wonder; the Gorge is a critical transportation corridor and is home to diverse communities, businesses, and farms.



Approximately 75,000³ people live in communities within in the National Scenic Area. These communities, in the aggregate, have less diversified and more vulnerable economies than many other communities of Washington and Oregon. The metropolitan areas of Portland, Oregon and Vancouver, Washington (combined 1999 population of approximately 1.8 million) lie just outside the western entrance to the Scenic Area.

The south rim of the Gorge rises to over 3,000 feet above the Columbia River and boasts several majestic waterfalls. The area affords spectacular views for miles, and harbors the second highest year-round waterfall in the United States.

Climate, geology, soils, and other environmental factors combine to create a unique diversity of plant and animal life. A rich and diverse array of cultural resources, some up to 10,000 years old, exist in the National Scenic Area.

Extraordinary recreational opportunities abound in the Scenic Area, including fishing, boating, and hiking. The Columbia River Gorge is also considered the windsurfing capital of the world.



³ Projection for year 2000. Columbia Gorge Economic Development Association

Located in the Columbia River Gorge National Scenic Area 40 miles east of Portland, Oregon, Bonneville Lock and Dam spans the Columbia and links the two states. Since 1938, hydropower from Bonneville Dam has supplied the northwest region and beyond.

Three deep-water ports lie within the Scenic Area supporting regional industries and international trade. The Gorge area holds over thirty major employers (100+ employees) with combined annual sales of about \$500,000 million dollars.

The diverse character of the Columbia Gorge makes the Columbia River Gorge National Scenic Area one of the most unique areas of the country. This blend of natural beauty and fragile community economies requires a comprehensive and collaborative approach to protecting and enhancing both the scenic resources and economic well being of the area.

**Cities Within the Columbia River Gorge National Scenic Area
Population in 1999/2000**

OREGON		WASHINGTON	
Cascade Locks	1,085	North Bonneville	513
Hood River	5,135	Stevenson	1,165
Mosier	360	Carson	2,116*
The Dalles	11,880	Home Valley	No Data
		White Salmon	1,913
		Bingen	659
		Lyle	530*
		Dallesport	1,185*
		Wishram/Wishram Heights	324*

Note: just outside the western boundary of the Columbia River Gorge National Scenic Area lay the Oregon cities of Portland, Gresham, Fairview, Wood Village and Troutdale; and the Washington cities of Vancouver, Camas, and Washougal.

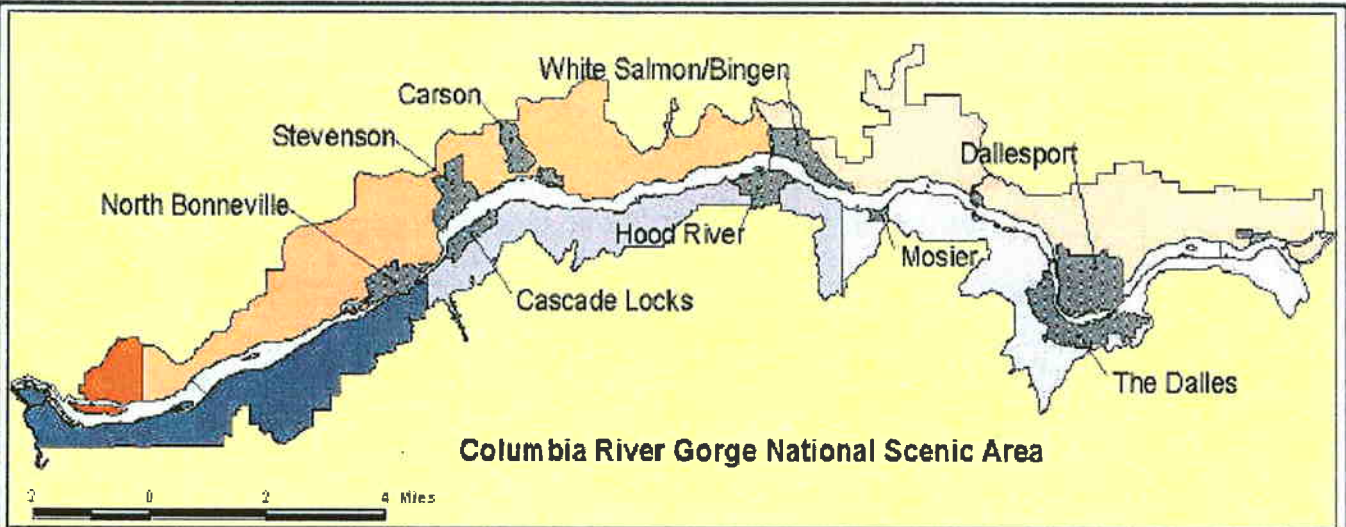
* Estimated from 2000 census.

**Counties Within the Columbia River Gorge National Scenic Area
Population in 1999/2000**

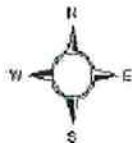
OREGON		WASHINGTON	
Hood River	20,411	Skamania	9,831
Wasco	23,791	Klickitat	19,530
Multnomah*	660,486	Clark*	336,268

* Multnomah and Clark Counties have a portion of their populations within the Columbia River Gorge National Scenic Area, however the majority of Multnomah and Clark County residents live in urban areas outside the NSA. Approximately 1,700 Multnomah County residents and about 260 Clark County residents live within the National Scenic Area boundaries.

Map of Columbia River National Scenic Area



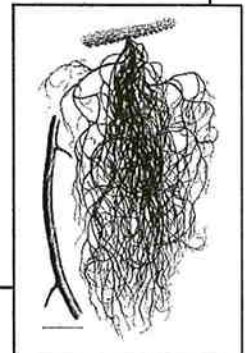
- Urban Areas
- Columbia River
- Counties**
- CLARK
- SKAMANIA
- KLICKITAT
- MULTNOMAH
- HOOD RIVER
- WASCO



The Columbia River Gorge National Scenic Area cannot assure the reliability or suitability of this information for a particular purpose. Original data was compiled from various sources. Spatial information may not meet National Map Accuracy Standards.

Original Data can be downloaded from www.fs.fed.us/r6/columbia/

R.Robles/April 25, 2001/ Columbia Gorge Commission



Northwest Lichen Species

Resources to be Protected Under the Scenic Area Act

Scenic

Protecting the future of scenic vistas within the Gorge is at the heart of the regional air quality strategy. The majestic views encountered throughout the National Scenic Area provide residents and visitors alike a special opportunity to appreciate nature's grandeur and to be inspired by scenes of great beauty. The scenic resources of the Gorge are highly valued in many ways. Enhancing air quality by reducing visibility impairing air pollutants such as ammonium sulfate, ammonium nitrate, as well as organic and elemental carbon, would help protect these scenic resources.

Natural

Because of the wide range of elevation and precipitation in the Gorge, a diverse collection of wildflowers and native plants thrive from the temperate rain forest at Oneonta Gorge to the grasslands at Celilo. The Gorge area boasts fourteen unique species of wildflowers, hundreds of native plant species, and forests. Enhancing air quality by reducing air pollutants such as ozone and acidic aerosols that damage plants and forests would help protect the natural resources and ecosystem diversity that are so important to the Scenic Area.

Cultural

For thousands of years, the Columbia River Gorge has supported flourishing civilizations. Evidence of the Folsom and Marmes people, who crossed the Great Continental Divide from Asia, have been found in local archaeological digs. Alternatively, Native American tradition describes the unique genesis of native peoples within the Columbia Gorge area. Excavations at Five Mile Rapids, a few miles east of The Dalles, show that humans have occupied this ideal salmon fishing site for more than 10,000 years. Ancestors of today's Yakama, Warm Springs, Umatilla, and Nez Perce Indian nations as well as many other Native American peoples lived and fished along the river's banks. Evidence of their life and creativity along the river exists today in the ancient petroglyphs and rock art found within the Scenic Area. These important cultural resources can be protected by reducing acidic aerosols that erode rock surfaces.



Ancient Native American Rock Art in the Gorge, Tsgagalal- "She Who Watches"

Recreational

The Columbia River Gorge is a world class location for hiking, windsurfing, bicycling, sightseeing, climbing, horseback riding, boating, fishing, and more. By protecting scenic, natural, and cultural resources in the NSA, the regional air quality strategy will also preserve the recreational appeal and value of the National Scenic Area.

Economic Resources

The Columbia River passing through the National Scenic Area is a major transportation route through the Cascade Mountain Range. Improved infrastructure has led to development of largely resource-based industries throughout this corridor. Lumber, aluminum, wool, and flourmills, as well as fish and fruit canneries contribute to local, regional, and international trade. The river continues to carry grain, livestock, lumber, and fruit and vegetables grown and processed in the Columbia Basin.

Columbia Gorge Economies - Oregon

The 2000 Census shows total population in Hood River County to be 20,411 persons and 23,791 for

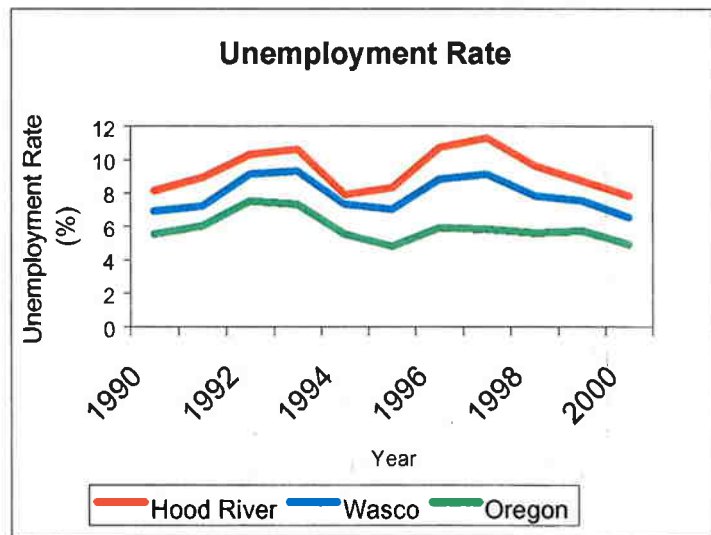
	1990 Census	2000 Census	% Change
Oregon	2,842,321	3,421,399	20.4%
Hood River	16,903	20,411	20.8%
Wasco	21,683	23,791	9.7%

Wasco County. This was a strong 20.8% increase in population for Hood River since the 1990 Census, and a slower 9.7% growth rate for Wasco.

Over the 1990 to 1999 period, **Hood River** and **Wasco** county total employment grew 22.0% and 24.8% respectively, both below the statewide rate of 27.6%. Similarly, wage and income levels in the region lag statewide averages. The 1999 average annual covered wage for Hood River and Wasco counties are \$20,643 and \$23,382 respectively, compared to a state average wage of \$30,867. Hood River County's average wage is the second lowest in Oregon, and Wasco County's is 12th lowest. Agricultural crop production is a large part of the regional economies and, in 1999, was the largest employing sector in both Hood River and Wasco counties.

Employment growth in agricultural crops over the 90-99 period was 60.7%

and 52.9% for Hood River and Wasco counties, respectively. The unemployment rate in both counties has fallen in recent years, but still remains above the state average. While the general, long-term economic outlook for the region should be positive due to its



proximity to Portland, its attractiveness as a tourist destination, and its access to both Interstate 84 and the Columbia River, several troubling trends are evident.

The recent power shortage and supply induced shutdown of Northwest Aluminum plants in The Dalles, Oregon and in Goldendale, Washington appears to be intermediate-to long-term, and impacts some of the highest-wage jobs in the region. Similarly, global competition in the tree fruit industry is putting extreme price pressure on growers in the region, a trend which appears likely to persist. Other risks to the economies exist as well including the potential impact from lost tourist dollars related to drought, and price pressures on other agricultural products grown in the region.

Tourism sectors employed 3,570 people in the Gorge area in 1999, or one employee for every 16 area residents. This ratio is very high compared to other tourism areas in the state. Total tourism industry payroll was \$50.3 million and local and state tax receipts were \$5.6 million and \$2.7 million, respectively.

The Oregon tourism Commission defines the Mt. Hood/Gorge Tourism Region as the **Eastern parts of Clackamas and Multnomah** Counties, Hood River County and North Wasco County. Leaving out East Clackamas County figures, the Oregon side of the Columbia Gorge Scenic Area generated \$208.8 million in destination travel spending in 1998. This total includes spending on such activities as accommodations, eating & drinking, food purchases, and ground transport, recreation and retail sales. **Multnomah and Clark Counties** comprise only a small portion of the National Scenic Area. The full economic profile of these two counties is not discussed in detail here so as not to unfairly influence the economic picture of the NSA.

About 1,700 of **Multnomah County's** 660,486-person population (about 0.25%) live in the National Scenic Area (2000 Census). In 1990, median household income in this area was 43% higher than the rest of Multnomah County and 41% higher than the State of Oregon. According to the 1990 census, over 60% of the workers in this part of the county commute over 20 minutes to work, presumably to the Portland/Vancouver Metro area. Most of the county's land base in the National Scenic Area is National Forest. Private land in the National Scenic Area is a mix of farms, forest, rural residences, and the community of Corbett.

Columbia Gorge Economies - Washington

Skamania County's economy is heavily influenced by land ownership. About 90% of the county is owned by the public—roughly 80% falls within the Gifford Pinchot National Forest, and another 10% is state timberland. Most of the privately owned acreage is in the southerly strip of land bordering the Columbia River, and so falls under the development rules of the National Scenic Area Act.

With most of the county being timberland, it is no surprise that timber has dominated Skamania County's employment. For years, the majority of jobs in the county were in logging, lumber and wood products, and through the Forest Service. Timber harvests,

which topped 350 million board feet through most of the 1980s, began declining in 1989 and bottomed out at 29 million board feet in 1996. Timber-related employment began to deteriorate in the late 1980's, culminating in the closure of the county's largest private-sector employer, Stevenson Co-Ply, in early 1992, and the subsequent closure of the Forest Service tree nursery later in the decade. A year after Co-Ply closed, the Skamania Lodge opened with about the same number of jobs at considerably lower wages

In 2000, the county had a population of 9,900, a labor force of 4,030, including 2,070 nonfarm jobs, and an unemployment rate of 9.2 percent. As of March 2001, the Skamania County labor force is 3,870, with 460 unemployed—a rate of 11.9 percent compared to the statewide average unemployment rate of 6.1 percent. This means 30 out of 39 Washington counties have lower unemployment rates than Skamania County. About half of the county's labor force migrates out of Skamania County to work in neighboring counties. Half of Skamania County's earned income comes from employment outside of the county. Of the almost \$50 million in payroll generated by employers in the county in 1999, almost half came from the public sector. Another 19% came from manufacturing (11% from logging and lumber) and about 15% from other services. The average wage of \$24,839 was far below the state average, and per capita income was 79% of the U.S. average and 74% of the state average.

Klickitat County's economy is somewhat more diverse than Skamania's, due in part to more diverse land ownership as well as geography. Klickitat's plateaus have proven suitable for wheat farming and ranching, and its valleys are devoted to fruit orchards. The county also has timberland, with harvests averaging around 100 million board feet per year. The John Day Dam on the Columbia explains in part the presence of the Goldendale Aluminum Smelter, while the dry climate accounts for the landfill in Roosevelt, the second largest municipal solid waste landfill in the nation.

In 2000, Klickitat County had 19,200 residents and a labor force of 8,710. The unemployment rate in Klickitat County for 2000 was 10.4%. Of 1,370 manufacturing jobs, 520 were in logging and lumber and wood products (down from 700 in 1990 and more than double that in 1980), and most of the rest were at the smelter. Total payrolls approached \$150 million in 1999. Of that amount, 29% came from the public sector, 10% from timber, and 25% from other manufacturing. The overall average annual wage was \$25,586. The unemployment rate for Klickitat County as of March 2001 is 19.4 percent. As with Skamania County, per capita income is far below the state average. Farm income provided 2.5% of total personal income vs. 0.9% for the state as a whole.

At the beginning of 2001, the Goldendale smelter was partially curtailed due to high energy prices from the Bonneville Power Administration (BPA). Currently the company is selling power back to BPA and paying its workers to do facility maintenance so that a labor force is available to re-start production. When production will resume remains unclear.

Tourism is a significant economic force in both Skamania and Klickitat Counties. In 1998, destination travel spending generated approximately \$34 million in Skamania County and \$17.6 million in Klickitat County. Both counties showed growth in destination travel spending in 1999 (\$37.5 million for Skamania County and 19.7 million for Klickitat County)⁴.

About 260 of **Clark County's** 336,268-person population live in the National Scenic Area (2000 Census). Most of the county's land base in the National Scenic Area is private farmland and rural residences. The U.S. Fish and Wildlife Service owns one large wildlife refuge, and the Forest Service holds a number of conservation easements.

Connections between Resource Protection and Economic Strength.

The goals to protect important resources in the Gorge while also supporting local economies are connected in many complex ways. Businesses such as Skamania Lodge and many others rely on the National Scenic Area as a tourist destination. One benefit of enhancing scenic resources would be to protect the tourist appeal of the Gorge. But increased human activity, such as high motor vehicle travel during peak tourist seasons can also degrade air quality. Reducing air pollution to protect natural resources such as native plants and forests will also benefit local farmers and orchardists whose crops can be harmed by air pollution.

Further growth in sustainable tourism in the Scenic Area depends upon the cooperation of federal, state, county, and local entities (both in the public and private sector) to create one unified travel destination. With declines in other industries, such as the timber industry, one of the strongest economic assets the Columbia Gorge possesses is its scenic beauty, reverse recreational opportunities, and other natural resources. In order for the region to profit by these natural resources, they need to be preserved with sustainable tourism development practices.⁵

Many of these complex relationships will be examined by decision-makers as they develop an air quality strategy for the Scenic Area.

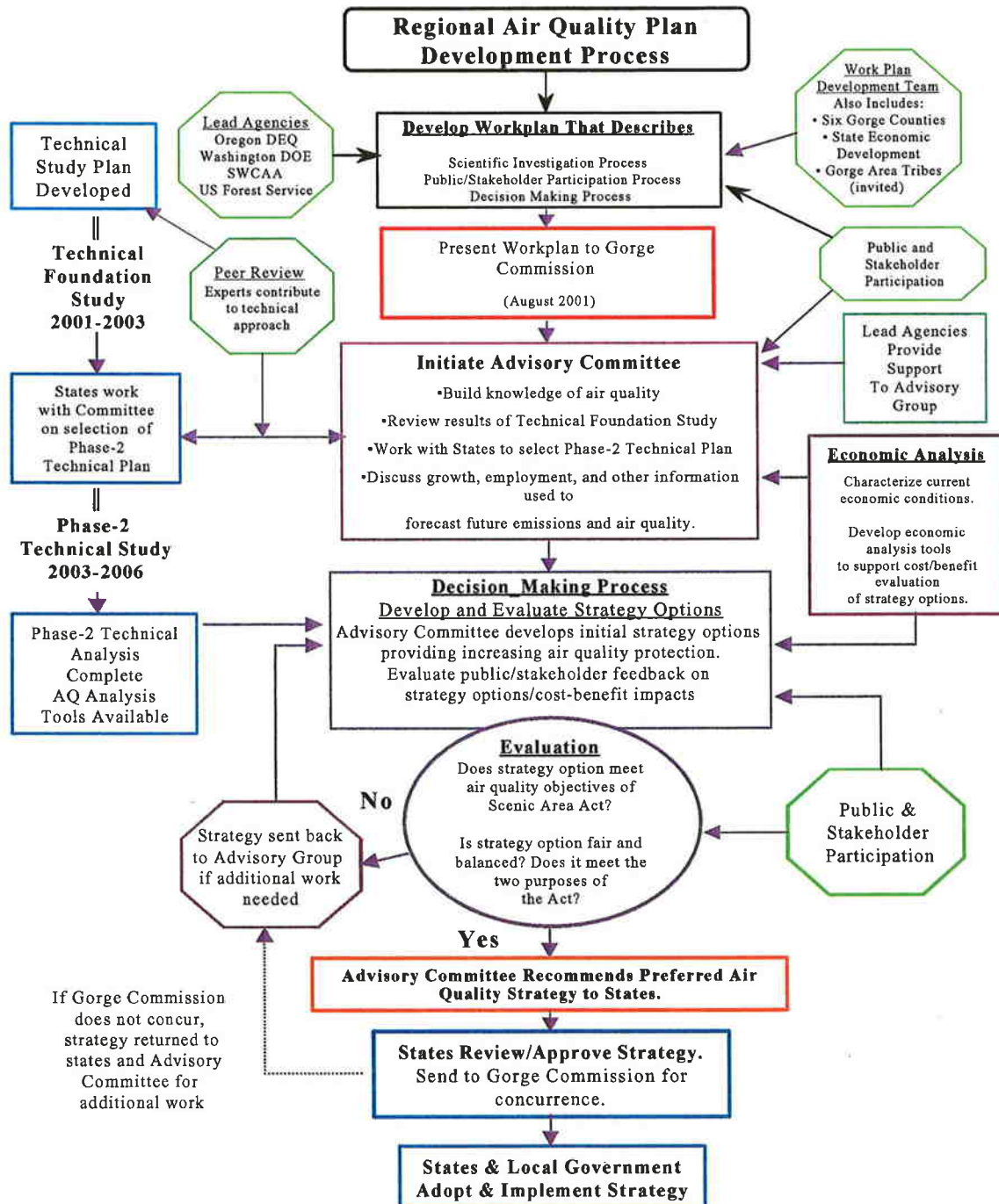


⁴ Estimates for destination travel spending provided by the Columbia River Gorge Visitors Association, citing January 2001 report on Washington State Travel Impacts. Dean Runyan Associates.

⁵ Columbia River Gorge Visitors Association.

Process for Developing a Regional Air Quality Strategy

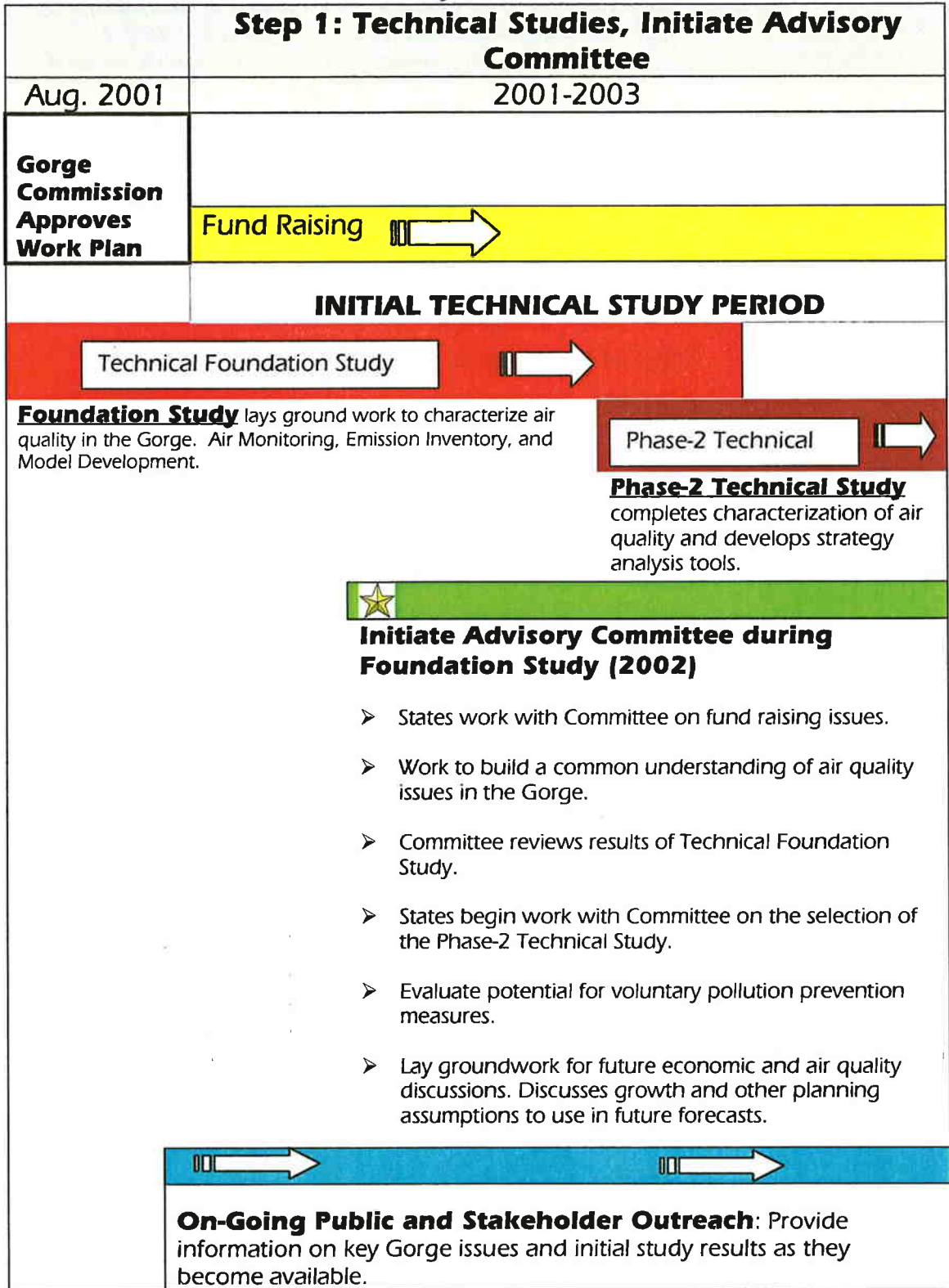
Throughout its many stages the Columbia River Gorge Air Quality Project will require the participation and dedication of many state and federal agencies, local governments, tribes, businesses, environmental and civic organizations, as well as the general public. The following chart shows the scientific investigation and decision-making process to be used in developing an air quality strategy. This work plan provides a “road map” for all subsequent steps in the project.




THREE-STEP APPROACH TO AIR QUALITY PROJECT

PHASE	PURPOSE/CONTEXT	TIMELINE
<p>Step-1: Technical Studies</p> <p>Multi-Phased Technical Study Program to characterize air quality and current (baseline) conditions of local Gorge economies</p>	<ol style="list-style-type: none"> 1. Phased, multi-year technical study program to evaluate air quality processes in the Gorge and gather information necessary to characterize air quality and areas of influence. Identify emission sources both inside and outside the Gorge that contribute to air quality in the National Scenic Area. 2. Characterize baseline economic conditions of local Gorge economies. 3. Initiate Stakeholder Advisory Committee: Build understanding of air quality issues, review results of the Foundation Study, work with states and SWCAA to develop second phase of technical study, discuss economic growth and other important planning assumptions, discuss potential for voluntary pollution prevention. <p><u>Final Products Expected From This Work</u></p> <ol style="list-style-type: none"> 1) Modeling and other tools to support the development of a regional air quality strategy. 2) Thorough understanding of baseline economic and air quality conditions. 	<p>Some air quality assessment work has already been completed. Further investigation is planned from now, through about 2005-2006.</p>
<p>Step-2: Develop Comprehensive Air Quality Strategy.</p>	<p>Continue Committee work and stakeholder and tribal involvement process. <u>Citizens/Stakeholder Advisory Group will:</u></p> <ol style="list-style-type: none"> 1. Evaluate results of air quality analysis and characterization of contributing emission sources. 2. Develop several strategy options that protect and enhance air quality, consistent with the purposes of the National Scenic Area Act. Several options may be developed that provide increasing levels of air quality protection. (This process will develop the air quality benefit information needed for a cost/benefit evaluation.) 3. Perform economic analysis to evaluate the potential impact of strategy options on local economies. (This process will develop the cost information needed for a cost/benefit evaluation.) 4. With input from the public, stakeholders, and tribes, weigh air quality benefits and costs of strategy options and develop a preferred approach to meeting Management Plan and Scenic Act objectives. Recommend preferred strategy to states. 5. States take recommended air quality strategy to Columbia Gorge Commission for their concurrence. <p><u>Final Product Expected From This Work</u></p> <p>A regional air quality strategy that meets the two purposes of the National Scenic Area Act.</p>	<p>The strategy development phase begins when the air quality study is complete (approximately 2005-2006). It is anticipated that strategy development would take approximately one year.</p>
<p>Step-3: Implement the Strategy.</p>	<p>State air quality agencies (DEQ, DOE, SWCAA) and local governments as necessary put strategy in place.</p> <p><u>Final Products Expected From This Work</u></p> <ol style="list-style-type: none"> 1. State and/or federal rules as needed. 2. Local ordinances or other agreements as necessary. 	<p>When the strategy development is complete.</p>

CHRONOLOGY OF PROJECT ACTIVITIES



ESTIMATED CHRONOLOGY OF PROJECT ACTIVITIES

Step 2: Develop Air Quality Strategy		Step 3: On-Going Monitoring		
2004 – 2006				
STRATEGY DEVELOPMENT PERIOD				
Completion of Phase-2 Technical Study				
Completion of Phase-2 Air Quality Investigation: Predictive modeling tools available.	Air Quality analysis to support testing strategy options.			
Data Gathering for Economic Analysis.	Economic Analysis to help evaluate strategies.			
Advisory Committee <ul style="list-style-type: none"> ➤ Committee reviews results of technical study as they become available. ➤ Continue to build an understanding of air quality issues in the Gorge. ➤ Finalize economic, growth, and other planning assumptions to use in future forecasts. 	Committee begins strategy development. Considers air quality strategies and cost/benefit information. Develop Initial Air Quality Strategy Options.	Committee develops preferred strategy option with public, stakeholder input.	States Approve Strategy Gorge Commission Concurrence that strategy meets purposes of the Scenic Area Act.	States and local governments as necessary put strategy in place.
Public, Stakeholder, and Tribal Participation. Continued Outreach				
				
On-Going air quality monitoring and progress tracking				

Public Outreach and Involvement

Multiple Audiences and Diverse Cultures

People of diverse backgrounds and cultures live, work, and play in the National Scenic Area. Each have their own values, priorities, and needs. To ensure success in developing a balanced strategy it is vital that all groups feel well represented and have frequent and regular opportunities to participate in decision-making. Bringing all these interests together requires a thoughtful approach to public outreach and participation. It also requires a willingness on the part of the public and stakeholder groups to participate constructively in the process.

People are busy with many competing personal and professional commitments. It is a challenge to devise public outreach approaches that accommodate these conflicts and encourage participation. A variety of approaches, tools, and techniques will be used to inform and engage the public and stakeholders about air quality and other resource issues in the Gorge. Public understanding and participation will be key to weighing questions of environmental choices and cost-benefit tradeoffs as different options are considered for the regional air quality strategy. Our primary tools and techniques for communicating with the public and stakeholder groups include: *working with local and regional media, special publications, public workshops, town meetings, constituent and public focus groups, surveys, individual meetings with stakeholder groups, discussions with civic organizations, and the project Internet site.* The public and stakeholder outreach work will focus on providing the basic information needed to make informed decisions about the Gorge.

“Hot Button” Issues: There are issues of special importance to Gorge area residents regarding the development of a regional air quality strategy. One such issue can be described as “geographic fairness.” Our outreach work will help clarify that the regional strategy will evaluate emission sources from both inside and outside the Gorge, and will not disproportionately or unfairly burden local Gorge communities while allowing significant air quality impacts to continue from sources located outside the National Scenic Area. Another hot button issue is the potential impact that an air quality strategy might have on local economies. Our outreach efforts will describe how economic analysis will be used as part of the strategy development process to evaluate questions of cost-benefit tradeoffs. A third issue of great importance to the public is the protection of air quality and other natural resources in the Gorge. The public outreach efforts address these important issues as well, and will be strongly oriented toward building trust and strengthening long-term relationships among stakeholders and the public.



Northwest Lichen Species

Target Audiences: An important part of the collaborative approach is to identify the various target audiences, along with their interests, concerns, and information needs.

These audiences have various points of view and frames of reference related to managing natural resources in the Gorge. Their voices and perspectives are very important in creating a regional air quality strategy that respects and reflects the diversity of the area.

Native American Tribes: Four federated tribes have treaty rights and cultural ties to the Columbia Gorge National Scenic Area: the Nez Perce Tribe, the Confederated Tribes and Bands of the Yakama Indian Nation, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes of the Warm Springs Reservation of Oregon. The tribes are sovereign nations and have a special place in the development of the regional air quality strategy. The process described in this work plan is designed to encourage tribal participation. We will also continue the special government-to-government consultation process established between the federal and state governments and the tribes. Throughout this process we will continue to seek the Native American perspective on protecting the scenic, natural, recreational, and cultural resources of the Gorge.

The target audience for public outreach and involvement include:

- General public
- Elected Officials
- Local, state, and federal officials
- Technical/scientific community
- Educators
- Native American tribes
- Environmental groups
- Community groups
- Civic organizations
- Industries
- Ports
- Agricultural interests
- Labor
- Recreational users
- Media
- Others

Perceptions/Misperceptions: Our outreach efforts also provide an opportunity to increase the public's knowledge about Gorge issues and to clarify any misperceptions shared by the public or stakeholder groups.

Baseline Scientific Understanding: There is a need to provide the public and stakeholder groups with a basic understanding of the science behind air quality impacts in the Scenic Area. It will be an important part of the outreach work to build this common level of knowledge about air quality and other resource issues in the NSA. It will also be very important to convey scientific information in a way that is understandable to all stakeholders and the general public.

Layers of Involvement

It must be recognized that in any process such as this, different segments of a community participate in different ways and at different levels. To meet differing needs, the public outreach and participation effort will include a variety of tools and methods to provide opportunities for all citizens to have a voice in the process. The multiple layers of involvement are summarized here.

